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TWO-STAGE, LOW NOISE ADVANCED TECHNOLOGY FAN
VOLUME II – AERODYNAMIC DATA

by

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**Pratt & Whitney Aircraft Division
United Technologies Corporation**

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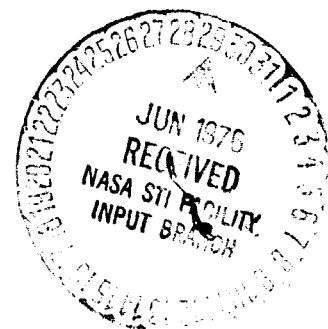
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16. Abstract Aerodynamic data from static tests of a two-stage advanced technology fan designed to minimize noise are presented in this data report. The fan design conditions include delivery of 209.1 kg/sec/m² (42.85 lbm/sec/ft²) specific corrected flow at an overall pressure ratio of 1.9 and an adiabatic efficiency of 85.3 percent. The 0.836 m (2.74 ft) diameter first stage rotor has a hub/tip ratio of 0.4 and 365.8 m/sec (1200 ft/sec) design tip speed. In addition to the moderate tip speed and pressure rise per stage, other noise control design features involve widely spaced blade rows and proper selection of blade-vane ratios. Aerodynamic data are presented for tests with uniform and with hub and tip radially distorted inlet flow. Aerodynamic data are also presented for tests of this fan with acoustic treatments, including acoustically treated casing walls, a flowpath exit acoustic ring, and a translating centerbody sonic inlet device. This report contains a complete tabulation of the overall performance data, the blade element data, and the power spectral density information relating to turbulence levels generated by the sonic inlet obtained during these tests. Discussion of the test results are to be found in the Final Report NASA CR-134830 (PWA-5304).					
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FOREWORD

The test data presented herein was prepared by the P&WA Aircraft Division of United Technologies Corporation for the National Aeronautics and Space Administration under Contract NAS3-16811. Mr. L. J. Herrig and Mr. W. L. Beede were NASA Project Managers for this effort, and Mr. H. V. Marman was the P&WA Program Manager. The report was prepared by K. G. Harley and P. A. Odegard with contributions from B. Gray, G. D. Burger, J. W. Harris, R. P. Chabis, and L. B. Faust, with technical direction from Mr. M. J. Keenan. Discussion of the aerodynamic data presented in this report is contained in the aerodynamic final report NASA CR-134830 (PWA-5304).

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INTRODUCTION

This report presents the aerodynamic data obtained from tests of a low speed, two-stage fan which was designed, constructed, and tested under Contract NAS3-16811. The objective of the program was to develop fan technology for application in turbofan engines for an advanced, long range commercial transport with a cruise Mach number of 0.85 to 0.9 and which will be required to meet stringent noise reduction goals. This document provides the fan overall performance and blade-element data and the data relating to turbulence levels generated from the sonic inlet. The acoustic test data is provided in reference 1.

The development fan was designed to reduce noise levels as much as 20 dB below current requirements. To accomplish this the fan utilized widely spaced blade rows, the proper ratio of blades and vanes, and a relatively low 1st-stage rotor tip speed of 365.8 m/sec (1200 ft/sec). The 1st-stage rotor had a diameter of 0.836 m (2.74 ft) and a hub/tip ratio of 0.4. The two-stage fan was designed to deliver a pressure ratio of 1.9 with an adiabatic efficiency of 85.3% at a specific inlet corrected flow of 209.1 kg/sec/m² (42.85 lbm/sec/ft²). The design of this two-stage fan is presented in reference 2.

Aerodynamic data are presented for the baseline fan configuration which has an untreated inlet cowling and interstage acoustic treatment¹. This configuration was tested with uniform inlet flow and with hub and tip radially distorted inlet flow. Aerodynamic data are also presented for a fully acoustically treated configuration (i.e., with a translating centerbody sonic inlet device, interstage and aft acoustic wall treatment, and an aft acoustically treated ring).² Aerodynamic data are presented for the approach, takeoff, and cruise positions of the sonic inlet.

The aerodynamic performance is presented in two types of tabulations. The first consists of a summary of the pressure ratio, temperature ratio, and efficiency for each individual blade row and the cumulative pressure ratio, temperature ratio, and efficiency through the fan for each operating speed and airflow. These tabulations also contain flows and overall fan pressure ratios at stall. The second type of tabulation contains blade element data at ten or eleven spanwise positions for each of the four blade rows. The radial positions for which the data is presented are provided on page 12, and the table headings for the blade element data are provided on pages 8 through 11.

Parameters, nomenclature and axial subscript identifications are given in the sections immediately following this introduction.

This report also contains data plots of dynamic pressure recorded for the acoustically treated sonic inlet device at the operating conditions: approach, takeoff, and cruise. These power spectral density data are presented at 10 radial positions for each of the three operating points.

A discussion of the aerodynamic data contained herein is given in reference 3, and the acoustic performance is discussed in reference 4.

-
1. This configuration is referred to as Configuration A in reference 1.
 2. This configuration is referred to as Configuration B in reference 1.

NOMENCLATURE

A	–	area
D	–	diffusion factor
g_c	–	conversion factor, 9.806 m/sec ² or 32.17 lbf-ft/lbf-sec ²
ID	–	inside diameter
i_m	–	incidence angle, angle between inlet air direction and line tangent to blade mean camber line at leading edge, degrees (labelled INCM, Blade Element Tables)
i_s	–	incidence angle, angle between inlet air direction and line tangent to blade suction surface at leading edge, degrees (labelled INCS, Blade Element Tables)
M	–	Mach number
MCA	–	multiple-circular-arc
N	–	rotor speed, rpm ($N/\sqrt{\theta}$ labelled NCORR, Blade Element Tables)
OD	–	outside diameter
P	–	total pressure, n/m ² or lbf/ft ²
p	–	static pressure, n/m ² or lbf/ft ²
R	–	gas constant for air, 88.59 joules/kg - °K or 53.35 ft-lbf/lbm - °R
r	–	radius measured from rig centerline
SL	–	streamline number
T	–	total temperature, °K or R
t	–	static temperature, °K or R
U	–	rotor speed, m/sec or ft/sec
V	–	air velocity, m/sec or ft/sec
V _m	–	meridional velocity ($V_r^2 + V_z^2$) ^{1/2} , m/sec or ft/sec (labelled VM, Blade Element Table)

V_θ	–	tangential component of velocity, m/sec or ft/sec
V_z	–	axial component of velocity, m/sec or ft/sec
W	–	mass flow rate, kg/sec or lbm/sec ($W\sqrt{\theta}/\delta$ labelled WCORR, Blade Element Tables)
β	–	absolute air angle, $\cot^{-1}(V_m/V_\theta)$, degrees (labelled B, Blade Element Tables)
β'	–	relative air angle, $\cot^{-1}(V_m/V_\theta')$, degrees (labelled B', Blade Element Tables)
$\Delta\beta$	–	turning, $\beta_1 - \beta_2$, degrees (labelled TURN, Blade Element Tables)
γ	–	ratio of specific heats for air
δ	–	ratio of total pressure to standard pressure of $1.0125 \times 10^5 \text{ N/m}^2$ or 2116 lbf/ft^2
δ°	–	deviation angle, exit air angle minus tangent to blade mean camber line at trailing edge, radians or degrees
ϵ	–	angle between tangent to streamline projected on meridional plane and axial direction, radians or degrees
η	–	efficiency (percent)
θ	–	ratio of total temperature to standard temperature of 288.16°K or 518.7°R
ρ	–	density, lbm/ft^3
σ	–	solidity, ratio of aerodynamic chord to gap between blades
ω	–	angular velocity of rotor, radians/sec
$\bar{\omega}$	–	total pressure loss coefficient
Subscripts		
ad	–	adiabatic
p	–	profile (loss); polytropic (efficiency)
r	–	radial direction

r	–	ratio (e.g. P_r = total pressure ratio)
s	–	suction surface
corr	–	corrected to standard conditions: $T = 288.16^\circ\text{K}$ or 518.7°R and $P = 1.0125 \times 10^5 \text{ N/m}^2$ or 2116 lbf/ft^2
o	–	plenum chamber
4	–	instrument plane upstream of rotor 1
5	–	station at rotor 1 leading edge
6	–	station at rotor 1 trailing edge
9	–	station at stator 1 leading edge
10	–	station at stator 1 trailing edge
11	–	instrument plane downstream stator 1
12	–	station at rotor 2 leading edge
13	–	station at rotor 2 trailing edge
16	–	station at stator 2 leading edge
17	–	station at stator 2 trailing edge
18	–	instrument plane downstream stator 2
Superscripts		
(Prime)	–	relative to rotor
*	–	denotes geometric blade-angle

PERFORMANCE PARAMETERS¹

a) Relative total temperature

$$T'_5 = t_5 \left[1 + \frac{\gamma - 1}{2} (M'_5)^2 \right] \quad \text{(rotor 1) IN}$$

$$T'_6 = T'_5 + \left[\frac{(\omega r_6)^2 - (\omega r_5)^2}{\frac{2\gamma}{\gamma - 1} R g_c} \right] \quad \text{(rotor 1) OUT}$$

b) Incidence angle based on mean camber line

$$i_m = \beta'_5 - \beta'^*_5 \quad \text{(rotor 1)}$$

$$i_m = \beta_9 - \beta^*_9 \quad \text{(stator 1)}$$

Incidence angle based on suction surface metal angle

$$i_s = \beta'_5 - \beta^*_{s5} \quad \text{(rotor 1)}$$

$$i_s = \beta_9 - \beta^*_{s9} \quad \text{(stator 1)}$$

c) Deviation angle

$$\delta^\circ = \beta'_6 - \beta'^*_6 \quad \text{(rotor 1)}$$

$$\delta^\circ = \beta_{10} - \beta^*_{10} \quad \text{(stator 1)}$$

d) Diffusion factor

$$D = 1 - \frac{V'_6}{V'_5} + \frac{r_6 V_{\theta 6} - r_5 V_{\theta 5}}{(r_6 + r_5) \sigma V'_5} \quad \text{(rotor 1)}$$

$$D = 1 - \frac{V_{10}}{V_9} + \frac{r_9 V_{\theta 9} - r_{10} V_{\theta 10}}{(r_9 + r_{10}) \sigma V_9} \quad \text{(stator 1)}$$

1. Parameter subscripts shown are for the 1st-stage only; for the 2nd-stage subscripts refer to "NOMENCLATURE", pages 3 and 4.

e) Loss coefficient

$$\bar{\omega} = \frac{P'_5 \left[\frac{T'_6}{T'_5} \right]^{\frac{\gamma}{\gamma-1}} - P'_6}{P'_5 - P_5} \quad (\text{rotor 1})$$

$$\bar{\omega} = \frac{P_9 - P_{10}}{P_9 - p_9} \quad (\text{stator 1})$$

f) Loss parameter

$$\frac{\bar{\omega} \cos \beta'_6}{2\sigma} \quad (\text{rotor 1})$$

$$\frac{\bar{\omega} \cos \beta_{10}}{2\sigma} \quad (\text{stator 1})$$

g) Polytropic efficiency

$$\eta_p = \frac{\frac{\gamma-1}{\gamma} \log_e \left[\frac{P_6}{P_5} \right]}{\log_e \left[\frac{T_6}{T_0} \right]} \quad (\text{rotor 1})$$

h) Adiabatic efficiency

$$\eta_{ad} = \frac{\left[\frac{P_6}{P_5} \right]^{\frac{\gamma-1}{\gamma}}}{\left[\frac{T_{10}}{T_0} \right]^{-1}} \quad -1$$

(rotor 1)

$$\eta_{ad} = \frac{\left[\frac{P_{10}}{P_5} \right]^{\frac{\gamma-1}{\gamma}}}{\left[\frac{T_{10}}{T_0} \right]^{-1}} \quad -1$$

(stage 1)

IDENTIFICATION OF AERODYNAMIC SUMMARY TABLE HEADINGS

SI UNITS

ROTOR 1

SL	EPB-1 RADIANT	EPB-2 RADIANT	V-1 M/SEC	V-2 M/SEC	VM-1 M/SEC	VM-2 M/SEC	V _{0.1} [†] M/SEC	V _{0.2} M/SEC	B-1 RADIANT	B-2 RADIANT	M-1	M-2	U-1 M/SEC	U-2 M/SEC	M ₁	M ₂	V ₁ M/SEC	V ₂ M/SEC
	ϵ_5	ϵ_6	V_5	V_6	V_{m5}	V_{m6}	$V_{0.5}$	V_{06}	β_5	β_6	M_5	M_6	U_5	U_6	M_5	M_6	V_5	V_6
SL	INC5 RADIANT	INC6 RADIANT	DEV RADIANT	TURN RADIANT	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1	%EFF-P TOT	%EFF-A TOT	B-1 RADIANT	B-2 RADIANT	V ₀ ¹ M/SEC	V ₀ ² M/SEC	PO/PO M/SEC	
	i_5	i_{m5}	δ_6^*	$\Delta\beta$	$\rho_5 V_{m5}$	$\rho_6 V_{m6}$	D	Ω	$\frac{\Delta \cos \beta'_6}{20}$	$\frac{P_6}{P_5}$	η_p	η_{ad}	β'_5	β'_6	$V_{0.5}$	$V_{0.6}$	$\frac{P_6}{P_5}$	
			TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %	INC1/A1 LBM/SEC SOFT		TO2/TO1	PO2/PO1	EFF-AD ROTOR %	EFF-P ROTOR %						
			$\frac{T_5}{T_0}$	$\frac{P_6}{P_5}$	η_{ad}	η_p	$\frac{W\sqrt{A_5}}{\delta_5 A_5}$		$\frac{T_6}{T_0}$	$\frac{P_6}{P_5}$	η_{ad}	η_p						

STATOR 1

SL	EPB-1 RADIANT	EPB-2 RADIANT	V-1 M/SEC	V-2 M/SEC	VM-1 M/SEC	VM-2 M/SEC	V _{0.1} M/SEC	V _{0.2} M/SEC	B-1 RADIANT	B-2 RADIANT	M-1	M-2	PO/PO* INLET	TO/TO INLET	PO/PO STAGE	TO2/ TO1
	ϵ_5	ϵ_{10}	V_9	V_{10}	V_{m9}	V_{m10}	$V_{0.1}$	$V_{0.2}$	β_9	β_{10}	M_9	M_{10}	$\frac{P_{10}}{P_0}$	$\frac{T_{10}}{T_0}$	$\frac{P_{10}}{P_5}$	$\frac{T_{10}}{T_5}$
SL	INC5 RADIANT	INC6 RADIANT	DEV RADIANT	TURN RADIANT	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1			%EFF-A TOT-INLET	%EFF-P TOT-INLET	%EFF-A TOT-STG	%EFF-P TOT-STG
	i_9	i_{m9}	δ_{10}^*	$\Delta\beta$	$\rho_9 V_{m9}$	$\rho_{10} V_{m10}$	D	Ω	$\frac{\Delta \cos \beta'_{10}}{20}$	$\frac{P_{10}}{P_5}$			η_{ad}	η_p	η_{ad-st}	η_{p-st}
			TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %			TO2/TO1	PO2/PO1	EFF-AD STAGE %					
			$\frac{T_{10}}{T_0}$	$\frac{P_{10}}{P_5}$	η_{ad}	η_p			$\frac{T_{10}}{T_5}$	$\frac{P_{10}}{P_5}$	η_{ad-st}					

† For tests with sonic inlet configuration, this column will be sonic inlet recovery, P_0/P_0^* .

* For tests with sonic inlet or inlet radial distortion, these pressure distributions are referenced to Station 5 radial mass average.

IDENTIFICATION OF AERODYNAMIC SUMMARY TABLE HEADINGS

SI UNITS
ROTOR 2

SL	EPBI-1 RADIANT	EPBI-2 RADIANT	V-1 M/SEC	V-2 M/SEC	VM-1 M/SEC	VM-2 M/SEC	Vθ-1 M/SEC	Vθ-2 M/SEC	B-1 RADIANT	B-2 RADIANT	M-1	M-2	U-1 FT/SEC	U-2 FT/SEC	M'-1	M'-2	V'-1 M/SEC	V'-2 M/SEC	
	ϵ_{12}	ϵ_{13}	V_{12}	V_{13}	V_{m12}	V_{m13}	$V_{\theta 12}$	$V_{\theta 13}$	β_{12}	β_{13}	M_{12}	M_{13}	U_{12}	U_{13}	M'_{12}	M'_{13}	V'_{12}	V'_{13}	
SL	INCS RADIANT	INCM RADIANT	DEV RADIANT	TURN RADIANT	RHOVM-1	RHOVM-2	D-FAC	OMEGA-S TOTAL	LOSS-P TOTAL	PO2/ PO1	%EFF-P TOT	%EFF-A TOT	B'-1 RADIANT	B'-2 RADIANT	Vθ'-1 M/SEC	Vθ'-2 M/SEC	PO/PO' INLET		
	i_{m12}	i_{m12}	δ_{12}	$\Delta\beta$	$R_{12}V_{m12}$	$R_{13}V_{m13}$	D	Ω	$\frac{\Omega \cos \beta'_{12}}{20}$	$\frac{P_{12}}{P_{12}}$	η_p	η_{ad}	β'_{12}	β'_{13}	$V'_{\theta 12}$	$V'_{\theta 13}$	$\frac{P_{12}}{P_0}$		
				TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %	WC1/A1 KG/SEC SQM		TO2/TO1	PO2/PO1	EFF-AD ROTOR %	EFF-P ROTOR %						
				$\frac{T_{12}}{T_0}$	$\frac{P_{12}}{P_0}$	η_{ad}	η_p	$\frac{W\sqrt{\theta}_{12}}{\delta_{12}A_{12}}$		$\frac{T_{12}}{T_{12}}$	$\frac{P_{12}}{P_{12}}$	η_{ad}	η_p						

STATOR 2

SL	EPBI-1 RADIANT	EPBI-2 RADIANT	V-1 M/SEC	V-2 M/SEC	VM-1 M/SEC	VM-2 M/SEC	Vθ-1 M/SEC	Vθ-2 M/SEC	B-1 RADIANT	B-2 RADIANT	M-1	M-2	PO/PO' INLET	TO/TO INLET	PO/PO STAGE	TO2/ TO1
	ϵ_{16}	ϵ_{17}	V_{16}	V_{17}	V_{m16}	V_{m17}	$V_{\theta 16}$	$V_{\theta 17}$	β_{16}	β_{17}	M_{16}	M_{17}	$\frac{P_{17}}{P_0}$	$\frac{T_{17}}{T_0}$	$\frac{P_{17}}{P_{12}}$	$\frac{T_{17}}{T_{12}}$
SL		INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVM-1	RHOVM-2	D-FAC	OMEGA-S TOTAL	LOSS-P TOTAL	PO2/ PO1			%EFF-A TOT-INLET	%EFF-P TOT-INLET	%EFF-A TOT-STG	%EFF-P TOT-STG
		i_{m16}	δ_{17}	$\Delta\beta$	$R_{16}V_{m16}$	$R_{17}V_{m17}$	D	Ω	$\frac{\Omega \cos \beta'_{17}}{20}$	$\frac{P_{17}}{P_{16}}$			η_{ad}	η_p	η_{ad-st}	η_{p-st}
		NCORR INLET RAD/SEC	WCORR INLET KG/SEC	TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %			TO2/TO1	PO2/PO1	EFF-AD STAGE %				
		$\frac{N}{\sqrt{\theta}_5}$	$\frac{W\sqrt{\theta}_5}{\delta_5}$	$\frac{T_{17}}{T_0}$	$\frac{P_{17}}{P_0}$	η_{ad}	η_p		$\frac{T_{17}}{T_{12}}$	$\frac{P_{17}}{P_{16}}$	η_{ad-st}					

* For tests with sonic inlet or inlet radial distortion, these pressure distributions are referenced to Station 5 radial mass average.

IDENTIFICATION OF AERODYNAMIC SUMMARY TABLE HEADINGS

U.S. CUSTOMARY UNITS

ROTOR 1

SL	EPBI-1 DEGREE	EPBI-2 DEGREE	V-1 FT/SEC	V-2 FT/SEC	VM-1 FT/SEC	VM-2 FT/SEC	V0-1 ¹ FT/SEC	V0-2 FT/SEC	B-1 DEGREE	B-2 DEGREE	M-1	M-2	U-1 FT/SEC	U-2 FT/SEC	M ¹	M ²	V ¹ FT/SEC	V ² FT/SEC
	ϵ_5	ϵ_6	V_5	V_6	V_{m5}	V_{m6}	V_{05}	V_{06}	β_5	β_6	M_5	M_6	U_5	U_6	M_5	M_6	V_5	V_6
SL	INCS DEGREE	INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1	%EFF-P TOT	%EFF-A TOT	B ¹ DEGREE	B ² DEGREE	V0 ¹ FT/SEC	V0 ² FT/SEC	PO/PO INLET [*]	
	i_{s5}	i_{m5}	δ_0^u	$\Delta\beta$	$\rho_5 V_{m5}$	$\rho_6 V_{m6}$	D	$\bar{\omega}$	$\frac{\bar{\omega} \cos \beta'}{20g}$	$\frac{P_6}{P_5}$	η_p	η_{ad}	β_5'	β_6'	V_{05}	V_{06}	$\frac{P_6}{P_0}$	
			TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %	WC1/A1 LBM/SEC SOFT		TO2/TO1	f/PO^1	EFF-AD TUTOR %	EFF-P ROTOR %						
			$\frac{T_6}{T_0}$	$\frac{P_6}{P_5}$	η_{ad}	η_p	$\frac{W\sqrt{\beta_5}}{\delta_5 A_5}$		$\frac{T_6}{T_0}$	$\frac{P_6}{P_5}$	η_{ad}	η_p						

STATOR 1

SL	EPBI-1 DEGREE	EPBI-2 DEGREE	V-1 FT/SEC	V-2 FT/SEC	VM-1 FT/SEC	VM-2 FT/SEC	V0-1 FT/SEC	V0-2 FT/SEC	B-1 DEGREE	B-2 DEGREE	M-1	M-2	PO/PO ¹ INLET	TO/TO INLET	PO/PO STAGE	TO2/ TO1
	ϵ_9	ϵ_{10}	V_9	V_{10}	V_{m9}	V_{m10}	V_{09}	V_{010}	β_9	β_{10}	M_9	M_{10}	$\frac{P_{10}}{P_0}$	$\frac{T_{10}}{T_0}$	$\frac{P_{10}}{P_5}$	$\frac{T_{10}}{T_5}$
SL	INCS DEGREE	INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1			%EFF-A TOT-INLET	%EFF-P TOT-INLET	%EFF-A TOT-STG	%EFF-P TOT-STG
	i_{m9}	i_{m9}	δ_{10}^u	$\Delta\beta$	$\rho_9 V_{m9}$	$\rho_{10} V_{m10}$	D	$\bar{\omega}$	$\frac{\bar{\omega} \cos \beta_{10}}{20g}$	$\frac{P_{10}}{P_5}$			η_{ad}	η_p	η_{ad-st}	η_{p-st}
			TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %			TO2/TO1	PO2/PO1	EFF-AD STAGE %					
			$\frac{T_{10}}{T_0}$	$\frac{P_{10}}{P_5}$	η_{ad}	η_p			$\frac{T_{10}}{T_5}$	$\frac{P_{10}}{P_5}$	η_{ad-st}					

¹ For tests with sonic inlet configuration, this column will be sonic inlet recovery, P_0/P_0^* .

^{*} For tests with sonic inlet or inlet radial distortion, these pressure distributions are referenced to Station 5 radial mass average.

IDENTIFICATION OF AERODYNAMIC SUMMARY TABLE HEADINGS

U.S. CUSTOMARY UNITS

ROTOR 2

SL	EPBI-1 DEGREE	EPBI-2 DEGREE	V-1 FT/SEC	V-2 FT/SEC	VM-1 FT/SEC	VM-2 FT/SEC	VO-1 FT/SEC	VO-2 FT/SEC	B-1 DEGREE	B-2 DEGREE	M-1	M-2	U-1 FT/SEC	U-2 FT/SEC	M'-1	M'-2	V'-1 FT/SEC	V'-2 FT/SEC	
	ϵ_{12}	ϵ_{13}	V_{12}	V_{13}	V_{m12}	V_{m13}	$V_{\theta 12}$	$V_{\theta 13}$	β_{12}	β_{13}	M_{12}	M_{13}	U_{12}	U_{13}	M'_{12}	M'_{13}	V'_{12}	V'_{13}	
SL	INCS DEGREE	INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1	%EFF-P TOT	%EFF-A TOT	B'-1 DEGREE	B'-2 DEGREE	VO'-1 FT/SEC	VO'-2 FT/SEC	PO/PO INLET		
	i_{12}	i_{m12}	δ_{13}^o	$\Delta\beta$	$\rho_{12} V_{m12}$	$\rho_{13} V_{m13}$	D	Ω	$\frac{\Omega \cos \beta'_{12}}{20}$	$\frac{P_{12}}{P_{12}}$	η_p	η_{ad}	β'_{12}	β'_{13}	$V'_{\theta 12}$	$V'_{\theta 13}$	$\frac{P_{12}}{P_o}$		
				TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %	WC1/A1 LBM/SEC SOFT		TO2/TO1	PO2/PO1	EFF-AD ROTOR %	EFF-P ROTOR %						
				$\frac{T_{12}}{T_o}$	$\frac{P_{12}}{P_o}$	η_{ad}	η_p	$\frac{W\sqrt{\theta}_{12}}{\delta_{12} A_{12}}$		$\frac{T_{12}}{T_{12}}$	$\frac{P_{12}}{P_{12}}$	η_{ad}	η_p						

STATOR 2

SL	EPBI-1 DEGREE	EPBI-2 DEGREE	V-1 FT/SEC	V-2 FT/SEC	VM-1 FT/SEC	VM-2 FT/SEC	VO-1 FT/SEC	VO-2 FT/SEC	B-1 DEGREE	B-2 DEGREE	M-1	M-2	PO/PO INLET	TO/TO INLET	PO/PO STAGE	TO2/ TO1
	ϵ_{16}	ϵ_{17}	V_{16}	V_{17}	V_{m16}	V_{m17}	$V_{\theta 16}$	$V_{\theta 17}$	β_{16}	β_{17}	M_{16}	M_{17}	$\frac{P_{17}}{P_o}$	$\frac{T_{17}}{T_o}$	$\frac{P_{17}}{P_{12}}$	$\frac{T_{17}}{T_{12}}$
SL		INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1			%EFF-A TOT-INLET	%EFF-P TOT-INLET	%EFF-A TOT-STG	%EFF-P TOT-STG
		i_{m16}	δ_{16}	$\Delta\beta$	$\rho_{16} V_{m16}$	$\rho_{17} V_{m17}$	D	Ω	$\frac{\Omega \cos \beta'_{17}}{20}$	$\frac{P_{17}}{P_{16}}$			η_{ad}	η_p	η_{ad-st}	η_{p-st}
		NCORR INLET PPM	WCORR INLET LBM/SEC	TO/TO INLET	PO/PO INLET	EFF-AD INLET %	EFF-P INLET %		TO2/TO1	PO2/PO1	EFF-AD STAGE %					
		$\frac{N}{\sqrt{\theta}_5}$	$\frac{W\sqrt{\theta}_5}{\delta_5}$	$\frac{T_{17}}{T_o}$	$\frac{P_{17}}{P_5}$	η_{ad}	η_p		$\frac{T_{17}}{T_{12}}$	$\frac{P_{17}}{P_{16}}$	η_{ad-st}					

* For tests with sonic inlet or inlet radial distortion, these pressure distributions are referenced to Station 5 radial mass average.

SPANS AND DIAMETERS FOR BLADE ELEMENT DATA

SL	Rotor 1 Inlet			Rotor 1 Exit			Stator 1 Inlet			Stator 1 Exit		
	Diam. (Meters)	Diam. (Inches)	Span (%)	Diam. (Meters)	Diam. (Inches)	Span (%)	Diam. (Meters)	Diam. (Inches)	Span (%)	Diam. (Meters)	Diam. (Inches)	Span (%)
1	.3635	14.310	5.8	.3975	15.650	5.8	.4206	16.560	6.2	.4389	17.280	5.0
2	.4069	16.020	14.5	.4356	17.150	13.9	.4567	17.980	14.4	.4694	18.480	12.3
3	.4554	17.930	24.2	.4778	18.810	23.0	.4983	19.620	23.8	.5070	19.960	21.3
4	.5001	19.690	33.1	.5177	20.380	31.6	.5362	21.110	32.3	.5425	21.360	29.8
5	.6007	23.650	53.1	.6096	24.000	51.4	.6223	24.500	51.8	.6261	24.650	49.8
6	.6492	25.560	62.8	.6553	25.800	61.2	.6657	26.210	61.6	.6683	26.310	60.0
7	.6802	26.780	69.0	.6838	26.920	67.3	.6929	27.280	67.7	.6952	27.370	66.4
8	.7107	27.980	75.1	.7132	28.080	73.7	.7206	28.370	74.0	.7224	28.440	72.9
9	.7437	29.280	81.7	.7437	29.280	80.2	.7501	29.530	80.7	.7518	29.600	79.9
10	.7811	30.750	89.1	.7811	30.750	88.3	.7836	30.850	88.2	.7851	30.910	87.9
11	.8125	31.990	95.4	.8123	31.980	95.0	.8141	32.050	95.1	.8146	32.070	95.0

SL	Rotor 2 Inlet			Rotor 2 Exit			Stator 2 Inlet			Stator 2 Exit		
	Diam. (Meters)	Diam. (Inches)	Span (%)	Diam. (Meters)	Diam. (Inches)	Span (%)	Diam. (Meters)	Diam. (Inches)	Span (%)	Diam. (Meters)	Diam. (Inches)	Span (%)
1	.4521	17.800	5.6	.4813	18.950	4.6	.4902	19.300	5.2	.5057	19.910	4.5
2	.4915	19.350	15.4	.5126	20.180	13.0	.5235	20.610	14.4	.5347	21.050	12.9
3	.5281	20.790	24.4	.5436	21.400	21.3	.5547	21.840	22.9	.5629	22.160	21.0
4	.5674	22.340	34.0	.5776	22.740	30.5	.5880	23.150	32.1	.5941	23.390	30.1
5	.6566	25.850	56.0	.6594	26.960	52.5	.6683	26.310	54.0	.6706	26.400	52.2
6	.6881	27.090	63.7	.6888	27.120	60.5	.6962	27.410	61.7	.6975	27.460	60.0
7	.7188	28.300	71.3	.7188	28.300	68.5	.7244	28.520	69.5	.7254	28.560	68.1
8	.7610	29.960	80.0	.7582	29.850	79.1	.7625	30.020	79.9	.7633	30.050	79.0
9	.7899	31.100	88.8	.7882	31.030	87.2	.7907	31.130	87.7	.7910	31.140	87.1
10	.8189	32.240	95.9	.8179	32.200	95.2	.8189	32.240	95.4	.8189	32.400	95.1

UNIFORM INLET, DESIGN VALUES

- Overall Performance and Blade Element Data

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA UNIFORM INLET FLOW Design Values

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2107	0.1616	216.0	302.7	216.0	196.4	0.0	230.3	0.0	0.8421	0.8620	0.8986	159.2	174.1	0.8223	0.8065	269.3	204.3
2	0.1451	0.1272	217.9	280.2	217.9	197.0	0.0	199.2	0.0	0.7885	0.8681	0.8253	178.2	190.8	0.8432	0.8088	281.5	197.2
3	0.1536	0.1006	219.5	261.1	219.5	192.1	0.0	176.9	0.0	0.7427	0.8735	0.7637	199.5	209.3	0.9102	0.8497	296.6	194.8
4	0.1261	0.0805	220.4	247.1	220.4	187.0	0.0	161.4	0.0	0.7110	0.8767	0.7187	219.1	226.7	0.9541	0.8763	310.8	198.1
5	0.0725	0.0474	221.1	224.9	221.1	178.7	0.0	136.6	0.0	0.6524	0.8789	0.6486	263.1	267.0	1.0554	0.8380	363.7	221.2
6	0.0513	0.0362	220.7	217.8	220.7	176.1	0.0	128.2	0.0	0.6290	0.8777	0.6263	284.4	287.1	1.1093	0.8819	360.0	237.2
7	0.0386	0.0265	220.6	214.2	220.6	174.8	0.0	123.8	0.0	0.6161	0.8773	0.6147	298.0	299.5	1.1383	0.8819	370.7	247.9
8	0.0269	0.0186	220.5	211.1	220.5	173.4	0.0	120.1	0.0	0.6052	0.8771	0.6047	311.3	312.4	1.1713	0.8822	381.5	259.1
9	0.0154	0.0109	220.2	208.6	220.2	172.0	0.0	118.0	0.0	0.6014	0.8766	0.5960	325.8	325.8	1.2071	0.8822	393.2	269.7
10	0.0065	0.0050	219.7	206.9	219.7	168.7	0.0	119.9	0.0	0.6178	0.8763	0.5886	342.1	342.1	1.2478	0.7937	406.6	278.0
11	0.0004	0.0003	219.3	206.8	219.3	163.5	0.0	126.6	0.0	0.6587	0.8729	0.5846	355.9	355.9	1.2828	0.7937	418.1	281.4

SL	INCS	IACM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	BEFF-P	BEFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOY	TOY	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0390	0.0579	0.2608	0.9144	43.94	45.15	0.4459	0.1055	0.0239	1.5170	91.77	91.24	0.6372	-0.2772	-159.2	56.2	1.5170
2	0.0256	0.0687	0.2732	0.7302	44.15	47.82	0.4812	0.0588	0.0150	1.5063	94.85	94.54	0.6878	-0.0424	-178.2	8.4	1.5063
3	0.0145	0.0777	0.2656	0.5730	44.33	48.54	0.5059	0.0435	0.0119	1.4970	95.78	95.53	0.7306	0.1664	-199.5	-32.4	1.4970
4	0.0092	0.0801	0.2383	0.4483	44.43	48.51	0.5124	0.0424	0.0119	1.4891	95.53	95.27	0.7837	0.3354	-219.1	-65.3	1.4891
5	0.0164	0.0632	0.1448	0.2622	44.50	48.11	0.4871	0.0479	0.0131	1.4787	94.17	93.83	0.8725	0.6303	-263.1	-130.4	1.4787
6	0.0124	0.0571	0.1199	0.1771	44.46	47.94	0.4653	0.0538	0.0146	1.4767	93.08	92.68	0.9110	0.7338	-284.4	-158.9	1.4767
7	0.0053	0.0548	0.1127	0.0956	44.45	47.83	0.4514	0.0583	0.0153	1.4758	92.27	91.83	0.9337	0.7881	-298.0	-175.7	1.4758
8	0.0167	0.0569	0.1107	0.0710	44.41	47.69	0.4382	0.0647	0.0168	1.4754	91.18	90.68	0.9545	0.8366	-311.3	-192.3	1.4754
9	0.0221	0.0611	0.1078	0.0510	44.41	47.34	0.4293	0.0786	0.0201	1.4754	89.11	88.49	0.9764	0.8794	-325.8	-207.8	1.4754
10	0.0272	0.0660	0.1131	0.0283	44.35	46.32	0.4322	0.1155	0.0281	1.4773	84.16	83.27	1.0000	0.9216	-342.1	-222.3	1.4773
11	0.0256	0.0643	0.1445	0.0675	44.31	44.60	0.4520	0.1694	0.0424	1.4815	77.66	76.40	1.0186	0.9511	-355.9	-229.2	1.4815

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			POTOR	NOTOR
		%	%	SQM			%	%
1.1336	1.4849	89.52	90.09	209.11	1.1336	1.4849	89.52	90.09

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1951	0.1351	274.2	180.9	167.2	179.3	217.3	23.4	0.9161	0.1282	0.8024	0.5111	1.4384	1.1384	1.4384	1.1384
2	0.1368	0.0995	262.0	180.1	180.2	178.6	190.1	23.4	0.8121	0.1297	0.7651	0.5106	1.4584	1.1315	1.4584	1.1315
3	0.0944	0.0741	251.0	178.4	185.1	176.9	169.5	23.2	0.7617	0.1304	0.7308	0.5064	1.4682	1.1279	1.4682	1.1279
4	0.0687	0.0587	242.4	176.9	185.7	175.4	155.4	23.0	0.6982	0.1306	0.7038	0.5020	1.4697	1.1265	1.4697	1.1265
5	0.0352	0.0367	227.5	174.9	184.0	173.4	133.8	22.8	0.6287	0.1308	0.6588	0.4963	1.4670	1.1260	1.4670	1.1260
6	0.0259	0.0294	222.1	174.5	182.8	173.0	126.2	22.8	0.6080	0.1309	0.6397	0.4948	1.4654	1.1271	1.4654	1.1271
7	0.0215	0.0292	219.3	174.0	182.1	172.5	122.1	22.7	0.5908	0.1309	0.6305	0.4932	1.4638	1.1281	1.4638	1.1281
8	0.0178	0.0214	216.9	173.4	181.4	171.9	118.9	22.6	0.5801	0.1309	0.6225	0.4909	1.4620	1.1297	1.4620	1.1297
9	0.0142	0.0174	214.8	172.5	180.1	171.0	117.1	22.5	0.5765	0.1309	0.6152	0.4875	1.4595	1.1330	1.4595	1.1330
10	0.0102	0.0127	213.7	171.5	177.3	170.0	119.2	22.4	0.5819	0.1309	0.6093	0.4827	1.4563	1.1414	1.4563	1.1414
11	0.0052	0.0065	213.8	171.0	172.5	169.4	126.5	22.3	0.6327	0.1309	0.6057	0.4783	1.4533	1.1556	1.4533	1.1556

SL	INCS	IACM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	BEFF-P	BEFF-A	BEFF-P	BEFF-A	BEFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOY-INLET	TOY-INLET	TOY-STG	TOY-STG	
1	0.0056	0.0766	0.2221	0.7859	41.28	50.06	0.4851	0.1495	0.0313	0.9483	79.13	80.18	79.13	80.18	
2	0.0138	0.0755	0.1724	0.6824	45.64	50.87	0.4527	0.0990	0.0221	0.9681	86.62	87.31	86.62	87.31	
3	0.0411	0.0546	0.1542	0.6113	47.81	50.99	0.4277	0.0641	0.0154	0.9808	90.88	91.37	90.88	91.17	
4	0.0604	0.0404	0.1447	0.5676	48.63	50.77	0.4091	0.0460	0.0118	0.9870	91.87	92.39	91.87	92.39	
5	0.1082	0.0042	0.1332	0.4979	49.30	50.27	0.3715	0.0315	0.0092	0.9921	91.82	92.25	91.82	92.25	
6	0.1319	0.0132	0.1273	0.4732	49.38	50.08	0.3569	0.0320	0.0098	0.9923	90.75	91.23	90.75	91.23	
7	0.1457	0.0238	0.1247	0.4599	49.38	49.89	0.3502	0.0346	0.0110	0.9919	89.79	90.53	89.79	90.33	
8	0.1607	0.0352	0.1233	0.4493	49.32	49.62	0.3464	0.0395	0.0130	0.9909	88.43	89.04	88.43	89.04	
9	0.1751	0.0462	0.1232	0.4456	49.04	49.22	0.3470	0.0478	0.0163	0.9892	85.82	86.56	85.82	86.56	
10	0.1930	0.0625	0.1310	0.4610	48.15	48.58	0.3578	0.0640	0.0226	0.9856	80.19	81.21	80.19	81.21	
11	0.2090	0.0748	0.1706	0.5018	46.47	47.85	0.3784	0.0867	0.0316	0.9810	72.46	73.86	72.46	73.86	

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
				%	%			%	%
876.19	96.372	1.1336	1.4611	85.66	86.41	1.1336	0.9840	85.66	

ROTOR 2

SL	FPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1596	0.1116	162.7	258.5	161.2	106.5	22.7	179.0	0.1394	0.7591	0.4577	0.7125	198.0	210.8	0.6697	0.5214	238.1	189.2
2	0.1236	0.0893	176.9	243.2	175.4	106.4	22.7	156.2	0.1284	0.6943	0.5011	0.6719	215.3	224.5	0.7380	0.5486	260.5	198.6
3	0.0971	0.0707	183.2	232.8	181.8	103.0	22.6	143.8	0.1235	0.6645	0.5208	0.6626	231.3	238.1	0.7867	0.5683	276.8	205.8
4	0.0737	0.0533	185.6	223.1	184.2	177.4	22.5	135.3	0.1215	0.6507	0.5283	0.6147	248.6	253.0	0.8300	0.5867	291.6	213.0
5	0.0516	0.0203	185.2	205.4	183.8	166.9	22.5	119.7	0.1220	0.6223	0.5269	0.5630	287.6	288.8	0.9178	0.6512	322.6	237.6
6	0.0195	0.0107	184.2	200.3	182.8	163.9	22.5	115.2	0.1227	0.6127	0.5236	0.5480	301.4	301.7	0.9479	0.6794	333.4	248.3
7	0.0090	0.0019	182.8	195.5	181.4	161.0	22.5	110.9	0.1234	0.6030	0.5191	0.5339	314.9	314.9	0.9771	0.7098	344.1	259.9
8	0.0026	0.0078	180.3	189.8	178.9	157.2	22.4	106.3	0.1244	0.5945	0.5106	0.5164	333.3	322.1	1.0158	0.7486	358.8	275.1
9	0.0067	0.0108	179.0	186.7	177.6	151.3	22.3	109.4	0.1251	0.6260	0.5045	0.5039	346.0	345.2	1.0407	0.7564	369.2	289.2
10	0.0044	0.0063	178.4	187.5	177.0	146.3	22.3	117.2	0.1256	0.6751	0.4992	0.5002	358.7	358.3	1.0637	0.7524	380.1	289.1

SL	INCS	IACH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	V'-1	V'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0825	0.0389	0.2468	0.6577	46.13	57.79	0.3712	0.0850	0.0204	1.3702	93.56	93.24	0.8249	0.1672	-175.3	-31.8	1.9710
2	0.0662	0.0431	0.2049	0.4814	50.32	59.87	0.3740	0.0483	0.0118	1.3624	95.35	95.15	0.8309	0.3494	-192.6	-48.4	1.9615
3	0.0576	0.0415	0.1862	0.3793	52.09	60.02	0.3799	0.0351	0.0087	1.3320	94.09	93.93	0.8536	0.4742	-208.7	-94.3	1.9547
4	0.0471	0.0316	0.1566	0.3017	52.67	59.01	0.3850	0.0342	0.0089	1.3254	95.56	95.37	0.8649	0.5852	-226.0	-117.7	1.9479
5	0.0334	0.0243	0.1175	0.1727	52.44	58.50	0.3655	0.0608	0.0097	1.3129	94.04	93.80	0.8646	0.7919	-245.1	-169.1	1.9249
6	0.0214	0.0601	0.1110	0.1406	52.13	55.65	0.3532	0.0426	0.0100	1.3087	93.44	93.19	0.8907	0.8501	-278.9	-186.6	1.9164
7	0.0217	0.0633	0.1109	0.1129	51.71	54.78	0.3392	0.0440	0.0100	1.3045	92.89	92.62	1.0155	0.9026	-292.4	-204.0	1.9079
8	0.0290	0.0677	0.1115	0.0860	50.87	53.40	0.4227	0.0485	0.0108	1.2982	91.72	91.41	1.0485	0.9624	-310.9	-225.8	1.8955
9	0.0384	0.0753	0.1165	0.0684	50.15	50.75	0.3356	0.0894	0.0195	1.2954	85.07	84.51	1.0689	1.0005	-323.7	-235.9	1.8843
10	0.0394	0.0787	0.1248	0.0613	49.35	48.15	0.3616	0.1431	0.0311	1.2996	77.57	76.72	1.0865	1.0252	-336.4	-241.1	1.8889

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
S	S	S	S	SOM			S	S
1.2354	1.9242	87.29	88.40	173.80	1.0898	1.3169	90.95	91.30

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PD/PO	TOZ
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1206	0.1408	236.5	177.2	158.3	177.2	175.8	0.0	0.8362	0.0000	0.6467	0.4759	1.8958	1.2530	1.3100	1.1007
2	0.0916	0.1013	229.9	179.8	171.7	179.8	152.9	0.0	0.7257	0.0000	0.6322	0.4870	1.9237	1.2345	1.3166	1.0920
3	0.0707	0.0738	225.9	178.9	176.6	178.9	140.9	0.0	0.6728	0.0000	0.6223	0.4857	1.9329	1.2276	1.3158	1.0888
4	0.0536	0.0522	221.0	175.7	176.6	175.7	132.9	0.0	0.6445	0.0000	0.6085	0.4773	1.9308	1.2250	1.3138	1.0877
5	0.0256	0.0208	207.9	167.2	171.0	167.2	118.2	0.0	0.6046	0.0000	0.5702	0.4534	1.9117	1.2236	1.3039	1.0860
6	0.0191	0.0144	203.2	164.0	168.3	164.0	114.0	0.0	0.5954	0.0000	0.5563	0.4445	1.9026	1.2241	1.2991	1.0855
7	0.0140	0.0098	198.5	160.5	165.3	160.5	110.0	0.0	0.5873	0.0000	0.5427	0.4344	1.8918	1.2250	1.2935	1.0850
8	0.0092	0.0062	192.5	155.4	160.8	155.4	105.8	0.0	0.5822	0.0000	0.5241	0.4192	1.8757	1.2299	1.2858	1.0849
9	0.0061	0.0041	189.2	151.6	154.6	151.6	109.1	0.0	0.6148	0.0000	0.5111	0.4058	1.8620	1.2464	1.2767	1.0907
10	0.0022	0.0016	189.9	147.9	149.4	147.9	117.1	0.0	0.6647	0.0000	0.5068	0.3910	1.8471	1.2791	1.2709	1.1011

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.0534	0.1485	0.8342	51.10	60.23	0.4051	0.1558	0.0328	0.9619	79.19	80.96	81.29	82.02
2	-0.0388	0.1404	0.7257	50.48	62.62	0.3660	0.0915	0.0183	0.9808	87.58	88.66	88.66	89.07
3	-0.0412	0.1446	0.6728	58.61	62.97	0.3561	0.0530	0.0126	0.9878	90.97	91.76	91.67	91.99
4	-0.0826	0.1490	0.6445	58.95	62.17	0.3562	0.0396	0.0100	0.9912	91.85	92.57	92.20	92.57
5	-0.1184	0.1563	0.6046	56.87	59.26	0.3594	0.0361	0.0098	0.9933	90.91	91.69	91.36	91.68
6	-0.1268	0.1622	0.5954	56.88	58.07	0.3614	0.0384	0.0115	0.9927	89.97	90.83	90.55	90.90
7	-0.1356	0.1668	0.5873	55.98	56.70	0.3650	0.0464	0.0145	0.9916	88.73	89.69	89.56	89.94
8	-0.1550	0.1771	0.5822	54.38	54.55	0.3762	0.0601	0.0199	0.9898	85.56	86.77	87.53	87.97
9	-0.1669	0.1966	0.6148	51.67	52.41	0.3965	0.0791	0.0272	0.9871	78.84	80.59	80.11	80.80
10	-0.1803	0.2221	0.6647	49.00	49.87	0.4401	0.1375	0.0489	0.9779	69.63	72.11	69.96	70.97

MCRR	WCRR	TO/TO	PD/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	S	S			S
RAD/SEC	KG/SEC							
876.19	96.372	1.2354	1.8985	85.33	86.58	1.0898	0.9866	86.34

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Design Values**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	FPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-1	V*-1	V*-2
	UFGREE	UFGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	12.073	9.258	708.7	993.1	708.7	644.4	0.0	755.6	0.0	49.4	0.6620	0.8986	522.4	571.3	0.8223	0.6065	880.5	670.3
2	10.805	7.287	714.8	919.7	714.8	646.4	0.0	653.6	0.0	45.2	0.6681	0.8253	584.8	626.0	0.8632	0.5808	923.5	647.0
3	8.799	5.766	720.1	896.7	720.1	630.2	0.0	580.3	0.0	42.6	0.6735	0.7637	654.5	686.6	0.9102	0.5667	973.1	631.6
4	7.227	4.810	723.2	810.6	723.2	613.7	0.0	529.6	0.0	40.7	0.6787	0.7187	718.8	744.0	0.9541	0.5763	1019.6	650.0
5	4.155	2.714	725.4	737.9	725.4	586.3	0.0	448.2	0.0	37.4	0.6789	0.6486	863.3	876.1	1.0554	0.6380	1127.6	725.9
6	2.440	1.959	724.2	714.7	724.2	577.9	0.0	420.5	0.0	36.0	0.6777	0.6263	933.1	941.8	1.1053	0.6819	1181.1	778.3
7	2.217	1.516	723.8	702.8	723.8	573.6	0.0	406.1	0.0	35.3	0.6773	0.6147	977.6	982.7	1.1383	0.7114	1216.4	813.3
8	1.544	1.064	723.6	692.5	723.6	569.6	0.0	394.0	0.0	34.7	0.6771	0.6047	1021.4	1025.0	1.1713	0.7422	1251.7	850.1
9	0.861	0.624	722.5	684.3	722.5	564.2	0.0	387.2	0.0	34.5	0.6760	0.5960	1068.8	1068.8	1.2071	0.7708	1290.1	884.9
10	0.256	0.174	723.8	678.9	723.8	553.4	0.0	393.2	0.0	35.4	0.6743	0.5886	1122.5	1122.5	1.2478	0.7937	1334.0	915.5
11	-0.023	-0.018	719.5	678.6	719.5	536.6	0.0	415.3	0.0	37.7	0.6729	0.5844	1167.8	1167.4	1.2828	0.7957	1371.6	923.9

SL	INCS	IACM	CEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LUSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
	INCHES	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.21	3.32	14.94	52.39	43.94	45.15	0.4459	0.1055	0.0239	1.5170	91.77	91.28	36.51	-15.88	-522.4	184.3	1.5170
2	-1.47	1.94	15.65	41.84	44.15	47.82	0.4812	0.0588	0.0150	1.5063	94.85	94.54	39.41	-2.43	-584.8	27.6	1.5063
3	-0.83	4.45	15.22	32.83	44.33	48.54	0.5059	0.0435	0.0119	1.4970	95.78	95.53	42.37	9.55	-654.5	-106.3	1.4970
4	-0.54	4.59	13.66	25.68	44.43	48.51	0.5126	0.0424	0.0119	1.4891	95.53	95.27	44.90	19.22	-718.8	-214.3	1.4891
5	-0.94	3.62	8.30	13.88	44.50	48.11	0.4871	0.0479	0.0131	1.4787	94.17	93.83	49.99	36.11	-863.3	-428.0	1.4787
6	-0.71	3.27	6.87	10.15	44.46	47.94	0.4653	0.0538	0.0144	1.4767	93.08	92.68	52.20	42.05	-933.1	-521.3	1.4767
7	0.30	3.14	6.46	8.34	44.45	47.83	0.4514	0.0583	0.0153	1.4758	92.27	91.83	53.50	45.15	-977.6	-576.6	1.4758
8	0.98	3.26	6.34	6.76	44.44	47.69	0.4342	0.0647	0.0168	1.4754	91.18	90.68	54.69	47.93	-1021.4	-631.1	1.4754
9	1.26	3.50	6.18	5.56	44.41	47.34	0.4293	0.0786	0.0201	1.4754	89.11	88.49	55.95	50.39	-1068.8	-681.7	1.4754
10	1.56	3.78	6.48	4.49	44.35	46.82	0.4322	0.1155	0.0291	1.4773	84.16	83.27	57.29	52.81	-1122.5	-729.3	1.4773
11	1.47	3.68	6.28	1.87	44.31	44.60	0.4520	0.1694	0.0424	1.4815	77.66	76.40	58.36	54.49	-1167.8	-752.1	1.4815

TO/TO	PO/PO	EFF-AD	FFF-P	W/L/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	SOFT			ROTOR	ROTOR
%	%	%	%	%			%	%
1.1336	1.4849	89.52	90.09	42.85	1.1336	1.4849	89.52	90.09

STATOR 1

SL	FPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	UFGREE	UFGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	11.141	7.743	899.5	593.4	548.5	588.4	713.0	76.8	52.4	7.3	0.6024	0.5111	1.4384	1.1384	1.4384	1.1384
2	7.440	5.703	859.5	541.0	591.3	586.0	623.8	76.8	46.5	7.4	0.7651	0.5106	1.4584	1.1315	1.4584	1.1315
3	5.407	4.245	823.5	585.5	607.3	580.5	556.7	76.2	42.5	7.5	0.7308	0.5064	1.4682	1.1279	1.4682	1.1279
4	3.933	3.366	795.4	580.3	607.3	575.4	511.3	75.6	40.0	7.5	0.7038	0.5020	1.4697	1.1265	1.4697	1.1265
5	2.016	2.102	746.4	573.9	603.7	569.0	439.0	74.9	36.0	7.5	0.6568	0.4963	1.4670	1.1260	1.4670	1.1260
6	1.485	1.682	728.8	572.5	599.9	567.6	413.9	74.7	34.6	7.5	0.6397	0.4948	1.4654	1.1271	1.4654	1.1271
7	1.234	1.446	719.5	570.9	597.6	566.1	400.8	74.5	33.8	7.5	0.6305	0.4932	1.4638	1.1281	1.4638	1.1281
8	1.021	1.226	711.6	568.8	595.1	563.9	390.0	74.2	33.2	7.5	0.6225	0.4909	1.4620	1.1297	1.4620	1.1297
9	0.811	0.998	704.8	565.9	590.9	561.1	384.7	73.9	33.0	7.5	0.6152	0.4875	1.4595	1.1330	1.4595	1.1330
10	0.584	0.776	701.1	562.7	581.8	557.9	391.2	73.4	33.9	7.5	0.6093	0.4827	1.4563	1.1414	1.4563	1.1414
11	0.249	0.370	701.6	561.2	565.8	556.4	414.9	73.3	36.3	7.5	0.6057	0.4783	1.4533	1.1556	1.4533	1.1556

SL	INCS	INCM	CEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LUSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	INCHES	INCHES	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.42	4.39	12.72	45.03	41.28	50.06	0.4851	0.1495	0.0313	0.9483	79.13	80.18	79.13	80.18
2	-0.79	4.52	9.88	39.10	45.64	50.87	0.4527	0.0990	0.0221	0.9681	86.62	87.31	86.62	87.31
3	-2.55	3.12	8.84	35.03	47.81	50.99	0.4277	0.0641	0.0154	0.9808	90.68	91.17	90.68	91.17
4	-3.46	2.32	8.29	32.52	48.63	50.77	0.4091	0.0460	0.0118	0.9870	91.97	92.39	91.97	92.39
5	-6.70	0.74	7.63	28.53	49.30	50.27	0.3715	0.0315	0.0092	0.9921	91.82	92.25	91.82	92.25
6	-7.53	-0.76	7.29	27.11	49.38	50.38	0.3569	0.0320	0.0098	0.9923	90.75	91.23	90.75	91.23
7	-8.35	-1.36	7.15	26.35	49.38	49.89	0.3502	0.0346	0.0110	0.9919	89.79	90.33	89.79	90.33
8	-9.21	-2.02	7.06	25.74	49.32	49.62	0.3464	0.0395	0.0130	0.9909	88.43	89.04	88.43	89.04
9	-10.04	-2.65	7.06	25.53	49.04	49.22	0.3470	0.0478	0.0164	0.9892	85.82	86.56	85.82	86.56
10	-11.14	-3.58	7.50	26.41	48.15	48.58	0.3578	0.0640	0.0226	0.9858	80.19	81.21	80.19	81.21
11	-12.01	-4.78	9.77	28.75	46.47	47.85	0.3784	0.0867	0.0316	0.9810	72.46	73.86	72.46	73.86

W/CRR	W/CRR	TO/TO	PO/PO	EFF-AD	FFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
%	%	%	%	%	%			%
1.367	212.50	1.1336	1.4611	85.66	86.41	1.1336	0.9840	85.66

ROTOR 2

SL	FPSI-1	FPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	A-1	A-2	M-1	M-2	U-1	U-2	M-1	M-1	V-1	V-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	4.142	6.394	534.0	848.0	528.6	411.8	76.6	587.3	8.0	43.5	0.4577	0.7125	649.8	641.8	0.6697	0.5214	781.3	626.6
2	7.040	5.116	580.3	798.0	575.5	611.7	76.5	512.4	7.4	39.8	0.5011	0.6719	706.4	736.7	0.7380	0.5486	854.7	651.5
3	5.764	4.052	601.1	763.7	596.5	630.4	76.2	471.9	7.1	38.1	0.5208	0.6426	758.9	781.2	0.7867	0.5667	906.2	675.4
4	4.222	3.053	609.0	772.1	604.5	582.2	75.8	445.8	7.0	37.3	0.5283	0.6147	815.5	830.1	0.8300	0.5867	956.8	698.7
5	1.808	1.161	607.6	674.0	603.1	547.6	73.9	392.9	7.0	35.7	0.5269	0.5630	943.6	947.7	0.9178	0.6512	1058.4	779.5
6	1.116	0.611	604.2	657.1	599.7	537.6	73.9	377.9	7.0	35.1	0.5236	0.5480	988.9	990.0	0.9479	0.6794	1094.0	814.7
7	0.517	0.108	599.7	641.4	595.1	528.3	73.8	364.8	7.1	34.5	0.5191	0.5339	1033.1	1033.1	0.9771	0.7098	1126.9	852.7
8	-0.146	-0.445	591.7	622.7	587.1	515.8	73.5	348.8	7.1	34.1	0.5106	0.5164	1093.7	1089.7	1.0158	0.7496	1177.4	902.7
9	-0.366	-0.619	587.3	612.5	582.7	496.3	73.3	338.9	7.2	33.9	0.5045	0.5039	1135.3	1132.7	1.0407	0.7564	1211.4	919.3
10	-0.753	-0.358	585.2	615.1	580.6	480.2	73.3	334.4	7.2	33.7	0.4992	0.5002	1176.9	1175.4	1.0637	0.7524	1247.0	925.3

SL	INCS	TACM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B-1	B-2	V0-1	V0-2	PO/PO
	DEGREE	DEGREE	CEGREE	CFGREE				TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.73	2.23	14.14	37.68	46.13	57.79	0.3712	0.0850	0.6204	1.3702	93.56	93.26	47.26	9.58	-575.2	-104.5	1.9710
2	-4.74	2.47	11.74	27.58	50.32	59.87	0.3747	0.0483	0.0118	1.3426	95.35	95.15	47.61	20.02	-631.9	-224.3	1.9615
3	-3.30	2.38	10.67	21.73	52.09	60.02	0.3799	0.0351	0.0087	1.3320	96.09	95.93	48.91	27.17	-684.8	-309.3	1.9567
4	-2.70	2.38	8.98	17.29	52.67	59.07	0.3850	0.0362	0.0089	1.3254	95.36	95.37	50.81	33.53	-741.7	-384.3	1.9479
5	-0.77	3.11	6.73	9.90	52.44	56.55	0.3855	0.0408	0.0097	1.3129	94.06	93.80	55.27	45.37	-809.7	-554.8	1.9249
6	0.14	3.45	6.76	8.06	52.13	55.65	0.3532	0.0426	0.0100	1.3087	93.44	93.19	56.76	48.71	-915.0	-612.1	1.9166
7	1.24	3.63	6.35	6.47	51.71	54.78	0.3392	0.0440	0.0100	1.3045	92.89	92.62	58.18	51.72	-959.2	-669.3	1.9079
8	1.66	3.88	6.39	4.93	50.87	53.40	0.3227	0.0485	0.0108	1.2992	91.72	91.41	60.07	55.16	-1020.2	-740.8	1.8955
9	2.04	4.32	6.68	3.92	50.15	50.75	0.3356	0.0894	0.0195	1.2954	85.07	84.51	61.24	57.32	-1062.0	-773.8	1.8863
10	2.28	4.51	7.15	3.51	49.35	48.15	0.3616	0.1431	0.0311	1.2906	77.57	76.72	62.25	58.74	-1103.6	-791.0	1.8889

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LEM/SEC			ROTOR	ROTOR
		§	§	SOFT			§	§
1.2354	1.9242	87.29	88.40	35.62	1.0898	1.3169	90.95	91.30

STATOR 2

SL	FPSI-1	FPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	A-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	0.912	8.067	776.1	581.5	519.3	581.5	576.8	0.0	47.8	0.0	0.6467	0.4759	1.8958	1.2530	1.3180	1.1007
2	3.247	5.805	754.4	590.0	563.4	590.0	501.6	0.0	41.6	0.0	0.6322	0.4870	1.9237	1.2345	1.3166	1.0920
3	4.053	4.730	741.3	586.8	579.4	586.8	462.4	0.0	38.5	0.0	0.6223	0.4857	1.9329	1.2276	1.3158	1.0888
4	3.071	2.991	725.2	576.5	574.6	576.5	435.9	0.0	36.9	0.0	0.6085	0.4773	1.9308	1.2250	1.3138	1.0877
5	1.464	1.193	682.1	548.5	561.2	548.5	387.7	0.0	34.6	0.0	0.5702	0.4534	1.9117	1.2236	1.3039	1.0860
6	1.095	0.826	666.6	539.2	552.1	536.2	373.9	0.0	34.1	0.0	0.5565	0.4445	1.9026	1.2241	1.2991	1.0855
7	0.603	0.562	651.4	526.6	542.5	526.6	361.0	0.0	33.7	0.0	0.5427	0.4344	1.8918	1.2250	1.2935	1.0850
8	0.578	0.353	631.5	509.4	527.4	509.4	347.2	0.0	33.4	0.0	0.5241	0.4192	1.8757	1.2299	1.2858	1.0849
9	0.547	0.232	620.8	497.5	507.1	497.5	338.1	0.0	33.2	0.0	0.5111	0.4058	1.8620	1.2464	1.2787	1.0507
10	0.128	0.083	622.9	485.3	490.3	485.3	334.2	0.0	33.1	0.0	0.5068	0.3910	1.8471	1.2751	1.2709	1.1011

SL	TACM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P
	DEGREE	CEGREE	CFGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-3.06	8.51	47.80	51.10	60.23	0.4051	0.1556	0.0328	0.9619	79.19	80.96	88.64	82.62
2	-2.23	8.04	41.58	56.48	62.62	0.3660	0.0815	0.0183	0.9808	87.58	88.66	88.64	89.07
3	-3.51	8.29	38.55	58.61	62.97	0.3561	0.0530	0.0126	0.9878	90.97	91.76	91.67	91.99
4	-6.73	8.54	36.93	58.95	62.17	0.3562	0.0396	0.0100	0.9912	91.85	92.57	92.58	92.57
5	-6.78	9.07	34.64	57.67	59.26	0.3594	0.0341	0.0098	0.9933	90.91	91.69	91.36	91.68
6	-7.26	9.29	34.11	56.68	58.07	0.3614	0.0384	0.0115	0.9927	89.97	90.83	90.55	90.90
7	-7.77	9.56	33.65	55.48	56.70	0.3650	0.0464	0.0145	0.9916	88.73	89.69	89.56	89.94
8	-8.88	10.15	33.36	54.38	54.55	0.3742	0.0601	0.0199	0.9899	85.56	86.77	87.53	87.97
9	-9.56	11.27	33.23	51.67	52.47	0.3965	0.0791	0.0272	0.9871	78.84	80.59	80.11	80.80
10	-10.33	12.73	33.09	49.00	49.00	0.4401	0.1375	0.0689	0.9779	69.63	72.11	69.46	70.97

NLCRR	MCCR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
				§	§			§	§
836.7	712.50	1.2354	1.8985	85.33	86.58	1.0898	0.9866	86.34	

UNIFORM INLET FLOW DATA – BASELINE CONFIGURATION

- Overall Performance and Stall Summary
- Overall Performance and Blade-Element Data

FAN OVERALL PERFORMANCE – UNIFORM INLET, BASELINE CONFIGURATION

	N _{CORR} (rpm)	W _{CORR} (kg/sec)	W _{CORR} (lbm/sec)	Local				Cumulative Fan Alone					
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)		
411-15-1													
Rotor 1	8754	100.8	222.44	1.1285	1.4300	83.76	84.56	1.1285	1.4300	83.76	84.56		
Stator 1					0.9791				1.4001	78.57	79.57		
Rotor 2				1.0753	1.2144	75.67	76.32	1.2134	1.7003	76.69	78.35		
Stator 2					0.9403				1.5989	67.20	69.27		
411-15-2													
Rotor 1	8689	100.8	222.39	1.1263	1.4406	87.07	87.72	1.1263	1.4406	87.07	87.72		
Stator 1					0.9761				1.4061	81.00	81.90		
Rotor 2				1.0778	1.2542	85.69	86.14	1.2140	1.7634	82.19	83.54		
Stator 2					0.9808				1.7295	79.15	80.68		
411-15-3													
Rotor 1	8763	100.9	222.55	1.1275	1.4382	85.82	86.53	1.1275	1.4382	85.82	86.53		
Stator 1					0.9797				1.4091	80.74	81.65		
Rotor 2				1.0844	1.2835	87.33	87.78	1.2227	1.8086	82.76	84.13		
Stator 2					0.9857				1.7827	80.58	82.08		
411-15-4													
Rotor 1	8759	101.1	222.95	1.1340	1.4545	84.32	85.13	1.1340	1.4545	84.32	85.13		
Stator 1					0.9805				1.4262	79.66	80.66		
Rotor 2				1.0920	1.3251	90.85	91.20	1.2383	1.8898	83.62	85.01		
Stator 2					0.9892				1.8694	82.06	83.55		
411-15-5													
Rotor 1	8765	101.0	222.80	1.1365	1.4696	85.16	85.94	1.1365	1.4696	85.16	85.94		
Stator 1					0.9766				1.4352	79.65	80.66		
Rotor 2				1.0950	1.3424	92.18	92.51	1.2445	1.9266	84.20	85.58		
Stator 2					0.9882				1.9038	82.53	84.03		
411-10-11													
Rotor 1	8354	98.4	217.03	1.1237	1.4323	87.45	88.07	1.1237	1.4323	87.45	88.07		
Stator 1					0.9783				1.4013	81.85	82.70		
Rotor 2				1.0649	1.1756	72.81	73.43	1.1966	1.6474	77.96	79.45		
Stator 2					0.9424				1.5525	68.11	70.01		
411-10-2													
Rotor 1	8307	98.3	216.80	1.1239	1.4397	88.61	89.18	1.1239	1.4397	88.61	89.18		
Stator 1					0.9748				1.4034	82.11	82.95		
Rotor 2				1.0689	1.2181	83.95	84.39	1.2013	1.7095	82.19	83.47		
Stator 2					0.9797				1.6747	78.80	80.27		
411-10-3													
Rotor 1	8296	97.9	215.92	1.1258	1.4460	88.36	88.95	1.1258	1.4460	88.36	88.95		
Stator 1					0.9768				1.4125	82.45	83.29		
Rotor 2				1.0729	1.2390	86.43	86.84	1.2079	1.7500	83.36	84.61		
Stator 2					0.9846				1.7230	80.86	82.26		
411-10-4													
Rotor 1	8343	97.9	215.89	1.1269	1.4483	87.97	88.58	1.1269	1.4483	87.97	88.58		
Stator 1					0.9760				1.4135	81.92	82.78		
Rotor 2				1.0752	1.2592	90.39	90.70	1.2117	1.7803	84.59	85.78		
Stator 2					0.9869				1.7570	82.49	83.81		
411-10-5													
Rotor 1	8395	97.6	215.25	1.1313	1.4679	88.32	88.94	1.1313	1.4679	88.32	88.94		
Stator 1					0.9774				1.4347	82.77	83.63		
Rotor 2				1.0828	1.2921	91.58	91.89	1.2249	1.8538	85.69	86.87		
Stator 2					0.9885				1.8325	83.95	85.25		
411-10-15													
Rotor 1	8346	97.4	214.92	1.1255	1.4503	89.31	89.86	1.1255	1.4503	89.31	89.86		
Stator 1					0.9817				1.4238	84.65	85.40		
Rotor 2				1.0793	1.2778	91.33	91.63	1.2147	1.8194	86.79	87.85		
Stator 2					0.9886				1.7987	84.98	86.16		
411-94-1													
Rotor 1	7865	93.5	206.30	1.1087	1.3908	91.01	91.42	1.1087	1.3908	91.01	91.42		
Stator 1					0.9801				1.3631	85.21	85.85		
Rotor 2				1.0550	1.1488	73.40	73.91	1.1697	1.5660	80.58	81.76		
Stator 2					0.9445				1.4792	69.75	71.36		
411-94-2													
Rotor 1	7830	92.8	204.60	1.1103	1.3929	90.07	90.52	1.1103	1.3929	90.07	90.52		
Stator 1					0.9822				1.3680	84.95	85.61		
Rotor 2				1.0597	1.1922	86.21	86.54	1.1766	1.6310	84.94	85.94		
Stator 2					0.9806				1.5993	81.31	82.50		

FAN OVERALL PERFORMANCE – UNIFORM INLET, BASELINE CONFIGURATION (Cont'd)

	N _{CORR} (rpm)	W _{CORR} (kg/sec)	W _{CORR} (lbm/sec)	Local				Cumulative Fan Alone				
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	
411-94-3												
Rotor 1	7828	91.3	201.50	1.1140	1.4096	90.41	90.86	1.1140	1.4096	90.41	90.86	
Stator 1					0.9805				1.3822	84.99	85.66	
Rotor 2				1.0697	1.2398	90.79	91.06	1.1916	1.7136	86.78	87.74	
Stator 2					0.9891				1.6950	84.88	85.95	
411-94-24												
Rotor 1	7873	90.6	199.90	1.1180	1.4230	89.89	90.39	1.1180	1.4230	89.89	90.39	
Stator 1					0.9789				1.3930	84.20	84.92	
Rotor 2				1.0714	1.2582	94.82	94.99	1.1978	1.7527	87.86	88.77	
Stator 2					0.9894				1.7340	86.05	87.08	
411-80-11												
Rotor 1	6692	81.1	178.80	1.0804	1.2758	89.64	90.00	1.0804	1.2758	89.64	90.00	
Stator 1					0.9858				1.2577	84.21	84.72	
Rotor 2				1.0351	1.0938	73.82	74.16	1.1184	1.3757	80.60	81.46	
Stator 2					0.9600				1.3208	69.88	71.05	
411-80-2												
Rotor 1	6682	79.1	174.40	1.0806	1.2852	92.24	92.52	1.0806	1.2852	92.24	92.52	
Stator 1					0.9849				1.2658	86.46	86.91	
Rotor 2				1.0443	1.1427	87.66	87.90	1.1285	1.4464	86.58	87.26	
Stator 2					0.9843				1.4236	82.67	83.51	
411-80-3												
Rotor 1	6684	74.4	164.20	1.0884	1.3066	89.87	90.25	1.0884	1.3066	89.87	90.25	
Stator 1					0.9862				1.2866	85.03	85.56	
Rotor 2				1.0515	1.1797	93.75	93.89	1.1445	1.5201	87.98	88.66	
Stator 2					0.9921				1.5082	86.22	86.99	
411-80-4												
Rotor 1	6674	77.0	169.80	1.0822	1.2866	90.91	91.23	1.0822	1.2866	90.91	91.23	
Stator 1					0.9885				1.2718	86.60	87.06	
Rotor 2				1.0490	1.1624	89.62	89.85	1.1352	1.4783	87.45	88.11	
Stator 2					0.9882				1.4608	84.62	85.42	
411-80-6												
Rotor 1	6668	71.4	157.60	1.0875	1.2937	87.31	87.77	1.0875	1.2937	87.31	87.77	
Stator 1					0.9880				1.2781	83.06	83.64	
Rotor 2				1.0587	1.1941	88.55	88.84	1.1513	1.5261	84.87	85.75	
Stator 2					0.9934				1.5161	83.46	84.41	
411-76-1												
Rotor 1	6351	77.4	170.70	1.0706	1.2402	89.95	90.25	1.0706	1.2402	89.95	90.25	
Stator 1					0.9878				1.2252	84.69	85.12	
Rotor 2				1.0319	1.0888	77.02	77.30	1.1048	1.3340	81.93	82.65	
Stator 2					0.9633				1.2850	70.91	71.92	
411-63-1												
Rotor 1	5257	64.5	142.40	1.0487	1.1616	89.84	90.06	1.0487	1.1616	89.84	90.06	
Stator 1					0.9908				1.1509	84.21	84.51	
Rotor 2				1.0206	1.0599	81.26	81.43	1.0703	1.2199	83.12	83.59	
Stator 2					0.9762				1.1908	72.78	73.45	
411-63-2												
Rotor 1	5255	61.0	134.70	1.0518	1.1727	90.05	90.26	1.0518	1.1727	90.05	90.26	
Stator 1					0.9912				1.1624	84.94	85.26	
Rotor 2				1.0261	1.0854	90.88	91.00	1.0792	1.2617	86.77	87.20	
Stator 2					0.9886				1.2473	82.35	82.90	
411-63-4												
Rotor 1	5275	64.8	121.00	1.0549	1.1797	88.17	88.46	1.0549	1.1797	88.17	88.46	
Stator 1					0.9916				1.1698	83.59	83.96	
Rotor 2				1.0357	1.1174	90.37	90.52	1.0925	1.3022	85.04	86.56	
Stator 2					0.9952				1.3009	84.44	85.01	
411-63-3												
Rotor 1	5255	57.7	127.30	1.0531	1.1770	89.83	90.07	1.0531	1.1770	89.83	90.07	
Stator 1					0.9926				1.1683	85.65	85.97	
Rotor 2				1.0313	1.1046	92.13	92.24	1.0861	1.2905	87.87	88.31	
Stator 2					0.9927				1.2810	85.25	85.77	
411-50-1												
Rotor 1	4191	51.6	113.80	1.0300	1.1010	93.08	93.16	1.0300	1.1010	93.08	93.16	
Stator 1					0.9945				1.0950	87.69	87.86	
Rotor 2				1.0142	1.0380	75.42	75.55	1.0446	1.1366	83.60	83.88	
Stator 2					0.9857				1.1204	74.05	74.48	

FAN OVERALL PERFORMANCE – UNIFORM INLET, BASELINE CONFIGURATION (Cont'd)

	N_{CORR} (rpm)	W_{CORR} (kg/sec)	W_{CORR} (lbm/sec)	Local				Cumulative Fan Alone				
				T_o/T_o	P_o/P_o	η_{ad} (%)	η_p (%)	T_o/T_o	P_o/P_o	η_{ad} (%)	η_p (%)	
411-50-2												
Rotor 1	4164	49.2	108.50	1.0308	1.1048	93.87	93.97	1.0308	1.1048	93.87	93.97	
Stator 1					0.9950				1.0993	89.09	89.25	
Rotor 2				1.0160	1.0479	84.14	84.21	1.0473	1.1519	87.28	87.52	
Stator 2					0.9890				1.1393	80.33	80.67	
411-50-3												
Rotor 1	4182	45.7	100.80	1.0331	1.1098	91.30	91.43	1.0331	1.1098	91.30	91.43	
Stator 1					0.9946				1.1039	86.53	86.72	
Rotor 2				1.0202	1.0612	84.59	84.73	1.0541	1.1714	85.63	85.96	
Stator 2					0.9952				1.1658	83.00	83.36	
411-50-4												
Rotor 1	4197	41.90	92.50	1.0365	1.1130	85.17	85.39	1.0365	1.1130	85.17	85.39	
Stator 1					1.0330				1.1067	80.59	80.86	
Rotor 2				1.0231	1.0576	88.70	88.84	1.0605	1.1882	83.58	83.97	
Stator 2					0.9970				1.1846	82.07	82.50	

Overall Stall Point Data

411-50	40.8	90.0	1.187
-63	52.4	115.7	1.307
-80	70.9	156.5	1.518
-94	90.1	198.7	1.747
-10	96.2	212.2	1.865
-15		no stall data	

SPEED CODE	IDENTIFICATION (percent of design speed)
50	50
63	63
76	76
80	80
94	94
10	100
15	105

FAN OVERALL PERFORMANCE – UNIFORM INLET, RECHECK

	N _{CORR} (rpm)	W _{CORR} (kg/sec)	W _{CORR} (lbm/sec)	Local				Cumulative Fan Alone				
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	
423-10-1												
Rotor 1	8348	99.6	219.80	1.1238	1.4393	88.60	89.18	1.1238	1.4393	88.60	89.18	
Stator 1					0.9788				1.4088	83.14	83.94	
Rotor 2				1.0644	1.1629	71.11	71.74	1.1961	1.6482	78.22	79.68	
Stator 2					0.9429				1.5541	68.43	70.31	
423-10-2												
Rotor 1	8365	99.6	219.70	1.1267	1.4450	87.58	88.20	1.1267	1.4450	87.58	88.20	
Stator 1					0.9789				1.4145	82.24	83.09	
Rotor 2				1.0682	1.2169	84.45	84.87	1.2035	1.7213	82.44	83.73	
Stator 2					0.9801				1.6871	79.17	80.63	
423-10-3												
Rotor 1	8375	98.6	217.50	1.1303	1.4691	89.18	89.75	1.1303	1.4691	89.18	89.75	
Stator 1					0.9773				1.4357	83.57	84.39	
Rotor 2				1.0805	1.2791	90.30	90.63	1.2213	1.8364	85.65	86.81	
Stator 2					0.9873				1.8131	83.69	84.99	
423-10-4												
Rotor 1	8373	97.77	215.60	1.1329	1.4741	88.25	88.88	1.1329	1.4741	88.25	88.88	
Stator 1					0.9812				1.4465	83.71	84.54	
Rotor 2				1.0809	1.2721	90.80	91.12	1.2245	1.8545	85.90	87.07	
Stator 2					0.9879				1.8320	84.05	85.34	
423-10-5												
Rotor 1	8372	98.2	216.70	1.1299	1.4773	90.81	91.30	1.1299	1.4773	90.81	91.30	
Stator 1					0.9747				1.4399	84.52	85.30	
Rotor 2				1.0807	1.2771	89.54	89.90	1.2210	1.8589	85.94	87.09	
Stator 2					0.9881				1.8170	84.11	85.38	
423-10-15												
Rotor 1	8359	98.4	217.00	1.1317	1.4754	89.23	89.81	1.1317	1.4754	89.23	89.81	
Stator 1					0.9759				1.4398	83.35	84.18	
Rotor 2				1.0802	1.2790	90.67	90.98	1.2224	1.8415	85.62	86.80	
Stator 2					0.9873				1.8182	83.68	84.98	
423-10-16												
Rotor 1	8378	99.7	220.00	1.1293	1.4552	87.54	88.19	1.1293	1.4552	87.54	88.19	
Stator 1					0.9810				1.4275	82.83	83.68	
Rotor 2				1.0741	1.2414	85.83	86.26	1.2129	1.7721	83.36	84.63	
Stator 2					0.9850				1.7455	80.98	82.40	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2084	0.1590	230.9	319.4	230.9	207.5	0.0	242.8	0.0	0.8605	0.7120	0.9498	166.6	182.2	0.8779	0.6429	284.7	216.2
2	0.1923	0.1211	234.1	311.4	234.1	220.0	0.0	228.7	0.0	0.7841	0.7228	0.9230	186.5	199.7	0.9242	0.6546	299.3	221.0
3	0.1940	0.1250	239.1	286.8	239.1	212.9	0.0	189.1	0.0	0.7262	0.7399	0.8357	208.7	219.0	0.9023	0.6309	317.4	215.0
4	0.1194	0.1074	242.3	244.6	242.3	208.1	0.0	163.4	0.0	0.6637	0.7511	0.7724	229.2	237.3	1.0339	0.6449	333.6	220.9
5	0.0308	0.0626	243.9	229.7	243.9	193.0	0.0	124.7	0.0	0.5740	0.7566	0.6656	275.3	279.4	1.1410	0.7164	367.9	247.3
6	0.0364	0.0355	242.5	216.3	242.5	184.4	0.0	113.1	0.0	0.5499	0.7516	0.6245	297.6	300.4	1.1899	0.7588	387.9	262.9
7	0.0277	0.0248	242.0	212.8	242.0	183.3	0.0	108.2	0.0	0.5332	0.7500	0.6137	311.8	313.4	1.2231	0.7934	394.7	275.2
8	0.0188	0.0189	241.8	213.5	241.8	184.5	0.0	104.0	0.0	0.5088	0.7494	0.6147	325.7	326.9	1.2572	0.8380	405.7	293.6
9	0.0104	0.0085	241.5	215.0	241.5	189.9	0.0	100.7	0.0	0.4873	0.7482	0.6198	340.9	340.9	1.2943	0.8833	417.8	306.2
10	0.0004	0.0021	240.7	212.6	240.7	187.6	0.0	100.0	0.0	0.4898	0.7456	0.6111	358.0	358.0	1.3361	0.9168	431.4	319.0
11	0.0040	0.0035	239.8	202.5	239.8	174.7	0.0	102.5	0.0	0.5307	0.7425	0.5779	372.4	372.3	1.3716	0.9173	443.0	321.4

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0493	0.0475	0.2556	0.9091	45.51	42.80	0.4479	0.3354	0.0757	1.4349	72.56	71.13	0.6268	0.2823	-166.6	80.6	1.4349
2	0.0379	0.0544	0.2206	0.7703	45.81	49.34	0.4535	0.1730	0.0440	1.5262	85.25	84.35	0.6755	0.0947	-186.5	21.0	1.5262
3	0.0344	0.0577	0.2381	0.5803	46.27	51.42	0.4912	0.0983	0.0269	1.5262	90.35	89.76	0.7196	0.1393	-208.7	-29.9	1.5262
4	0.0363	0.0550	0.2443	0.4172	46.54	51.95	0.4873	0.0747	0.0299	1.4958	91.56	91.06	0.7586	0.3414	-229.2	-73.9	1.4958
5	0.0433	0.0363	0.1905	0.1896	46.68	49.58	0.4464	0.0836	0.0220	1.4190	87.95	87.34	0.8456	0.6760	-275.3	-154.7	1.4190
6	0.0364	0.0331	0.1790	0.0940	46.56	47.58	0.4237	0.1024	0.0256	1.3801	84.08	83.33	0.8870	0.7930	-297.6	-187.3	1.3801
7	0.0176	0.0319	0.1664	0.0690	46.52	47.46	0.4058	0.1028	0.0252	1.3822	83.51	82.74	0.9108	0.8418	-311.8	-205.2	1.3822
8	0.0057	0.0345	0.1479	0.0581	46.50	48.55	0.3838	0.0909	0.0222	1.3521	85.09	84.37	0.9322	0.8741	-325.7	-222.9	1.3521
9	0.0001	0.0391	0.1302	0.0526	46.47	49.69	0.3619	0.0811	0.0197	1.4034	86.45	85.78	0.9544	0.9818	-340.9	-240.2	1.4034
10	0.0081	0.0448	0.1334	0.0369	46.41	48.99	0.3556	0.1247	0.0250	1.4001	82.45	81.60	0.9788	0.9419	-358.0	-258.0	1.4001
11	0.0056	0.0444	0.1854	0.0024	46.33	45.09	0.3714	0.1667	0.0377	1.3688	72.44	71.19	0.9986	0.9962	-372.6	-269.8	1.3688

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	AC/SEC	%	%	ROTOR	ROTOR
		%	%	SON			%	%
1.1285	1.4306	83.76	84.56	218.89	1.1285	1.4300	83.76	84.56

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	STG
1	0.1924	0.1318	288.9	195.4	175.4	192.2	229.4	34.8	0.9164	0.1771	0.8454	0.5508	1.3552	1.1528	1.3552	1.1528
2	0.1236	0.0856	296.2	222.0	208.4	219.0	210.5	36.1	0.7895	0.1624	0.8704	0.6315	1.4473	1.1522	1.4473	1.1522
3	0.0747	0.0446	286.0	222.7	220.7	220.6	181.8	30.7	0.6883	0.1381	0.8396	0.6366	1.4884	1.1426	1.4884	1.1426
4	0.0467	0.0305	271.8	216.1	221.0	214.0	158.3	29.9	0.6212	0.1387	0.7962	0.6191	1.4688	1.1333	1.4688	1.1333
5	0.0187	0.0124	239.5	197.7	205.8	195.6	122.5	28.9	0.5365	0.1468	0.6964	0.5664	1.4000	1.1202	1.4000	1.1202
6	0.0125	0.0083	225.0	189.3	195.5	187.2	111.4	28.0	0.5176	0.1482	0.6516	0.5414	1.3697	1.1173	1.3697	1.1173
7	0.0097	0.0065	220.8	187.0	193.3	184.9	106.7	27.4	0.5044	0.1480	0.6386	0.5346	1.3606	1.1172	1.3606	1.1172
8	0.0084	0.0062	221.1	189.1	195.7	187.2	102.9	26.4	0.4842	0.1410	0.6394	0.5409	1.3650	1.1176	1.3650	1.1176
9	0.0072	0.0059	222.3	193.6	198.6	191.7	99.8	26.4	0.4856	0.1379	0.6427	0.5541	1.3769	1.1188	1.3769	1.1188
10	0.0044	0.0041	219.9	194.1	196.1	190.2	99.5	30.5	0.4498	0.1997	0.6336	0.5543	1.3771	1.1240	1.3771	1.1240
11	0.0014	0.0016	209.4	182.3	182.7	178.3	102.3	30.0	0.5105	0.2101	0.5989	0.5167	1.3411	1.1320	1.3411	1.1320

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0033	0.0790	0.2709	0.7392	39.26	48.94	0.4618	0.1503	0.0312	0.9438	59.38	61.07	59.38	61.07
2	0.0364	0.0528	0.2091	0.6271	48.43	57.75	0.3811	0.1012	0.0225	0.9605	76.07	77.32	76.07	77.32
3	0.0445	0.0010	0.1619	0.5502	43.14	59.33	0.3450	0.0665	0.0160	0.9755	84.41	85.26	84.41	85.26
4	0.1375	0.0367	0.1528	0.4824	44.28	57.86	0.3205	0.0495	0.0127	0.9032	87.08	87.76	87.08	87.76
5	0.2005	0.0087	0.1492	0.3898	51.97	52.50	0.2826	0.0451	0.0131	0.9876	83.93	84.68	83.93	84.68
6	0.2180	0.0547	0.1446	0.3694	49.68	49.93	0.2704	0.0456	0.0160	0.9888	80.18	81.04	80.18	81.04
7	0.2321	0.1102	0.1419	0.3563	49.33	49.18	0.2674	0.0664	0.0211	0.9841	78.50	79.42	78.50	79.42
8	0.2567	0.1312	0.1354	0.3431	50.25	49.77	0.2598	0.0831	0.0273	0.9800	79.09	79.99	79.09	79.99
9	0.2862	0.1571	0.1302	0.3277	51.28	51.01	0.2424	0.0802	0.0273	0.9805	80.59	81.45	80.59	81.45
10	0.3172	0.1847	0.1998	0.2700	50.76	50.37	0.2146	0.0867	0.0233	0.9843	77.24	78.25	77.24	78.25
11	0.3319	0.1970	0.2498	0.3004	48.62	46.53	0.2415	0.0912	0.0327	0.9804	66.29	67.65	66.29	67.65

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
RAD/SEC			%	%			%	%
916.75	1.1285	1.4001	78.57	79.57	1.1285	0.9791	78.57	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N°-1	N°-2	V°-1	V°-2
1	0.1533	C.1022	170.4	297.0	175.1	246.4	33.9	165.7	0.1899	0.5861	0.5004	0.8316	207.2	220.6	0.6012	0.7069	246.4	252.5
2	0.1187	0.0792	224.0	209.0	221.4	249.9	34.7	146.6	0.1827	0.5270	0.4383	0.8132	225.3	234.9	0.8333	0.7438	292.5	265.1
3	0.0585	0.0436	228.7	273.7	226.7	241.2	29.8	129.3	0.1305	0.4906	0.4539	0.7683	242.0	249.1	0.8908	0.7560	310.6	269.3
4	0.0804	0.0493	224.2	255.8	222.8	226.8	29.2	118.2	0.1300	0.4799	0.4448	0.7171	240.1	244.7	0.9217	0.7370	320.5	270.0
5	0.0426	0.0212	205.0	222.8	203.1	196.4	28.1	106.8	0.1377	0.4897	0.5892	0.6210	300.9	302.2	0.9776	0.7766	340.1	278.4
6	0.0317	0.0156	199.3	211.1	197.4	186.2	27.5	99.4	0.1306	0.4903	0.5721	0.5866	315.4	315.7	1.0019	0.7934	349.0	285.4
7	0.0211	0.0091	190.9	211.1	197.1	188.1	26.5	95.9	0.1338	0.4716	0.5706	0.5867	329.5	329.5	1.0370	0.8332	361.4	299.9
8	0.0058	0.0028	203.8	215.4	201.7	192.4	29.0	97.0	0.1428	0.4469	0.5851	0.5980	344.8	347.5	1.0855	0.8767	378.1	315.9
9	0.0010	0.0009	201.5	212.4	197.8	182.4	38.4	108.8	0.1916	0.5378	0.5767	0.5861	342.1	341.3	1.0856	0.8597	379.4	311.5
10	0.0020	0.0051	189.6	198.0	195.8	166.1	37.7	107.8	0.2002	0.5758	0.5388	0.5417	375.3	374.9	1.0950	0.8662	385.4	314.5

SL	INCS	INCH	DEV	TURN	RDOWN-1	RDOWN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B°-1	B°-2	VO°-1	VO°-2	PD/PO
1	0.1302	0.0088	0.2960	0.5608	45.73	44.23	0.1219	0.0618	0.0147	1.3219	94.12	93.88	0.7772	0.2164	-173.4	-54.9	1.8013
2	0.1866	0.0773	0.1928	0.3731	58.73	67.89	0.2007	0.1518	0.0374	1.2396	79.17	78.52	0.7105	0.3374	-191.1	-88.3	1.8354
3	0.1592	0.0602	0.1713	0.2925	60.22	67.34	0.2245	0.1457	0.0363	1.2166	76.63	75.97	0.7519	0.4594	-212.3	-114.8	1.8038
4	0.1294	0.0407	0.1441	0.2319	58.85	64.47	0.2407	0.1357	0.0338	1.2049	76.15	75.52	0.8046	0.5727	-230.9	-144.5	1.7549
5	0.0966	0.0210	0.1130	0.1439	53.26	56.86	0.2572	0.1234	0.0295	1.2029	76.14	75.51	0.9313	0.7874	-272.8	-197.4	1.6628
6	0.0185	0.0393	0.1211	0.1896	51.61	53.88	0.2543	0.1247	0.0287	1.1937	74.53	73.89	0.9699	0.8602	-287.9	-216.4	1.6284
7	0.0003	0.0419	0.1011	0.1013	51.68	54.69	0.2401	0.1086	0.0251	1.2023	77.00	76.40	0.9941	0.8928	-302.9	-233.6	1.6370
8	0.0116	0.0271	0.0648	0.0921	52.81	56.11	0.2367	0.1162	0.0275	1.2049	74.81	74.14	1.0079	0.9157	-319.8	-250.5	1.6605
9	0.0104	0.0284	0.0612	0.0769	51.57	58.80	0.2530	0.1441	0.0339	1.2026	70.15	69.36	1.0221	0.9452	-323.7	-252.5	1.6521
10	0.0210	0.0599	0.1139	0.0533	47.85	47.42	0.2594	0.1601	0.0352	1.1991	67.23	66.38	1.0676	1.0143	-337.6	-267.0	1.6044

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
1.2134	1.7003	76.69	71.35	189.43	1.0753	1.2144	75.67	76.32

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PD/PO	TO2/
1	0.1184	0.1388	261.1	268.9	204.2	268.5	162.7	-14.6	0.4692	-0.0542	0.7200	0.7437	1.7191	1.2542	1.2549	1.0880
2	0.0859	0.0991	264.4	264.9	224.5	263.7	163.4	-25.1	0.5668	-0.0945	0.7400	0.7359	1.7236	1.2612	1.1635	1.0850
3	0.0701	0.0788	258.2	244.8	225.0	263.9	126.7	-21.8	0.5122	-0.0891	0.7202	0.6795	1.6493	1.2256	1.1127	1.0755
4	0.0426	0.0447	246.8	231.2	217.7	230.5	116.2	-18.9	0.4900	-0.0819	0.6893	0.6421	1.6090	1.2128	1.1038	1.0723
5	0.0423	0.0406	224.4	216.5	199.1	215.9	103.4	-16.4	0.4792	-0.0760	0.6258	0.6021	1.5876	1.1984	1.1465	1.0717
6	0.0316	0.0292	214.9	208.6	191.0	208.1	98.3	-14.6	0.4755	-0.0702	0.5980	0.5793	1.5668	1.1956	1.1476	1.0703
7	0.0225	0.0195	216.0	205.7	193.9	205.5	95.1	-8.7	0.4562	-0.0426	0.6011	0.5707	1.5607	1.1961	1.1445	1.0705
8	0.0179	0.0155	221.3	203.6	199.2	203.6	96.4	0.0	0.4508	0.0002	0.6153	0.5630	1.5561	1.2015	1.1294	1.0735
9	0.0150	0.0140	219.3	202.1	196.6	202.1	108.4	1.8	0.5169	0.0089	0.6066	0.5562	1.5520	1.2115	1.1275	1.0777
10	0.0070	0.0069	206.0	192.1	175.6	192.1	107.7	1.7	0.5503	0.0086	0.6000	0.5246	1.5202	1.2226	1.1352	1.0800

SL	INCH	DEV	TURN	RDOWN-1	RDOWN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
1	-0.2184	0.0943	0.7234	57.50	71.03	0.1126	0.1584	0.0334	0.9536	65.80	68.27	76.39	77.14
2	-0.1577	0.0458	0.6614	64.14	71.02	0.1458	0.1983	0.0444	0.9398	69.66	71.86	80.84	85.77
3	-0.2218	0.0556	0.6013	64.87	66.01	0.1878	0.2921	0.0693	0.9149	68.07	70.21	80.85	81.73
4	-0.2371	0.0671	0.5719	63.01	62.92	0.2018	0.3073	0.0774	0.9161	68.39	70.41	80.51	80.34
5	-0.2437	0.0822	0.5552	57.44	60.24	0.1919	0.2017	0.0580	0.9529	71.13	72.93	85.47	86.32
6	-0.2466	0.0920	0.5457	54.95	58.17	0.1889	0.1801	0.0540	0.9612	69.96	71.79	85.01	87.84
7	-0.2666	0.1244	0.4584	55.91	57.47	0.1977	0.2129	0.0667	0.9539	69.15	71.00	86.38	87.21
8	-0.2865	0.1772	0.4506	57.53	56.74	0.2222	0.2778	0.0918	0.9374	66.82	68.81	88.08	88.96
9	-0.2648	0.2055	0.5080	54.60	55.70	0.2477	0.2824	0.0969	0.9374	63.26	65.43	84.81	85.73
10	-0.2947	0.2307	0.5417	49.53	52.41	0.2524	0.2731	0.0972	0.9466	57.07	59.50	84.00	86.95

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
916.75	100.880	1.2134	1.5989	67.23	69.27	1.0753	0.9403	51.25

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2027	0.1465	230.2	314.7	237.2	206.9	0.0	238.0	0.0	0.8595	0.7096	0.9352	165.4	180.8	0.8736	0.6329	283.4	213.0
2	0.1825	0.1392	233.2	308.3	237.2	210.0	0.0	217.9	0.0	0.7836	0.7197	0.9129	185.1	196.2	0.9189	0.6483	297.7	218.9
3	0.1482	0.1263	237.4	286.1	237.4	215.9	0.0	187.8	0.0	0.7160	0.7363	0.8411	207.2	217.4	0.9795	0.6405	315.1	217.9
4	0.1188	0.0987	240.2	266.1	240.2	211.1	0.0	161.9	0.0	0.6539	0.7436	0.7783	227.5	235.5	1.0243	0.6541	330.8	223.6
5	0.0621	0.0498	242.2	229.2	242.2	192.8	0.0	124.0	0.0	0.5712	0.7507	0.6844	273.3	277.3	1.1318	0.7141	345.2	246.4
6	0.0445	0.0353	241.9	216.3	241.9	184.8	0.0	112.5	0.0	0.5467	0.7496	0.6249	295.3	298.1	1.1830	0.7564	381.8	261.9
7	0.0355	0.0285	242.0	212.2	242.0	183.0	0.0	107.4	0.0	0.5309	0.7499	0.6121	309.4	311.1	1.2173	0.7898	392.8	273.8
8	0.0268	0.0209	242.4	212.5	242.4	185.9	0.0	102.9	0.0	0.5056	0.7513	0.6132	323.3	324.5	1.2525	0.8345	404.1	289.2
9	0.0156	0.0118	242.6	213.8	242.6	189.2	0.0	99.7	0.0	0.4850	0.7522	0.6169	338.3	338.3	1.2906	0.8786	416.4	304.5
10	0.0021	0.0003	242.3	211.7	242.3	187.2	0.0	99.0	0.0	0.4864	0.7511	0.6090	355.3	355.3	1.3330	0.9129	430.1	317.4
11	0.0029	0.0030	241.6	206.5	241.6	172.6	0.0	102.1	0.0	0.5363	0.7487	0.5721	369.6	369.5	1.3683	0.9881	441.6	318.3

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-2	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VE*-1	VE*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0520	0.0448	0.2633	0.8987	47.66	43.27	0.4535	0.2920	0.0661	1.4473	75.95	74.67	0.8241	-0.2746	-165.4	58.0	1.4473
2	-0.0406	0.0537	0.2253	0.7629	47.73	49.80	0.4554	0.1347	0.0362	1.5383	88.48	87.76	0.6729	-0.0901	-185.1	19.8	1.5383
3	-0.0352	0.0570	0.2349	0.5829	47.12	52.32	0.4756	0.0734	0.0211	1.5353	92.87	92.43	0.7189	0.1360	-207.2	-29.5	1.5353
4	-0.0331	0.0557	0.2382	0.4239	47.36	52.90	0.4710	0.0502	0.0140	1.5050	94.42	94.08	0.7593	0.3353	-227.5	-73.6	1.5050
5	-0.0432	0.0364	0.1863	0.1740	47.54	49.95	0.4423	0.0661	0.0175	1.4274	90.60	90.11	0.8457	0.6718	-273.3	-153.4	1.4274
6	-0.0387	0.0308	0.1736	0.0971	47.51	48.20	0.4207	0.0799	0.0201	1.3999	87.69	87.08	0.8847	0.7876	-295.3	-185.6	1.3999
7	-0.0211	0.0285	0.1635	0.0484	47.52	47.93	0.4044	0.0809	0.0199	1.3951	87.11	86.48	0.9073	0.8389	-309.4	-203.7	1.3951
8	-0.0103	0.0249	0.1464	0.0550	47.55	49.04	0.3816	0.0668	0.0163	1.4054	89.06	88.52	0.9276	0.8726	-323.3	-221.5	1.4054
9	-0.0057	0.0334	0.1290	0.0480	47.57	50.15	0.3621	0.0571	0.0139	1.4174	91.15	89.96	0.9687	0.9006	-338.3	-238.7	1.4174
10	-0.0005	0.0383	0.1315	0.0322	47.54	49.56	0.3560	0.0798	0.0191	1.4154	84.57	85.89	0.9723	0.9401	-355.3	-256.3	1.4154
11	-0.0012	0.0376	0.1911	-0.0059	47.49	45.12	0.3760	0.1500	0.0339	1.3802	75.15	74.00	0.9919	0.9977	-369.6	-267.4	1.3802

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
1.1263	1.4406	87.07	87.72	218.84	1.1263	1.4406	87.07	87.72

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	INLET	STAGE
1	0.1950	0.1337	284.2	193.9	177.8	190.7	225.7	35.1	0.9162	0.1797	0.8314	0.5474	1.3586	1.1492	1.3586	1.1492
2	0.1257	0.0877	292.1	219.6	207.3	216.0	207.9	39.1	0.7909	0.1780	0.8578	0.6250	1.4674	1.1492	1.4674	1.1492
3	0.0767	0.0548	281.8	270.8	217.6	216.4	179.9	30.6	0.6926	0.1387	0.8260	0.6313	1.4913	1.1403	1.4913	1.1403
4	0.0478	0.0355	267.2	212.8	217.9	211.7	156.0	29.6	0.6231	0.1387	0.7821	0.6126	1.4718	1.1306	1.4718	1.1306
5	0.0172	0.0156	234.7	195.3	201.0	193.2	121.3	28.1	0.5429	0.1443	0.6819	0.5594	1.4053	1.1184	1.4053	1.1184
6	0.0103	0.0102	222.0	187.9	197.5	185.8	110.7	28.1	0.5218	0.1498	0.6428	0.5377	1.3789	1.1158	1.3789	1.1158
7	0.0076	0.0079	218.2	185.8	197.7	183.6	104.0	27.1	0.5071	0.1464	0.6309	0.5315	1.3707	1.1154	1.3707	1.1154
8	0.0066	0.0071	218.7	187.9	197.5	186.0	101.9	26.2	0.4867	0.1399	0.6325	0.5377	1.3751	1.1156	1.3751	1.1156
9	0.0059	0.0066	220.0	192.3	197.5	190.4	98.9	27.1	0.4661	0.1413	0.6362	0.5508	1.3871	1.1167	1.3871	1.1167
10	0.0037	0.0047	217.6	192.2	197.0	189.7	98.7	31.0	0.4704	0.1618	0.6273	0.5491	1.3853	1.1220	1.3853	1.1220
11	0.0012	0.0019	206.1	179.9	177.1	175.9	102.0	37.6	0.5179	0.2105	0.5891	0.5100	1.3479	1.1306	1.3479	1.1306

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.0035	0.0788	0.2735	0.7365	37.50	48.92	0.4552	0.1691	0.0351	0.9383	61.33	62.96	61.33	62.96
2	-0.0350	0.0543	0.2227	0.6129	47.87	57.36	0.3764	0.1220	0.0271	0.9534	77.60	78.78	77.60	78.78
3	-0.0902	0.0653	0.1625	0.5539	57.08	59.22	0.3410	0.0779	0.0187	0.9720	86.21	86.97	86.21	86.97
4	-0.1356	0.0347	0.1528	0.4844	57.20	57.70	0.3169	0.0594	0.0152	0.9804	89.40	89.97	89.40	89.97
5	-0.1960	0.0815	0.1447	0.3986	57.48	52.34	0.2798	0.0496	0.0144	0.9869	86.26	86.91	86.26	86.91
6	-0.2138	0.0955	0.1462	0.3719	47.65	50.05	0.2644	0.0559	0.0172	0.9865	83.07	83.82	83.07	83.82
7	-0.2294	0.1075	0.1402	0.3607	47.44	49.41	0.2636	0.0773	0.0245	0.9819	81.69	82.49	81.69	82.49
8	-0.2561	0.1306	0.1323	0.3448	57.49	49.99	0.2563	0.0960	0.0315	0.9773	82.47	83.24	82.47	83.24
9	-0.2856	0.1566	0.1376	0.3248	57.56	51.21	0.2380	0.0938	0.0319	0.9776	83.96	84.69	83.96	84.69
10	-0.3165	0.1840	0.1619	0.3086	57.83	50.76	0.2261	0.0849	0.0305	0.9799	80.07	80.96	80.07	80.96
11	-0.3244	0.1896	0.2502	0.3075	47.35	46.36	0.2410	0.1075	0.0385	0.9775	68.20	69.51	68.20	69.51

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	STAGE	STAGE
RAD/SEC	1.1263	1.4061	81.00	81.90	1.1263	0.9761	81.00	81.90
909.90								

ROTOR 2

														RUN NO 411, SPEED CODE 15, POINT NO 2				
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1533	0.1044	176.3	279.1	17.0	226.6	34.1	162.9	0.1934	0.6171	0.4950	0.7775	205.7	219.0	0.6041	0.6505	243.4	233.5
2	0.1187	0.0831	221.3	276.8	21.2	233.8	37.0	148.2	0.1673	0.5621	0.6307	0.7737	223.6	233.2	0.8183	0.6953	287.1	248.7
3	0.0577	0.0676	226.6	265.2	22.7	230.8	29.5	130.7	0.1304	0.5139	0.6501	0.7423	240.2	247.3	0.8837	0.7236	308.0	258.5
4	0.0781	0.0522	221.8	248.2	22.0	217.2	28.8	120.0	0.1301	0.5042	0.6383	0.6941	258.1	262.8	0.9145	0.7269	317.8	259.9
5	0.0389	0.0225	202.9	214.5	20.0	185.2	27.8	108.1	0.1373	0.5204	0.5832	0.5957	298.7	300.0	0.9697	0.7406	337.3	266.7
6	0.0296	0.0178	197.4	203.7	19.7	175.9	27.3	102.7	0.1389	0.5286	0.5672	0.5645	313.0	313.4	0.9941	0.7405	346.3	274.4
7	0.0209	0.0125	197.1	204.0	19.4	178.0	25.8	99.7	0.1315	0.5109	0.5658	0.5649	327.0	327.0	1.0304	0.7994	359.0	289.7
8	0.0079	0.0022	202.1	209.1	20.2	182.8	27.8	101.6	0.1380	0.5070	0.5805	0.5783	346.2	344.9	1.0802	0.8417	376.1	304.4
9	0.0014	0.0035	199.5	206.6	19.0	176.3	31.7	107.8	0.1594	0.5478	0.5716	0.5679	359.4	358.6	1.0944	0.8433	382.3	306.6
10	0.0006	0.0029	187.4	194.6	18.6	159.0	37.3	112.2	0.2005	0.6146	0.5324	0.5308	372.5	372.1	1.0859	0.8310	382.2	304.6

SL	INCS	INCR	DEV	TURN	RH	VM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.1291	-0.0077	0.3194	0.5385	4.53	62.33	0.1829	-0.0005	-0.0001	1.3347	99.99	99.98	0.7783	0.2398	-171.6	-56.1	1.0193	
2	-0.1409	-0.0816	0.2019	0.3597	5.29	86.93	0.2410	0.0888	0.0218	1.2862	88.20	87.79	0.7061	0.3465	-186.6	-85.0	1.0753	
3	-0.1583	-0.0593	0.1781	0.2866	6.14	87.92	0.2543	0.0775	0.0192	1.2556	88.04	87.65	0.7528	0.4662	-210.7	-116.5	1.0662	
4	-0.1275	-0.0389	0.1521	0.2258	5.76	65.11	0.2682	0.0675	0.0167	1.2475	88.68	88.31	0.8065	0.5807	-229.4	-142.7	1.0217	
5	-0.0450	0.0226	0.1284	0.1300	5.25	56.33	0.2904	0.0778	0.0183	1.2418	85.83	85.39	0.9529	0.8029	-271.0	-191.8	1.0759	
6	-0.0179	0.0398	0.1360	0.0953	5.72	53.58	0.2837	0.0775	0.0176	1.2344	85.13	84.68	0.9704	0.8751	-285.7	-210.4	1.0957	
7	0.0015	0.0432	0.1148	0.0888	5.65	54.42	0.2707	0.0707	0.0160	1.2432	86.10	85.67	0.9953	0.9046	-301.2	-227.3	1.1053	
8	-0.0102	0.0288	0.0753	0.0830	5.02	56.08	0.2854	0.0837	0.0195	1.2485	83.33	82.80	1.0093	0.9263	-318.4	-243.3	1.1329	
9	-0.0030	0.0358	0.0743	0.0712	5.89	53.69	0.2778	0.1103	0.0255	1.2490	78.71	78.03	1.0295	0.9583	-327.7	-251.0	1.1268	
10	-0.0230	0.0619	0.1214	0.0478	4.73	47.85	0.2941	0.1092	0.0237	1.2548	79.41	78.74	1.0697	1.0218	-335.2	-259.9	1.6878	

TO/TU	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SOM			%	%
1.2140	1.7634	82.19	83.54	188.39	1.0778	1.2542	85.69	86.14

STATOR 2

														RUN NO 411, SPEED CODE 15, POINT NO 2			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	TO/TO	TO/TO	TO/TO
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01	T02/
1	0.1220	0.1405	248.1	220.4	18.6	220.4	159.9	2.3	0.4970	0.3104	0.6825	0.6005	1.7587	1.2477	1.2905	1.0857	
2	0.0505	0.0990	258.2	234.3	21.7	236.3	145.0	-0.3	0.5947	-0.0014	0.7163	0.6443	1.8415	1.2380	1.2430	1.0792	
3	0.0691	0.0728	254.7	229.5	22.2	229.5	128.1	-1.6	0.5261	-0.0070	0.7099	0.6339	1.8396	1.2241	1.2430	1.0764	
4	0.0530	0.0534	243.4	215.3	21.9	215.3	117.9	-2.1	0.5054	-0.0098	0.6794	0.5953	1.7923	1.2110	1.2281	1.0737	
5	0.0303	0.0279	215.6	184.8	18.4	184.8	106.7	-2.2	0.4978	-0.0118	0.5992	0.5087	1.6917	1.1996	1.2175	1.0746	
6	0.0248	0.0223	206.1	177.8	17.3	177.7	101.4	-3.5	0.5157	-0.0194	0.5716	0.4889	1.6714	1.1971	1.2165	1.0731	
7	0.0204	0.0180	207.3	178.7	18.1	178.7	99.0	-2.4	0.4978	-0.0133	0.5746	0.4914	1.6761	1.1986	1.2220	1.0747	
8	0.0160	0.0143	213.4	184.5	18.8	184.5	101.2	2.7	0.4491	0.0145	0.5908	0.5066	1.6963	1.2053	1.2223	1.0788	
9	0.0116	0.0109	211.4	183.2	18.2	183.0	107.2	8.1	0.5321	0.0444	0.5822	0.5004	1.6920	1.2163	1.2224	1.0838	
10	0.0048	0.0047	200.2	170.6	16.9	169.7	112.1	9.2	0.5942	0.0541	0.5469	0.4606	1.6508	1.2266	1.2268	1.0849	

SL	INCR	DEV	TURN	RH	VM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1906	0.1590	0.6866	5.52	65.48	0.2434	0.1241	0.0262	0.9668	70.60	72.81	87.89	88.32	
2	-0.1699	0.1389	0.5961	6.57	71.65	0.2181	0.0622	0.0140	0.9820	80.06	81.69	80.81	81.40	
3	-0.2079	0.1377	0.5331	6.20	71.33	0.2187	0.0474	0.0113	0.9865	84.85	86.09	82.24	82.77	
4	-0.2217	0.1393	0.5152	6.41	67.37	0.2386	0.0588	0.0149	0.9845	85.92	87.02	81.93	82.45	
5	-0.2051	0.1465	0.5296	5.85	57.63	0.2889	0.0910	0.0262	0.9804	81.15	82.49	77.33	77.96	
6	-0.2045	0.1428	0.5351	5.40	55.40	0.2918	0.0728	0.0219	0.9855	80.17	81.54	78.61	79.20	
7	-0.2251	0.1535	0.5111	5.41	55.73	0.2905	0.0846	0.0263	0.9832	80.04	81.43	78.81	79.40	
8	-0.2432	0.1915	0.4794	5.23	57.48	0.2867	0.0994	0.0329	0.9791	79.37	80.83	76.76	75.46	
9	-0.2496	0.2410	0.4877	5.05	56.53	0.2954	0.1025	0.0351	0.9789	78.94	78.70	70.31	71.14	
10	-0.2509	0.2762	0.5400	4.52	51.65	0.3347	0.1209	0.0430	0.9777	67.90	70.06	70.67	71.50	

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
KG/SEC	KG/SEC			%	%			%	%
909.90100.857	1.2140	1.7295	79.15	80.68	1.0778	0.9878	78.12		

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

														RUN M9411, SPEED CODE 15, POINT NO 3									
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	M-1	M-2	V*-1	V*-2					
	RADIANS	RADIANS	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIANS	RADIANS			M/SEC	M/SEC			M/SEC	M/SEC					
1	0.2025	0.1676	232.3	313.4	237.3	203.5	0.0	238.4	0.0	0.8422	0.7167	0.9303	166.8	182.4	0.0022	0.6264	285.9	211.0					
2	0.1833	0.1365	234.8	308.4	231.8	218.0	0.0	217.4	0.0	0.7803	0.7253	0.9129	186.7	199.9	0.9266	0.6497	300.0	219.6					
3	0.1518	0.1124	238.6	290.4	231.6	221.4	0.0	187.9	0.0	0.7031	0.7383	0.8550	208.9	219.2	0.9814	0.6582	317.2	223.5					
4	0.1222	0.0859	241.3	271.2	241.3	216.7	0.0	163.1	0.0	0.6442	0.7476	0.7945	229.5	237.5	1.0316	0.6713	333.0	229.2					
5	0.0644	0.0467	243.6	235.2	242.6	199.4	0.0	124.8	0.0	0.5587	0.7555	0.6828	275.6	279.7	1.1407	0.7330	367.8	252.5					
6	0.0453	0.0275	243.1	220.2	242.1	189.1	0.0	112.9	0.0	0.5381	0.7538	0.6367	297.9	300.7	1.1921	0.7703	384.5	264.5					
7	0.0362	0.0220	243.0	214.1	242.0	185.1	0.0	107.6	0.0	0.5265	0.7534	0.6176	312.1	313.7	1.2263	0.7993	395.5	277.0					
8	0.0289	0.0166	243.3	211.9	242.3	183.3	0.0	102.9	0.0	0.5069	0.7543	0.6111	326.1	327.2	1.2615	0.8300	406.8	291.0					
9	0.0191	0.0105	243.6	214.1	242.6	189.6	0.0	99.5	0.0	0.4834	0.7555	0.6175	341.2	341.2	1.3002	0.8600	419.3	307.2					
10	0.0058	0.0013	243.6	213.4	242.6	189.1	0.0	98.9	0.0	0.4818	0.7555	0.6138	358.3	358.3	1.3438	0.9235	433.3	321.1					
11	0.0004	0.0019	243.2	204.9	242.2	177.7	0.0	101.9	0.0	0.5204	0.7542	0.5851	372.8	372.1	1.3802	0.9253	445.1	323.9					

SL	INCS	INCH	DEV	TURN	RHCVP-1	RHCVM-2	G-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VB*-1	VB*-2	PO/PO
	RADIANS	RADIANS	RADIANS	RADIANS				TOTAL	TOTAL	PO1	TOT	TOT	RADIANS	RADIANS	M/SEC	M/SEC	INLET
1	0.0523	0.0446	0.2704	0.8914	4*-64	42.56	0.4642	0.3241	0.0735	1.4295	72.95	71.56	0.6238	0.2676	-166.8	56.0	1.4295
2	0.0398	0.0545	0.2358	0.7531	4*-88	49.46	0.4563	0.1617	0.0411	1.5237	86.05	85.20	0.6736	0.0795	-186.7	17.5	1.5237
3	0.0337	0.0590	0.2389	0.5808	4*-23	53.07	0.4598	0.0807	0.0221	1.5362	92.23	91.74	0.7209	0.1400	-208.9	-31.3	1.5362
4	0.0316	0.0577	0.2333	0.4309	4*-44	53.78	0.4578	0.0559	0.0157	1.5102	93.82	93.45	0.7613	0.3304	-229.5	-74.4	1.5102
5	0.0417	0.0378	0.1766	0.1871	4*-65	51.35	0.4302	0.0632	0.0160	1.4373	91.07	90.60	0.8472	0.6601	-275.6	-154.9	1.4373
6	0.0370	0.0325	0.1676	0.1047	4*-61	48.96	0.4136	0.0850	0.0215	1.4812	86.91	86.27	0.8864	0.7816	-297.9	-187.8	1.4812
7	0.0190	0.0305	0.1638	0.0702	4*-60	48.07	0.4086	0.0929	0.0229	1.3890	85.14	84.43	0.9094	0.8391	-312.1	-204.1	1.3890
8	0.0079	0.0323	0.1543	0.0495	4*-62	48.37	0.3814	0.0871	0.0211	1.3906	85.63	84.95	0.9299	0.8804	-326.1	-224.3	1.3906
9	0.0035	0.0356	0.1341	0.0451	4*-65	49.80	0.3598	0.0728	0.0176	1.4059	87.76	87.16	0.9509	0.9058	-341.2	-241.7	1.4059
10	0.0010	0.0398	0.1324	0.0328	4*-65	49.69	0.3519	0.0894	0.0213	1.4095	86.93	84.18	0.9737	0.9410	-358.3	-259.5	1.4095
11	0.0003	0.0384	0.1834	0.0027	4*-62	46.21	0.3678	0.1491	0.0341	1.3833	75.27	74.11	0.9927	0.9900	-372.8	-270.8	1.3833

TO/TO	PO/PO	EFF-AD	EFF-P	W/L/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	%	ROTOR	ROTOR
1.1275	1.4302	85.82	86.53	216.99	1.1275	1.4302	85.82	86.53

STATOR 1

														RUN M9411, SPEED CODE 15, POINT NO 3									
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	M-1	M-2	V*-1	V*-2					
	RADIANS	RADIANS	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIANS	RADIANS			M/SEC	M/SEC			M/SEC	M/SEC					
1	0.1910	0.1319	283.1	190.8	171.5	187.9	225.3	33.3	0.9188	0.1732	0.8273	0.5378	1.3566	1.1502	1.3566	1.1502	1.3566	1.1502					
2	0.1211	0.0841	291.8	217.7	205.3	214.8	207.3	35.7	0.7892	0.1639	0.8562	0.6191	1.4664	1.1501	1.4664	1.1501	1.4664	1.1501					
3	0.0725	0.0516	283.9	220.5	219.4	218.3	179.9	31.1	0.6854	0.1411	0.8333	0.4303	1.4940	1.1414	1.4940	1.1414	1.4940	1.1414					
4	0.0450	0.0335	270.2	214.4	219.9	212.6	157.0	27.5	0.6195	0.1206	0.7911	0.6141	1.4763	1.1326	1.4763	1.1326	1.4763	1.1326					
5	0.0167	0.0157	238.4	157.3	205.0	195.2	122.1	29.1	0.5367	0.1478	0.6936	0.5653	1.4133	1.1200	1.4133	1.1200	1.4133	1.1200					
6	0.0107	0.0112	223.7	188.4	194.2	186.3	111.1	28.5	0.5195	0.1516	0.6475	0.5389	1.3822	1.1171	1.3822	1.1171	1.3822	1.1171					
7	0.0081	0.0089	217.8	184.8	190.2	182.7	106.1	27.9	0.5088	0.1516	0.6294	0.5282	1.3697	1.1166	1.3697	1.1166	1.3697	1.1166					
8	0.0062	0.0070	216.2	186.7	190.7	184.8	101.9	27.1	0.4906	0.1458	0.6245	0.5340	1.3741	1.1165	1.3741	1.1165	1.3741	1.1165					
9	0.0042	0.0051	218.4	191.8	194.8	189.8	98.7	27.9	0.4690	0.1457	0.6308	0.5491	1.3877	1.1176	1.3877	1.1176	1.3877	1.1176					
10	0.0012	0.0023	217.2	192.7	193.5	189.4	98.6	35.8	0.4712	0.1866	0.6256	0.5504	1.3884	1.1230	1.3884	1.1230	1.3884	1.1230					
11	0.0006	0.0002	208.1	180.8	181.5	176.0	101.8	41.4	0.5112	0.2312	0.5949	0.5124	1.3515	1.1315	1.3515	1.1315	1.3515	1.1315					

SL	INCS	INCH	DEV	TURN	RHCVP-1	RHCVM-2	G-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	RADIANS	RADIANS	RADIANS	RADIANS				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0009	0.0814	0.2670	0.7456	38.79	48.31	0.4652	0.1421	0.0295	0.9465	60.62	62.27	60.62	62.27
2	0.0367	0.0526	0.2066	0.6254	48.43	57.11	0.3842	0.1014	0.0226	0.9614	77.02	78.22	77.02	78.22
3	0.0973	0.0019	0.1650	0.5443	53.53	59.23	0.3468	0.0758	0.0182	0.9723	86.01	86.78	86.01	86.78
4	0.1392	0.0383	0.1427	0.4909	54.67	57.99	0.3246	0.0580	0.0149	0.9805	88.84	89.44	88.84	89.44
5	0.2002	0.0877	0.1502	0.3889	52.39	52.93	0.2819	0.0490	0.0142	0.9866	86.54	87.18	86.54	87.18
6	0.2161	0.0578	0.1480	0.3679	49.91	50.21	0.2691	0.0456	0.0140	0.9889	82.73	83.51	82.73	83.51
7	0.2277	0.1058	0.1455	0.3572	49.06	49.10	0.2651	0.0564	0.0179	0.9868	80.73	81.57	80.73	81.57
8	0.2502	0.1248	0.1382	0.3448	49.44	49.66	0.2517	0.0583	0.0191	0.9865	81.61	82.42	81.61	82.42
9	0.2828	0.1537	0.1380	0.3233	51.83	51.07	0.2335	0.0614	0.0209	0.9855	83.50	84.24	83.50	84.24
10	0.3158	0.1833	0.1867	0.2846	50.50	50.70	0.2144	0.0606	0.0212	0.9841	79.95	80.86	79.95	80.86
11	0.3311	0.1963	0.2709	0.2800	46.90	46.40	0.2368	0.1036	0.0370	0.9780	68.36	69.67	68.36	69.67

NCCR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	STAGE	STAGE
917.65	1.1275	1.4091	80.74	81.65	1.1275	0.9797	80.74	81.65

ROTOR 2

RUN NO411, SPEED CODE 15, POINT NO 3																		
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1527	0.1031	174.7	275.9	171.7	221.9	32.4	164.1	0.1852	0.6307	0.4901	0.7664	207.4	220.8	0.6879	0.6360	245.2	229.0
2	0.1180	0.0817	220.7	273.4	210.1	228.9	34.1	149.5	0.1548	0.5755	0.6207	0.7614	225.5	235.2	0.8264	0.6007	290.1	244.4
3	0.0576	0.0467	226.9	263.5	225.0	226.3	29.5	135.1	0.1301	0.5366	0.6507	0.7352	242.3	249.4	0.8801	0.7073	309.7	253.5
4	0.0781	0.0512	222.8	248.3	221.1	215.4	27.3	123.7	0.1228	0.5206	0.6408	0.6923	240.3	265.0	0.9239	0.7182	321.3	257.6
5	0.0391	0.0218	204.2	216.9	202.2	183.3	28.6	116.0	0.1404	0.5640	0.5868	0.6004	301.2	302.5	0.9756	0.7240	339.5	261.5
6	0.0292	0.0162	197.4	205.7	195.4	173.9	27.9	109.9	0.1420	0.5634	0.5864	0.5682	315.7	316.8	0.9980	0.7449	347.9	269.7
7	0.0196	0.0099	196.1	205.0	194.2	174.1	26.9	108.2	0.1374	0.5562	0.5625	0.5653	329.8	329.8	1.0322	0.7771	359.9	281.8
8	0.0061	0.0009	201.8	211.0	199.6	179.4	29.4	111.0	0.1462	0.5539	0.5791	0.5808	349.1	347.9	1.0819	0.8181	376.9	297.1
9	0.0004	0.0004	199.6	208.9	196.2	170.8	36.4	120.4	0.1832	0.6138	0.5710	0.5719	362.4	361.6	1.0888	0.8091	380.5	295.6
10	0.0005	0.0030	187.5	198.9	182.9	155.1	41.1	124.4	0.2212	0.6760	0.5325	0.5402	375.7	375.2	1.0830	0.8012	381.3	294.9

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	B*-1	VB*-2	PO/PO
		RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1154	0.0060	0.3270	0.5444	45.20	62.21	0.2102	-0.0296	-0.0070	1.9542	102.60	102.71	0.7920	0.2674	-175.1	-56.8	1.8468
2	0.1784	0.0491	0.2114	0.3427	59.30	66.68	0.2676	0.0833	0.0204	1.2817	89.19	88.80	0.7777	0.3560	-191.4	-85.7	1.8992
3	0.1541	0.0550	0.1781	0.2909	60.28	47.79	0.2789	0.0714	0.0177	1.2749	89.47	89.10	0.7777	0.4662	-212.8	-114.3	1.8993
4	0.1223	0.0336	0.1515	0.2317	59.08	65.71	0.2880	0.0572	0.0142	1.2715	90.83	90.51	0.7777	0.5801	-233.1	-141.3	1.8931
5	0.0448	0.0227	0.1198	0.1388	53.62	56.78	0.3170	0.0795	0.0174	1.2731	87.66	87.23	0.7777	0.7962	-272.7	-189.4	1.7746
6	0.0140	0.0438	0.1389	0.1043	51.65	54.00	0.3073	0.0662	0.0151	1.2699	88.33	87.92	0.7744	0.8700	-287.8	-206.2	1.7450
7	0.0069	0.0485	0.1131	0.0959	51.33	54.21	0.2995	0.0683	0.0155	1.2782	87.82	87.39	1.0007	0.9048	-302.9	-221.4	1.7514
8	0.0070	0.0310	0.0714	0.0902	52.91	56.05	0.2952	0.0867	0.0203	1.2841	86.42	83.86	1.0125	0.9224	-319.7	-236.9	1.7838
9	0.0035	0.0353	0.0707	0.0742	51.76	53.00	0.3120	0.1140	0.0265	1.2856	80.24	79.53	1.0290	0.9547	-326.1	-261.3	1.7810
10	0.0238	0.0627	0.1165	0.0536	47.63	47.66	0.3172	0.1097	0.0240	1.2970	81.53	80.84	1.0785	1.0169	-334.6	-250.8	1.7489

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.2227	1.8086	82.76	84.13	188.23	1.0844	1.2835	87.33	87.78

STATOR 2

RUN NO411, SPEED CODE 15, POINT NO 3																	
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/	TO1
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE	INLET
1	0.1227	0.1410	244.5	229.1	183.9	209.1	161.1	3.5	0.7158	0.0165	0.6706	0.5667	1.7875	1.2518	1.3147	1.0883	
2	0.0922	0.0998	254.0	223.4	207.6	223.4	146.4	2.8	0.6127	0.0125	0.7018	0.6106	1.8687	1.2431	1.2610	1.0825	
3	0.0709	0.0734	252.2	221.4	214.7	221.4	132.4	-0.7	0.5519	0.0030	0.7005	0.6082	1.8800	1.2303	1.2621	1.0804	
4	0.0551	0.0545	252.8	209.0	210.2	208.9	121.4	-2.4	0.5236	0.0114	0.6753	0.5746	1.8421	1.2185	1.2579	1.0783	
5	0.0330	0.0299	217.8	180.0	185.3	180.0	114.4	-2.2	0.5533	0.0121	0.6029	0.4928	1.7520	1.2092	1.2550	1.0817	
6	0.0283	0.0251	206.0	171.4	177.3	171.5	108.7	-4.3	0.5502	0.0249	0.5748	0.4693	1.7289	1.2064	1.2567	1.0802	
7	0.0247	0.0216	208.2	171.8	176.5	171.8	107.3	-1.2	0.5414	0.0070	0.5749	0.4695	1.7325	1.2065	1.2647	1.0827	
8	0.0198	0.0175	215.4	179.5	185.2	179.4	110.4	3.3	0.5376	0.0186	0.5944	0.4898	1.7606	1.2162	1.2680	1.0878	
9	0.0139	0.0129	214.4	178.1	178.0	177.9	119.9	6.9	0.5927	0.0390	0.5885	0.4833	1.7572	1.2279	1.2661	1.0932	
10	0.0054	0.0052	209.3	165.7	163.4	165.5	124.3	7.6	0.6502	0.0459	0.5588	0.4461	1.7189	1.2392	1.2739	1.0952	

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
		RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1718	0.1651	0.6993	54.88	64.10	0.2784	0.1217	0.0257	0.9683	71.62	73.82	91.79	92.11
2	-0.1519	0.1529	0.6001	62.88	70.39	0.2465	0.0573	0.0129	0.9839	80.44	82.07	82.81	83.37
3	-0.1821	0.1416	0.5550	65.79	71.02	0.2469	0.0360	0.0086	0.9900	85.77	86.97	85.28	85.76
4	-0.2036	0.1377	0.5349	64.84	67.54	0.2675	0.0432	0.0109	0.9887	87.21	88.26	86.07	86.52
5	-0.1696	0.1461	0.5655	57.30	58.12	0.3284	0.0653	0.0188	0.9850	83.03	84.30	81.91	82.49
6	-0.1719	0.1373	0.5751	54.85	55.39	0.3396	0.0492	0.0148	0.9901	82.02	83.34	83.98	84.49
7	-0.1815	0.1598	0.5484	55.27	55.45	0.3374	0.0504	0.0158	0.9899	81.50	82.87	83.82	84.35
8	-0.1997	0.1957	0.5189	57.42	57.97	0.3293	0.0584	0.0193	0.9876	81.11	82.54	79.75	80.42
9	-0.1890	0.2356	0.5537	54.76	57.00	0.3516	0.0696	0.0239	0.9854	76.66	76.42	74.63	75.46
10	-0.1948	0.2680	0.6043	49.73	52.24	0.3961	0.0918	0.0326	0.9824	69.93	72.10	75.06	75.90

NCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
RAC/SEC	KG/SEC			%	%			%	%
917.65	100.930	1.2227	1.7827	80.58	82.08	1.0844	0.9857	82.13	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2060	0.1647	234.6	309.2	234.6	193.0	0.0	239.9	0.0	0.8861	0.7267	0.9151	166.7	182.3	0.8890	0.6019	287.8	209.3
2	0.1887	0.1411	237.4	304.5	237.4	208.5	0.0	221.9	0.0	0.8150	0.7343	0.8981	186.6	199.8	0.9339	0.6185	302.0	209.7
3	0.1537	0.1415	241.7	287.8	241.7	213.6	0.0	192.9	0.0	0.7353	0.7489	0.8647	208.9	219.1	0.9897	0.6318	319.4	215.2
4	0.1237	0.1172	244.2	269.2	244.2	210.6	0.0	167.7	0.0	0.6733	0.7574	0.7865	229.4	237.4	1.0392	0.6481	335.0	221.8
5	0.0489	0.0521	245.1	236.4	245.1	196.9	0.0	130.9	0.0	0.5866	0.7608	0.6867	275.5	279.6	1.1444	0.7143	368.8	246.7
6	0.0489	0.0330	243.9	224.3	243.9	189.6	0.0	119.8	0.0	0.5636	0.7565	0.6471	297.7	300.5	1.1938	0.7556	384.9	261.9
7	0.0378	0.0291	243.3	217.8	243.3	185.2	0.0	114.8	0.0	0.5542	0.7544	0.6270	311.9	313.6	1.2267	0.7825	395.6	271.8
8	0.0282	0.0189	243.0	215.3	243.0	185.0	0.0	110.1	0.0	0.5370	0.7533	0.6190	325.9	327.1	1.2603	0.8199	406.5	285.1
9	0.0180	0.0115	242.6	218.7	242.6	190.5	0.0	107.4	0.0	0.5135	0.7519	0.6289	341.1	341.1	1.2973	0.8670	418.5	301.4
10	0.0051	0.0013	241.9	217.7	241.9	189.5	0.0	107.1	0.0	0.5142	0.7496	0.6261	358.2	358.2	1.3394	0.9021	432.2	314.6
11	0.0000	0.0021	241.2	207.4	241.2	176.4	0.0	109.2	0.0	0.5542	0.7472	0.5903	372.6	372.6	1.3750	0.9021	443.9	317.0

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0570	0.0399	0.2518	0.9033	45.87	40.92	0.4963	0.3441	0.0776	1.4182	70.94	69.47	0.6192	0.2861	-166.7	57.6	1.4182
2	0.0450	0.0444	0.2099	0.7740	46.12	47.24	0.4873	0.1956	0.0487	1.5133	83.05	82.04	0.6685	0.1055	-186.6	22.1	1.5133
3	0.0396	0.0526	0.2213	0.5920	46.49	51.46	0.4857	0.1029	0.0283	1.5362	90.04	89.44	0.7145	0.1225	-208.9	-26.2	1.5362
4	0.0374	0.0518	0.2229	0.4354	46.70	52.52	0.4882	0.0730	0.0205	1.5142	91.99	91.51	0.7553	0.3200	-229.5	-69.7	1.5142
5	0.0449	0.0346	0.1611	0.1573	46.77	50.99	0.4528	0.0740	0.0199	1.4546	89.95	89.40	0.8440	0.6467	-275.5	-180.7	1.4546
6	0.0367	0.0368	0.1473	0.1234	46.67	49.46	0.4323	0.0886	0.0229	1.4295	87.07	86.40	0.8847	0.7613	-297.7	-199.0	1.4295
7	0.0198	0.0298	0.1458	0.0875	46.62	48.46	0.4203	0.0993	0.0249	1.4164	86.99	84.23	0.9386	0.8212	-311.9	-199.0	1.4164
8	0.0075	0.0327	0.1387	0.0654	46.60	48.61	0.4022	0.0974	0.0240	1.4168	86.88	84.11	0.9303	0.8649	-325.9	-217.0	1.4168
9	0.0017	0.0374	0.1153	0.0657	46.56	50.39	0.3799	0.0834	0.0206	1.4370	86.93	86.24	0.9527	0.8869	-341.1	-233.7	1.4370
10	0.0041	0.0428	0.1157	0.0525	46.51	50.13	0.3729	0.1035	0.0253	1.4401	83.76	82.90	0.9768	0.9243	-358.2	-251.1	1.4401
11	0.0033	0.0421	0.1741	0.0156	46.45	46.16	0.3886	0.1643	0.0380	1.4081	74.41	73.15	0.9963	0.9807	-372.6	-263.4	1.4081

TO/TO	PO/PO	EFF-AD	EFF-P	NC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%/SEC			ROTOR	ROTOR
				SQM				
1.1340	1.4545	84.32	85.13	219.39	1.1340	1.4545	84.32	85.13

STATOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET
1	0.1931	0.1345	280.5	180.2	165.1	177.0	226.7	33.5	0.9402	0.1848	0.8182	0.5060	1.3531	1.1511	1.3531	1.1511
2	0.1266	0.0901	289.0	208.0	157.0	204.9	211.4	35.9	0.8199	0.1725	0.8457	0.5888	1.4586	1.1531	1.4586	1.1531
3	0.0793	0.0556	283.1	214.6	213.8	212.3	185.6	31.0	0.7164	0.1448	0.8288	0.6108	1.4981	1.1460	1.4981	1.1460
4	0.0509	0.0363	270.9	209.7	216.7	207.8	162.6	28.6	0.6432	0.1368	0.7919	0.5983	1.4859	1.1374	1.4859	1.1374
5	0.0202	0.0172	242.6	195.4	205.9	193.2	128.3	29.3	0.5570	0.1505	0.7044	0.5578	1.4326	1.1263	1.4326	1.1263
6	0.0141	0.0134	230.8	189.7	198.4	187.4	118.0	28.9	0.5363	0.1531	0.6677	0.5408	1.4108	1.1244	1.4108	1.1244
7	0.0110	0.0108	224.5	187.0	194.0	185.0	113.1	27.1	0.5278	0.1455	0.6480	0.5328	1.4008	1.1242	1.4008	1.1242
8	0.0082	0.0083	222.2	187.8	193.6	185.9	109.0	26.2	0.5127	0.1402	0.6406	0.5351	1.4015	1.1246	1.4015	1.1246
9	0.0058	0.0060	225.6	192.4	198.9	190.6	106.0	26.2	0.4918	0.1365	0.6506	0.5484	1.4135	1.1268	1.4135	1.1268
10	0.0031	0.0038	224.4	193.5	193.4	190.4	106.6	34.8	0.4950	0.1810	0.6451	0.5504	1.4147	1.1327	1.4147	1.1327
11	0.0007	0.0013	214.0	181.5	184.2	177.5	109.0	37.8	0.5344	0.2096	0.6104	0.5124	1.3774	1.1408	1.3774	1.1408

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET
1	0.0205	0.1028	0.2786	0.7354	37.26	46.08	0.4992	0.1285	0.0266	0.9542	59.71	61.39	59.71	61.39	59.71	61.39
2	0.0060	0.0832	0.2152	0.6474	48.34	55.00	0.4148	0.0936	0.0208	0.9650	74.39	75.71	74.39	75.71	74.39	75.71
3	0.0684	0.0271	0.1686	0.5696	52.02	58.18	0.3720	0.0683	0.0164	0.9752	83.89	84.78	83.89	84.78	83.89	84.78
4	0.1155	0.0146	0.1509	0.5064	53.88	57.29	0.3492	0.0542	0.0139	0.9817	87.24	87.93	87.24	87.93	87.24	87.93
5	0.1800	0.0675	0.1529	0.4065	52.70	51.19	0.2956	0.0477	0.0146	0.9877	85.66	86.37	85.66	86.37	85.66	86.37
6	0.1993	0.0810	0.1495	0.3831	51.14	50.38	0.2888	0.0436	0.0138	0.9895	81.43	82.29	81.43	82.29	81.43	82.29
7	0.2087	0.0888	0.1394	0.3823	50.13	50.58	0.2793	0.0489	0.0161	0.9882	81.26	82.14	81.26	82.14	81.26	82.14
8	0.2282	0.1027	0.1326	0.3725	50.24	51.87	0.2705	0.0720	0.0245	0.9821	81.97	82.83	81.97	82.83	81.97	82.83
9	0.2599	0.1309	0.1288	0.3554	51.57	51.50	0.2510	0.0709	0.0248	0.9827	78.53	79.55	78.53	79.55	78.53	79.55
10	0.2420	0.1555	0.1811	0.3140	51.40	47.65	0.2732	0.0945	0.0339	0.9790	68.05	69.46	68.05	69.46	68.05	69.46
11	0.3079	0.1731	0.2493	0.3248	47.65	47.32	0.2732	0.0945	0.0339	0.9790	68.05	69.46	68.05	69.46	68.05	69.46

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET				STAGE	STAGE
RAC/SEC								
917.24	1.1340	1.4262	79.66	80.64	1.1340	0.9805	79.67	80.64

ROTOR 2

RUN NO411, SPEED CODE 15, POINT NO 4																		
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V'-1	V'-2		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC		
1	0.1520	0.1035	164.2	245.8	160.9	204.3	32.5	170.1	0.1983	0.6881	0.4591	0.7335	207.3	220.7	0.6644	0.5808	237.6	210.5
2	0.1180	0.0828	211.8	281.7	209.0	212.4	34.3	152.7	0.1622	0.6197	0.6003	0.7233	225.4	235.1	0.8026	0.6301	283.2	228.0
3	0.0582	0.0684	221.8	255.2	219.8	213.2	29.5	140.1	0.1334	0.5787	0.6233	0.7065	242.2	249.3	0.8734	0.6633	305.8	259.5
4	0.0798	0.0540	218.4	243.9	216.8	204.8	28.0	132.4	0.1285	0.5731	0.6283	0.6750	260.2	264.9	0.9102	0.6752	317.7	244.0
5	0.0418	0.0245	204.2	218.4	202.1	178.8	28.9	125.7	0.1419	0.6125	0.5849	0.6009	301.1	302.4	0.9713	0.6912	339.1	251.4
6	0.0311	0.0176	199.3	209.1	197.4	171.8	27.7	119.1	0.1396	0.6060	0.5702	0.5736	315.4	315.9	0.9984	0.7168	349.0	261.3
7	0.0221	0.0119	197.5	204.2	195.8	169.7	24.2	117.2	0.1328	0.6043	0.5646	0.5644	329.6	329.6	1.0325	0.7441	361.2	271.9
8	0.0093	0.0023	202.3	211.4	200.4	175.2	27.7	118.4	0.1372	0.5940	0.5783	0.5772	349.0	347.7	1.0825	0.7878	378.7	288.6
9	0.0032	0.0024	200.9	210.4	197.8	166.4	35.1	128.7	0.1755	0.6582	0.5723	0.5710	362.3	361.4	1.0894	0.7764	382.3	286.1
10	0.0010	0.0012	189.0	202.1	185.2	153.6	37.5	131.5	0.1997	0.7080	0.5347	0.5444	375.5	375.1	1.0906	0.7755	385.5	288.0

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VB*-1	VB*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0838	0.0376	0.3196	0.5836	42.81	59.64	0.2670	-0.0881	-0.0208	1.3926	107.11	107.45	0.8236	0.2400	-174.8	-50.6	1.8884
2	0.1580	0.0487	0.2230	0.3715	56.37	64.20	0.3098	0.0649	0.0114	1.3071	94.31	94.09	0.7391	0.3676	-191.1	-82.4	1.9294
3	0.1429	0.0438	0.1835	0.2966	59.56	66.18	0.3195	0.0538	0.0133	1.2985	92.58	92.30	0.7883	0.4717	-212.6	-109.1	1.9455
4	0.1142	0.0255	0.1449	0.2463	58.44	64.80	0.3302	0.0421	0.0105	1.3059	93.88	93.44	0.8199	0.5735	-232.2	-132.5	1.9302
5	0.0455	0.0221	0.1050	0.1529	54.28	57.44	0.3549	0.0538	0.0130	1.3196	91.86	91.53	0.9326	0.7795	-272.3	-176.7	1.8749
6	0.0185	0.0393	0.1140	0.1168	52.85	55.80	0.3428	0.0469	0.0109	1.3189	92.55	92.25	0.9699	0.8531	-287.0	-196.0	1.8505
7	0.0042	0.0459	0.1051	0.1012	52.37	55.00	0.3388	0.0593	0.0136	1.3224	90.47	90.08	0.9981	0.8968	-303.5	-212.5	1.8501
8	0.0066	0.0322	0.0672	0.0947	53.66	56.94	0.3307	0.0751	0.0177	1.3311	87.76	87.26	1.0129	0.9182	-321.3	-229.3	1.8826
9	0.0055	0.0333	0.0659	0.0771	52.69	53.77	0.3500	0.1033	0.0242	1.3344	83.78	83.10	1.0270	0.9499	-327.2	-232.7	1.8849
10	0.0229	0.0618	0.1079	0.0612	48.71	49.15	0.3539	0.0980	0.0218	1.3526	85.09	84.44	1.0695	1.0084	-338.0	-243.6	1.8595

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	KG/SEC			%	%
1.2383	1.8898	83.42	85.01	186.85	1.0920	1.3251	90.85	91.20

STATOR 2

RUN NO411, SPEED CODE 15, POINT NO 4																	
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1	
1	0.1231	0.1421	236.2	185.3	167.0	185.3	167.0	3.5	0.7818	0.0187	0.6444	0.4978	1.8252	1.2571	1.3472	1.0921	
2	0.0932	0.1010	242.5	200.8	190.9	200.7	149.6	4.1	0.6631	0.0205	0.8652	0.5433	1.9012	1.2500	1.2884	1.0843	
3	0.0727	0.0746	243.8	203.8	201.5	203.8	137.3	1.1	0.5976	0.0054	0.6721	0.5545	1.9315	1.2399	1.2887	1.0837	
4	0.0569	0.0550	238.4	198.2	199.9	198.2	129.9	-0.1	0.5758	-0.0008	0.6585	0.5346	1.9164	1.2312	1.2955	1.0844	
5	0.0322	0.0273	220.1	175.4	181.9	175.4	123.9	-2.6	0.5982	-0.0150	0.6054	0.4762	1.8602	1.2261	1.3083	1.0898	
6	0.0270	0.0221	211.9	167.2	176.1	167.1	117.9	-4.9	0.5902	-0.0293	0.5819	0.4533	1.8377	1.2240	1.3066	1.0887	
7	0.0241	0.0198	210.0	165.2	175.0	165.1	116.1	-2.9	0.5859	-0.0177	0.5753	0.4470	1.8345	1.2271	1.3111	1.0916	
8	0.0191	0.0164	216.6	174.7	182.0	174.7	117.5	1.6	0.5734	0.0091	0.5923	0.4720	1.8689	1.2362	1.3218	1.0970	
9	0.0127	0.0113	216.7	174.7	174.8	174.6	128.2	6.4	0.6327	0.0364	0.5894	0.4695	1.8699	1.2491	1.3213	1.1028	
10	0.0044	0.0038	209.2	162.7	162.8	162.5	131.3	7.8	0.6786	0.0477	0.5645	0.4337	1.8316	1.2622	1.3315	1.1064	

SL	INCM	DEV	TURN	RHCVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1058	0.1673	0.7631	51.56	59.80	0.3588	0.1364	0.0287	0.9668	72.88	75.05	96.23	96.39
2	-0.1015	0.1609	0.6426	59.78	66.37	0.3055	0.0563	0.0126	0.9856	80.53	82.19	88.85	89.24
3	-0.1364	0.1500	0.5922	63.90	68.63	0.2963	0.0283	0.0067	0.9926	86.19	87.40	89.53	89.90
4	-0.1513	0.1483	0.5766	63.91	66.69	0.3144	0.0304	0.0077	0.9923	88.28	89.29	90.80	91.13
5	-0.1247	0.1433	0.6132	58.49	59.75	0.3694	0.0392	0.0113	0.9914	85.74	86.93	88.64	89.06
6	-0.1320	0.1329	0.6195	56.73	56.92	0.3865	0.0371	0.0112	0.9924	84.70	85.94	89.34	89.74
7	-0.1369	0.1491	0.6036	56.35	56.16	0.3899	0.0372	0.0117	0.9925	83.29	84.65	87.66	88.12
8	-0.1638	0.1862	0.5643	58.65	59.41	0.3685	0.0318	0.0105	0.9933	82.74	84.18	85.36	85.93
9	-0.1490	0.2330	0.5963	55.93	58.86	0.3871	0.0424	0.0145	0.9911	78.53	80.32	80.36	81.12
10	-0.1664	0.2698	0.6309	51.58	53.95	0.4329	0.0787	0.0280	0.9847	71.91	74.17	79.86	80.66

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%			%	%
917.24	101.111	1.2383	1.8694	82.06	83.55	1.0920	0.9892	87.20	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN NO411, SPEED CODE 15, POINT NO 5																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2039	0.1710	271.1	310.4	231.1	197.7	0.0	239.3	0.0	0.8785	0.7126	0.9196	166.8	182.4	0.8789	0.6095	285.0	205.7
2	0.1901	0.1390	233.1	305.9	233.1	210.3	0.0	222.1	0.0	0.8109	0.7196	0.9026	186.7	199.9	0.9219	0.6242	298.7	211.5
3	0.1666	0.1048	237.1	290.0	237.1	215.4	0.0	194.3	0.0	0.7326	0.7331	0.8518	209.0	219.3	0.9772	0.6367	316.1	216.8
4	0.1393	0.0820	240.6	272.0	240.6	212.8	0.0	169.5	0.0	0.6718	0.7451	0.7952	229.5	217.6	1.0297	0.6529	332.5	223.4
5	0.0812	0.0468	244.9	236.8	244.9	195.8	0.0	133.2	0.0	0.5971	0.7599	0.6851	275.7	279.7	1.1443	0.7076	368.7	244.6
6	0.0601	0.0351	245.3	224.7	245.3	188.2	0.0	122.8	0.0	0.5779	0.7612	0.6476	297.9	300.7	1.1977	0.7463	385.9	250.0
7	0.0480	0.0294	245.7	220.4	245.7	186.3	0.0	117.9	0.0	0.5644	0.7628	0.6341	312.2	313.8	1.2333	0.7775	397.3	270.3
8	0.0363	0.0230	246.4	219.7	246.4	188.3	0.0	113.2	0.0	0.5412	0.7650	0.6318	326.1	327.3	1.2692	0.8200	408.7	285.2
9	0.0231	0.0144	246.7	220.5	246.7	190.9	0.0	110.4	0.0	0.5242	0.7661	0.6337	341.3	341.3	1.3079	0.8609	421.1	299.6
10	0.0079	0.0031	246.5	218.9	246.5	189.0	0.0	110.3	0.0	0.5284	0.7654	0.6266	358.4	358.4	1.3508	0.8929	435.0	311.9
11	0.0003	0.0014	245.9	217.4	245.9	173.7	0.0	113.2	0.0	0.5771	0.7635	0.5990	372.9	372.8	1.3868	0.8870	446.7	312.4

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	
TOTAL																		
RADIAN	RADIAN	RADIAN	RADIAN							PO1	TOT	TT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.0496	0.0472	0.2588	0.9056	45.53	41.41	0.4822	0.3453	0.0780	1.4498	71.30	6	0.6265	0.2791	-166.8	56.9	1.4198	
2	0.0356	0.0588	0.2108	0.7824	45.73	47.48	0.4849	0.2012	0.0511	1.5134	82.96	81.94	0.6779	0.1044	-186.7	22.1	1.5134	
3	0.0287	0.0635	0.2141	0.6101	44.09	51.40	0.4824	0.1110	0.0305	1.5385	89.73	89.09	0.7254	0.1153	-209.0	-25.0	1.5385	
4	0.0288	0.0605	0.2119	0.4851	46.40	52.98	0.4775	0.0724	0.0204	1.5236	92.38	91.91	0.7641	0.3090	-229.5	-68.0	1.5236	
5	0.0436	0.0359	0.1549	0.2029	46.76	50.95	0.4586	0.0766	0.0202	1.4651	90.14	89.59	0.8453	0.6424	-275.7	-146.6	1.4651	
6	0.0408	0.0287	0.1432	0.1254	46.79	49.47	0.4422	0.0881	0.0228	1.4465	87.52	86.85	0.8825	0.7572	-297.9	-177.9	1.4465	
7	0.0240	0.0255	0.1352	0.0937	46.82	49.23	0.4281	0.0899	0.0229	1.4415	86.86	86.17	0.9043	0.8106	-312.2	-195.9	1.4415	
8	0.0137	0.0245	0.1233	0.0747	46.87	50.16	0.4069	0.0778	0.0195	1.4508	88.29	87.66	0.9241	0.8494	-326.1	-214.1	1.4508	
9	0.0093	0.0298	0.1083	0.0651	46.90	51.14	0.3901	0.0724	0.0181	1.4435	88.94	88.33	0.9451	0.8800	-341.3	-230.9	1.4435	
10	0.0043	0.0345	0.1111	0.0487	46.88	50.60	0.3858	0.0966	0.0237	1.4650	85.21	84.39	0.9684	0.9197	-358.4	-248.1	1.4650	
11	0.0053	0.0335	0.1741	0.0071	46.84	46.00	0.4062	0.1650	0.0362	1.4289	74.98	73.69	0.9878	0.9807	-372.9	-259.6	1.4289	

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.1365	1.4696	85.16	85.94	219.24	1.1365	1.4696	85.16	85.94

STATOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RUN NO411, SPEED CODE 15, POINT NO 5																
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	STAGE	TOT
1	0.1924	0.1368	277.7	173.7	161.2	170.0	226.1	35.6	0.9502	0.2043	0.8092	0.4870	1.3500	1.1508	1.3500	1.1508
2	0.1274	0.0947	286.4	201.9	192.9	198.7	211.7	35.8	0.8310	0.1776	0.8369	0.5702	1.4520	1.1533	1.4520	1.1533
3	0.0806	0.0613	280.8	211.5	210.4	209.1	185.9	31.7	0.7231	0.1502	0.8209	0.6012	1.5015	1.1465	1.5015	1.1465
4	0.0516	0.0411	269.1	207.3	213.9	205.3	163.2	28.9	0.6515	0.1396	0.7855	0.5908	1.4927	1.1383	1.4927	1.1383
5	0.0174	0.0180	240.8	194.0	202.5	191.8	130.3	28.8	0.5717	0.1490	0.6979	0.5528	1.4430	1.1285	1.4430	1.1285
6	0.0092	0.0118	229.9	189.5	195.5	187.4	120.9	28.5	0.5536	0.1511	0.6636	0.5396	1.4243	1.1277	1.4243	1.1277
7	0.0062	0.0091	226.2	187.3	193.9	185.2	116.4	27.5	0.5403	0.1472	0.6519	0.5328	1.4146	1.1279	1.4146	1.1279
8	0.0054	0.0079	225.8	188.1	196.0	186.3	112.1	26.0	0.5195	0.1389	0.6508	0.5353	1.4150	1.1283	1.4150	1.1283
9	0.0046	0.0070	226.8	192.5	198.6	190.6	109.6	26.9	0.5040	0.1404	0.6533	0.5480	1.4265	1.1304	1.4265	1.1304
10	0.0029	0.0050	225.2	193.8	196.5	190.6	110.0	34.9	0.5101	0.1808	0.6461	0.5501	1.4283	1.1369	1.4283	1.1369
11	0.0009	0.0021	213.7	181.9	181.3	177.6	113.1	39.7	0.5576	0.2197	0.6080	0.5124	1.3912	1.1461	1.3912	1.1461

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P	SEFF-A	SEFF-P
TOTAL																
RADIAN	RADIAN	RADIAN	RADIAN							PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	TOT-STG	TOT-STG
1	0.0305	0.1128	0.2981	0.7459	36.47	44.56	0.5155	0.1396	0.0288	0.9511	59.37	61.05	59.37	61.05	59.37	61.05
2	0.0051	0.0944	0.2203	0.6534	45.72	53.60	0.4511	0.1088	0.0242	0.9599	73.32	74.68	73.32	74.68	73.32	74.68
3	0.0097	0.0337	0.1740	0.5729	51.61	57.71	0.3780	0.0693	0.0166	0.9751	84.11	84.99	84.11	84.99	84.11	84.99
4	0.1072	0.0063	0.1536	0.5119	58.61	57.07	0.3551	0.0558	0.0169	0.9814	87.74	88.41	87.74	88.41	87.74	88.41
5	0.1453	0.0528	0.1514	0.4228	57.25	53.06	0.3148	0.0486	0.0141	0.9846	86.00	86.71	86.00	86.71	86.00	86.71
6	0.1819	0.0636	0.1475	0.3023	50.87	51.54	0.2982	0.0517	0.0159	0.9868	83.32	84.13	83.32	84.13	83.32	84.13
7	0.1961	0.0742	0.1410	0.3932	50.73	50.78	0.2976	0.0784	0.0249	0.9805	81.49	82.38	81.49	82.38	81.49	82.38
8	0.2214	0.0559	0.1312	0.3806	51.64	51.01	0.2937	0.1035	0.0340	0.9743	81.31	82.21	81.31	82.21	81.31	82.21
9	0.2478	0.1188	0.1327	0.3636	52.61	52.17	0.2764	0.1054	0.0358	0.9737	81.92	82.81	81.92	82.81	81.92	82.81
10	0.2769	0.1444	0.1809	0.3293	52.01	51.88	0.2579	0.1021	0.0358	0.9750	78.33	79.39	78.33	79.39	78.33	79.39
11	0.2847	0.1499	0.2594	0.3379	47.44	47.58	0.2740	0.1153	0.0413	0.9746	67.73	69.19	67.73	69.19	67.73	69.19

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC			%	%			%	%
917.86	1.1365	1.4352	79.65	80.66	1.1365	0.9766	79.65	80.66

ROTOR 2

														RUN NO 11, SPEED CODE 15, POINT NO 5				
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1508	0.1039	159.8	261.6	136.0	195.5	34.6	173.8	0.2169	0.7203	0.4465	0.7203	207.5	220.9	0.6504	0.5538	232.9	201.1
2	0.1168	0.0631	207.4	237.7	204.6	206.2	34.0	194.7	0.1642	0.6405	0.5868	0.7104	225.5	235.2	0.7929	0.6101	280.3	221.3
3	0.0972	0.0691	220.3	251.9	218.2	206.4	30.2	144.5	0.1373	0.6092	0.6287	0.6955	242.3	249.4	0.8685	0.6392	304.4	231.5
4	0.0794	0.0553	217.3	242.9	215.5	200.8	28.0	136.6	0.1292	0.5967	0.6218	0.6704	260.4	265.1	0.9070	0.6581	316.9	238.4
5	0.0426	0.0256	203.9	219.0	201.9	177.2	28.4	128.7	0.1398	0.6281	0.5832	0.6005	301.3	302.6	0.9710	0.6808	339.5	248.3
6	0.0317	0.0180	199.4	210.2	197.5	170.7	27.8	122.7	0.1401	0.6231	0.5695	0.5751	315.8	316.1	0.9971	0.7058	349.1	258.0
7	0.0226	0.0119	197.6	207.3	195.9	168.9	25.9	120.2	0.1315	0.6185	0.5640	0.5655	329.9	329.9	1.0321	0.7347	361.6	269.3
8	0.0096	0.0023	201.9	212.4	200.0	173.5	26.2	122.5	0.1399	0.6148	0.5761	0.5780	349.2	347.9	1.0792	0.7743	378.2	284.4
9	0.0031	0.0027	200.7	212.0	197.6	165.6	35.3	132.3	0.1768	0.6739	0.5707	0.5734	362.5	361.7	1.0869	0.7654	382.2	282.9
10	0.0006	0.0018	188.9	203.5	184.7	151.3	39.4	136.1	0.2103	0.7323	0.5330	0.5462	375.8	375.3	1.0830	0.7599	383.7	289.1

SL	INCS	IACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0742	0.0473	0.3131	0.5597	41.65	58.07	0.2974	0.1249	-0.0296	1.4093	109.55	110.02	0.6332	0.2335	-172.9	-47.1	1.9062
2	0.1464	0.0370	0.2256	0.3805	55.37	63.25	0.3282	0.0248	0.0060	1.3238	97.06	96.94	0.7507	0.3702	-191.5	-80.5	1.9474
3	0.1403	0.415	0.1809	0.3014	59.52	65.01	0.3461	0.0403	0.0150	1.3073	92.00	91.69	0.7706	0.4691	-212.1	-105.0	1.9649
4	0.1106	0.419	0.1400	0.2548	58.67	64.54	0.3499	0.0405	0.0101	1.3213	94.36	94.14	0.8234	0.5688	-232.4	-128.5	1.9634
5	0.0437	0.0238	0.1015	0.1583	54.60	58.07	0.3681	0.0476	0.0115	1.3367	93.05	92.75	0.9362	0.7759	-272.9	-173.9	1.9159
6	0.0185	0.0393	0.1087	0.1220	53.25	56.15	0.3560	0.0400	0.0094	1.3349	93.87	93.61	0.9499	0.8478	-287.9	-193.5	1.8943
7	0.0046	0.0463	0.1012	0.1056	52.78	55.65	0.3501	0.0513	0.0119	1.3403	92.02	91.67	0.9984	0.8929	-304.0	-209.7	1.8939
8	0.0059	0.0329	0.0636	0.0990	53.92	57.32	0.3446	0.0705	0.0167	1.3502	88.96	88.48	1.0136	0.9146	-321.1	-225.4	1.9274
9	0.0050	0.0338	0.0614	0.0821	53.00	54.42	0.3619	0.0959	0.0226	1.3549	85.47	84.83	1.0275	0.9454	-327.2	-229.4	1.9327
10	0.0219	0.0609	0.1064	0.0617	48.87	49.26	0.3666	0.0866	0.0193	1.3728	87.28	86.69	1.0686	1.0068	-336.4	-239.3	1.9063

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.2445	1.9266	84.20	85.58	185.75	1.0950	1.3424	92.18	92.51

STATOR 2

AIRFOIL AERODYNAMIC SUMMARY PRINT

														RUN NO 11, SPEED CODE 15, POINT NO 5				
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	INLET	INLET	STAGE	TO1
1	0.1219	0.1415	233.1	176.9	158.9	176.8	170.6	4.4	0.8175	0.0250	0.6350	0.4738	1.8452	1.2532	1.3652	1.0933		
2	0.0928	0.1012	230.9	191.5	184.7	191.5	151.5	4.5	0.6852	0.0235	0.6538	0.5164	1.9139	1.2526	1.3019	1.0858		
3	0.0728	0.0748	240.6	196.6	194.5	196.6	141.6	1.5	0.6286	0.0077	0.6613	0.5327	1.9499	1.2439	1.2954	1.0865		
4	0.0570	0.0551	237.3	191.2	195.9	191.2	134.0	-0.7	0.5995	-0.0038	0.6538	0.5190	1.9438	1.2361	1.3069	1.0877		
5	0.0327	0.0273	220.6	175.2	180.4	173.2	126.9	-1.5	0.6133	-0.0084	0.6051	0.4687	1.8995	1.2326	1.3242	1.0929		
6	0.0276	0.0221	213.2	165.8	175.2	165.8	121.4	-2.3	0.6061	-0.0137	0.5837	0.4480	1.8799	1.2313	1.3234	1.0918		
7	0.0245	0.0197	211.0	163.4	174.2	163.4	119.1	-1.2	0.5997	-0.0074	0.5766	0.4408	1.8767	1.2344	1.3276	1.0944		
8	0.0195	0.0165	217.7	173.0	180.6	173.0	121.6	3.1	0.5925	0.0178	0.5935	0.4658	1.9113	1.2442	1.3316	1.1006		
9	0.0132	0.0116	218.5	173.5	174.5	173.4	131.6	7.4	0.6465	0.0426	0.5925	0.4647	1.9143	1.2575	1.3412	1.1062		
10	0.0048	0.0042	210.8	162.0	161.2	161.7	135.9	8.6	0.7005	0.0531	0.5671	0.4301	1.8771	1.2711	1.3509	1.1090		

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-b	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.0701	0.1736	0.7924	49.73	58.29	0.3890	0.1337	0.0282	0.9682	74.00	76.12	99.38	99.42
2	-0.0794	0.1639	0.6617	58.69	64.47	0.3351	0.0681	0.0153	0.9830	80.61	82.28	90.95	91.29
3	-0.1055	0.1523	0.6209	62.58	67.35	0.3208	0.0341	0.0081	0.9913	86.12	87.36	88.49	88.90
4	-0.1276	0.1452	0.6033	61.63	66.16	0.3375	0.0421	0.0106	0.9895	88.49	89.51	90.40	90.76
5	-0.1097	0.1498	0.6217	58.98	60.15	0.3831	0.0427	0.0123	0.9906	86.41	87.57	89.68	90.09
6	-0.1161	0.1485	0.6198	57.38	57.55	0.3577	0.0402	0.0121	0.9917	85.37	86.60	90.55	90.92
7	-0.1232	0.1554	0.6071	57.25	55.66	0.4031	0.0399	0.0125	0.9920	83.96	85.30	89.08	89.51
8	-0.1448	0.1948	0.5747	59.17	59.95	0.3834	0.0254	0.0117	0.9925	83.19	84.64	86.40	86.96
9	-0.1352	0.2390	0.6041	56.76	59.58	0.4005	0.0480	0.0164	0.9898	79.10	80.90	81.93	82.67
10	-0.1446	0.2752	0.6474	51.90	54.73	0.4471	0.0797	0.0283	0.9844	72.83	74.92	82.09	82.84

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
RAD/SEC	KG/SEC	INLET	INLET	INLET	INLET			STAGE	%
917.86	101.843	1.2445	1.9038	82.53	84.03	1.0950	0.9882	88.30	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN N3411, SPEED CODE 10, POINT NO 11																		
	RADIANS		M/SEC		M/SEC		M/SEC		RADIANS		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1987	0.1768	224.4	304.1	224.4	194.0	0.0	234.2	0.0	0.8777	0.6900	0.9025	159.0	173.9	0.8456	0.6023	75.0	203.2
2	0.1786	0.1500	225.1	296.4	225.1	206.5	0.0	212.7	0.0	0.7995	0.6924	0.8764	178.0	190.5	0.8826	0.6139	75.0	203.2
3	0.1523	0.1160	226.1	278.3	226.1	207.7	0.0	185.2	0.0	0.7275	0.6959	0.8181	199.2	209.0	0.9273	0.6166	315.1	213.4
4	0.1248	0.0543	226.8	260.0	226.8	203.4	0.0	161.9	0.0	0.6719	0.6982	0.7605	218.8	226.4	0.9700	0.6243	315.1	213.4
5	0.0741	0.0652	227.7	225.5	227.7	187.2	0.0	125.8	0.0	0.5917	0.7012	0.6538	262.7	266.6	1.0704	0.6792	347.7	234.3
6	0.0563	0.0521	228.5	218.2	228.5	184.5	0.0	116.5	0.0	0.5635	0.7040	0.6308	284.0	286.6	1.1228	0.7256	364.5	251.0
7	0.0461	0.0438	229.5	215.1	229.5	183.4	0.0	112.5	0.0	0.5504	0.7072	0.6210	297.5	299.1	1.1579	0.7553	375.8	261.6
8	0.0365	0.0342	230.7	213.6	230.7	184.3	0.0	108.0	0.0	0.5303	0.7114	0.6162	310.9	312.0	1.1936	0.7930	387.1	274.9
9	0.0245	0.0236	231.8	213.0	231.8	185.3	0.0	105.0	0.0	0.5156	0.7151	0.6139	325.3	325.3	1.2322	0.8298	399.4	287.9
10	0.0100	0.0099	232.5	212.9	232.5	185.8	0.0	103.8	0.0	0.5096	0.7173	0.6122	341.6	341.6	1.2750	0.8679	413.2	301.8
11	0.0016	0.0019	232.5	204.2	232.5	174.9	0.0	105.4	0.0	0.5423	0.7174	0.5836	355.4	355.3	1.3104	0.8718	424.7	305.0

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	POZ/	SEFF-P	SEFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO	
	TOTAL																	
	RADIANS		RADIANS	RADIANS	RADIANS					PO1	TOT	TOT	RADIANS	RADIANS	M/SEC	M/SEC	INLET	
1	0.0589	0.0379	0.2372	0.9179	44.85	41.28	0.4681	0.3043	0.0483	1.4108	74.71	73.46	0.6172	0.3007	-159.0	60.3	1.4108	
2	0.0429	0.0514	0.2085	0.7774	44.93	47.17	0.4689	0.1619	0.0411	1.4840	86.06	85.27	0.6705	0.1069	-178.0	22.2	1.4840	
3	0.0302	0.0620	0.2125	0.6102	45.04	50.00	0.4752	0.0968	0.0266	1.4901	90.84	90.31	0.7239	0.1137	-199.2	-23.8	1.4901	
4	0.0244	0.0650	0.2098	0.4616	45.11	50.62	0.4736	0.0716	0.0202	1.4701	92.35	91.92	0.7685	0.3069	-218.8	-64.5	1.4701	
5	0.0317	0.0479	0.1598	0.2120	45.20	48.48	0.4478	0.0723	0.0195	1.4139	90.28	89.79	0.8573	0.6453	-262.7	-140.9	1.4139	
6	0.0298	0.0396	0.1313	0.1482	45.28	48.33	0.4250	0.0695	0.0182	1.4105	90.02	89.53	0.8935	0.7453	-284.0	-170.1	1.4105	
7	0.0143	0.0353	0.1191	0.1196	45.37	48.32	0.4126	0.0702	0.0181	1.4117	89.61	89.09	0.9141	0.7945	-297.5	-186.6	1.4117	
8	0.0053	0.0349	0.1102	0.0962	45.49	48.89	0.3948	0.0616	0.0157	1.4176	90.57	90.09	0.9325	0.8364	-310.9	-204.0	1.4176	
9	0.0026	0.0365	0.0999	0.0802	45.60	49.41	0.3807	0.0593	0.0149	1.4249	90.72	90.24	0.9518	0.8716	-325.3	-220.3	1.4249	
10	0.0004	0.0393	0.0988	0.0659	45.66	49.67	0.3712	0.0704	0.0176	1.4327	88.86	88.28	0.9733	0.9074	-341.6	-237.8	1.4327	
11	0.0015	0.0372	0.1536	0.0313	45.66	46.38	0.3850	0.1248	0.0298	1.4074	80.30	79.33	0.9915	0.9602	-355.4	-249.9	1.4074	

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.1237	1.4323	87.45	88.07	213.56	1.1237	1.4323	87.45	88.07

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN N3411, SPEED CODE 10, POINT NO 11																		
	RADIANS		M/SEC		M/SEC		M/SEC		RADIANS		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1914	0.1331	274.4	180.4	182.1	177.8	221.3	30.5	0.9372	0.1680	0.8021	0.5091	1.3424	1.1407	1.3424	1.1407	1.3424	1.1407
2	0.1208	0.0871	279.4	204.4	192.1	202.1	202.9	30.9	0.8117	0.1908	0.8191	0.5814	1.4350	1.1400	1.4350	1.1400	1.4350	1.1400
3	0.0712	0.0526	270.2	205.9	204.1	203.8	177.2	29.9	0.7142	0.1455	0.7914	0.5880	1.4547	1.1328	1.4547	1.1328	1.4547	1.1328
4	0.0432	0.0345	257.2	200.0	204.7	198.0	155.9	28.4	0.6502	0.1421	0.7516	0.5720	1.4395	1.1256	1.4395	1.1256	1.4395	1.1256
5	0.0135	0.0153	228.5	184.7	192.5	184.4	123.0	28.7	0.5684	0.1542	0.6630	0.5360	1.3952	1.1155	1.3952	1.1155	1.3952	1.1155
6	0.0077	0.0107	222.2	185.7	190.3	183.4	114.7	29.0	0.5425	0.1567	0.6434	0.5312	1.3897	1.1156	1.3897	1.1156	1.3897	1.1156
7	0.0054	0.0085	219.6	185.2	189.5	182.0	111.0	28.8	0.5297	0.1563	0.6351	0.5294	1.3867	1.1163	1.3867	1.1163	1.3867	1.1163
8	0.0043	0.0073	218.6	186.0	190.6	183.8	107.0	28.6	0.5112	0.1543	0.6317	0.5316	1.3881	1.1166	1.3881	1.1166	1.3881	1.1166
9	0.0033	0.0061	218.3	188.7	191.8	186.4	104.2	29.5	0.4975	0.1571	0.6303	0.5396	1.3957	1.1182	1.3957	1.1182	1.3957	1.1182
10	0.0015	0.0040	218.2	191.1	192.1	186.1	103.5	34.4	0.4940	0.1756	0.6288	0.5454	1.4019	1.1229	1.4019	1.1229	1.4019	1.1229
11	0.0000	0.0015	209.4	180.6	181.0	176.5	105.3	38.1	0.5266	0.2124	0.5995	0.5123	1.3703	1.1297	1.3703	1.1297	1.3703	1.1297

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	POZ/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	TOTAL													
	RADIANS		RADIANS	RADIANS	RADIANS					PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0175	0.0998	0.2618	0.7691	37.16	46.27	0.4853	0.1407	0.0293	0.9514	62.40	63.92	62.40	63.92
2	0.0142	0.0751	0.1935	0.6609	45.76	54.19	0.4046	0.0938	0.0209	0.9665	77.65	78.76	77.65	78.76
3	0.0086	0.0269	0.1693	0.5687	50.07	55.54	0.3666	0.0698	0.0167	0.9764	85.14	85.91	85.14	85.91
4	0.0084	0.0076	0.1562	0.5081	51.22	54.23	0.3453	0.0589	0.0150	0.9817	87.37	88.00	87.37	88.00
5	0.0085	0.0050	0.1566	0.4142	49.55	50.38	0.3006	0.0473	0.0137	0.9880	86.43	87.05	86.43	87.05
6	0.0031	0.0074	0.1531	0.3858	49.49	49.98	0.2826	0.0610	0.0187	0.9852	85.31	85.98	85.31	85.98
7	0.0006	0.0049	0.1502	0.3733	49.55	49.75	0.2763	0.0773	0.0245	0.9816	84.22	84.93	84.22	84.93
8	0.0000	0.0041	0.1467	0.3569	50.13	49.95	0.2681	0.0911	0.0299	0.9785	84.25	84.97	84.25	84.97
9	0.0000	0.0040	0.1494	0.3404	50.68	50.67	0.2527	0.0904	0.0306	0.9788	84.54	85.26	84.54	85.26
10	0.0000	0.0040	0.1757	0.3184	50.86	51.00	0.2391	0.0930	0.0326	0.9783	82.49	83.11	82.49	83.11
11	0.0000	0.0040	0.1807	0.3143	47.55	47.28	0.2544	0.1182	0.0424	0.9746	72.64	73.83	72.64	73.83

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGF	STAGF
RAD/SEC			%	%			%	%
874.83	1.1237	1.4013	81.85	82.70	1.1237	0.9783	81.85	82.70

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1503	0.1009	168.6	285.9	166.0	239.1	29.7	196.7	0.1760	0.5743	0.4743	0.8040	197.8	210.5	0.6644	0.6892	236.2	245.1
2	0.1115	0.0752	210.1	279.6	208.0	242.6	29.7	139.0	0.1415	0.5173	0.5990	0.7878	215.0	224.2	0.7960	0.7244	278.5	257.1
3	0.0869	0.0557	214.7	267.0	212.8	236.0	28.9	125.0	0.1348	0.4854	0.6155	0.7532	231.0	237.7	0.8411	0.7378	295.4	261.5
4	0.0690	0.0355	210.3	251.5	208.5	224.2	27.8	114.0	0.1327	0.4694	0.6042	0.7085	248.2	252.6	0.8714	0.7426	303.4	263.6
5	0.0475	0.0203	197.3	216.3	192.2	192.6	28.7	98.5	0.1459	0.4726	0.5663	0.6053	287.2	288.4	0.9299	0.7569	323.9	276.5
6	0.0078	0.0044	194.8	208.2	192.6	187.1	28.8	91.3	0.1483	0.4541	0.5585	0.5819	301.0	301.3	0.9561	0.7860	333.5	281.2
7	0.0001	0.0004	193.5	207.8	191.4	188.7	28.4	87.1	0.1470	0.4323	0.5546	0.5809	314.4	314.4	0.9864	0.8260	344.2	295.4
8	0.0111	0.0186	195.3	210.0	192.9	191.2	30.3	86.9	0.1556	0.4265	0.5593	0.5866	332.8	331.6	1.0276	0.8674	358.9	310.8
9	0.0156	0.0220	194.2	205.0	191.2	183.3	34.0	91.8	0.1760	0.4644	0.5548	0.5695	345.5	344.7	1.0441	0.8877	365.5	312.4
10	0.0102	0.0133	182.8	186.9	178.8	160.5	37.9	95.8	0.2089	0.5382	0.5187	0.5144	358.2	357.7	1.0411	0.8454	366.8	307.2

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VR'-1	B'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN							P01	TOT	TOT	RADIAN	PADIAN	M/SEC	M/SEC	INLET
1	0.1191	0.0023	0.2981	0.5487	43.93	62.73	0.1108	0.0655	0.0196	1.2951	93.70	93.47	0.7882	0.2185	-188.0	-93.8	1.7483
2	0.1714	0.0621	0.1908	0.3907	55.76	66.07	0.1866	0.1378	0.0740	1.2288	81.28	80.70	0.7257	0.3356	-185.2	-85.2	1.7793
3	0.1526	0.0536	0.1559	0.3145	57.12	65.95	0.2042	0.1145	0.0288	1.2156	81.94	81.43	0.7585	0.4640	-202.1	-112.7	1.7628
4	0.1213	0.0327	0.1244	0.2597	55.89	63.61	0.2177	0.1043	0.0283	1.2046	81.75	81.27	0.8127	0.5530	-220.4	-138.7	1.7214
5	0.0938	0.0138	0.1038	0.1458	52.32	55.02	0.2405	0.1486	0.0558	1.1566	88.74	88.09	0.9241	0.7782	-258.5	-189.9	1.6092
6	0.0335	0.0243	0.1037	0.1120	51.84	53.49	0.2246	0.1402	0.0330	1.1430	87.40	86.78	0.9549	0.8429	-272.2	-210.0	1.5893
7	0.0128	0.0288	0.0864	0.1029	51.40	54.11	0.2061	0.1226	0.0288	1.1449	89.71	89.13	0.9810	0.8781	-286.1	-227.3	1.5881
8	0.0165	0.0223	0.0585	0.0955	51.94	54.86	0.1956	0.1328	0.0293	1.1441	88.41	87.81	1.0030	0.9075	-302.6	-244.7	1.5988
9	0.0122	0.0266	0.0557	0.0766	51.40	52.10	0.2083	0.1585	0.0374	1.1322	80.09	79.39	1.0203	0.9636	-311.5	-252.9	1.5813
10	0.0150	0.0540	0.1207	0.0406	47.61	44.84	0.2284	0.2036	0.0443	1.1140	90.21	89.44	1.0617	1.0211	-320.3	-261.9	1.5222

TO/TO	PO/PO	EFF-AD	EFF-P	HC1/A	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SOH			%	%
1.1966	1.6474	77.96	79.45	184.27	1.0649	1.1756	72.81	73.43

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET	TO1
1	0.1192	0.1397	253.7	268.1	201.7	267.1	153.9	-23.1	0.6483	-0.0859	0.7038	0.7480	1.6708	1.2339	1.2336	1.0817	
2	0.0871	0.1002	259.5	264.4	221.0	262.9	156.0	-28.3	0.5498	-0.1071	0.7251	0.7405	1.4764	1.2224	1.1970	1.0746	
3	0.0715	0.0801	254.6	245.6	223.2	244.3	122.4	-29.4	0.5009	-0.1036	0.7145	0.6868	1.6085	1.2090	1.1096	1.0702	
4	0.0692	0.0699	245.0	231.8	218.0	230.4	111.9	-23.7	0.4744	-0.1026	0.6886	0.6480	1.5678	1.1983	1.0966	1.0671	
5	0.0435	0.0413	218.4	217.2	195.7	216.7	97.1	-14.0	0.4609	-0.0844	0.6117	0.6077	1.5689	1.1847	1.1130	1.0624	
6	0.0319	0.0288	211.7	209.0	191.4	208.9	90.3	-2.3	0.4411	-0.0112	0.5924	0.5841	1.5267	1.1813	1.1066	1.0584	
7	0.0237	0.202	211.6	204.1	193.1	204.1	86.4	3.2	0.4207	0.0155	0.5923	0.5700	1.5138	1.1749	1.0915	1.0569	
8	0.0188	0.0162	213.9	201.5	195.6	201.4	86.6	7.2	0.4168	0.0358	0.5981	0.5613	1.5076	1.1836	1.0789	1.0577	
9	0.0159	0.0146	207.0	197.9	187.9	197.7	91.6	8.4	0.4535	0.0426	0.5814	0.5486	1.4974	1.1918	1.0708	1.0606	
10	0.0080	0.0079	191.5	183.1	165.9	182.9	95.7	7.4	0.5232	0.0406	0.5278	0.5032	1.4592	1.2012	1.0629	1.0672	

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN							P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.2393	0.0626	0.7362	56.62	69.60	0.0896	0.1595	0.0335	0.9550	67.50	69.73	75.46	76.11
2	-0.2147	0.0332	0.6570	62.82	69.71	0.1273	0.1957	0.0438	0.9423	71.43	73.41	86.62	87.48
3	-0.2332	0.0411	0.6044	64.00	65.07	0.1751	0.3024	0.0717	0.9130	69.54	71.49	92.80	93.62
4	-0.2527	0.0464	0.5770	62.64	61.87	0.1949	0.3293	0.0828	0.9101	69.11	70.98	99.75	100.54
5	-0.2621	0.0938	0.5253	55.66	59.49	0.1558	0.1728	0.0497	0.9011	72.09	73.74	106.40	107.22
6	-0.2811	0.1510	0.4522	54.47	57.45	0.1457	0.1768	0.0532	0.9026	70.87	72.54	113.40	114.19
7	-0.3021	0.1823	0.4052	55.05	56.13	0.1581	0.2210	0.0693	0.9333	69.88	71.58	120.43	121.11
8	-0.3204	0.2129	0.3810	55.76	55.24	0.1797	0.2653	0.0876	0.9430	67.77	69.57	127.40	128.14
9	-0.3282	0.2392	0.4109	53.05	53.84	0.1934	0.2664	0.0913	0.9449	63.75	65.73	134.34	135.18
10	-0.3218	0.2625	0.4828	46.05	49.07	0.2113	0.2667	0.0948	0.9535	55.99	58.22	141.27	142.07

NCORR	MCORP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
674.43	98.426	1.1966	1.5225	68.11	70.01	1.0649	0.9426	45.73

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VB-1	VB-2	B-1	B-2	M-1	M-2	U-1	U-2	M ¹⁻¹	M ¹⁻²	V ¹⁻¹	V ¹⁻²
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2015	0.1640	223.4	297.8	223.6	188.4	0.0	230.6	0.0	0.8836	0.6874	0.8820	198.1	172.9	0.8418	0.5837	273.9	197.1
2	0.1780	0.1436	225.2	290.6	223.2	200.8	0.0	210.1	0.0	0.8066	0.6928	0.8578	177.0	199.5	0.8811	0.5958	286.5	201.9
3	0.1386	0.1941	226.8	271.9	228.8	201.2	0.0	182.9	0.0	0.7397	0.6980	0.7977	198.1	207.8	0.9268	0.5947	301.1	207.7
4	0.1122	0.1257	227.0	254.1	227.0	196.7	0.0	160.9	0.0	0.6872	0.6987	0.7419	217.5	225.1	0.9677	0.6039	314.4	206.9
5	0.0677	0.0702	227.0	223.2	227.0	183.9	0.0	126.4	0.0	0.6025	0.6987	0.6463	261.3	265.1	1.0653	0.6672	346.1	230.4
6	0.0523	0.0527	227.5	217.1	227.5	182.1	0.0	116.3	0.0	0.5763	0.7005	0.6271	282.4	285.0	1.1164	0.7132	362.6	246.9
7	0.0450	0.0452	228.3	214.5	228.3	181.4	0.0	114.5	0.0	0.5631	0.7031	0.6187	295.8	297.4	1.1509	0.7431	373.7	257.8
8	0.0338	0.0333	229.3	213.2	229.3	182.8	0.0	109.7	0.0	0.5406	0.7065	0.6146	309.1	310.2	1.1858	0.7822	384.9	271.3
9	0.0223	0.0225	230.1	213.3	230.1	184.8	0.0	106.6	0.0	0.5231	0.7094	0.6146	323.5	323.5	1.2256	0.8210	397.0	285.0
10	0.0076	0.0082	230.5	214.4	230.5	186.5	0.0	105.7	0.0	0.5196	0.7107	0.6163	339.7	339.7	1.2657	0.8604	410.5	299.7
11	0.0003	0.0005	230.3	203.5	230.3	172.8	0.0	107.5	0.0	0.5543	0.7099	0.5810	353.4	353.4	1.3002	0.8579	421.8	305.5

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B ¹⁻¹	B ¹⁻²	VB ¹⁻¹	VB ¹⁻²	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0587	0.0371	0.2421	0.9122	44.77	41.10	0.4853	0.2869	0.0600	1.4201	77.68	76.55	0.6164	-0.2958	-158.1	57.7	1.4201
2	0.0460	0.0483	0.2132	0.7695	44.04	44.88	0.4869	0.1294	0.0329	1.4918	88.71	88.06	0.6674	-0.1021	-177.0	20.6	1.4918
3	0.0354	0.0568	0.2224	0.5551	45.10	49.19	0.4979	0.0813	0.0223	1.4879	92.05	91.59	0.7187	0.1234	-198.1	-74.9	1.4879
4	0.0283	0.0610	0.2192	0.4483	45.12	49.48	0.4953	0.0676	0.0190	1.4657	92.62	91.21	0.7666	0.3163	-217.5	-64.2	1.4657
5	0.0331	0.0465	0.1611	0.2092	45.12	47.98	0.4585	0.0665	0.0179	1.4179	91.08	90.62	0.8558	0.6467	-241.3	-138.7	1.4179
6	0.0305	0.0390	0.1278	0.1510	45.17	48.03	0.4354	0.0658	0.0173	1.4184	90.69	90.21	0.8928	0.7418	-282.4	-156.8	1.4184
7	0.0145	0.0350	0.1145	0.1240	45.25	48.14	0.4225	0.0644	0.0172	1.4212	90.35	89.86	0.9139	0.7898	-295.8	-182.9	1.4212
8	0.0051	0.0351	0.1057	0.1009	45.35	48.85	0.4025	0.0596	0.0142	1.4281	91.63	91.20	0.9327	0.8318	-304.1	-270.5	1.4281
9	0.0019	0.0372	0.0935	0.0273	45.44	49.48	0.3860	0.0499	0.0127	1.4384	92.32	91.92	0.9525	0.8652	-323.5	-216.9	1.4384
10	0.0018	0.0406	0.0893	0.0766	45.47	50.27	0.3754	0.0391	0.0149	1.4502	90.84	90.35	0.9745	0.8979	-339.7	-234.0	1.4502
11	0.0003	0.0390	0.1514	0.0353	45.45	46.14	0.3938	0.1238	0.0296	1.4171	80.85	79.89	0.9933	0.9580	-353.4	-245.8	1.4171

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	ROTOR	ROTOR
S	S	S	S	SGM	S	S	S	S
1.1239	1.4997	88.61	89.18	213.34	1.1239	1.4997	88.61	89.18

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VB-1	VB-2	B-1	B-2	M-1	M-2	PO/PO	YO/YO	PO/PO	YO/YO
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	STAGE	STAGE
1	0.1958	0.1365	271.1	179.8	161.3	177.1	217.9	31.3	0.9327	0.1727	0.7925	0.9081	1.3417	1.1377	1.3417	1.1377
2	0.1289	0.0928	276.2	202.9	190.1	200.5	200.4	31.2	0.8112	0.1533	0.8095	0.5776	1.0727	1.1375	1.4327	1.1375
3	0.0801	0.0577	284.2	204.8	199.7	202.5	176.0	29.4	0.7218	0.1440	0.7787	0.5844	1.4550	1.1314	1.4550	1.1314
4	0.0503	0.0374	253.8	198.8	200.3	196.8	155.8	28.4	0.6607	0.1433	0.7406	0.5884	1.4415	1.1250	1.4415	1.1250
5	0.0161	0.0136	227.5	186.7	190.8	184.6	123.9	28.3	0.5758	0.1518	0.6800	0.5341	1.4017	1.1157	1.4017	1.1157
6	0.0084	0.0077	222.0	185.4	189.0	182.9	116.4	30.0	0.5517	0.1628	0.6424	0.5298	1.3940	1.1167	1.3940	1.1167
7	0.0054	0.0054	219.7	184.2	188.5	181.9	113.0	29.0	0.5398	0.1578	0.6320	0.5281	1.3886	1.1177	1.3886	1.1177
8	0.0043	0.0048	218.8	184.4	189.9	182.2	108.6	28.4	0.5192	0.1546	0.6320	0.5286	1.3874	1.1177	1.3874	1.1177
9	0.0041	0.0047	219.2	187.5	192.1	185.2	105.7	29.2	0.5081	0.1562	0.6320	0.5356	1.3956	1.1193	1.3956	1.1193
10	0.0034	0.0043	220.3	190.6	193.5	187.6	105.3	33.7	0.4980	0.1778	0.6349	0.5436	1.4038	1.1242	1.4038	1.1242
11	0.0018	0.0024	209.6	180.9	180.1	177.1	107.3	36.7	0.5374	0.2043	0.5997	0.5128	1.3745	1.1314	1.3745	1.1314

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOT	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
S	S	S	S	SGM	S	S	S	S	S	S	S	S	S	S
1	0.0131	0.0953	0.2665	0.7600	37.56	46.20	0.4782	0.1624	0.0440	0.9448	63.62	65.09	63.62	65.09
2	0.0147	0.0746	0.1960	0.6579	45.91	53.92	0.4010	0.1110	0.0611	0.9611	78.68	79.73	78.68	79.73
3	0.0610	0.0344	0.1679	0.5777	49.48	55.39	0.3617	0.0672	0.0161	0.9778	86.11	86.82	86.11	86.82
4	0.0579	0.0029	0.1574	0.5174	50.47	54.09	0.3419	0.0527	0.0135	0.9840	88.11	88.71	88.11	88.71
5	0.1611	0.0486	0.1542	0.4240	49.38	50.64	0.2993	0.0445	0.0129	0.9888	87.55	88.13	87.55	88.13
6	0.1838	0.0655	0.1591	0.3870	49.42	49.98	0.2844	0.0719	0.0220	0.9826	86.01	86.34	86.01	86.34
7	0.1947	0.0748	0.1517	0.3819	49.54	49.57	0.2835	0.0994	0.0315	0.9764	83.60	84.34	83.60	84.34
8	0.2216	0.0961	0.1470	0.3646	50.26	49.58	0.2789	0.1234	0.0405	0.9799	81.76	84.12	81.76	84.12
9	0.2487	0.1167	0.1485	0.3464	51.10	50.41	0.2647	0.1290	0.0438	0.9695	83.80	84.54	83.80	84.54
10	0.2889	0.1544	0.1779	0.3202	51.61	50.90	0.2510	0.1355	0.0475	0.9678	81.93	82.78	81.93	82.78
11	0.3049	0.1701	0.2440	0.3331	47.96	47.50	0.2600	0.1361	0.0489	0.9707	72.44	73.65	72.44	73.65

MCCR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
RAD/SEC	INLET	INLET	INLET	INLET	INLET	INLET	STAGE	STAGE
S	S	S	S	S	S	S	S	S
645.88	1.1239	1.4034	82.11	82.95	1.1239	0.9748	82.11	82.95

ROTOR 2

RUN N1411, SPEED CODE 10, POINT NO. 2																		
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1508	0.1025	165.0	272.6	162.1	221.2	30.4	159.2	0.1841	0.6179	0.4642	0.7627	196.6	209.3	0.4535	0.6347	232.2	226.8
2	0.1127	0.0786	206.6	268.9	204.4	228.4	29.8	142.0	0.1442	0.5929	0.5888	0.7543	213.8	222.9	0.7839	0.6798	275.0	242.4
3	0.0991	0.0655	212.3	258.0	210.3	223.8	28.5	128.4	0.1344	0.5193	0.6082	0.7244	229.7	236.4	0.8740	0.6976	291.1	248.4
4	0.0665	0.0419	258.6	243.4	206.8	213.5	27.8	116.9	0.1335	0.5003	0.5989	0.6830	246.8	251.2	0.8647	0.7075	301.2	252.2
5	0.0232	0.0077	197.2	212.0	195.0	186.1	29.2	105.1	0.1487	0.5185	0.5660	0.5907	285.6	286.8	0.9244	0.7208	322.1	258.7
6	0.0147	0.0038	194.4	201.3	192.2	176.4	29.3	97.0	0.1514	0.5028	0.5577	0.5599	299.7	299.8	0.9494	0.7469	331.4	268.6
7	0.0082	0.0004	192.4	199.9	190.4	177.1	28.2	92.7	0.1471	0.4823	0.5510	0.5557	312.6	312.6	0.9800	0.7849	342.3	282.3
8	0.0014	0.0071	195.2	202.9	192.9	180.3	29.9	92.9	0.1540	0.4756	0.5587	0.5633	331.0	329.7	1.0233	0.8266	357.5	297.7
9	0.0054	0.0099	195.6	201.1	192.6	175.2	34.1	98.8	0.1751	0.5135	0.5587	0.5557	343.6	342.8	1.0411	0.8301	364.5	300.4
10	0.0035	0.0055	185.5	189.8	181.9	160.9	36.5	100.6	0.1792	0.5590	0.5268	0.5208	358.2	355.7	1.0639	0.8274	367.8	301.6

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VB'-1	VB'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1128	0.0086	0.2995	0.5746	43.19	60.72	0.1733	0.0118	0.0028	1.3177	98.88	98.83	0.7946	0.2199	-146.2	-50.1	1.7747
2	0.1162	0.0389	0.1938	0.3925	55.13	65.01	0.2321	0.0923	0.0227	1.2563	88.07	87.68	0.7709	0.1384	-184.0	-61.0	1.8149
3	0.1490	0.0500	0.1598	0.3142	56.80	65.28	0.2456	0.0753	0.0186	1.2451	89.09	88.75	0.7621	0.4479	-201.2	-108.0	1.3078
4	0.1202	0.0315	0.1318	0.2534	55.72	63.30	0.2526	0.0547	0.0137	1.2374	96.43	96.66	0.8138	0.5605	-219.0	-134.3	1.7729
5	0.0574	0.0101	0.1042	0.1418	52.47	55.12	0.2782	0.0973	0.0234	1.2038	81.42	80.91	0.9204	0.7786	-256.3	-181.7	1.6815
6	0.0362	0.0216	0.1151	0.0979	51.62	52.84	0.2627	0.0922	0.0214	1.1872	80.51	80.03	0.9521	0.8563	-269.9	-202.6	1.6503
7	0.0128	0.0288	0.1011	0.0882	51.14	53.22	0.2451	0.0785	0.0181	1.1912	82.63	82.19	0.9810	0.8828	-284.4	-219.9	1.6415
8	0.0188	0.0200	0.0689	0.0809	51.90	54.29	0.2350	0.0824	0.0196	1.1935	81.23	80.75	1.0007	0.9199	-301.0	-236.8	1.6476
9	0.0186	0.0202	0.0641	0.0658	51.72	52.38	0.2471	0.1146	0.0269	1.1872	74.50	73.87	1.0139	0.9481	-309.5	-244.1	1.6633
10	0.0067	0.0457	0.1077	0.0453	48.33	47.56	0.2523	0.1256	0.0279	1.1863	72.54	71.86	1.0334	1.0001	-319.6	-255.1	1.6271

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.2013	1.7095	82.19	87.47	187.81	1.0689	1.2181	85.75	84.39

STATOR 2

RUN N1411, SPEED CODE 10, POINT NO. 2																	
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TU/TU	PO/PO	TU/TU	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE	TO1
1	0.1223	0.1410	245.6	221.1	188.6	221.0	156.4	2.8	0.6989	0.0126	0.6779	0.6066	1.7114	1.2319	1.2702	1.0928	
2	0.0917	0.1002	253.2	233.1	211.7	233.1	138.9	-1.5	0.5789	0.0066	0.7057	0.6450	1.7850	1.2278	1.2337	1.0765	
3	0.0703	0.0737	249.9	227.7	216.0	227.7	125.7	-2.1	0.5265	0.0094	0.6994	0.6323	1.7797	1.2106	1.2265	1.0725	
4	0.0538	0.0539	240.6	215.4	211.4	215.7	114.9	-1.9	0.4973	0.0086	0.6743	0.5995	1.7419	1.1998	1.2166	1.0690	
5	0.0288	0.0247	213.5	187.0	186.7	187.0	103.7	0.7	0.5071	0.0036	0.5953	0.5170	1.6463	1.1906	1.1790	1.0670	
6	0.0221	0.0196	203.4	179.9	174.5	179.9	95.7	-0.9	0.4900	0.0048	0.5661	0.4973	1.6251	1.1874	1.1493	1.0525	
7	0.0178	0.0155	202.5	177.9	180.3	177.9	92.1	-0.3	0.4722	0.0019	0.5633	0.4913	1.6187	1.1871	1.1679	1.0623	
8	0.0141	0.0125	205.6	181.3	183.4	181.3	92.8	3.8	0.4686	0.0211	0.5712	0.5002	1.6296	1.1920	1.1661	1.0642	
9	0.0104	0.0096	203.6	179.5	178.2	179.2	98.6	9.2	0.5054	0.0516	0.5631	0.4929	1.6233	1.2014	1.1584	1.0679	
10	0.0045	0.0043	192.7	168.6	164.4	168.3	100.5	10.9	0.5488	0.0647	0.5291	0.4601	1.5906	1.2101	1.1595	1.0695	

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-R	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1987	0.1611	0.6763	54.71	64.51	0.2276	0.1351	0.0289	0.9642	71.50	73.55	85.23	87.72
2	-0.1856	0.1338	0.5255	62.23	64.92	0.2028	0.0620	0.0140	0.9824	80.79	82.27	80.69	81.75
3	-0.2076	0.1352	0.5359	64.02	69.30	0.2194	0.0528	0.0126	0.9853	84.99	86.15	82.71	83.20
4	-0.2298	0.1405	0.5059	63.00	66.06	0.2246	0.0630	0.0159	0.9835	84.94	86.99	83.36	83.81
5	-0.2158	0.1619	0.5035	55.66	56.95	0.2631	0.0917	0.0264	0.9805	80.31	81.63	71.82	72.46
6	-0.2122	0.1574	0.4948	53.56	54.76	0.2585	0.0754	0.0227	0.9843	79.39	80.74	73.02	73.60
7	-0.2507	0.1649	0.4741	53.98	54.39	0.2644	0.1023	0.0321	0.9802	78.84	80.22	72.62	73.21
8	-0.2687	0.1981	0.4475	54.98	55.03	0.2607	0.1155	0.0382	0.9771	77.97	79.43	69.82	70.47
9	-0.2769	0.2481	0.4539	53.03	53.96	0.2702	0.1249	0.0428	0.9758	73.70	75.42	63.10	63.86
10	-0.2463	0.2868	0.4841	48.38	50.03	0.2910	0.1296	0.0460	0.9774	67.46	69.49	62.07	62.86

NCORR	WCORR	TU/TU	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
865.88	96.322	1.2013	1.6747	78.80	80.27	1.0689	0.9747	74.98

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	F-1	F-2	PG/PO	TO/TO	EFF-AD	EFF-P	U-1	U-2	W-1	W-2	V-1	V-2
RUN NO:11, SPEED CODE 10, POINT NO 3																						
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2061	0.1735	217.4	216.0	217.4	187.4	0.0	232.8	0.0	0.8915	0.4444	0.8051	157.9	172.7	0.8238	0.5829	268.7	196.8				
2	0.1929	0.1451	219.2	291.0	219.2	200.1	0.0	212.4	0.0	0.8141	0.4724	0.8612	176.7	189.2	0.8430	0.5944	281.4	201.4				
3	0.1643	0.1151	222.4	274.8	222.4	202.3	0.0	185.9	0.0	0.7625	0.4831	0.8044	197.0	207.5	0.9143	0.5972	297.4	203.5				
4	0.1407	0.0948	225.0	257.4	225.0	190.9	0.0	163.3	0.0	0.6871	0.4920	0.7519	217.2	224.0	0.9419	0.6002	312.8	208.2				
5	0.0950	0.0629	228.4	224.2	228.4	183.7	0.0	129.4	0.0	0.6109	0.7033	0.6440	248.9	244.0	1.0480	0.6619	346.7	228.7				
6	0.1145	0.0502	229.1	217.9	229.1	181.9	0.0	129.0	0.0	0.5534	0.7057	0.6291	262.0	294.6	1.1193	0.7084	363.3	246.3				
7	0.0510	0.0424	229.7	215.0	229.7	181.7	0.0	116.5	0.0	0.5706	0.7070	0.6222	295.5	297.0	1.1533	0.7304	374.2	256.1				
8	0.0395	0.0336	230.3	214.1	230.3	182.3	0.0	112.3	0.0	0.5523	0.7100	0.6140	308.7	309.8	1.1873	0.7742	385.2	268.0				
9	0.0250	0.0230	230.7	213.7	230.7	183.7	0.0	109.3	0.0	0.5348	0.7111	0.6151	323.0	323.0	1.2230	0.8130	396.9	281.0				
10	0.0099	0.0091	230.6	213.6	230.6	184.0	0.0	108.1	0.0	0.5323	0.7100	0.6130	339.3	339.3	1.2444	0.8475	410.2	295.2				
11	0.0012	0.0012	230.2	204.0	230.2	171.7	0.0	110.0	0.0	0.5497	0.7094	0.5816	352.9	352.9	1.2988	0.8481	421.4	297.4				

SL	INCS	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO	TO/TO	EFF-AD	EFF-P	
RUN NO:11, SPEED CODE 10, POINT NO 3																					
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.0445	0.0503	0.2205	0.9991	44.10	40.25	0.4774	0.3160	0.0707	1.4803	74.45	73.20	0.6296	0.3095	-157.9	60.1	1.4033				
2	0.0320	0.0623	0.2002	0.7964	44.29	46.08	0.4797	0.1099	0.0431	1.4773	85.75	84.94	0.6815	0.1151	-176.7	23.2	1.4773				
3	0.0240	0.0682	0.2050	0.6239	44.64	49.11	0.4870	0.0967	0.0264	1.4809	91.09	90.57	0.7301	0.1062	-197.0	-21.6	1.4809				
4	0.0278	0.0664	0.2024	0.4705	44.92	49.94	0.4868	0.0868	0.0109	1.4751	92.99	92.60	0.7782	0.2997	-217.2	-61.5	1.4751				
5	0.0361	0.0435	0.1520	0.2144	45.26	48.36	0.4644	0.0858	0.0170	1.4269	91.35	90.91	0.8529	0.6383	-248.9	-134.2	1.4269				
6	0.0341	0.0354	0.1220	0.1532	45.33	48.21	0.4414	0.0814	0.0162	1.4290	91.44	91.01	0.8897	0.7360	-282.0	-164.7	1.4290				
7	0.0179	0.0317	0.1072	0.1280	45.39	48.47	0.4295	0.0808	0.0159	1.4344	91.33	90.80	0.9105	0.7825	-295.5	-180.5	1.4344				
8	0.0070	0.0324	0.0994	0.1045	45.45	48.98	0.4115	0.0748	0.0141	1.4409	91.95	91.52	0.9301	0.8255	-308.7	-197.5	1.4409				
9	0.0035	0.0354	0.0894	0.0999	45.49	49.62	0.3961	0.0720	0.0133	1.4406	92.19	91.76	0.9509	0.8610	-323.0	-213.8	1.4406				
10	0.0012	0.0399	0.0893	0.0760	45.48	49.82	0.3869	0.0657	0.0166	1.4377	90.85	89.50	0.9739	0.8979	-339.3	-230.9	1.4377				
11	0.0001	0.0387	0.1486	0.0377	45.44	46.11	0.4820	0.1247	0.0300	1.4293	81.14	80.16	0.9929	0.9552	-352.9	-242.8	1.4293				

TO/TO	PO/PO	EFF-AD	EFF-P	U-1/1	U-2/2	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1258	1.4460	88.36	88.95	212.47		1.1258	1.4460	88.36	88.95

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	F-1	F-2	PG/PO	TO/TO	EFF-AD	EFF-P	U-1	U-2	W-1	W-2	V-1	V-2
RUN NO:11, SPEED CODE 10, POINT NO 3																						
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1916	0.1337	269.1	171.8	155.0	168.7	220.0	32.5	0.9555	0.1802	0.7856	0.4841	1.3420	1.1309	1.3420	1.1309						
2	0.1204	0.0874	274.5	196.4	185.2	193.5	202.4	33.8	0.8291	0.1710	0.8033	0.5575	1.4322	1.1309	1.4322	1.1309						
3	0.0713	0.0530	266.4	200.4	198.4	198.1	178.0	30.3	0.7305	0.1513	0.7795	0.5713	1.4585	1.1326	1.4585	1.1326						
4	0.0431	0.0343	254.8	195.5	200.3	173.5	157.4	28.2	0.6655	0.1444	0.7434	0.5582	1.4448	1.1261	1.4448	1.1261						
5	0.0125	0.0133	227.8	184.4	189.9	182.2	125.9	28.4	0.5850	0.1545	0.6605	0.5264	1.4009	1.1173	1.4009	1.1173						
6	0.0040	0.0081	222.0	184.4	188.9	181.9	118.2	30.2	0.5509	0.1642	0.6445	0.5265	1.4055	1.1183	1.4055	1.1183						
7	0.0039	0.0041	221.3	184.1	187.0	181.8	115.0	29.0	0.5465	0.1582	0.6391	0.5253	1.4026	1.1197	1.4026	1.1197						
8	0.0032	0.0053	220.1	184.8	189.9	182.6	111.2	28.4	0.5297	0.1544	0.6354	0.5270	1.4031	1.1205	1.4031	1.1205						
9	0.0028	0.0047	220.0	187.7	191.4	185.1	108.5	31.0	0.5154	0.1600	0.6345	0.5355	1.4100	1.1222	1.4100	1.1222						
10	0.0019	0.0035	219.9	189.9	191.5	184.7	106.0	34.6	0.5133	0.1832	0.6326	0.5407	1.4140	1.1273	1.4140	1.1273						
11	0.0004	0.0015	210.3	180.8	179.3	175.4	109.9	39.8	0.5499	0.2278	0.6008	0.5094	1.3861	1.1344	1.3861	1.1344						

SL	INCS	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO	TO/TO	EFF-AD	EFF-P		
RUN NO:11, SPEED CODE 10, POINT NO 3																						
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	
1	0.0359	0.1101	0.2020	0.7673	35.81	44.50	0.5047	0.1286	0.0264	0.9569	63.29	64.78	0.6329	0.4478			1.1258					
2	0.0032	0.0924	0.2145	0.6573	44.44	52.51	0.4204	0.0887	0.0197	0.9693	77.84	78.93	0.7784	0.78.93			1.1258					
3	0.0523	0.0432	0.1752	0.5792	49.10	54.65	0.3796	0.0647	0.0155	0.9786	85.92	86.65	0.85.92	86.65			1.1258					
4	0.0932	0.0077	0.1585	0.5211	50.57	53.62	0.3588	0.0567	0.0145	0.9827	88.30	88.89	0.88.30	88.89			1.1258					
5	0.1520	0.0395	0.1569	0.4305	49.34	50.34	0.3121	0.0444	0.0129	0.9888	87.79	88.37	0.87.79	88.37			1.1258					
6	0.1764	0.0503	0.1606	0.3947	49.63	50.13	0.2742	0.0701	0.0215	0.9930	86.35	86.99	0.86.35	86.99			1.1258					
7	0.1900	0.0681	0.1521	0.3802	49.95	49.96	0.2920	0.0957	0.0304	0.9770	86.79	85.50	0.86.79	85.50			1.1258					
8	0.2112	0.0857	0.1469	0.3751	50.50	50.10	0.2854	0.1135	0.0372	0.9730	84.37	85.10	0.84.37	85.10			1.1258					
9	0.2344	0.1073	0.1583	0.3494	51.14	50.79	0.2675	0.1162	0.0394	0.9724	84.55	85.29	0.84.55	85.29			1.1258					
10	0.2736	0.1411	0.1832	0.3302	51.20	51.06	0.2957	0.1219	0.0427	0.9712	82.09	82.94	0.82.09	82.94			1.1258					
11	0.2924	0.1576	0.2625	0.3271	47.59	47.42	0.2654	0.1360	0.0486	0.9706	72.77	73.99	0.72.77	73.99			1.1258					

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
840.78	1.1258	1.4125	82.45	83.29	1.1258	0.9768	82.45	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	M-1	M-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2101	0.1631	216.7	297.3	216.7	167.7	0.0	230.5	0.0	0.0051	0.0441	0.0001	150.0	173.6	0.0233	0.5007	268.6	196.1
2	0.1940	0.1359	218.8	290.5	218.8	199.5	0.0	211.2	0.0	0.0120	0.0712	0.0568	177.7	190.3	0.0640	0.5016	281.9	200.4
3	0.1604	0.1134	222.3	273.4	222.3	201.1	0.0	165.3	0.0	0.0738	0.0831	0.0020	106.9	200.7	0.0164	0.5937	290.3	202.4
4	0.1394	0.0951	225.1	256.7	225.1	190.3	0.0	163.1	0.0	0.0079	0.0923	0.0495	210.5	226.1	0.0647	0.6075	313.7	209.1
5	0.0004	0.0621	228.4	225.4	228.4	104.9	0.0	120.8	0.0	0.0004	0.0936	0.0524	262.4	266.3	1.0716	0.6470	367.9	230.4
6	0.0403	0.0442	229.1	219.5	229.1	103.3	0.0	120.8	0.0	0.5029	0.0957	0.0330	203.4	206.2	1.1231	0.7120	364.5	246.9
7	0.0409	0.0351	229.7	216.8	229.7	102.2	0.0	117.5	0.0	0.5730	0.0970	0.0247	297.1	298.7	1.1573	0.7404	375.5	256.9
8	0.0325	0.0277	230.4	214.6	230.4	102.1	0.0	113.6	0.0	0.5578	0.0970	0.0175	310.4	311.5	1.1917	0.7740	380.6	269.0
9	0.0163	0.0219	230.6	213.5	230.6	102.7	0.0	110.5	0.0	0.5439	0.0970	0.0137	324.9	324.9	1.2203	0.8097	388.4	281.7
10	0.0049	0.0075	230.3	211.9	230.3	102.6	0.0	109.3	0.0	0.5417	0.0970	0.0075	341.2	341.2	1.2489	0.8442	411.4	294.5
11	0.0005	0.0013	229.9	209.3	229.9	172.0	0.0	110.3	0.0	0.5704	0.0965	0.5051	354.9	354.8	1.3033	0.8521	422.9	299.0

SL	INCS	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0419	0.0550	0.2449	0.0273	44.01	40.52	0.4773	0.3105	0.0499	1.4043	74.90	73.67	0.6343	0.2930	-150.0	56.9	1.4043
2	0.0282	0.0462	0.2113	0.7093	44.25	40.12	0.4010	0.1605	0.0420	1.4700	85.07	85.07	0.6053	0.1040	-177.7	20.9	1.4700
3	0.0212	0.0710	0.2143	0.6174	44.64	40.96	0.4016	0.0900	0.0209	1.4902	90.93	90.93	0.7329	0.1135	-190.9	-23.4	1.4902
4	0.0202	0.0691	0.2105	0.4650	44.93	40.94	0.4092	0.0657	0.0104	1.4770	93.10	92.70	0.7727	0.3077	-210.5	-63.0	1.4770
5	0.0337	0.0459	0.1537	0.2160	45.27	40.52	0.4420	0.0400	0.0163	1.4340	92.10	91.49	0.8553	0.6392	-242.4	-137.4	1.4340
6	0.0315	0.0300	0.1202	0.1376	45.33	40.67	0.4410	0.0509	0.0154	1.4372	91.03	91.40	0.8919	0.7342	-263.4	-165.4	1.4372
7	0.0153	0.0343	0.1074	0.1304	45.39	40.63	0.4306	0.0435	0.0104	1.4296	90.97	90.49	0.9131	0.7027	-297.1	-161.2	1.4296
8	0.0053	0.0349	0.1012	0.1051	45.40	40.06	0.4139	0.0420	0.0101	1.4426	90.00	90.31	0.9325	0.6274	-310.4	-190.0	1.4426
9	0.0009	0.0302	0.0935	0.0083	45.40	49.22	0.4012	0.0441	0.0103	1.4471	90.37	89.06	0.9535	0.6032	-324.9	-214.4	1.4471
10	0.0043	0.0430	0.0970	0.0704	45.45	40.94	0.3926	0.0032	0.0200	1.4404	87.41	86.73	0.9770	0.9064	-341.2	-231.9	1.4404
11	0.0030	0.0417	0.1400	0.0614	45.41	40.25	0.4023	0.1312	0.0316	1.4301	80.26	79.24	0.9960	0.9544	-354.9	-244.0	1.4301

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/B1	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	%	%	SR			%	%
1.1269	1.4403	87.97	80.50	212.44	1.1269	1.4403	87.97	80.50

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	M-1	M-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1937	0.1359	267.9	171.3	155.9	160.2	217.9	32.5	0.0404	0.1007	0.7019	0.4020	1.3409	1.1303	1.3409	1.1303	1.1303	1.1303
2	0.1239	0.0911	273.0	193.3	185.1	192.3	201.4	34.3	0.0260	0.1794	0.0002	0.5542	1.4204	1.1300	1.4204	1.1300	1.4204	1.1300
3	0.0754	0.0567	265.6	199.9	197.0	197.7	177.5	29.7	0.0731	0.1400	0.7762	0.5095	1.4560	1.1331	1.4560	1.1331	1.4560	1.1331
4	0.0475	0.0377	254.6	195.9	200.1	193.9	157.3	27.9	0.0057	0.1429	0.7625	0.5592	1.4401	1.1240	1.4401	1.1240	1.4401	1.1240
5	0.0100	0.0169	229.2	185.7	191.3	183.5	126.3	20.0	0.5031	0.1566	0.6645	0.5304	1.4190	1.1184	1.4190	1.1184	1.4190	1.1184
6	0.0121	0.0121	224.2	185.3	190.1	183.0	110.9	20.1	0.5509	0.1576	0.6405	0.5200	1.4096	1.1197	1.4096	1.1197	1.4096	1.1197
7	0.0099	0.0099	221.9	184.4	189.2	182.3	110.0	20.0	0.5407	0.1526	0.6407	0.5250	1.4050	1.1214	1.4050	1.1214	1.4050	1.1214
8	0.0008	0.0007	220.0	184.2	189.1	182.1	112.4	27.9	0.5361	0.1520	0.6344	0.5249	1.4032	1.1224	1.4032	1.1224	1.4032	1.1224
9	0.0076	0.0073	218.9	180.0	189.5	184.4	109.5	20.9	0.5239	0.1553	0.6306	0.5310	1.4006	1.1241	1.4006	1.1241	1.4006	1.1241
10	0.0046	0.0044	217.2	180.9	188.0	185.2	100.7	37.2	0.5242	0.1903	0.6230	0.5374	1.4154	1.1209	1.4154	1.1209	1.4154	1.1209
11	0.0013	0.0014	210.4	179.0	179.0	175.4	110.6	39.5	0.5535	0.2215	0.6007	0.5005	1.3000	1.1341	1.3000	1.1341	1.3000	1.1341

SL	INCS	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0208	0.1111	0.2025	0.7590	36.17	44.37	0.5027	0.1344	0.0203	0.9545	63.22	64.71	0.3222	0.471	63.22	64.71	1.1303
2	0.0007	0.0900	0.2101	0.6513	44.57	52.13	0.4211	0.0079	0.0217	0.9463	77.25	78.36	0.7725	0.36	77.25	78.36	1.1300
3	0.0514	0.0461	0.1727	0.5025	48.99	54.40	0.3700	0.0093	0.0166	0.9772	85.90	86.05	0.9530	0.65	85.90	86.05	1.4560
4	0.0930	0.0079	0.1570	0.5228	50.44	53.73	0.3576	0.0420	0.0150	0.9811	80.04	80.66	0.66	0.66	80.04	80.66	1.4401
5	0.1530	0.0413	0.1570	0.4205	49.04	50.75	0.3113	0.0547	0.0159	0.9801	87.91	88.49	0.71	0.71	87.91	88.49	1.4190
6	0.1747	0.0504	0.1540	0.4013	50.04	50.46	0.2969	0.0709	0.0104	0.9804	86.11	86.77	0.61	0.61	86.11	86.77	1.4096
7	0.1840	0.0449	0.1464	0.3971	50.04	50.09	0.2954	0.1004	0.0319	0.9750	84.05	84.00	0.65	0.65	84.05	84.00	1.4050
8	0.2040	0.0793	0.1444	0.3840	50.26	49.95	0.2800	0.1157	0.0300	0.9726	83.09	83.00	0.69	0.69	83.09	83.00	1.4032
9	0.2270	0.0908	0.1476	0.3606	50.57	50.56	0.2735	0.1113	0.0377	0.9739	83.00	83.00	0.69	0.69	83.00	83.00	1.4006
10	0.2620	0.1303	0.1904	0.3259	50.21	50.44	0.2673	0.0909	0.0345	0.9772	81.03	81.94	0.63	0.63	81.03	81.94	1.4154
11	0.2809	0.1540	0.2612	0.3320	47.50	47.41	0.2606	0.1345	0.0401	0.9700	72.20	73.45	0.63	0.63	72.20	73.45	1.3000

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	%	%			%	%
0.7344	1.1269	1.4135	81.92	82.70	1.1269	0.9760	81.92	82.70

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	H-1	H-2	V-1	V-2		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC		
1	0.1503	0.1016	150.1	250.2	154.9	201.1	31.6	162.0	0.1999	0.6710	0.4441	0.7176	197.5	210.2			0.6375	0.5747	227.0	200.0
2	0.1124	0.0797	200.3	254.7	197.4	202.0	32.7	145.9	0.1632	0.6065	0.5692	0.7093	214.7	223.9			0.7635	0.6207	200.7	222.9
3	0.0994	0.0637	200.1	247.7	200.2	209.6	29.2	132.0	0.1359	0.5602	0.5951	0.6910	230.7	237.4			0.8261	0.6545	200.9	234.0
4	0.0692	0.0444	205.3	236.1	203.5	201.9	27.3	122.3	0.1334	0.5439	0.5803	0.6584	247.9	252.3			0.8598	0.6696	200.1	240.1
5	0.0272	0.0125	194.5	211.7	194.3	179.4	24.0	112.4	0.1470	0.5595	0.5629	0.5870	284.8	280.0			0.9255	0.6960	223.0	251.1
6	0.0177	0.0067	194.5	201.0	192.5	173.1	20.3	103.4	0.1441	0.5400	0.5565	0.5585	300.6	300.9			0.9538	0.7258	233.6	262.2
7	0.0109	0.0027	192.7	194.0	190.7	171.4	27.4	100.3	0.1439	0.5294	0.5505	0.5485	314.0	314.0			0.9830	0.7566	244.0	273.9
8	0.0001	0.0002	194.6	203.6	192.3	170.1	30.2	102.1	0.1550	0.5252	0.5557	0.5616	332.4	331.2			1.0227	0.7971	250.2	289.0
9	0.0049	0.0101	194.6	201.2	190.9	167.0	37.6	111.4	0.1942	0.5866	0.5546	0.5523	345.0	344.3			1.0311	0.7874	261.9	286.9
10	0.0029	0.0052	185.0	191.4	180.8	154.9	39.3	112.5	0.2142	0.6202	0.5240	0.5218	357.7	357.2			1.0368	0.7895	266.1	289.6

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/	TEFF-P	TEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN							P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0923	0.0202	0.3122	0.5035	41.59	57.70	0.2434	-0.0470	-0.0113	1.3425	103.99	104.15	0.8161	0.2326	-165.9	-48.3	1.0056
2	0.1544	0.0453	0.2107	0.3872	53.65	41.90	0.2805	0.0596	0.0144	1.2762	92.73	92.47	0.7425	0.3553	-182.0	-78.0	1.0420
3	0.1359	0.0369	0.1763	0.3100	56.19	43.64	0.2915	0.0483	0.0121	1.2697	93.14	92.94	0.7752	0.4445	-202.4	-105.4	1.0492
4	0.0900	0.0290	0.1424	0.2544	55.37	42.28	0.2954	0.0310	0.0079	1.2401	95.13	94.96	0.8254	0.5710	-220.5	-129.9	1.0726
5	0.0526	0.0150	0.1001	0.1508	52.77	56.06	0.3110	0.0402	0.0144	1.2325	89.64	89.31	0.9253	0.7745	-258.0	-175.6	1.0760
6	0.0329	0.0249	0.1110	0.1054	52.16	54.17	0.2939	0.0545	0.0127	1.2369	89.70	89.38	0.9555	0.8501	-272.2	-197.1	1.0799
7	0.0105	0.0312	0.1031	0.0806	51.62	53.69	0.2810	0.0535	0.0123	1.2370	89.47	89.16	0.9834	0.8948	-286.3	-213.7	1.1348
8	0.0155	0.0232	0.0642	0.0888	52.09	55.30	0.2709	0.0545	0.0129	1.2478	89.20	88.85	1.0040	0.9152	-302.2	-229.1	1.1706
9	0.0175	0.0213	0.0629	0.0601	51.61	52.29	0.2891	0.0696	0.0211	1.2472	82.80	82.27	1.0150	0.9469	-307.5	-232.9	1.1753
10	0.0076	0.0466	0.1061	0.0478	48.39	47.66	0.2919	0.0962	0.0214	1.2448	81.79	81.22	1.0543	1.0065	-318.4	-244.7	1.1745

TD/TD	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
1.2117	1.7803	84.59	85.70	101.90	1.0752	1.2595	90.30	90.70

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	H-1	H-2	VO-1	VO-2	
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1225	0.1406	234.3	195.5	172.0	195.4	159.0	3.6	0.7427	0.0193	0.6453	0.5317	1.7525	1.7525			1.2340	1.3033	1.0041
2	0.0900	0.0977	240.5	208.9	193.5	208.9	142.8	2.7	0.6339	0.0131	0.6641	0.5724	1.8206	1.2265			1.2609	1.2679	1.0770
3	0.0691	0.0700	240.0	208.5	202.2	208.5	129.3	0.7	0.5683	0.0032	0.6476	0.5738	1.8332	1.2161			1.2587	1.0756	1.0756
4	0.0531	0.0519	232.9	199.4	199.5	199.6	120.2	-1.0	0.5417	-0.0046	0.6488	0.5499	1.8086	1.2075			1.2554	1.0730	1.0730
5	0.0292	0.0258	212.0	179.0	181.4	179.0	110.9	-1.6	0.5482	-0.0087	0.5902	0.4914	1.7451	1.2019			1.2364	1.0742	1.0742
6	0.0230	0.0204	203.6	171.4	175.9	171.4	102.5	-4.4	0.5279	-0.0254	0.5635	0.4702	1.7229	1.1992			1.240	1.0699	1.0699
7	0.0208	0.0178	200.9	169.0	174.5	169.0	99.6	0.1	0.5186	0.0004	0.5553	0.4630	1.7166	1.2007			1.2239	1.0701	1.0701
8	0.0170	0.0150	206.5	175.0	179.6	175.0	101.9	2.7	0.5160	0.0152	0.5702	0.4789	1.7370	1.2071			1.2313	1.0733	1.0733
9	0.0119	0.0106	204.5	173.2	171.7	173.0	111.1	0.1	0.5744	0.0048	0.5618	0.4716	1.7316	1.2170			1.2266	1.0775	1.0775
10	0.0044	0.0041	195.1	161.3	159.5	161.1	112.4	0.6	0.6138	0.0533	0.5324	0.4363	1.6960	1.2263			1.2240	1.0793	1.0793

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/	TEFF-A	TEFF-P	TEFF-A	TEFF-P
RADIAN	RADIAN	RADIAN							P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1449	0.1470	0.7234	51.71	60.69	0.3031	0.1201	0.0255	0.9707	74.25	76.18	93.29	93.54
2	-0.1306	0.1534	0.6200	58.95	64.39	0.2611	0.0459	0.0103	0.9802	82.42	83.03	87.82	88.21
3	-0.1050	0.1479	0.5651	62.29	67.24	0.2577	0.0322	0.0077	0.9917	87.44	88.46	89.67	90.00
4	-0.1054	0.1443	0.5465	61.90	64.77	0.2734	0.0408	0.0103	0.9900	88.07	89.76	90.82	91.11
5	-0.1747	0.1495	0.5569	56.62	57.95	0.3113	0.0590	0.0170	0.9876	85.39	86.48	86.10	84.57
6	-0.1943	0.1368	0.5533	54.87	55.44	0.3165	0.0498	0.0150	0.9903	84.39	85.53	85.20	85.62
7	-0.2043	0.1674	0.5180	54.47	54.58	0.3137	0.0551	0.0173	0.9896	83.15	84.37	84.64	85.07
8	-0.2212	0.1923	0.5008	56.15	56.48	0.3101	0.0668	0.0221	0.9868	82.48	83.78	83.40	83.88
9	-0.2073	0.2434	0.5276	53.29	55.38	0.3271	0.0730	0.0250	0.9859	78.25	79.05	76.76	77.42
10	-0.2312	0.2754	0.5405	49.02	50.91	0.3630	0.0951	0.0338	0.9833	71.94	73.93	74.78	75.49

NCORR	MLORR	TD/TD	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGF
873.64	97.909	1.2117	1.7570	82.49	83.81	1.0752	0.9869	85.05

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	V ^o -1	V ^o -2
1	0.2082	0.1639	215.8	293.7	215.8	163.4	0.0	229.4	0.0	0.0941	0.6612	0.06.7	159.0	174.7	0.0227	0.5655	268.5	191.4
2	0.1946	0.1324	217.7	287.9	217.7	195.1	0.0	211.7	0.0	0.0241	0.6675	0.0474	178.9	191.5	0.0439	0.5773	281.7	196.1
3	0.1681	0.1079	220.9	271.2	220.9	197.2	0.0	186.1	0.0	0.7554	0.6782	0.7940	200.2	210.0	0.9153	0.5816	290.1	198.7
4	0.1399	0.0904	223.5	254.4	223.5	193.8	0.0	164.8	0.0	0.7039	0.6968	0.7412	219.0	227.5	0.9634	0.5937	313.5	203.8
5	0.0809	0.0655	227.0	224.5	227.0	181.5	0.0	132.1	0.0	0.6295	0.6986	0.6484	264.0	267.9	1.0718	0.6548	348.2	226.7
6	0.0590	0.0549	227.7	219.7	227.7	180.4	0.0	125.4	0.0	0.6076	0.7011	0.6326	285.4	288.0	1.1241	0.6996	365.1	242.9
7	0.0478	0.0431	228.3	218.2	228.3	180.7	0.0	122.3	0.0	0.5955	0.7032	0.6273	299.0	300.5	1.1506	0.7296	376.2	253.8
8	0.0365	0.0322	229.0	216.5	229.0	181.3	0.0	118.3	0.0	0.5785	0.7056	0.6216	312.4	313.5	1.1934	0.7650	387.3	264.4
9	0.0249	0.0209	229.5	214.8	229.5	181.2	0.0	115.2	0.0	0.5663	0.7072	0.6158	324.9	324.9	1.2308	0.7991	399.4	278.7
10	0.0111	0.0066	229.7	213.7	229.7	180.7	0.0	114.1	0.0	0.5634	0.7078	0.6110	343.3	343.3	1.2729	0.8344	413.0	291.0
11	0.0025	0.0021	229.5	207.2	229.5	172.1	0.0	115.5	0.0	0.5909	0.7073	0.5893	357.2	357.0	1.3083	0.8434	424.5	296.6

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B ^o -1	B ^o -2	VO ^o -1	VO ^o -2	PO/PO
1	0.0371	0.0590	0.2495	0.9275	43.91	40.25	0.4942	0.2936	0.0661	1.4144	76.30	75.20	0.6390	-0.2885	-159.8	54.7	1.4144
2	0.0227	0.0717	0.2126	0.7935	44.13	45.71	0.4985	0.1589	0.0403	1.4090	56.80	86.03	0.6908	-0.1027	-178.9	20.2	1.4090
3	0.0148	0.0773	0.2189	0.6191	44.48	48.60	0.5050	0.0907	0.0249	1.5015	91.72	91.23	0.7392	0.1201	-200.2	-23.9	1.5015
4	0.0134	0.0759	0.2157	0.4666	44.75	49.33	0.5043	0.0657	0.0185	1.4877	73.20	92.81	0.7795	0.3128	-219.8	-62.8	1.4877
5	0.0273	0.0522	0.1573	0.2188	45.12	48.07	0.4778	0.0425	0.0169	1.4500	92.02	91.59	0.8616	0.6428	-264.0	-135.8	1.4500
6	0.0255	0.0439	0.1202	0.1634	45.19	48.32	0.4570	0.0453	0.0173	1.4558	91.28	90.80	0.8978	0.7362	-285.4	-162.7	1.4558
7	0.0093	0.0402	0.1035	0.1401	45.25	48.69	0.4443	0.0488	0.0175	1.4430	90.91	90.41	0.7190	0.7789	-299.0	-178.2	1.4430
8	0.0085	0.0407	0.0964	0.1159	45.33	49.17	0.4277	0.0432	0.0163	1.4691	91.16	90.67	0.9384	0.8224	-312.4	-195.2	1.4691
9	0.0044	0.0435	0.0911	0.0960	45.37	49.39	0.4139	0.0459	0.0168	1.4736	90.57	90.04	0.9588	0.8628	-326.9	-211.7	1.4736
10	0.0085	0.0472	0.0947	0.0780	45.39	49.34	0.4050	0.0818	0.0205	1.4796	88.19	87.52	0.9812	0.9037	-343.3	-229.2	1.4796
11	0.0066	0.0453	0.1452	0.0478	45.38	46.75	0.4144	0.1273	0.0307	1.4629	81.66	80.65	0.9996	0.9518	-357.2	-241.6	1.4629

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	RS/SEC			ROTOR	ROTOR
1.1313	1.4679	88.32	88.94	211.81	1.1313	1.4679	88.32	88.94

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
1	0.1963	0.1397	264.1	161.7	150.9	173.7	216.8	31.4	0.9620	0.1934	0.7694	0.4566	1.3454	1.1385	1.3454	1.1385
2	0.1309	0.0989	270.0	185.6	179.4	184.4	201.8	34.7	0.8434	0.1871	0.7881	0.5249	1.4272	1.1399	1.4272	1.1399
3	0.0850	0.0667	262.4	193.4	192.3	191.0	178.6	30.3	0.7682	0.1568	0.7653	0.5495	1.4656	1.1350	1.4656	1.1350
4	0.0566	0.0465	251.6	190.6	194.8	188.5	159.2	27.7	0.6848	0.1458	0.7322	0.5423	1.4624	1.1294	1.4624	1.1294
5	0.0244	0.0226	228.0	181.0	187.6	178.9	129.4	27.6	0.6043	0.1533	0.6594	0.5153	1.4390	1.1223	1.4390	1.1223
6	0.0169	0.0163	223.8	181.8	186.9	179.4	123.2	29.1	0.5827	0.1606	0.6456	0.5171	1.4328	1.1248	1.4328	1.1248
7	0.0135	0.0134	222.9	182.2	187.5	180.2	120.4	26.9	0.5717	0.1484	0.6421	0.5177	1.4323	1.1271	1.4323	1.1271
8	0.0111	0.0111	221.9	183.2	188.5	181.3	117.1	26.5	0.5557	0.1450	0.6394	0.5204	1.4343	1.1282	1.4343	1.1282
9	0.0082	0.0085	220.6	185.9	188.7	183.8	114.3	27.5	0.5443	0.1483	0.6340	0.5280	1.4416	1.1303	1.4416	1.1303
10	0.0041	0.0046	219.8	188.5	188.2	185.3	113.6	34.7	0.5429	0.1852	0.6300	0.5346	1.4483	1.1355	1.4483	1.1355
11	0.0009	0.0012	213.5	179.0	179.7	175.5	115.2	35.3	0.5702	0.1983	0.6083	0.5047	1.4189	1.1426	1.4189	1.1426

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
1	0.0423	0.1246	0.2872	0.7686	35.53	42.51	0.5321	0.1489	0.0308	0.9516	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
2	0.0175	0.1067	0.2298	0.6563	43.83	50.10	0.4494	0.1201	0.0266	0.9596	63.89	65.36	63.89	65.36
3	0.0346	0.0609	0.1806	0.5915	48.33	53.45	0.3986	0.0740	0.0177	0.9761	76.46	77.61	76.46	77.61
4	0.0738	0.0270	0.1599	0.5396	49.89	53.10	0.3752	0.0555	0.0142	0.9833	85.55	86.30	85.55	86.30
5	0.1326	0.0201	0.1557	0.4510	49.38	50.35	0.3346	0.0463	0.0134	0.9883	88.68	89.27	88.68	89.27
6	0.1528	0.0346	0.1570	0.4221	49.67	50.35	0.3180	0.0647	0.0198	0.9841	88.55	89.12	88.55	89.12
7	0.1648	0.0427	0.1422	0.4233	50.08	50.42	0.3174	0.0870	0.0276	0.9789	86.76	87.41	86.76	87.41
8	0.1851	0.0597	0.1373	0.4107	50.63	50.68	0.3096	0.0991	0.0325	0.9762	85.08	85.82	85.08	85.82
9	0.2075	0.0784	0.1406	0.3960	50.90	51.37	0.2922	0.0925	0.0314	0.9781	84.69	85.45	84.69	85.45
10	0.2441	0.1116	0.1853	0.3577	50.85	51.60	0.2704	0.0906	0.0317	0.9788	84.58	85.36	84.58	85.36
11	0.2721	0.1373	0.2380	0.3719	48.29	48.30	0.2982	0.1346	0.0484	0.9703	82.41	83.31	82.41	83.31

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	STAGE				
879.13	1.1313	1.4347	82.77	83.63	1.1313	0.9774	82.77	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN NO411, SPEED CODE 10, POINT NO 5																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1449	0.1014	148.1	251.4	145.0	106.0	36.5	148.5	0.2063	0.7275	0.4150	0.4955	198.7	211.6	0.4221	0.5300	222.0	191.7
2	0.1102	0.0792	109.7	246.9	106.7	193.9	33.3	152.9	0.1757	0.6444	0.5360	0.4832	216.0	225.3	0.7395	0.5726	261.3	207.0
3	0.0893	0.0644	201.8	240.9	199.8	196.4	28.5	139.5	0.1416	0.6157	0.5753	0.4676	232.1	238.9	0.8131	0.6101	285.2	220.1
4	0.0697	0.0488	199.3	231.3	197.5	191.4	26.0	129.7	0.1346	0.5944	0.5491	0.4410	249.4	253.9	0.8499	0.6326	297.6	228.3
5	0.0295	0.0158	192.1	210.3	190.0	172.3	20.5	120.4	0.1490	0.6104	0.5460	0.5792	288.6	289.8	0.9196	0.6653	322.1	241.5
6	0.0198	0.0093	191.8	201.7	189.8	168.0	27.0	111.4	0.1456	0.5866	0.5460	0.5544	302.4	302.8	0.9517	0.6995	333.0	254.4
7	0.0128	0.0050	191.0	198.4	189.9	167.1	26.3	106.8	0.1375	0.5480	0.5462	0.5443	316.0	316.0	0.9867	0.7345	344.4	267.7
8	0.0079	0.0027	194.2	203.2	192.1	171.7	28.3	108.7	0.1462	0.5644	0.5520	0.5544	334.5	333.3	1.0298	0.7740	361.5	282.6
9	0.0011	0.0007	194.9	202.1	191.0	164.0	35.1	110.0	0.1809	0.6235	0.5537	0.5505	347.2	346.4	1.0406	0.7661	366.3	281.2
10	0.0005	0.0022	184.7	194.0	181.3	154.4	35.1	117.5	0.1913	0.6505	0.5216	0.5251	359.9	359.5	1.0502	0.7748	372.0	287.0

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	
RUN NO411, SPEED CODE 10, POINT NO 5																		
RADIAN	RADIAN	RADIAN	RADIAN							P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.0516	0.0701	0.3033	0.6323	39.49	55.53	0.3014	0.0706	-0.0168	1.3719	105.28	105.52	0.8560	0.2237	-168.2	-43.1	1.0507	
2	0.1245	0.0151	0.2105	0.4175	51.44	59.37	0.3363	0.0404	0.0099	1.3064	95.55	95.37	0.7726	0.3551	-182.7	-72.4	1.0030	
3	0.1174	0.0103	0.1790	0.3266	55.45	61.43	0.3401	0.0555	0.0130	1.2899	92.89	92.63	0.7938	0.4672	-203.6	-99.4	1.0973	
4	0.0089	0.0002	0.1450	0.2707	54.73	61.14	0.3371	0.0310	0.0077	1.2950	95.70	95.54	0.8451	0.5744	-222.7	-124.2	1.0879	
5	0.0300	0.0354	0.1020	0.1635	52.54	55.06	0.3475	0.0513	0.0124	1.2895	92.06	91.77	0.9399	0.7704	-246.1	-169.3	1.0475	
6	0.0221	0.0354	0.1108	0.1163	52.38	54.59	0.3267	0.0453	0.0146	1.2744	92.33	92.06	0.9662	0.8499	-274.4	-191.1	1.0254	
7	0.0034	0.0382	0.1048	0.0739	52.48	54.40	0.3120	0.0500	0.0115	1.2705	91.09	90.78	0.9904	0.8965	-289.7	-209.1	1.0213	
8	0.0093	0.0295	0.0669	0.0924	53.03	55.99	0.3042	0.0594	0.0140	1.2812	89.36	88.98	1.0102	0.9179	-306.2	-224.5	1.0405	
9	0.0127	0.0261	0.0640	0.0718	52.79	53.19	0.3229	0.0953	0.0224	1.2772	83.45	82.86	1.0198	0.9400	-312.1	-228.4	1.0409	
10	0.0149	0.0539	0.1024	0.0687	49.38	49.64	0.3202	0.0913	0.0206	1.2882	84.38	83.80	1.0616	1.0029	-324.8	-242.0	1.0245	

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		S	S	SOM			S	S
1.2249	1.0538	85.49	86.87	179.11	1.0028	1.2921	91.58	91.89

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RUN NO411, SPEED CODE 10, POINT NO 5																
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1228	0.1411	228.7	175.9	157.9	175.9	165.4	3.8	0.0051	0.0216	0.6269	0.4748	1.7934	1.2462	1.3302	1.0094
2	0.0910	0.0978	232.8	189.7	178.3	189.6	149.7	3.8	0.6960	0.0202	0.6409	0.5151	1.8566	1.2341	1.2861	1.0025
3	0.0692	0.0702	233.2	192.6	189.0	192.6	136.7	0.3	0.6259	0.0018	0.6445	0.5256	1.8816	1.2251	1.2793	1.0013
4	0.0532	0.0508	228.3	187.0	189.5	187.0	127.4	-1.4	0.5914	0.0075	0.6318	0.5111	1.8717	1.2181	1.2847	1.0003
5	0.0282	0.0236	211.9	171.6	175.3	171.6	119.0	-2.8	0.5962	0.0160	0.5839	0.4674	1.8300	1.2155	1.2773	1.0019
6	0.0225	0.0182	204.0	164.6	171.5	164.6	110.4	-4.5	0.5718	0.0273	0.5611	0.4480	1.8101	1.2137	1.2637	1.0078
7	0.0201	0.0164	201.2	162.6	171.0	162.6	106.0	-1.9	0.5552	0.0117	0.5526	0.4419	1.8053	1.2157	1.2595	1.0077
8	0.0164	0.0140	206.7	170.3	176.0	170.3	108.4	1.6	0.5520	0.0096	0.5665	0.4622	1.8312	1.2235	1.2494	1.0022
9	0.0107	0.0094	206.0	169.6	169.1	169.4	117.6	6.9	0.6078	0.0410	0.5619	0.4580	1.8290	1.2347	1.2627	1.0071
10	0.0036	0.0031	196.4	159.4	160.0	159.2	117.6	9.0	0.6330	0.0566	0.5376	0.4277	1.7975	1.2449	1.2689	1.0093

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P	EFF-A	EFF-P
RUN NO411, SPEED CODE 10, POINT NO 5													
RADIAN	RADIAN	RADIAN							P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.0825	0.1701	0.7835	48.93	57.16	0.3772	0.1324	0.0279	0.9692	75.54	77.45	94.79	95.00
2	-0.0670	0.1606	0.6760	56.02	62.90	0.3249	0.0583	0.0131	0.9859	82.55	83.99	90.07	90.43
3	-0.1006	0.1464	0.6237	60.13	64.89	0.3121	0.0339	0.0081	0.9910	87.87	88.89	89.54	89.90
4	-0.1357	0.1415	0.5988	60.81	63.49	0.3233	0.0364	0.0092	0.9914	89.88	90.73	92.26	92.53
5	-0.1247	0.1422	0.6123	56.68	58.23	0.3599	0.0449	0.0129	0.9908	87.41	88.43	88.26	88.67
6	-0.1504	0.1349	0.5990	55.55	55.81	0.3678	0.0439	0.0132	0.9916	86.38	87.47	88.71	89.08
7	-0.1677	0.1590	0.5669	55.41	55.04	0.3594	0.0452	0.0152	0.9915	85.20	86.37	87.65	87.86
8	-0.1852	0.1806	0.5425	57.09	57.60	0.3435	0.0472	0.0156	0.9908	84.38	85.64	85.64	86.12
9	-0.1739	0.2376	0.5668	54.50	56.83	0.3617	0.0377	0.0198	0.9888	80.17	81.77	78.95	79.63
10	-0.2120	0.2787	0.5764	51.11	52.71	0.2911	0.0834	0.0296	0.9851	74.39	76.40	78.64	79.35

WCDR	WCDR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			S	S			S
879.13	97.619	1.2249	1.0325	83.95	85.25	1.0028	0.9885	87.31

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	WV	SPFED	CODE	PO	POINT NO	IS	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC					M/SEC	M/SEC
1	0.2061	0.1729	216.4	295.6	216.4	184.5	0.0	230.9	0.0	0.8952	0.6632	0.8742	158.8	173.7	0.8227	0.5713			268.6	193.2
2	0.1919	0.1441	218.4	288.4	218.4	197.1	0.0	210.7	0.0	0.8175	0.6697	0.8504	177.8	190.3	0.8636	0.5842			281.6	198.2
3	0.1659	0.1146	221.5	271.4	221.5	199.7	0.0	184.1	0.0	0.7440	0.6802	0.7964	199.0	208.8	0.9144	0.5900			297.8	201.2
4	0.1374	0.0947	223.9	254.4	223.9	196.4	0.0	161.7	0.0	0.6882	0.6883	0.7424	218.5	226.2	0.9618	0.6036			312.9	206.8
5	0.0799	0.0618	226.3	223.4	226.3	183.8	0.0	127.3	0.0	0.6059	0.6963	0.6474	262.5	266.4	1.0684	0.6872			346.6	230.5
6	0.0589	0.0481	226.3	214.5	226.3	180.7	0.0	119.2	0.0	0.5833	0.6964	0.6249	283.7	286.4	1.1167	0.7104			362.9	246.2
7	0.0470	0.0404	226.4	212.5	226.4	178.2	0.0	117.0	0.0	0.5741	0.6969	0.6118	297.2	298.8	1.1499	0.7337			373.7	255.9
8	0.0367	0.0327	226.7	209.7	226.7	177.4	0.0	114.4	0.0	0.5602	0.6979	0.6030	310.5	311.7	1.1835	0.7700			384.5	267.7
9	0.0258	0.0240	227.0	209.5	227.0	179.0	0.0	108.9	0.0	0.5467	0.6986	0.6019	325.0	325.0	1.2202	0.8061			394.4	280.6
10	0.0122	0.0117	227.1	211.4	227.1	181.8	0.0	107.9	0.0	0.5357	0.6990	0.6043	341.3	341.3	1.2619	0.8486			409.9	295.8
11	0.0031	0.0031	227.0	204.1	227.0	173.0	0.0	108.3	0.0	0.5545	0.6987	0.5824	355.1	354.9	1.2972	0.8595			421.4	301.2

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VM*-1	VM*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0415	0.0554	0.2380	0.9346	43.98	40.10	0.4890	0.3062	0.0687	1.4080	75.32	74.10	0.6366	0.3000	-158.8	57.2	1.4580
2	0.0273	0.0670	0.2125	0.7890	44.20	45.87	0.4897	0.1630	0.0414	1.4802	86.34	85.57	0.6861	0.1029	-177.8	20.4	1.4802
3	0.0193	0.0729	0.2215	0.6121	44.55	48.95	0.4930	0.0882	0.0242	1.4928	91.87	91.40	0.7368	0.1227	-199.0	-24.7	1.4928
4	0.0175	0.0719	0.2201	0.4582	44.80	49.78	0.4899	0.0578	0.0163	1.4786	93.44	93.59	0.7754	0.3172	-218.5	-64.5	1.4786
5	0.0288	0.0508	0.1621	0.2125	45.05	48.58	0.4580	0.0468	0.0126	1.4391	93.87	93.55	0.8602	0.6477	-262.5	-139.0	1.4391
6	0.0254	0.0441	0.1325	0.1515	45.05	48.29	0.4381	0.0513	0.0134	1.4368	92.88	92.50	0.8979	0.7465	-283.7	-167.1	1.4368
7	0.0082	0.0413	0.1239	0.1209	45.06	47.82	0.4289	0.0609	0.0156	1.4342	91.32	90.87	0.9202	0.7992	-297.2	-183.1	1.4342
8	0.0025	0.0427	0.1193	0.0949	45.10	47.94	0.4125	0.0596	0.0150	1.4357	91.24	90.78	0.9404	0.8455	-310.5	-200.3	1.4357
9	0.0069	0.0460	0.1075	0.0822	45.12	48.54	0.3979	0.0593	0.0148	1.4446	91.12	90.61	0.9613	0.8791	-325.0	-216.1	1.4446
10	0.0110	0.0457	0.1005	0.0746	45.13	49.49	0.3843	0.0641	0.0160	1.4404	90.35	89.82	0.9837	0.9091	-341.3	-233.4	1.4404
11	0.0090	0.0477	0.1925	0.0429	45.12	46.85	0.3919	0.1077	0.0257	1.4410	83.71	82.85	1.0020	0.9591	-355.1	-246.6	1.4410

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PG2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	KG/SEC			%	%
1.1255	1.4503	89.31	89.86	211.49	1.1255	1.4503	89.31	89.86

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	WV	SPFED	CODE	PO	POINT NO	IS	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC					TO1
1	0.1939	0.1374	264.6	163.7	149.7	160.7	218.3	31.1	0.9686	0.1890	0.7711	0.4604	1.3392	1.1386					1.1386
2	0.1259	0.0944	269.9	188.5	180.1	189.7	201.0	32.4	0.8996	0.1720	0.7881	0.5339	1.4246	1.1386					1.1386
3	0.0789	0.0615	262.3	196.0	194.1	194.0	176.4	29.1	0.7372	0.1435	0.7857	0.5980	1.4621	1.1325					1.1325
4	0.0503	0.0416	251.1	192.7	196.8	190.8	156.0	26.7	0.6696	0.1386	0.7318	0.5497	1.4569	1.1259					1.1259
5	0.0194	0.0203	227.2	181.8	189.9	179.9	124.7	26.1	0.5810	0.1443	0.6584	0.5191	1.4228	1.1169					1.1169
6	0.0131	0.0153	221.4	181.9	187.7	179.5	117.4	26.9	0.5588	0.1597	0.6401	0.5189	1.4210	1.1182					1.1182
7	0.0098	0.0121	218.0	180.8	185.6	178.7	114.2	27.9	0.5514	0.1550	0.6289	0.5155	1.4169	1.1196					1.1196
8	0.0073	0.0094	215.8	180.3	185.5	178.4	110.3	26.5	0.5364	0.1478	0.6220	0.5138	1.4147	1.1201					1.1201
9	0.0050	0.0066	216.0	183.7	187.0	181.3	108.1	29.7	0.5239	0.1622	0.6220	0.5233	1.4237	1.1226					1.1226
10	0.0022	0.0035	218.0	187.2	189.8	184.2	107.5	33.4	0.5158	0.1796	0.6265	0.5328	1.4332	1.1275					1.1275
11	0.0004	0.0012	210.8	178.6	180.9	175.1	108.2	35.1	0.5390	0.1981	0.6027	0.5056	1.4067	1.1331					1.1331

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	TOT-STG	TOT-STG
1	0.0489	0.1312	0.2628	0.7797	35.04	42.76	0.5268	0.1486	0.0308	0.9516	62.80	64.30	62.80	64.30	64.30	64.30
2	0.0137	0.1029	0.2147	0.6676	43.78	50.75	0.4397	0.1098	0.0244	0.9631	76.77	77.90	76.77	77.90	77.90	77.90
3	0.0458	0.0499	0.1674	0.5937	48.40	54.03	0.3880	0.0641	0.0154	0.9793	86.65	87.34	86.65	87.34	87.34	87.34
4	0.0890	0.0118	0.1527	0.5310	50.23	53.51	0.3623	0.0450	0.0115	0.9865	90.24	90.75	90.24	90.75	90.75	90.75
5	0.1560	0.0435	0.1468	0.4367	49.86	50.44	0.3237	0.0419	0.0121	0.9895	90.69	91.14	90.69	91.14	91.14	91.14
6	0.1767	0.0585	0.1561	0.3691	49.71	50.21	0.3016	0.0451	0.0138	0.9882	89.39	89.91	89.39	89.91	89.91	89.91
7	0.1851	0.0432	0.1489	0.3964	49.33	49.85	0.2966	0.0517	0.0164	0.9879	87.58	88.18	87.58	88.18	88.18	88.18
8	0.2045	0.0790	0.1400	0.3887	49.52	49.70	0.2932	0.0458	0.0216	0.9849	86.76	87.39	86.76	87.39	87.39	87.39
9	0.2278	0.0988	0.1545	0.3617	50.15	50.48	0.2744	0.0662	0.0224	0.9868	86.67	87.32	86.67	87.32	87.32	87.32
10	0.2712	0.1387	0.1796	0.3362	51.01	51.18	0.2625	0.0820	0.0287	0.9809	84.98	85.72	84.98	85.72	85.72	85.72
11	0.3033	0.1685	0.2378	0.3409	48.43	48.15	0.2791	0.1066	0.0383	0.9769	76.97	78.05	76.97	78.05	78.05	78.05

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	%	%			%	%
873.98	1.1255	1.4238	84.65	85.40	1.1255	0.9817	84.65	

ROTOR 2

SL	EP1-1	EP1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	RUN N1	W/ SPEED	CODE	NO.	POINT NO	15	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			U-1	U-2	U-1	U-2	M'-1	M'-2	M/SEC	M/SEC
1	0.1475	C.1004	151.9	249.6	148.9	196.0	30.3	157.1	0.1991	0.4744	0.4259	0.6921	147.4	210.3	0.6279	0.9577	223.9	201.2	223.9	201.2
2	0.1073	C.0763	194.4	246.4	192.0	202.2	30.8	140.8	0.1582	0.4048	0.5515	0.4846	214.8	224.0	0.7544	0.6076	265.9	218.6	265.9	218.6
3	0.0863	C.0591	205.3	241.0	203.8	203.5	26.7	129.0	0.1299	0.3630	0.5867	0.6712	230.7	237.5	0.8237	0.6425	288.2	230.7	288.2	230.7
4	0.0626	C.0414	202.1	231.1	200.4	196.3	26.0	122.0	0.1289	0.3553	0.5787	0.6433	248.0	242.4	0.8564	0.6559	299.0	235.6	299.0	235.6
5	0.0196	C.0061	192.5	209.8	190.5	173.8	27.8	117.5	0.1452	0.3943	0.5512	0.5802	286.9	288.1	0.9208	0.6735	321.5	243.6	321.5	243.6
6	C.0100	C.0000	190.5	200.4	189.4	167.9	28.4	109.5	0.1488	0.3781	0.5447	0.5511	300.7	301.0	0.9467	0.7029	331.1	254.6	331.1	254.6
7	0.0040	C.0033	188.1	191.3	188.3	165.1	26.3	106.2	0.1405	0.3373	0.5405	0.5405	314.1	314.1	0.9791	0.7310	342.8	265.5	342.8	265.5
8	0.0030	C.0082	193.8	200.7	189.4	168.0	30.4	109.8	0.1400	0.3785	0.5446	0.5515	332.5	331.3	1.0161	0.7640	356.0	278.0	356.0	278.0
9	0.0049	C.0090	192.0	199.9	189.1	163.6	33.7	114.9	0.1765	0.4121	0.5471	0.5466	345.2	344.4	1.0379	0.7708	364.4	281.9	364.4	281.9
10	0.0022	C.0039	182.5	192.3	179.1	153.1	35.0	116.3	0.1932	0.4496	0.5170	0.5227	357.8	357.4	1.0460	0.7763	369.1	285.6	369.1	285.6

SL	INCS	INCP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	V3'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC
1	-0.0672	0.0542	0.3441	0.5756	40.20	57.40	0.2546	-0.1353	-0.0318	1.3599	111.23	111.72	C.0401	0.2645	-167.3	-53.2	1.8258
2	-0.1350	0.0257	0.2434	0.3741	52.53	41.70	0.2952	0.0004	0.0001	1.2914	99.91	99.91	0.7621	0.3880	-184.0	-83.2	1.8423
3	-0.1256	0.0206	0.2000	0.2974	56.10	43.61	0.3025	0.0147	0.0036	1.2806	97.93	97.85	0.7855	0.4881	-204.1	-108.5	1.8765
4	-0.0980	0.0094	0.1568	0.2505	55.21	42.24	0.3096	0.0060	0.0015	1.2843	99.09	99.05	0.8360	0.5855	-222.0	-130.4	1.8819
5	-0.0411	0.0265	0.1015	0.1604	52.48	55.69	0.3382	0.0597	0.0144	1.2747	90.44	90.10	0.9368	0.7759	-259.1	-170.6	1.8128
6	-0.0228	C.0350	0.1118	0.1146	51.87	53.89	0.3188	0.0534	0.0124	1.2596	90.67	90.35	0.9656	0.8510	-272.3	-191.5	1.7866
7	0.0025	0.0442	0.1000	0.0967	51.29	52.96	0.3122	0.0609	C.0158	1.2572	87.66	87.25	0.9963	0.8997	-287.8	-207.9	1.7777
8	0.0065	C.0323	0.0708	0.0912	51.95	53.97	0.3047	0.0782	0.0184	1.2638	85.90	85.42	1.0130	0.9218	-302.1	-221.5	1.8015
9	0.0073	0.0315	0.0676	0.0736	52.05	52.27	0.3157	0.1120	0.0262	1.2590	80.13	79.46	1.0252	0.9516	-311.5	-229.5	1.8028
10	0.0177	0.0566	0.1045	0.0594	48.86	48.55	0.3176	0.1156	0.0258	1.2680	79.94	79.27	1.0643	1.0049	-322.8	-241.1	1.7803

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SBM			%	%
1.2147	1.8194	86.79	87.85	179.74	1.0793	1.2778	91.33	91.63

STATOR 2

SL	EP1-1	EP1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	RUN N1	W/ SPEED	CODE	NO.	POINT NO	15	T02/	T01
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			U-1	U-2	U-1	U-2	M'-1	M'-2	TOT-STG	TOT-STG
1	0.1230	C.1414	225.0	185.0	143.8	185.0	154.2	4.8	0.7519	0.0259	0.6182	C.5024	1.7715	1.2317	1.2317	1.3193	1.0018	1.3193	1.0018	
2	0.0928	C.0997	231.5	198.7	186.0	198.7	137.8	3.2	0.6762	0.0161	0.6397	0.5435	1.8391	1.2238	1.2238	1.2754	1.0757	1.2754	1.0757	
3	0.0722	C.0735	233.0	200.7	195.7	200.7	126.4	0.7	0.5727	0.0033	0.6470	0.5514	1.8431	1.2143	1.2143	1.2716	1.0747	1.2716	1.0747	
4	0.0569	0.0546	228.0	192.9	193.9	192.9	119.8	-0.9	0.5531	C.0047	0.6339	0.5305	1.8441	1.2073	1.2073	1.2733	1.0747	1.2733	1.0747	
5	0.0324	C.0277	211.4	173.9	174.7	173.9	116.0	-1.8	0.5811	-0.0106	0.5849	0.4760	1.7945	1.2063	1.2063	1.2619	1.0795	1.2619	1.0795	
6	0.0263	0.0218	202.6	165.8	171.3	165.7	108.3	-3.9	0.5489	-0.0236	0.5597	C.4532	1.7720	1.2035	1.2035	1.2493	1.0754	1.2493	1.0754	
7	0.0230	0.0191	199.0	161.8	168.8	161.8	105.4	-1.7	0.5583	-0.0104	0.5482	0.4413	1.7619	1.2063	1.2063	1.2458	1.0771	1.2458	1.0771	
8	0.0179	0.0153	203.9	167.8	172.1	167.8	109.3	1.6	0.5661	0.0094	0.5408	0.4571	1.7827	1.2138	1.2138	1.2507	1.0807	1.2507	1.0807	
9	0.0118	0.0103	203.4	168.4	168.0	168.2	114.5	6.7	0.5983	0.0397	0.5967	C.4566	1.7849	1.2241	1.2241	1.2456	1.0853	1.2456	1.0853	
10	0.0042	0.0037	196.1	158.5	158.0	158.2	116.2	9.3	0.6339	0.0588	0.5337	0.4272	1.7551	1.2334	1.2334	1.2499	1.0883	1.2499	1.0883	

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1357	0.1744	0.7260	50.67	59.02	0.3151	0.1302	0.0274	C.9704	76.55	78.36	100.51	100.49
2	-0.1283	0.1564	0.6202	58.31	64.92	0.2710	0.0514	0.0116	0.9876	84.95	86.18	94.87	95.05
3	-0.1613	0.1480	0.5694	62.07	66.65	0.2665	0.0292	0.0070	0.9928	90.74	91.51	94.91	95.08
4	-0.1740	0.1443	0.5578	61.86	64.54	0.2870	0.0363	0.0092	0.9914	92.27	92.91	95.53	95.59
5	-0.1418	0.1477	0.5917	56.45	58.11	0.3383	0.0487	0.0140	0.9899	98.10	89.03	86.23	86.67
6	-0.1582	0.1386	0.5876	54.79	55.36	0.3497	0.0439	0.0132	0.9916	87.20	88.19	86.88	87.29
7	-0.1646	0.1544	0.5687	53.92	53.88	0.3552	0.0475	0.0149	0.9912	85.12	86.25	83.90	84.39
8	-0.1711	C.1865	0.5567	55.01	55.83	0.3504	0.0536	0.0177	0.9897	83.97	85.21	81.63	82.20
9	-0.1834	0.2363	0.5586	53.40	55.57	0.3547	0.0546	0.0187	0.9896	80.28	81.81	75.76	76.50
10	-0.2112	0.2809	0.5750	49.83	51.66	0.3861	0.0806	0.0286	0.9858	74.66	76.57	74.32	75.12

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/P01	EFF-A
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
E73.98	97.469	1.2147	1.7987	84.98	86.16	1.0793	0.9886	86.92

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2068	0.1629	201.2	280.8	201.2	178.5	0.0	216.7	0.0	0.8794	0.6130	0.8310	149.7	163.7	0.7640	0.5512	250.8	186.3
2	0.1890	0.1376	203.6	272.3	203.6	190.1	0.0	195.0	0.0	0.7963	0.6207	0.8033	167.6	179.4	0.8040	0.5627	263.7	190.8
3	0.1545	0.1347	206.7	252.1	206.7	186.9	0.0	169.2	0.0	0.7360	0.6309	0.7390	187.5	196.7	0.8519	0.5539	279.1	188.9
4	0.1266	0.1108	208.4	235.5	208.4	183.4	0.0	147.8	0.0	0.6788	0.6368	0.6877	205.9	213.2	0.8952	0.5684	293.0	194.7
5	0.0749	0.0620	210.1	208.0	210.1	172.9	0.0	115.6	0.0	0.5894	0.6423	0.6035	247.4	251.0	0.9921	0.6373	324.6	219.6
6	0.0555	0.0455	210.3	203.4	210.3	171.9	0.0	108.8	0.0	0.5642	0.6428	0.5890	267.3	269.9	1.0398	0.6822	340.1	235.6
7	0.0436	0.0364	210.5	200.9	210.5	170.5	0.0	106.2	0.0	0.5571	0.6435	0.5807	280.1	281.6	1.0712	0.7071	350.4	244.6
8	0.0328	0.0276	210.8	198.9	210.8	170.2	0.0	102.9	0.0	0.5437	0.6444	0.5742	292.7	293.7	1.1027	0.7383	360.6	255.7
9	0.0212	0.0182	210.8	198.5	210.8	171.5	0.0	100.0	0.0	0.5279	0.6446	0.5726	306.3	306.3	1.1369	0.7738	371.8	268.2
10	0.0076	0.0062	210.6	198.5	210.6	172.2	0.0	98.7	0.0	0.5203	0.6439	0.5715	321.6	321.6	1.1754	0.8112	384.4	281.7
11	0.0003	0.0001	210.2	188.7	210.2	160.3	0.0	99.7	0.0	0.5565	0.6425	0.5403	334.6	334.6	1.2079	0.8139	395.1	284.3

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	V9*-1	V9*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOY	TOY	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0350	0.0619	0.2504	0.5287	42.12	39.57	0.4675	0.2754	0.0621	1.3704	77.86	76.85	0.6412	0.2875	-149.7	53.1	1.3704
2	0.0223	0.0720	0.2337	0.7728	42.43	44.84	0.4691	0.2752	0.0324	1.4272	89.10	88.54	0.6911	0.0817	-167.6	15.6	1.4272
3	0.0152	0.0769	0.2455	0.5922	42.82	46.36	0.4924	0.0649	0.0178	1.4287	93.69	93.37	0.7389	0.1466	-187.5	-27.6	1.4287
4	0.0122	0.0772	0.2456	0.4380	43.04	46.71	0.4860	0.0412	0.0115	1.4121	95.46	95.22	0.7807	0.3427	-205.9	-65.4	1.4121
5	0.0217	0.0579	0.1792	0.2025	43.24	45.52	0.4441	0.0318	0.0085	1.3764	95.57	95.36	0.8673	0.6648	-174.4	-135.5	1.3764
6	0.0186	0.0509	0.1391	0.1916	43.26	45.68	0.4217	0.0326	0.0085	1.3796	95.22	94.99	0.9047	0.7531	-267.3	-161.1	1.3796
7	0.0017	0.0478	0.1242	0.1272	43.29	45.49	0.4130	0.0414	0.0106	1.3808	93.79	93.50	0.9267	0.7995	-280.1	-175.4	1.3808
8	0.0090	0.0492	0.1165	0.1063	43.32	45.59	0.3990	0.0431	0.0109	1.3831	93.74	93.03	0.9469	0.8426	-292.7	-190.8	1.3831
9	0.0136	0.0527	0.1058	0.0506	43.33	46.12	0.3829	0.0413	0.0103	1.3884	93.46	93.14	0.9680	0.8774	-306.3	-206.3	1.3884
10	0.0184	0.0571	0.1045	0.0760	43.30	46.41	0.3712	0.0521	0.0129	1.3962	91.66	91.25	0.9911	0.9131	-321.6	-222.9	1.3962
11	0.0169	0.0557	0.1653	0.0380	43.25	42.86	0.3857	0.1089	0.0255	1.3699	82.51	81.72	1.0099	0.9719	-334.6	-234.8	1.3699

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/41	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.1087	1.1908	91.01	91.42	203.00	1.1087	1.1908	91.01	91.42

STATOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PJ/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1929	0.1338	253.7	172.2	149.6	169.4	204.8	30.9	0.9387	0.1781	0.7413	0.4888	1.3089	1.1226	1.3089	1.1226
2	0.1252	0.0894	257.2	193.1	177.4	190.5	186.2	31.7	0.8086	0.1639	0.7534	0.5523	1.3866	1.1209	1.3866	1.1209
3	0.0778	0.0562	248.7	194.1	188.1	192.0	162.6	28.1	0.7122	0.1449	0.7278	0.5566	1.4030	1.1149	1.4030	1.1149
4	0.0900	0.0381	237.5	188.9	189.6	187.1	143.1	26.2	0.6460	0.1388	0.6940	0.5426	1.3918	1.1086	1.3918	1.1086
5	0.0203	0.0195	214.9	177.9	182.6	176.1	113.3	25.3	0.5553	0.1428	0.6252	0.5114	1.3588	1.1002	1.3588	1.1002
6	0.0143	0.0155	211.2	178.6	182.1	176.7	107.0	26.1	0.5314	0.1469	0.6132	0.5130	1.3590	1.1016	1.3590	1.1016
7	0.0110	0.0129	209.2	178.4	181.0	176.6	104.8	25.2	0.5247	0.1415	0.6064	0.5121	1.3576	1.1035	1.3576	1.1035
8	0.0083	0.0105	207.6	178.2	180.9	176.4	101.8	24.7	0.5126	0.1352	0.6011	0.5111	1.3563	1.1045	1.3563	1.1045
9	0.0059	0.0081	207.4	179.7	182.1	177.8	99.2	26.1	0.4986	0.1458	0.6000	0.5155	1.3604	1.1060	1.3604	1.1060
10	0.0034	0.0056	207.4	181.3	182.6	178.2	98.3	33.0	0.4938	0.1828	0.5989	0.5191	1.3643	1.1098	1.3643	1.1098
11	0.0012	0.0026	197.8	171.1	170.9	167.4	99.5	35.3	0.5273	0.2078	0.5879	0.4872	1.3362	1.1154	1.3362	1.1154

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOY-INLET	TOY-INLET	TOY-STG	TOY-STG
1	0.0191	0.1013	0.2719	0.7606	35.30	44.09	0.4620	0.1468	0.0305	0.9551	65.22	66.51	65.22	66.51
2	0.0173	0.0740	0.2066	0.6447	43.27	50.99	0.3819	0.0897	0.0200	0.9718	80.98	81.84	80.98	81.84
3	0.0706	0.0249	0.1687	0.5873	46.99	52.17	0.3477	0.0605	0.0145	0.9820	88.46	89.00	88.46	89.00
4	0.1127	0.0119	0.1529	0.5072	48.13	51.08	0.3273	0.0504	0.0129	0.9862	91.26	91.66	91.26	91.66
5	0.1817	0.0092	0.1452	0.4125	47.49	48.04	0.2894	0.0549	0.0159	0.9875	91.40	91.77	91.40	91.77
6	0.2042	0.0859	0.1432	0.3845	47.73	48.10	0.2725	0.0673	0.0207	0.9849	90.19	90.61	90.19	90.61
7	0.2118	0.0899	0.1353	0.3832	47.61	47.98	0.2687	0.0773	0.0246	0.9830	88.20	88.70	88.20	88.70
8	0.2282	0.1027	0.1316	0.3734	47.75	47.87	0.2649	0.0909	0.0299	0.9803	87.09	87.63	87.09	87.63
9	0.2532	0.1242	0.1391	0.3528	48.26	48.22	0.2540	0.0987	0.0335	0.9787	86.79	87.36	86.79	87.36
10	0.2932	0.1607	0.1829	0.3110	48.47	48.22	0.2381	0.1066	0.0373	0.9771	84.55	85.21	84.55	85.21
11	0.3151	0.1802	0.2479	0.3195	48.05	44.80	0.2531	0.1220	0.0438	0.9761	74.83	75.84	74.83	75.84

NCCRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
RAD/SEC	INLET	INLET	INLET	INLET			STAGE	STAGE
823.62	%	%	%	%			%	%
	1.1087	1.1631	85.21	85.85	1.1087	0.9801	85.21	

ROTOR 2

															RUN N7411, SPEED CODE 94, POINT NO 1			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1509	0.1018	160.0	271.6	157.2	228.0	30.0	147.6	0.1874	0.5687	0.4529	0.7694	186.2	198.2	0.6271	0.6616	221.6	233.6
2	0.1119	0.0761	197.7	266.3	195.4	230.8	30.2	132.8	0.1527	0.5189	0.5665	0.7559	202.4	211.1	0.7462	0.6919	260.5	243.8
3	0.0660	0.0558	202.4	255.6	200.7	227.1	26.8	117.2	0.1327	0.4745	0.5827	0.7262	217.5	223.8	0.7966	0.7130	274.8	250.9
4	0.0607	0.0344	199.2	241.7	157.5	216.7	25.4	107.1	0.1278	0.4580	0.5745	0.6860	237.7	237.8	0.8279	0.7184	287.0	253.1
5	0.0115	0.0058	189.2	209.6	187.5	189.6	25.8	89.3	0.1365	0.4401	0.5457	0.5917	270.4	271.5	0.8887	0.7424	308.2	263.0
6	0.0001	0.0130	187.7	199.9	186.0	186.3	25.5	77.5	0.1361	0.3980	0.5404	0.5642	283.3	283.7	0.9154	0.7804	317.9	276.6
7	0.0086	0.0190	185.4	196.6	183.8	182.6	24.4	73.0	0.1322	0.3803	0.5331	0.5544	296.0	296.0	0.9428	0.8126	327.9	288.2
8	0.0175	0.0258	185.2	196.6	183.1	182.0	27.5	76.4	0.1489	0.3881	0.5317	0.5535	313.4	312.2	0.9749	0.8430	339.5	299.4
9	0.0202	0.0270	183.4	192.4	180.3	176.5	33.3	81.0	0.1827	0.4345	0.5254	0.5392	325.3	324.6	0.9831	0.8398	343.2	299.6
10	0.0133	0.0163	172.1	172.2	168.5	151.0	35.1	82.9	0.2054	0.5021	0.4902	0.4784	337.2	336.8	0.9854	0.8206	345.9	295.4

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1206	0.0072	0.2953	0.5630	41.60	59.51	0.0916	0.0595	0.0141	1.2604	94.19	94.00	0.7788	0.2157	-156.2	-50.6	1.6588
2	0.1176	0.0673	0.1862	0.3956	52.34	62.39	0.1751	0.1311	0.0324	1.2075	82.17	81.70	0.7205	0.3248	-172.2	-78.3	1.6874
3	0.1525	0.0535	0.1492	0.3213	53.78	62.88	0.1888	0.0943	0.0249	1.1981	84.10	83.69	0.7586	0.4374	-190.6	-106.7	1.6773
4	0.1227	0.0360	0.1135	0.2492	52.90	60.80	0.2056	0.0943	0.0239	1.1877	83.15	82.73	0.8113	0.5421	-208.2	-130.8	1.6437
5	0.0611	0.0065	0.0909	0.1514	50.27	53.54	0.2201	0.1323	0.0325	1.1376	70.06	69.51	0.9188	0.7653	-244.6	-182.2	1.5462
6	0.0424	0.0154	0.1022	0.1046	49.87	52.10	0.1914	0.1102	0.0259	1.1170	69.90	69.42	0.9460	0.8413	-257.9	-206.2	1.5169
7	0.0180	0.0236	0.0931	0.0910	49.31	51.55	0.1780	0.1058	0.0247	1.1113	68.90	68.43	0.9758	0.8848	-271.6	-223.0	1.5070
8	0.0181	0.0202	0.0868	0.0834	49.26	51.24	0.1715	0.1148	0.0271	1.1063	65.14	64.64	1.0010	0.9175	-285.9	-237.8	1.5064
9	0.0150	0.0238	0.0652	0.0483	48.47	48.71	0.1821	0.1453	0.0340	1.0981	57.39	56.83	1.0175	0.9492	-292.0	-243.6	1.4922
10	0.0155	0.0544	0.1360	0.0277	44.93	41.43	0.2037	0.1997	0.0425	1.0755	42.74	42.16	1.0621	1.0344	-302.1	-253.9	1.4331

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	KG/SEC	%	%	%	%
1.1697	1.5660	80.58	81.76	178.85	1.0550	1.1488	73.40	73.91

STATOR 2

															RUN N0411, SPEED CODE 94, POINT NO 1			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO	TO2/	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET	STAGE	
1	0.1206	0.1410	241.5	256.8	193.1	254.7	144.9	-8.6	0.6404	-0.0336	0.6757	0.7169	1.5971	1.2039	1.1900	1.0725		
2	0.0887	0.1010	248.0	255.8	211.4	255.3	129.8	-16.4	0.5490	-0.0699	0.6989	0.7231	1.5937	1.1941	1.1400	1.0874		
3	0.0721	0.0793	244.9	236.5	216.4	238.1	114.7	-14.1	0.4869	-0.0582	0.6990	0.6733	1.5385	1.1825	1.0911	1.0632		
4	0.0635	0.0660	236.8	228.8	212.2	228.4	105.2	-13.9	0.4601	-0.0607	0.6708	0.6461	1.5118	1.1736	1.0921	1.0608		
5	0.0418	0.0384	211.8	211.7	192.6	211.6	87.9	-7.8	0.4283	-0.0369	0.5982	0.5979	1.4794	1.1605	1.0884	1.0541		
6	0.0323	0.0284	203.1	203.6	188.1	203.6	74.6	1.5	0.3868	0.0075	0.5736	0.5752	1.4591	1.1543	1.0743	1.0465		
7	0.0260	0.0219	199.5	196.0	186.3	195.9	72.4	5.1	0.3708	0.0260	0.5642	0.5525	1.4382	1.1537	1.0607	1.0447		
8	0.0214	0.0183	199.8	192.4	185.6	192.0	74.2	11.5	0.3804	0.0596	0.5631	0.5409	1.4308	1.1568	1.0509	1.0452		
9	0.0172	0.0155	195.7	189.7	178.3	189.4	80.7	11.1	0.4252	0.0587	0.5491	0.5314	1.4253	1.1634	1.0474	1.0475		
10	0.0085	0.0083	176.2	172.4	155.5	172.1	82.8	9.1	0.4892	0.0530	0.4899	0.4788	1.3782	1.1710	1.0337	1.0498		

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	EFF-P
1	-0.2472	0.1150	0.6739	53.60	65.13	0.0772	0.2070	0.0436	0.9454	67.13	69.12	70.10	57.82
2	-0.2155	0.0765	0.6129	59.32	66.63	0.1004	0.1991	0.0447	0.9445	73.28	74.96	56.23	70.00
3	-0.2471	0.0855	0.5461	61.19	62.44	0.1508	0.3066	0.0729	0.9159	71.40	73.07	42.42	43.16
4	-0.2670	0.0883	0.5208	60.10	60.40	0.1614	0.3088	0.0779	0.9194	72.20	73.76	41.89	42.61
5	-0.2947	0.1214	0.4651	54.17	56.94	0.1339	0.2043	0.0589	0.9558	73.86	75.26	45.22	45.81
6	-0.3354	0.1697	0.3793	52.88	55.02	0.1104	0.1931	0.0581	0.9613	73.49	75.24	44.46	45.07
7	-0.3520	0.1928	0.3448	52.33	52.84	0.1249	0.2352	0.0737	0.9543	71.18	72.61	37.98	38.49
8	-0.3568	0.2366	0.3208	51.98	51.70	0.1401	0.2594	0.0856	0.9498	68.76	70.29	31.58	32.06
9	-0.3565	0.2552	0.3665	49.51	50.73	0.1581	0.2521	0.0864	0.9527	65.24	66.92	28.05	28.52
10	-0.3559	0.2751	0.4362	42.45	45.43	0.1750	0.2598	0.0923	0.9601	56.12	58.05	19.10	19.48

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%	%	%	%
823.62	93.560	1.1697	1.4792	69.75	71.36	1.0550	0.9445	42.87

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2042	0.1666	200.1	280.5	200.1	177.7	0.0	217.0	0.0	0.8825	0.6092	0.8301	149.0	163.0	0.7596	0.5498	249.4	185.8
2	0.1851	0.1418	202.2	271.5	202.2	189.3	0.0	194.6	0.0	0.7979	0.6162	0.8008	166.8	178.6	0.7988	0.5603	262.1	190.0
3	0.1521	0.1316	204.9	253.5	204.9	188.4	0.0	149.7	0.0	0.7334	0.6250	0.7438	186.7	195.9	0.8656	0.5580	277.2	190.2
4	0.1245	0.1077	206.4	237.7	206.4	184.6	0.0	149.8	0.0	0.6818	0.6300	0.6944	205.0	212.2	0.8880	0.5693	290.9	194.9
5	0.0722	0.0627	207.4	209.6	207.4	173.4	0.0	117.8	0.0	0.5971	0.6333	0.6082	246.3	249.9	0.9831	0.6324	321.9	218.0
6	0.0527	0.0462	207.2	204.7	207.2	172.0	0.0	111.1	0.0	0.5738	0.6327	0.5927	266.2	268.6	1.0299	0.6751	337.3	235.2
7	0.0412	0.0369	207.2	201.8	207.2	170.2	0.0	108.5	0.0	0.5678	0.6327	0.5830	278.9	280.3	1.0608	0.6986	347.4	241.8
8	0.0312	0.0277	207.3	199.8	207.3	169.8	0.0	105.4	0.0	0.5557	0.6330	0.5766	291.3	292.4	1.0919	0.7287	357.6	252.6
9	0.0203	0.0184	207.2	199.0	207.2	170.3	0.0	102.9	0.0	0.5439	0.6328	0.5733	304.9	304.9	1.1257	0.7612	368.7	264.1
10	0.0083	0.0075	207.0	198.1	207.0	169.7	0.0	102.2	0.0	0.5421	0.6320	0.5693	320.2	320.2	1.1641	0.7940	381.3	276.2
11	0.0016	0.0015	206.7	191.8	206.7	161.7	0.0	103.1	0.0	0.5678	0.6310	0.5486	333.1	333.0	1.1968	0.8040	392.0	281.0

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VB*-1	VB*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0346	0.0623	0.2439	0.9356	41.97	34.51	0.4670	0.2682	0.0603	1.3730	78.59	77.61	0.6415	0.2940	-149.0	54.0	1.3730
2	0.0215	0.0728	0.2310	0.7763	42.25	36.73	0.4686	0.1224	0.0311	1.4267	89.56	89.02	0.6919	0.0844	-166.8	16.1	1.4267
3	0.0133	0.0789	0.2370	0.6026	42.59	41.69	0.4687	0.0583	0.0160	1.4320	94.41	94.12	0.7408	0.1382	-186.7	-26.2	1.4320
4	0.0096	0.0798	0.2293	0.4369	42.78	46.7	0.4634	0.0394	0.0111	1.4177	95.73	95.52	0.7834	0.3264	-205.0	-62.5	1.4177
5	0.0175	0.0620	0.1657	0.2202	42.91	45.58	0.4474	0.0369	0.0099	1.3799	94.98	94.75	0.8714	0.4312	-246.3	-132.1	1.3799
6	0.0138	0.0557	0.1277	0.1678	42.88	45.60	0.4266	0.0413	0.0109	1.3815	94.09	93.81	0.9096	0.7417	-266.2	-157.5	1.3815
7	0.0036	0.0532	0.1151	0.1415	42.89	45.26	0.4187	0.0525	0.0138	1.3809	92.31	91.95	0.9320	0.7905	-278.9	-171.8	1.3809
8	0.0147	0.0549	0.1075	0.1189	42.90	45.33	0.4055	0.0560	0.0143	1.3831	91.58	91.19	0.9526	0.8337	-291.3	-187.0	1.3831
9	0.0195	0.0586	0.0987	0.1035	42.89	45.61	0.3919	0.0592	0.0149	1.3875	90.91	90.48	0.9739	0.8704	-304.9	-201.9	1.3875
10	0.0242	0.0630	0.1009	0.0875	42.86	45.48	0.3840	0.0765	0.0190	1.3914	88.14	87.57	0.9989	0.9095	-320.2	-218.0	1.3914
11	0.0224	0.0612	0.1513	0.0576	42.82	43.12	0.3926	0.1199	0.0287	1.3763	81.42	80.57	1.0154	0.9579	-333.1	-229.9	1.3763

TC/TO	PO/PO	EFF-AD	EFF-P	WCI/AI	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.1103	1.3929	90.07	90.52	201.33	1.1103	1.3929	90.07	90.52

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1534	0.1352	253.0	169.1	148.2	164.3	205.1	30.6	0.9438	0.1796	0.7396	0.4799	1.3120	1.1222	1.3120	1.1222	1.3120	1.1222
2	0.1264	0.0922	255.8	189.7	175.7	186.7	185.9	31.4	0.8127	0.1657	0.7491	0.5409	1.3659	1.1202	1.3659	1.1202	1.3659	1.1202
3	0.0805	0.0609	248.1	190.6	187.2	188.5	162.9	28.3	0.7157	0.1405	0.7262	0.5462	1.4031	1.1148	1.4031	1.1148	1.4031	1.1148
4	0.0538	0.0439	237.7	184.2	188.5	184.2	144.7	26.7	0.6544	0.1436	0.6943	0.5340	1.3944	1.1096	1.3944	1.1096	1.3944	1.1096
5	0.0242	0.0250	215.0	176.0	181.3	174.3	115.5	24.8	0.5670	0.1413	0.6250	0.5053	1.3657	1.1014	1.3657	1.1014	1.3657	1.1014
6	0.0175	0.0198	211.0	176.4	180.5	174.5	109.4	26.2	0.5447	0.1488	0.6122	0.5061	1.3656	1.1033	1.3656	1.1033	1.3656	1.1033
7	0.0138	0.0162	208.6	176.2	179.0	174.3	107.1	25.7	0.5390	0.1463	0.6039	0.5049	1.3641	1.1052	1.3641	1.1052	1.3641	1.1052
8	0.0105	0.0127	207.0	175.8	178.8	174.0	104.3	25.1	0.5282	0.1430	0.5987	0.5035	1.3626	1.1066	1.3626	1.1066	1.3626	1.1066
9	0.0073	0.0092	204.3	177.2	179.2	175.3	102.1	26.1	0.5179	0.1480	0.5959	0.5073	1.3659	1.1086	1.3659	1.1086	1.3659	1.1086
10	0.0033	0.0049	205.4	179.1	178.4	175.9	101.8	33.7	0.5184	0.1896	0.5918	0.5117	1.3702	1.1132	1.3702	1.1132	1.3702	1.1132
11	0.0004	0.0014	199.0	169.7	170.3	165.7	103.0	36.7	0.5438	0.2179	0.5707	0.4825	1.3641	1.1189	1.3641	1.1189	1.3641	1.1189

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	B*-1	B*-2	VB*-1	VB*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-STG	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0241	0.1044	0.2734	0.7441	35.10	43.60	0.4732	0.1458	0.0303	0.9555	66.04	67.31	0.6604	0.31	66.04	67.31	0.9555
2	0.0132	0.0760	0.2084	0.6469	42.99	50.28	0.3934	0.0906	0.0201	0.9718	81.36	82.20	0.8136	0.20	81.36	82.20	0.9718
3	0.0067	0.0284	0.1723	0.5672	46.92	51.50	0.1610	0.0681	0.0163	0.9798	88.59	89.13	0.8859	0.13	88.59	89.13	0.9798
4	0.1042	0.0034	0.1576	0.5108	47.99	50.57	0.3420	0.0580	0.0148	0.9840	90.94	91.36	0.9094	0.16	90.94	91.36	0.9840
5	0.1700	0.0575	0.1437	0.4257	47.22	47.85	0.3030	0.0444	0.0129	0.9889	91.57	91.93	0.9157	0.17	91.57	91.93	0.9889
6	0.1908	0.0725	0.1452	0.3959	47.34	47.82	0.2856	0.0516	0.0158	0.9885	90.19	90.61	0.9019	0.19	90.19	90.61	0.9885
7	0.1975	0.0755	0.1401	0.3928	47.06	47.66	0.2801	0.0561	0.0178	0.9878	88.21	88.71	0.8821	0.21	88.21	88.71	0.9878
8	0.2126	0.0871	0.1354	0.3853	47.16	47.51	0.2776	0.0697	0.0229	0.9850	86.72	87.28	0.8672	0.22	86.72	87.28	0.9850
9	0.2338	0.1048	0.1403	0.3699	47.42	47.80	0.2672	0.0745	0.0253	0.9841	85.79	86.41	0.8579	0.23	85.79	86.41	0.9841
10	0.2686	0.1360	0.1897	0.3289	47.24	47.81	0.2459	0.0728	0.0255	0.9846	83.18	83.91	0.8318	0.24	83.18	83.91	0.9846
11	0.2985	0.1637	0.2576	0.3259	44.89	44.58	0.2686	0.1160	0.0415	0.9771	74.18	75.23	0.7418	0.25	74.18	75.23	0.9771

NGOR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC			%	%			%	%
819.94	1.1103	1.3680	84.95	85.61	1.1103	0.9822	84.95	85.61

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1521	0.1040	155.2	253.7	192.4	206.8	29.7	146.9	0.1914	0.6118	0.4389	0.7135	189.3	197.3	0.6158	0.5987	217.8	212.8
2	0.1143	0.0804	192.2	232.3	189.8	213.1	30.0	135.1	0.1582	0.5819	0.5498	0.7118	201.5	210.1	0.7318	0.6374	259.8	225.9
3	0.0893	0.0619	197.5	242.6	195.6	210.5	27.1	120.8	0.1374	0.5186	0.5673	0.6891	216.5	222.8	0.7824	0.6608	272.3	254.0
4	0.0653	0.0437	195.0	228.8	193.3	201.0	25.8	109.3	0.1324	0.4974	0.5615	0.6455	232.6	236.8	0.8131	0.6714	283.1	238.0
5	0.0201	0.0069	186.8	202.7	184.8	178.7	25.5	96.1	0.1369	0.4941	0.5371	0.5689	269.2	270.3	0.8805	0.6990	305.9	244.4
6	0.0103	0.0009	185.4	191.8	183.6	171.5	25.8	85.8	0.1398	0.4841	0.5330	0.5376	282.1	282.4	0.9062	0.7312	315.2	260.9
7	0.0040	0.0028	183.6	188.7	181.9	170.4	24.8	81.0	0.1387	0.4839	0.5270	0.5304	294.7	294.7	0.9342	0.7652	323.4	273.3
8	0.0039	0.0036	184.0	190.9	181.9	172.2	27.4	82.5	0.1489	0.4867	0.5275	0.5336	312.0	310.8	0.9632	0.7994	337.8	284.0
9	0.0048	0.0111	183.5	188.9	180.3	165.8	34.2	90.5	0.1871	0.4894	0.5249	0.5259	323.8	323.1	0.9760	0.7952	341.2	285.7
10	0.0041	0.0061	173.6	177.9	169.7	151.9	36.5	92.6	0.2121	0.5475	0.4838	0.4820	333.7	333.3	0.9786	0.7919	343.9	286.3

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	POZ/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1146	0.0668	0.3158	0.9563	40.67	56.75	0.1668	0.0036	0.0008	1.2753	99.64	99.62	0.7928	0.2362	-155.6	-90.4	1.7770
2	0.1642	0.0548	0.1917	0.3966	51.29	60.50	0.2308	0.0798	0.0197	1.2336	89.80	89.50	0.7329	0.3363	-171.5	-75.0	1.7225
3	0.1429	0.0439	0.1622	0.3175	52.89	61.12	0.2399	0.0566	0.0137	1.2251	91.80	91.56	0.7682	0.4503	-189.4	-102.2	1.7171
4	0.1152	0.0245	0.1356	0.2547	52.21	59.17	0.2494	0.0464	0.0116	1.2143	92.17	91.95	0.8188	0.5642	-204.9	-127.4	1.6861
5	0.0559	0.0116	0.0987	0.1488	49.94	53.04	0.2649	0.0822	0.0199	1.1892	85.59	85.19	0.9220	0.7731	-243.7	-174.2	1.6188
6	0.0392	0.0186	0.1143	0.0958	49.58	51.04	0.2413	0.0701	0.0163	1.1636	83.73	83.38	0.9491	0.8334	-256.2	-194.4	1.5878
7	0.0161	0.0235	0.1058	0.0802	49.10	50.73	0.2249	0.0625	0.0143	1.1609	84.50	84.18	0.9777	0.8975	-269.8	-213.4	1.5813
8	0.0178	0.0210	0.0736	0.0771	49.12	51.21	0.2164	0.0657	0.0151	1.1644	83.45	83.09	1.0017	0.9246	-284.8	-228.3	1.5913
9	0.0185	0.0203	0.0475	0.0625	48.57	49.02	0.2290	0.0935	0.0218	1.1599	77.23	76.74	1.0140	0.9314	-289.7	-232.6	1.5862
10	0.0082	0.0471	0.1112	0.0432	45.31	44.44	0.2353	0.1070	0.0236	1.1583	74.49	73.95	1.0348	1.0117	-299.7	-242.7	1.5939

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/41	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
				S				
1.1766	1.6310	84.94	85.94	176.88	1.0597	1.1922	86.21	86.54

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1218	0.1407	228.9	228.9	209.7	177.7	209.6	144.3	4.1	0.4786	0.0195	0.6378	0.9805	1.8293	1.2030	1.0721
2	0.0905	0.0892	238.9	222.5	194.0	222.5	132.1	1.2	0.5844	0.0053	0.6704	0.6207	1.8978	1.1994	1.2155	1.0688
3	0.0685	0.0718	236.3	217.5	204.7	217.5	116.1	-1.2	0.5225	0.0036	0.6658	0.6087	1.8928	1.1849	1.2083	1.0649
4	0.0516	0.0511	227.3	206.3	200.3	206.3	107.4	-1.7	0.4917	0.0082	0.6408	0.5775	1.8587	1.1761	1.1953	1.0618
5	0.0265	0.0231	204.4	182.4	181.1	182.4	94.8	-0.9	0.4823	0.0223	0.5741	0.5087	1.9829	1.1627	1.1432	1.0525
6	0.0206	0.0173	193.6	174.5	174.2	174.4	84.5	-4.1	0.4518	0.0223	0.5430	0.4868	1.9402	1.1635	1.1355	1.0517
7	0.0178	0.0149	190.4	169.8	172.8	169.8	80.5	-1.0	0.4359	0.0056	0.5341	0.4730	1.9466	1.1687	1.1385	1.0535
8	0.0154	0.0135	192.9	172.9	174.3	172.9	82.5	2.4	0.4420	0.0139	0.5396	0.4809	1.9359	1.1765	1.1323	1.0563
9	0.0119	0.0105	190.8	170.4	168.1	170.3	90.3	6.8	0.4932	0.0308	0.5316	0.4721	1.9492	1.1838	1.1357	1.0579
10	0.0054	0.0053	180.2	161.2	154.6	161.0	92.5	8.9	0.5390	0.0592	0.4987	0.4460	1.9240	1.1838	1.1357	1.0579

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.2090	0.1641	0.6590	51.11	60.50	0.2110	0.1203	0.0254	0.9712	73.65	75.38	87.17	87.55
2	-0.1802	0.1456	0.5791	58.00	65.85	0.1909	0.0592	0.0124	0.9856	83.58	84.75	89.17	89.72
3	-0.2115	0.1391	0.5281	60.13	65.20	0.1982	0.0513	0.0122	0.9846	87.74	88.61	85.44	85.82
4	-0.2354	0.1409	0.4999	59.12	62.11	0.2122	0.0638	0.0161	0.9847	88.35	89.15	84.42	84.81
5	-0.2406	0.1535	0.4871	53.64	54.86	0.2422	0.1045	0.0301	0.9791	83.48	84.50	72.25	72.82
6	-0.2704	0.1389	0.4751	51.67	52.31	0.2362	0.0918	0.0276	0.9833	83.28	84.29	74.10	74.59
7	-0.2870	0.1612	0.4415	51.30	50.77	0.2429	0.0918	0.0389	0.9781	81.15	82.26	71.41	71.92
8	-0.2952	0.1410	0.4281	51.70	51.58	0.2400	0.1242	0.0410	0.9777	79.80	81.01	70.51	71.05
9	-0.2885	0.2364	0.4534	49.52	50.45	0.2584	0.1352	0.0444	0.9762	76.49	76.95	64.12	64.75
10	-0.3040	0.2773	0.4838	45.10	47.20	0.2715	0.1246	0.0443	0.9804	69.58	71.32	63.86	64.50

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
819.94	92.789	1.1766	1.9993	81.31	82.50	1.0597	0.9806	76.79	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M1-1	M1-2	V1-1	V1-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	M/SEC	M/SEC	M1-1	M1-2	M/SEC	M/SEC
1	0.2061	0.1705	191.6	274.9	191.6	170.4	0.0	215.6	0.0	0.9002	0.5817	0.8116	149.0	162.9	0.7368	0.5268	242.7	178.4
2	0.1912	0.1411	193.6	267.2	193.6	181.8	0.0	195.7	0.0	0.8207	0.5881	0.7862	166.8	178.5	0.7762	0.5375	255.5	182.7
3	0.1652	0.1137	198.6	251.2	198.6	183.3	0.0	171.8	0.0	0.7521	0.5980	0.7356	186.7	195.8	0.8245	0.5414	271.1	184.8
4	0.1381	0.0964	199.0	236.5	199.0	180.5	0.0	152.8	0.0	0.7021	0.6059	0.6898	209.2	212.2	0.8697	0.5542	285.7	190.0
5	0.0844	0.0629	202.4	210.3	202.4	171.2	0.0	122.2	0.0	0.6201	0.6170	0.6094	246.2	249.8	0.9715	0.6187	318.7	213.6
6	0.0636	0.0495	203.3	205.2	203.3	169.3	0.0	115.9	0.0	0.6007	0.6199	0.5927	266.1	268.6	1.0210	0.6585	334.9	227.9
7	0.0510	0.0413	204.0	204.1	204.0	169.4	0.0	113.8	0.0	0.5918	0.6220	0.5888	278.8	280.2	1.0534	0.6850	345.4	237.5
8	0.0392	0.0321	204.8	202.5	204.8	169.7	0.0	110.6	0.0	0.5778	0.6240	0.5833	291.3	292.3	1.0857	0.7162	355.9	248.6
9	0.0258	0.0218	204.9	201.3	204.9	170.0	0.0	107.9	0.0	0.5685	0.6250	0.5792	304.8	304.8	1.1204	0.7485	367.3	260.2
10	0.0104	0.0065	204.8	201.0	204.8	170.1	0.0	107.2	0.0	0.5622	0.6249	0.5769	320.1	320.1	1.1594	0.7821	380.0	272.5
11	0.0016	0.0014	204.5	192.7	204.5	159.1	0.0	108.7	0.0	0.5595	0.6239	0.5499	333.0	332.9	1.1921	0.7821	390.8	274.9

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B1-1	B1-2	VR1-1	VR1-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0137	0.0831	0.2389	0.9414	40.82	38.30	0.4807	0.2837	0.6637	1.3688	78.30	77.32	0.4624	0.2990	149.0	52.7	1.3688
2	0.0004	0.0947	0.2214	0.8078	41.09	43.24	0.4876	0.1449	0.0368	1.4218	88.24	87.64	0.7138	0.0940	166.8	17.2	1.4218
3	0.0081	0.1003	0.2291	0.6319	41.51	45.47	0.4919	0.0813	0.0223	1.4281	92.66	92.28	0.7622	0.1303	186.7	-24.1	1.4281
4	0.0093	0.0987	0.2204	0.4847	41.83	46.08	0.4915	0.0555	0.0156	1.4157	94.33	94.04	0.8022	0.3175	205.0	-59.4	1.4157
5	0.0053	0.0742	0.1553	0.2427	42.28	45.75	0.4981	0.0381	0.0103	1.3963	95.13	94.89	0.8836	0.6409	246.2	-127.7	1.3963
6	0.0045	0.0650	0.1200	0.1849	42.39	45.32	0.4416	0.0430	0.0114	1.4004	94.19	93.11	0.9189	0.7340	266.1	-152.7	1.4004
7	0.0113	0.0608	0.1013	0.1630	42.48	45.61	0.4321	0.0468	0.0123	1.4082	93.56	93.24	0.9396	0.7766	278.8	-166.4	1.4082
8	0.0210	0.0612	0.0938	0.1389	42.55	45.91	0.4182	0.0463	0.0120	1.4136	93.44	93.11	0.9588	0.8199	291.3	-181.7	1.4136
9	0.0248	0.0639	0.0871	0.1204	42.59	46.21	0.4049	0.0486	0.0124	1.4189	92.94	92.58	0.9792	0.8588	304.8	-196.9	1.4189
10	0.0288	0.0676	0.0882	0.1048	42.59	46.32	0.3968	0.0641	0.0162	1.4242	90.59	90.10	1.0016	0.8968	320.1	-212.9	1.4242
11	0.0270	0.0657	0.1468	0.0665	42.55	43.04	0.4123	0.1197	0.0288	1.4047	82.43	81.56	1.0200	0.9535	333.0	-224.2	1.4047

TO2/TO1	PO2/PO1	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	ROTOR	ROTOR	ROTOR	ROTOR
S	S	S	S	SQM	S	S	S	S
1.1140	1.4096	90.41	90.86	198.23	1.1140	1.4096	90.41	90.86

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PD/PO	TO/TO	P3/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	INLET	INLET	STAGE	TO1
1	0.1452	0.1380	247.3	155.3	140.0	152.4	203.8	29.9	0.9678	0.1918	0.7211	0.4393	1.3113	1.1214	1.3113	1.1214
2	0.1281	0.0958	250.1	176.4	166.4	175.1	186.8	36.3	0.8424	0.1949	0.7305	0.5020	1.3807	1.1208	1.3807	1.1208
3	0.0814	0.0837	242.3	180.7	177.6	178.7	164.8	26.6	0.7474	0.1473	0.7089	0.5159	1.4045	1.1161	1.4045	1.1161
4	0.0531	0.0445	232.5	176.0	180.2	176.5	147.6	23.4	0.6857	0.1315	0.6784	0.5088	1.4011	1.1118	1.4011	1.1118
5	0.0219	0.0228	213.2	170.9	176.3	169.1	119.7	22.8	0.5965	0.1339	0.6181	0.4882	1.3799	1.1054	1.3799	1.1054
6	0.0148	0.0169	209.5	172.1	175.7	170.4	114.1	24.3	0.5759	0.1418	0.6081	0.4922	1.3820	1.1078	1.3820	1.1078
7	0.0113	0.0136	205.2	173.2	176.5	171.8	112.4	25.2	0.5670	0.1462	0.6044	0.4946	1.3855	1.1105	1.3855	1.1105
8	0.0089	0.0110	208.5	175.7	177.2	171.8	109.5	25.5	0.5594	0.1476	0.6011	0.4959	1.3841	1.1118	1.3841	1.1118
9	0.0068	0.0086	207.5	175.4	177.8	173.2	107.0	27.7	0.5418	0.1505	0.5982	0.5006	1.3883	1.1138	1.3883	1.1138
10	0.0042	0.0057	207.4	177.6	177.9	174.5	106.7	33.1	0.5403	0.1876	0.5966	0.5059	1.3935	1.1187	1.3935	1.1187
11	0.0016	0.0024	199.3	168.7	167.1	165.0	108.6	34.8	0.5763	0.2079	0.5697	0.4779	1.3686	1.1253	1.3686	1.1253

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0481	0.1304	0.2856	0.7759	33.47	40.67	0.5165	0.1420	0.0294	0.9583	66.33	67.59	66.33	67.59
2	0.0165	0.1057	0.2376	0.6675	41.06	47.30	0.4294	0.0943	0.0209	0.9718	79.95	80.84	79.95	80.84
3	0.0354	0.0600	0.1711	0.6001	44.90	49.56	0.3907	0.0579	0.0139	0.9835	87.86	88.42	87.86	88.42
4	0.0729	0.0279	0.1456	0.5542	46.30	49.18	0.3710	0.0480	0.0123	0.9873	90.48	90.92	90.48	90.92
5	0.1407	0.0282	0.1363	0.4624	46.48	47.15	0.3305	0.0504	0.0146	0.9884	91.51	91.69	91.51	91.69
6	0.1596	0.0413	0.1382	0.4341	46.68	47.39	0.3111	0.0616	0.0189	0.9865	89.89	90.35	89.89	90.35
7	0.1695	0.0476	0.1400	0.4208	47.08	47.52	0.3058	0.0818	0.0240	0.9821	88.01	88.55	88.01	88.55
8	0.1874	0.0620	0.1400	0.4058	47.48	47.59	0.2995	0.0975	0.0320	0.9789	87.07	87.46	87.07	87.46
9	0.2100	0.0810	0.1508	0.3833	47.82	47.94	0.2857	0.1018	0.0345	0.9781	86.41	87.02	86.41	87.02
10	0.2467	0.1141	0.1877	0.3527	47.92	48.13	0.2705	0.1076	0.0377	0.9770	83.84	84.59	83.84	84.59
11	0.2661	0.1312	0.2476	0.3684	44.71	45.04	0.2889	0.1278	0.0458	0.9748	74.91	75.99	74.91	75.99

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	STAGE	STAGE	STAGE	STAGE
RAD/SEC	S	S	S	S	S	S	S	S
819.73	1.1140	1.3822	84.99	85.66	1.1140	0.9805	84.99	85.66

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1497	0.1019	162.5	241.3	139.5	183.5	29.1	156.7	0.2046	0.7003	0.4018	0.6737	189.3	197.3	0.5904	0.5266	209.4	187.9
2	0.1113	0.0809	179.9	236.9	177.1	180.0	31.3	146.0	0.1745	0.6504	0.3123	0.6621	201.4	210.1	0.6994	0.5570	245.6	194.3
3	0.0891	0.0656	188.0	230.0	186.4	191.3	26.6	127.7	0.1308	0.5869	0.3383	0.6436	216.4	222.8	0.7658	0.5978	267.5	213.6
4	0.0677	0.0487	186.5	219.8	185.2	186.3	22.4	116.8	0.1202	0.5592	0.4348	0.6149	232.6	236.7	0.8033	0.6198	280.1	221.6
5	0.0474	0.0333	181.2	199.8	179.7	169.4	23.4	105.8	0.1294	0.5581	0.5197	0.5562	269.1	270.2	0.8732	0.6575	304.4	236.1
6	0.0146	0.0040	181.5	191.0	179.8	166.5	26.8	97.1	0.1371	0.5333	0.5200	0.5314	282.0	282.3	0.8990	0.6890	318.8	247.7
7	0.0083	0.0021	181.2	187.8	179.4	162.0	25.2	96.8	0.1396	0.5296	0.5185	0.5212	294.6	294.6	0.9262	0.7140	323.7	257.2
8	0.0059	0.0037	182.4	192.0	180.1	165.2	28.4	97.7	0.1565	0.5337	0.5213	0.5320	311.9	310.7	0.9600	0.7472	335.8	269.6
9	0.0025	0.0059	182.8	190.1	179.7	158.9	33.5	106.5	0.1641	0.5816	0.5213	0.5244	323.8	323.0	0.9738	0.7452	341.4	270.2
10	0.0010	0.0023	173.3	182.3	169.8	149.4	36.7	104.4	0.2015	0.6096	0.4916	0.4999	335.6	335.2	0.9801	0.7543	345.5	275.0

SL	INCS	JNCM	DEV	TURN	RHOVM-1	RHOVM-2	D-PAC	OMEGA-B	LOSS-P	POZ/	BEFF-P	BEFF-A	B*-1	B*-2	VO*-1	VO*-2	PC/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0690	0.0525	0.2944	0.4236	37.80	52.88	0.2637	0.0403	-0.0096	1.3131	103.17	103.29	0.8384	0.2140	-156.2	-40.5	1.7257
2	0.1138	0.0245	0.1910	0.4277	48.55	55.76	0.3166	0.0688	0.0170	1.2599	92.32	92.06	0.7633	0.3356	-170.2	-66.0	1.7542
3	0.1123	0.0133	0.1718	0.3389	51.28	57.98	0.3124	0.0558	0.0139	1.2517	92.61	92.37	0.7988	0.4600	-191.8	-95.1	1.7610
4	0.0856	0.0030	0.1429	0.2749	50.87	57.29	0.3108	0.0360	0.0090	1.2507	94.73	94.55	0.8484	0.5715	-210.2	-120.0	1.7472
5	0.0384	0.0291	0.0959	0.1691	49.33	52.82	0.3172	0.0564	0.0137	1.2372	90.47	90.18	0.9394	0.7704	-245.7	-164.5	1.7086
6	0.0276	0.0302	0.1054	0.1163	49.30	51.43	0.2927	0.0621	0.0099	1.2194	92.00	91.77	0.9608	0.8445	-257.2	-185.2	1.6885
7	0.0106	0.0310	0.0976	0.0939	49.17	50.63	0.2848	0.0508	0.0118	1.2146	89.88	89.60	0.9832	0.8893	-269.4	-199.8	1.6807
8	0.0150	0.0238	0.0600	0.0936	49.36	51.70	0.2765	0.0537	0.0128	1.2247	89.30	88.99	1.0045	0.9109	-283.4	-213.1	1.7012
9	0.0162	0.0226	0.0582	0.0741	49.12	49.41	0.2920	0.0884	0.0209	1.2194	82.83	82.34	1.0163	0.9422	-290.3	-218.6	1.6982
10	0.0103	0.0453	0.0558	0.0607	45.96	46.14	0.2877	0.0807	0.0183	1.2249	84.41	83.95	1.0570	0.9963	-300.9	-230.8	1.6764

TO/TD	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	\$	\$	SQM			ROTOR	ROTOR
							\$	\$
1.1916	1.7136	86.78	87.74	172.71	1.0697	1.2398	90.79	91.06

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PC/PU	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1234	0.1414	220.2	177.9	157.5	177.9	153.9	2.2	0.7703	0.0126	0.6102	0.4868	1.6781	1.2091	1.2773	1.0782
2	0.0891	0.0958	223.6	191.2	174.7	191.2	141.0	4.4	0.6771	0.0229	0.6248	0.5266	1.7373	1.2027	1.2472	1.0759
3	0.0660	0.0674	223.6	191.4	185.4	191.4	125.1	0.4	0.5926	0.0023	0.6245	0.5791	1.7496	1.1941	1.2440	1.0715
4	0.0500	0.0683	217.7	184.8	185.1	184.8	114.7	-2.0	0.5543	-0.0110	0.6086	0.5115	1.7344	1.1876	1.2419	1.0697
5	0.0263	0.0227	201.3	169.5	172.1	169.5	106.7	-3.0	0.5450	-0.0179	0.5608	0.4680	1.7921	1.1833	1.2252	1.0693
6	0.0214	0.0180	193.0	162.5	167.5	162.4	95.9	-4.5	0.5200	-0.0279	0.5372	0.4486	1.6729	1.1797	1.2096	1.0633
7	0.0189	0.0159	190.2	159.9	165.2	159.9	94.2	-2.8	0.5185	-0.0176	0.5282	0.4406	1.6661	1.1823	1.2060	1.0636
8	0.0148	0.0128	194.7	165.1	168.5	165.1	97.5	0.6	0.5245	0.0034	0.5399	0.4343	1.6821	1.1888	1.2109	1.0669
9	0.0095	0.0084	193.0	164.1	162.5	164.0	104.2	6.6	0.5703	0.0401	0.5327	0.4495	1.6790	1.1982	1.2052	1.0737
10	0.0031	0.0027	185.4	153.9	153.4	153.5	104.2	10.0	0.5948	0.0649	0.5091	0.4190	1.6500	1.2060	1.2075	1.0715

SL	INCP	DEV	TURN	RHOVM-1	RHOVM-2	C-PAC	OMEGA-B	LOSS-P	POZ/	BEFF-A	BEFF-P	BEFF-A	BEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1173	0.1611	0.7577	47.14	55.18	0.3367	0.1238	0.0261	0.4725	76.19	77.85	92.43	92.69
2	-0.0875	0.1633	0.6541	52.97	60.54	0.2836	0.0424	0.0095	0.9902	84.34	85.50	88.00	88.17
3	-0.1414	0.1469	0.5903	56.83	61.40	0.2752	0.0267	0.0064	0.9938	89.26	90.07	89.37	90.18
4	-0.1728	0.1381	0.5653	57.13	59.62	0.2853	0.0318	0.0080	0.9930	90.80	91.48	91.49	91.75
5	-0.1780	0.1404	0.5628	53.51	54.63	0.3114	0.0471	0.0136	0.9910	88.43	89.25	86.11	86.50
6	-0.2022	0.1363	0.5478	52.20	57.37	0.3149	0.0439	0.0132	0.9922	88.11	88.94	86.11	86.47
7	-0.2043	0.1492	0.5460	51.43	51.39	0.3187	0.0502	0.0157	0.9913	86.09	87.05	85.49	85.87
8	-0.2128	0.1804	0.5211	52.51	52.98	0.3157	0.0624	0.0206	0.9888	84.81	85.88	85.88	84.90
9	-0.2114	0.2367	0.5302	50.30	52.21	0.3238	0.0655	0.0225	0.9885	80.48	81.84	77.38	77.97
10	-0.2482	0.2870	0.5320	47.14	48.35	0.3514	0.0973	0.0345	0.9842	74.64	76.35	77.24	77.84

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/P01	EFF-AD
INLET	INLET	INLET	INLET	\$	\$			STAGE
RAD/SEC	KG/SEC							\$
814.73	91.383	1.1916	1.6950	84.88	85.95	1.0697	0.9891	86.03

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	N-1	N-2
RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC
1	0.2068	0.1698	188.4	276.4	188.4	169.0	0.0	216.9	0.0	0.9071	0.5712	0.0112	149.8	163.9	0.7299	0.5225	240.7	177.1
2	0.1927	0.1405	193.5	266.6	193.5	177.4	0.0	198.9	0.0	0.8404	0.5700	0.7834	167.7	179.4	0.7702	0.5269	253.0	178.4
3	0.1675	0.1160	193.7	249.9	193.7	179.2	0.0	174.3	0.0	0.7707	0.5886	0.7938	187.7	197.0	0.8197	0.5280	269.0	180.6
4	0.1404	0.0953	196.5	235.5	196.5	177.6	0.0	154.7	0.0	0.7163	0.5975	0.6859	206.2	213.4	0.8661	0.5447	284.0	187.0
5	0.0957	0.0639	200.3	210.7	200.3	169.1	0.0	125.7	0.0	0.6396	0.6100	0.6093	247.6	251.3	0.9700	0.6091	318.5	210.6
6	0.0640	0.0500	201.2	206.1	201.2	167.8	0.0	119.7	0.0	0.6200	0.6130	0.5945	267.6	270.1	1.0201	0.6499	344.8	225.3
7	0.0510	0.0414	201.8	204.6	201.8	167.2	0.0	117.9	0.0	0.6146	0.6150	0.5890	280.4	281.9	1.0527	0.6740	365.5	234.2
8	0.0371	0.0323	202.3	202.8	202.3	167.0	0.0	115.0	0.0	0.6033	0.6166	0.5828	293.0	294.0	1.0851	0.7035	386.0	244.8
9	0.0257	0.0219	202.5	201.8	202.5	167.6	0.0	112.5	0.0	0.5914	0.6173	0.5792	306.6	306.6	1.1200	0.7358	407.4	256.4
10	0.0101	0.0084	202.4	202.0	202.4	168.2	0.0	111.9	0.0	0.5871	0.6170	0.5782	322.0	322.0	1.1592	0.7703	430.3	269.1
11	0.0013	0.0009	202.1	193.0	202.1	168.7	0.0	112.7	0.0	0.6298	0.6158	0.5494	335.0	334.9	1.1921	0.7736	451.2	271.8

SL	INCS	INCN	DEV	TURN	RHOVR-1	RHOVR-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	W-1	W-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN							PO1	TOT	TOT	RADIAN	RADIAN	N/SEC	N/SEC	INLET
1	0.0026	0.0963	0.2350	0.9765	40.36	38.23	0.4830	0.2774	0.0822	1.3796	79.37	78.41	0.6736	0.3029	-149.8	53.0	1.3796
2	0.0115	0.1058	0.2074	0.8329	42.85	42.45	0.4991	0.1554	0.0394	1.4296	87.78	87.15	0.7269	0.1080	-147.7	19.3	1.4296
3	0.0186	0.1177	0.2264	0.6468	41.12	44.48	0.5071	0.0914	0.0251	1.4361	91.99	91.57	0.7726	0.1258	-147.7	-22.7	1.4361
4	0.0189	0.1082	0.2220	0.4527	41.49	45.57	0.5019	0.0583	0.0164	1.4276	94.21	93.91	0.8118	0.3191	-206.2	-58.7	1.4276
5	0.0028	0.0823	0.1534	0.2525	42.80	45.08	0.4705	0.0421	0.0114	1.4101	94.80	94.54	0.8917	0.6391	-247.4	-125.4	1.4101
6	0.0023	0.0728	0.1171	0.1956	42.12	45.24	0.4533	0.0459	0.0122	1.4171	94.04	93.74	0.9267	0.7311	-267.6	-150.4	1.4171
7	0.0191	0.0608	0.1003	0.1717	42.20	45.31	0.4462	0.0540	0.0142	1.4237	92.84	92.48	0.9474	0.7757	-280.4	-163.9	1.4237
8	0.0289	0.0691	0.0940	0.1466	42.26	45.44	0.4339	0.0549	0.0147	1.4288	92.27	91.87	0.9667	0.8201	-293.0	-179.0	1.4288
9	0.0328	0.0718	0.0870	0.1285	42.29	45.84	0.4205	0.0594	0.0152	1.4352	91.71	91.28	0.9871	0.8567	-306.6	-194.1	1.4352
10	0.0368	0.0756	0.0872	0.1138	42.28	46.11	0.4113	0.0738	0.0187	1.4448	89.64	89.08	1.0094	0.8958	-322.0	-210.1	1.4448
11	0.0350	0.0737	0.1499	0.0715	42.23	42.69	0.4251	0.1272	0.0305	1.4216	82.01	81.09	1.0280	0.9565	-335.0	-222.1	1.4216

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/PI	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SOM			%	%
1.1190	1.4230	89.89	90.39	196.71	1.1180	1.4230	89.89	90.39

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	N-1	N-2
RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC
1	0.1989	0.1420	247.1	149.8	136.0	146.8	205.0	29.9	0.9776	0.1987	0.7200	0.4228	1.3143	1.1228	1.3143	1.1228	1.3143	1.1228
2	0.1322	0.1004	249.2	171.2	161.7	168.2	189.6	32.3	0.8644	0.1887	0.7265	0.4860	1.3819	1.1233	1.3819	1.1233	1.3819	1.1233
3	0.0895	0.0675	246.4	174.1	174.7	173.8	167.3	28.1	0.7891	0.1599	0.7001	0.5015	1.4069	1.1186	1.4069	1.1186	1.4069	1.1186
4	0.0562	0.0418	231.4	174.3	176.7	172.4	149.4	25.5	0.7018	0.1469	0.6724	0.4972	1.4067	1.1140	1.4067	1.1140	1.4067	1.1140
5	0.0299	0.0254	213.3	169.1	174.2	167.2	123.2	25.1	0.6155	0.1487	0.6176	0.4828	1.3931	1.1091	1.3931	1.1091	1.3931	1.1091
6	0.0177	0.0194	210.4	170.5	174.4	168.3	117.8	27.0	0.5941	0.1593	0.6078	0.4862	1.3953	1.1119	1.3953	1.1119	1.3953	1.1119
7	0.0161	0.0158	209.8	171.9	174.6	169.8	114.4	27.3	0.5880	0.1555	0.6050	0.4899	1.3984	1.1151	1.3984	1.1151	1.3984	1.1151
8	0.0107	0.0123	208.0	172.6	175.0	170.6	113.9	25.9	0.5749	0.1508	0.6011	0.4914	1.3995	1.1170	1.3995	1.1170	1.3995	1.1170
9	0.0077	0.0091	208.2	174.0	175.8	171.9	111.6	27.0	0.5656	0.1559	0.5989	0.4951	1.4028	1.1194	1.4028	1.1194	1.4028	1.1194
10	0.0049	0.0060	208.4	175.8	176.4	172.4	111.4	34.7	0.5433	0.1489	0.5985	0.4993	1.4070	1.1246	1.4070	1.1246	1.4070	1.1246
11	0.0022	0.0028	199.8	167.4	165.1	163.4	112.6	36.1	0.5983	0.2175	0.5700	0.4729	1.3837	1.1306	1.3837	1.1306	1.3837	1.1306

SL	INCS	INCN	DEV	TURN	RHOVR-1	RHOVR-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	B-1	B-2	W-1	W-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN							PO1	TOT-INLET	TOT-INLET	RADIAN	RADIAN	N/SEC	N/SEC	INLET
1	0.0579	0.1402	0.2925	0.7788	33.22	39.48	0.5398	0.1590	0.0329	0.9334	66.14	67.42	0.6114	0.3029	-149.8	53.0	1.3796
2	0.0385	0.1277	0.2314	0.6756	40.13	46.25	0.4527	0.1091	0.0242	0.9476	78.52	79.47	0.7052	0.1080	-147.7	19.3	1.4296
3	0.0137	0.1018	0.1877	0.4712	43.93	48.52	0.4066	0.0673	0.0161	0.9810	86.47	87.10	0.7657	0.1258	-147.7	-22.7	1.4361
4	0.0568	0.0440	0.1610	0.3549	43.71	48.42	0.3832	0.0554	0.0241	0.9855	89.89	90.37	0.8099	0.3191	-206.2	-58.7	1.4276
5	0.0215	0.0350	0.1511	0.4468	46.22	47.03	0.3405	0.0529	0.0154	0.9880	91.49	91.49	0.8500	0.6391	-247.4	-125.4	1.4101
6	0.0141	0.0231	0.1557	0.4349	46.66	47.22	0.3235	0.0702	0.0217	0.9845	89.31	89.00	0.8917	0.7311	-267.6	-150.4	1.4171
7	0.0185	0.0266	0.1533	0.4285	46.88	47.51	0.3166	0.0821	0.0260	0.9820	87.42	88.00	0.9267	0.7757	-280.4	-163.9	1.4237
8	0.0139	0.0385	0.1432	0.4281	47.17	47.68	0.3128	0.0955	0.0313	0.9793	86.20	86.84	0.9667	0.8201	-293.0	-179.0	1.4288
9	0.0041	0.0571	0.1482	0.4097	47.57	47.93	0.3038	0.1066	0.0362	0.9770	85.09	85.78	0.9871	0.8567	-306.6	-194.1	1.4352
10	0.0023	0.0911	0.1990	0.3644	47.82	47.91	0.2882	0.1219	0.0426	0.9738	82.30	83.14	1.0094	0.8958	-322.0	-210.1	1.4448
11	0.0040	0.1092	0.2572	0.3008	44.50	44.98	0.3023	0.1329	0.0476	0.9737	74.48	75.62	1.0280	0.9565	-335.0	-222.1	1.4216

MCRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	%	%			%	%
824.50	1.1180	1.3930	84.20	84.92	1.1180	0.9789	84.20	84.92

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N°-1	N°-2	V°-1	V°-2
1	0.148	0.1022	136.7	236.5	133.6	173.2	29.0	138.1	0.2126	0.7333	0.3049	0.6521	186.4	198.4	0.5010	0.4966	206.4	177.8
2	0.1080	0.0793	176.0	229.8	171.3	179.6	30.8	143.3	0.1771	0.6781	0.4941	0.6396	202.6	211.3	0.6089	0.5366	242.6	192.0
3	0.0865	0.0648	183.3	223.9	181.4	181.3	26.5	131.4	0.1445	0.6255	0.5235	0.6242	217.7	226.1	0.7527	0.5675	263.6	203.6
4	0.0663	0.0442	182.3	216.3	180.7	178.9	24.5	121.5	0.1347	0.5968	0.5217	0.6030	233.9	238.1	0.7913	0.5953	276.6	213.5
5	0.0255	0.0134	179.1	198.2	177.2	164.3	26.0	110.7	0.1456	0.5930	0.5124	0.5499	270.7	271.8	0.8644	0.6395	302.1	230.1
6	0.0161	0.0107	179.9	189.5	177.8	160.3	27.2	101.0	0.1517	0.5620	0.5161	0.5254	283.6	286.0	0.8919	0.6746	312.1	243.3
7	0.0102	0.0097	180.2	186.4	178.3	158.9	26.1	97.4	0.1453	0.5498	0.5142	0.5155	296.3	296.3	0.9239	0.7042	323.7	256.6
8	0.0026	0.0012	181.1	189.9	179.0	162.1	27.9	99.0	0.1546	0.5481	0.5162	0.5240	312.7	312.5	0.9610	0.7390	337.2	268.1
9	0.0087	0.0038	181.6	193.0	178.2	156.2	35.2	108.1	0.1950	0.6055	0.5164	0.5220	325.6	324.9	0.9689	0.7342	346.7	267.2
10	0.0004	0.0016	172.6	182.4	168.8	147.1	36.0	107.8	0.2100	0.6325	0.4883	0.4985	337.6	337.2	0.9777	0.7446	365.6	272.4

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B°-1	B°-2	VO°-1	VO°-2	PO/PO
1	0.0441	0.0773	0.3058	0.6371	36.48	51.10	0.3044	0.0727	0.0172	1.3270	105.43	105.65	0.0632	0.2262	-157.3	-48.4	1.7482
2	0.1121	0.0020	0.2151	0.4253	47.23	54.42	0.3383	0.0327	0.0000	1.2727	96.43	96.51	0.7050	0.3597	-171.8	-68.0	1.7733
3	0.1004	0.0016	0.1827	0.3399	50.32	56.12	0.3624	0.0424	0.0105	1.2642	94.67	94.68	0.8107	0.4709	-191.2	-92.6	1.7839
4	0.0754	0.0133	0.1481	0.2819	50.12	56.25	0.3339	0.0165	0.0041	1.2686	97.72	97.66	0.8586	0.5767	-209.4	-116.0	1.7812
5	0.0338	0.0337	0.1009	0.1687	49.10	52.41	0.3341	0.0352	0.0095	1.2589	96.35	96.16	0.9641	0.7754	-244.7	-161.1	1.7520
6	0.0238	0.0340	0.1122	0.1132	49.22	51.34	0.3043	0.0154	0.0036	1.2390	97.25	97.17	0.9645	0.8513	-255.5	-103.0	1.7312
7	0.0062	0.0354	0.1050	0.0989	49.27	50.84	0.2965	0.0268	0.0062	1.2339	96.85	96.69	0.9876	0.8967	-270.2	-198.9	1.7264
8	0.0084	0.0304	0.0705	0.0996	49.42	51.06	0.2868	0.0355	0.0083	1.2436	93.15	92.95	1.0111	0.9215	-285.8	-213.6	1.7451
9	0.0120	0.0268	0.0623	0.0741	49.85	49.76	0.3015	0.0608	0.0143	1.2437	88.66	88.30	1.0285	0.9463	-290.4	-216.8	1.7496
10	0.0138	0.0527	0.1000	0.0601	48.85	46.55	0.2978	0.0552	0.0124	1.2514	89.76	89.43	1.0605	1.0004	-301.6	-229.3	1.7290

TO/TO	PO/PO	EFF-AD	EFF-P	MC/LA1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
1.1578	1.7527	87.86	88.77	170.30	1.0714	1.2582	94.82	94.99

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N°-1	N°-2	V°-1	V°-2
1	0.1226	0.1405	214.5	166.6	148.1	166.5	155.2	6.1	0.8052	0.0244	0.5925	0.4539	1.7017	1.2121	1.2922	1.0795		
2	0.0897	0.0959	217.9	179.4	166.7	179.4	140.3	2.8	0.6979	0.0156	0.6040	0.4917	1.7555	1.2081	1.2595	1.0739		
3	0.0668	0.0675	217.7	181.4	175.5	181.4	128.8	1.4	0.6322	0.0080	0.6056	0.4992	1.7733	1.1984	1.2569	1.0732		
4	0.0507	0.0479	214.1	177.1	177.7	177.1	119.4	-0.5	0.5711	0.0029	0.5964	0.4879	1.7665	1.1925	1.2584	1.0719		
5	0.0261	0.0222	199.6	164.8	167.0	164.7	109.3	-3.3	0.5794	0.0202	0.5541	0.4530	1.7356	1.1899	1.2450	1.0714		
6	0.0209	0.0173	191.4	158.0	163.4	157.9	99.6	-5.3	0.5474	0.0337	0.5311	0.4345	1.7176	1.1858	1.2292	1.0648		
7	0.0188	0.0157	188.8	155.9	162.1	155.9	96.7	-2.0	0.5479	0.0127	0.5225	0.4280	1.7123	1.1895	1.2238	1.0652		
8	0.0155	0.0135	192.8	161.0	165.5	161.0	98.8	-0.2	0.5383	0.0010	0.5324	0.4408	1.7278	1.1970	1.2312	1.0690		
9	0.0102	0.0092	193.2	162.0	160.3	161.9	107.8	6.1	0.5923	0.0374	0.5313	0.4419	1.7309	1.2066	1.2300	1.0726		
10	0.0034	0.0030	186.0	152.0	151.6	151.8	107.7	7.2	0.6176	0.0474	0.5088	0.4123	1.7027	1.2143	1.2323	1.0738		

SL	INCM	DEV	TURN	RHOVN-1	RHOVN-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
1	0.0924	0.1729	0.7808	45.23	53.03	0.3094	0.1254	0.0264	0.9735	77.30	78.92	95.36	95.73
2	0.0666	0.1559	0.6824	51.55	58.22	0.3169	0.0467	0.0105	0.9898	84.60	85.76	92.03	92.28
3	0.1319	0.1526	0.6242	54.51	59.86	0.3046	0.0270	0.0064	0.9941	89.58	90.39	92.11	92.36
4	0.1360	0.1461	0.5961	56.08	58.59	0.3134	0.0378	0.0096	0.9919	91.67	92.31	94.21	94.40
5	0.1435	0.1381	0.5596	53.13	54.51	0.3369	0.0474	0.0137	0.9911	89.79	90.55	90.28	90.57
6	0.1747	0.1284	0.5812	52.18	52.31	0.3599	0.0442	0.0133	0.9923	89.93	90.66	93.70	93.89
7	0.1850	0.1541	0.5506	51.69	51.67	0.3373	0.0478	0.0150	0.9919	87.62	88.52	90.97	91.23
8	0.1990	0.1760	0.5393	52.75	52.98	0.3337	0.0565	0.0187	0.9901	85.79	86.87	88.59	88.92
9	0.1894	0.2340	0.5549	50.81	52.94	0.3428	0.0621	0.0213	0.9891	82.12	83.44	83.74	84.21
10	0.2274	0.2655	0.5902	47.75	49.13	0.3754	0.0942	0.0335	0.9847	76.60	78.27	83.10	83.59

NCORR	W CORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
824.90	90.658	1.1978	1.7340	86.85	87.88	1.0714	0.9894	90.27	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	CODE	NO.	POINT	NO	11	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC					M/SEC	M/SEC	
1	0.1976	0.1636	167.1	236.3	167.1	159.2	0.0	193.2	0.0	0.0793	0.3033	0.7412	127.4	139.3	0.6328	0.4976			210.1	160.0	
2	0.1717	0.1311	168.1	241.0	168.1	170.4	0.0	171.1	0.0	0.7044	0.3064	0.7139	142.4	152.4	0.6448	0.3070			220.4	171.4	
3	0.1382	0.1054	167.0	226.0	169.0	172.2	0.0	146.4	0.0	0.7035	0.3094	0.6654	159.4	167.4	0.7005	0.3104			232.5	173.4	
4	0.1102	0.0843	169.3	208.0	169.3	167.1	0.0	125.1	0.0	0.6420	0.3103	0.6124	175.2	181.4	0.7344	0.3173			243.7	176.3	
5	0.0867	0.0506	168.0	183.1	168.0	153.9	0.0	99.2	0.0	0.5722	0.3087	0.5340	210.5	213.6	0.8131	0.3594			269.0	191.0	
6	0.0524	0.0304	168.4	180.3	168.4	154.0	0.0	93.0	0.0	0.5470	0.3080	0.5250	227.5	229.6	0.8531	0.3979			283.1	205.3	
7	0.0430	0.0305	168.4	179.2	168.4	153.0	0.0	92.1	0.0	0.5397	0.3081	0.5213	236.3	239.6	0.8707	0.4197			292.0	213.1	
8	0.0338	0.0219	168.8	178.0	168.8	153.4	0.0	90.0	0.0	0.5302	0.3085	0.5172	246.0	249.9	0.9004	0.4441			300.8	221.7	
9	0.0216	0.0133	168.0	177.5	168.0	154.1	0.0	88.1	0.0	0.5197	0.3086	0.5132	260.4	260.6	0.9355	0.4712			310.5	231.2	
10	0.0079	0.0027	168.5	177.1	168.5	154.1	0.0	87.4	0.0	0.5130	0.3077	0.5133	273.7	273.7	0.9683	0.7006			321.4	241.0	
11	0.0001	0.0016	167.0	167.0	167.0	142.9	0.0	88.0	0.0	0.5520	0.3064	0.4840	284.7	284.6	0.9960	0.7011			330.4	243.1	

SL	INCL	INCL	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0243	0.0726	0.2129	0.9770	37.06	36.16	0.4248	0.2539	0.0543	1.2847	60.53	79.03	0.6519	0.3251	-127.4	55.9	1.2047
2	0.0091	0.0052	0.2001	0.8116	37.22	40.00	0.4240	0.1039	0.0252	1.3102	91.60	91.06	0.7044	0.1072	-142.4	16.4	1.3102
3	0.0031	0.0034	0.2199	0.6363	37.37	42.37	0.4302	0.0372	0.0102	1.3156	96.45	96.31	0.7573	0.1211	-159.4	-21.0	1.3156
4	0.0100	0.0094	0.2270	0.4700	37.42	41.89	0.4297	0.0072	0.0076	1.2773	96.93	96.82	0.6829	0.3241	-175.2	-56.2	1.2773
5	0.0061	0.0057	0.1537	0.2950	37.34	39.38	0.4145	0.0513	0.0130	1.2619	92.66	92.42	0.6951	0.6302	-210.5	-116.4	1.2619
6	0.0099	0.0794	0.1809	0.1004	37.30	39.67	0.3938	0.0404	0.0130	1.2619	92.66	92.38	0.6333	0.7229	-227.5	-139.0	1.2619
7	0.0269	0.0765	0.0099	0.1004	37.31	39.74	0.3804	0.0544	0.0145	1.2654	91.57	91.28	0.6953	0.7647	-236.3	-147.5	1.2654
8	0.0375	0.0777	0.0795	0.1007	37.33	39.80	0.3769	0.0505	0.0154	1.2681	90.47	90.34	0.6754	0.8057	-246.0	-159.9	1.2681
9	0.0418	0.0840	0.0701	0.1544	37.33	40.02	0.3658	0.0413	0.0160	1.2718	89.99	89.64	0.6962	0.8417	-260.6	-172.5	1.2718
10	0.0442	0.0840	0.0712	0.1302	37.29	40.07	0.3503	0.0745	0.0192	1.2756	87.43	87.20	1.0109	0.8797	-273.7	-186.3	1.2756
11	0.0444	0.0832	0.1359	0.0949	37.22	36.91	0.3760	0.1308	0.0320	1.2546	78.13	77.41	1.0374	0.9425	-284.7	-196.6	1.2546

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	STAGE	ROTOR
%	%	%	%	SQM	%	%	%	%
1.0004	1.2750	89.44	90.00	175.94	1.0004	1.2750	89.44	90.00

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	CODE	NO.	POINT	NO	11	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC					M/SEC	M/SEC	
1	0.1917	0.1322	228.5	163.7	137.4	161.0	182.4	29.2	0.9243	0.1774	0.6705	0.4701	1.2376	1.0920	1.2376			1.2376	1.0930		
2	0.1235	0.0882	229.2	179.0	160.0	163.3	20.0	0.7922	0.1562	0.6738	0.3171	1.2919	1.0902	1.2919			1.2919	1.0902			
3	0.0769	0.0577	228.6	174.9	170.3	173.4	140.2	23.4	0.6882	0.1341	0.6442	0.5062	1.2914	1.0843	1.2914			1.2914	1.0843		
4	0.0521	0.0434	207.2	168.2	168.5	168.8	120.6	22.1	0.6210	0.1315	0.6076	0.4874	1.2774	1.0779	1.2774			1.2774	1.0779		
5	0.0238	0.0255	185.8	157.0	158.3	154.4	97.1	20.6	0.5501	0.1307	0.5422	0.4569	1.2517	1.0733	1.2517			1.2517	1.0733		
6	0.0174	0.0205	183.8	157.0	158.9	155.4	92.4	21.4	0.5265	0.1304	0.5357	0.4542	1.2488	1.0746	1.2488			1.2488	1.0746		
7	0.0144	0.0181	183.1	157.4	159.0	156.0	90.9	20.9	0.5196	0.1303	0.5333	0.4550	1.2493	1.0765	1.2493			1.2493	1.0765		
8	0.0122	0.0157	182.4	157.5	159.1	156.2	89.1	20.6	0.5106	0.1312	0.5306	0.4550	1.2494	1.0779	1.2494			1.2494	1.0779		
9	0.0098	0.0131	182.2	158.4	159.8	156.9	87.5	22.0	0.5000	0.1391	0.5295	0.4574	1.2517	1.0795	1.2517			1.2517	1.0795		
10	0.0067	0.0097	182.0	159.7	159.8	157.6	87.0	25.7	0.4987	0.1614	0.5281	0.4604	1.2550	1.0827	1.2550			1.2550	1.0827		
11	0.0030	0.0048	172.7	151.2	140.7	140.4	87.8	28.8	0.5337	0.1916	0.4988	0.4342	1.2363	1.0866	1.2363			1.2363	1.0866		

SL	INCL	INCL	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	
1	0.0046	0.0869	0.2712	0.7449	32.47	41.06	0.4210	0.1413	0.0293	0.9432	67.58	64.54	67.58	68.34		
2	0.0337	0.0555	0.1909	0.6360	39.24	46.15	0.3494	0.0773	0.0172	0.9797	84.27	84.83	84.27	84.83		
3	0.0946	0.0009	0.1579	0.5341	42.35	45.72	0.3319	0.0737	0.0177	0.9310	89.98	90.36	89.98	90.36		
4	0.1377	0.0368	0.1455	0.4095	42.35	44.16	0.3062	0.0432	0.0110	0.9005	93.07	93.31	93.07	93.31		
5	0.1869	0.0744	0.1331	0.4193	40.35	41.33	0.2704	0.0262	0.0076	0.9053	90.47	90.77	90.47	90.77		
6	0.2090	0.0900	0.1320	0.3501	40.72	41.00	0.2651	0.0597	0.0104	0.9094	87.94	88.32	87.94	88.32		
7	0.2169	0.0950	0.1272	0.3062	40.04	41.05	0.2679	0.0734	0.0234	0.9071	85.95	86.39	85.95	86.39		
8	0.2302	0.1048	0.1255	0.3794	40.96	41.04	0.2649	0.0853	0.0281	0.9051	84.43	84.91	84.43	84.91		
9	0.2509	0.1219	0.1314	0.3617	41.22	41.20	0.2531	0.0924	0.0314	0.9039	83.39	83.88	83.39	83.88		
10	0.2809	0.1558	0.1613	0.3372	41.25	41.21	0.2427	0.0937	0.0329	0.9030	81.11	81.71	81.11	81.71		
11	0.3066	0.1738	0.2313	0.3421	38.14	38.62	0.2494	0.0910	0.0327	0.9059	72.15	72.97	72.15	72.97		

W1/A1	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	STAGE	ROTOR
%	%	%	%	%	%	%	%	%
1.0004	1.2577	84.21	84.72	1.0004	0.9858	84.21		

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	R-1	R-2	U-1	U-2	N*-1	N*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1552	0.1043	149.8	239.3	147.1	206.2	29.4	121.5	0.1096	0.5272	0.4200	0.4067	196.4	168.7	0.5619	0.6069	196.3	211.5
2	0.1193	0.0835	179.0	236.5	177.1	210.2	26.3	109.2	0.1467	0.4720	0.5175	0.4003	172.2	179.4	0.4434	0.4300	229.5	222.0
3	0.0944	0.0659	179.7	224.9	170.2	203.7	22.5	95.3	0.1295	0.4361	0.5210	0.4470	165.0	190.5	0.4994	0.4449	241.2	224.8
4	0.0690	0.0470	175.0	213.9	174.5	195.4	21.3	86.7	0.1217	0.4167	0.5106	0.4156	196.8	202.4	0.7230	0.4730	248.9	227.2
5	0.0161	0.0040	166.7	188.7	165.4	175.1	20.0	70.3	0.1253	0.3016	0.4030	0.4008	230.1	231.0	0.7739	0.6613	266.7	237.7
6	0.0039	0.0060	165.7	170.1	164.3	160.7	21.0	56.9	0.1274	0.3252	0.4001	0.5105	241.1	241.4	0.7939	0.7167	274.6	250.0
7	0.0004	0.0140	164.4	173.0	163.1	165.7	20.2	49.0	0.1235	0.2923	0.4790	0.4950	251.9	251.9	0.8200	0.7400	283.3	261.3
8	0.0171	0.0241	163.9	173.9	162.3	166.2	22.7	51.1	0.1309	0.2900	0.4737	0.4079	266.6	265.7	0.8469	0.7772	293.0	271.5
9	0.0220	0.0203	162.5	169.9	160.4	160.5	26.1	55.9	0.1011	0.3351	0.4687	0.4047	276.0	276.2	0.8507	0.7774	297.6	272.5
10	0.0159	0.0106	153.1	148.4	150.4	135.4	20.7	60.3	0.1004	0.4187	0.4399	0.4197	286.9	286.6	0.8507	0.7460	296.9	263.0

SL	INCS	INCA	DEV	TURN	RHOVR-1	RHOVR-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1045	0.0651	0.3017	0.4908	30.19	51.69	0.0507	0.1290	0.0300	1.1505	05.27	04.94	0.7209	0.2221	-130.0	-47.1	1.4370
2	0.2092	0.0999	0.1007	0.3624	44.39	54.32	0.1306	0.1491	0.0369	1.1316	70.20	75.06	0.6879	0.3253	-146.0	-71.4	1.4653
3	0.1726	0.0736	0.1470	0.3020	46.61	53.57	0.1545	0.1214	0.0300	1.1279	77.06	77.20	0.7305	0.4350	-162.5	-95.2	1.4493
4	0.1402	0.0516	0.1047	0.2604	45.57	52.12	0.1667	0.0955	0.0246	1.1252	80.65	80.32	0.7930	0.5333	-177.5	-115.7	1.4313
5	0.0761	0.0086	0.0082	0.1992	43.00	46.99	0.1740	0.0904	0.0240	1.0904	74.44	74.09	0.9018	0.7426	-209.2	-160.0	1.3722
6	0.0509	0.0012	0.0007	0.0995	42.70	45.36	0.1307	0.0631	0.0151	1.0700	77.15	76.09	0.9294	0.8299	-220.1	-108.5	1.3452
7	0.0367	0.0050	0.0023	0.0731	42.67	44.50	0.1105	0.0490	0.0116	1.0662	70.06	77.06	0.9572	0.8041	-231.4	-202.0	1.3310
8	0.0339	0.0020	0.0007	0.0719	42.31	44.52	0.1113	0.0545	0.0130	1.0650	74.91	74.60	0.9036	0.9117	-243.9	-214.6	1.3325
9	0.0307	0.0001	0.0004	0.0604	41.79	42.63	0.1236	0.0900	0.0215	1.0556	61.14	60.04	1.0010	0.9414	-250.7	-220.3	1.3200
10	0.0031	0.0050	0.1305	0.0123	30.90	35.40	0.1617	0.1700	0.0003	1.0207	20.41	20.13	1.0435	1.0310	-250.3	-226.3	1.2691

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
%	%	%	%	%	%	%	%	%
1.1104	1.3757	00.40	01.46	165.06	1.0351	1.0930	73.02	74.16

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	R-1	R-2	U-1	U-2	N*-1	N*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1238	0.1631	212.9	219.7	176.3	219.7	119.3	-0.4	0.5910	-0.0017	0.6040	0.6257	1.3575	1.1401	1.0949	1.0505	1.0505	
2	0.0931	0.1026	222.3	233.0	195.5	233.7	105.8	-4.5	0.4947	-0.0191	0.6361	0.6720	1.4205	1.1390	1.1033	1.0473	1.0473	
3	0.0705	0.0743	218.4	224.5	197.5	224.5	93.3	-3.2	0.4400	-0.0142	0.6270	0.6461	1.4003	1.1303	1.0946	1.0445	1.0445	
4	0.0522	0.0522	212.6	215.1	194.0	215.1	85.1	-1.2	0.4110	-0.0054	0.6113	0.6192	1.3036	1.1221	1.0082	1.0425	1.0425	
5	0.0299	0.0267	190.6	185.6	177.7	185.6	69.0	1.2	0.3703	0.0064	0.5467	0.5315	1.2979	1.1120	1.0390	1.0363	1.0363	
6	0.0246	0.0213	180.3	183.0	171.4	183.0	55.9	0.2	0.3154	0.0011	0.5174	0.5279	1.2954	1.1056	1.0370	1.0276	1.0276	
7	0.0214	0.0182	175.2	173.1	160.1	173.1	49.5	0.5	0.2845	0.0032	0.5024	0.4961	1.2606	1.1032	1.0156	1.0237	1.0237	
8	0.0200	0.0183	175.9	172.9	166.4	172.9	51.0	3.2	0.2939	0.0102	0.5039	0.4950	1.2702	1.1060	1.0142	1.0230	1.0230	
9	0.0180	0.0176	172.0	170.6	162.7	170.4	55.8	0.5	0.3304	0.0497	0.4900	0.4069	1.2660	1.1110	1.0114	1.0256	1.0256	
10	0.0106	0.0110	151.2	157.0	130.7	156.5	60.3	12.0	0.4098	0.0014	0.4200	0.4451	1.2367	1.1100	1.0019	1.0200	1.0200	

SL	INCS	INCA	DEV	TURN	RHOVR-1	RHOVR-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.2950	0.1460	0.5936	44.40	53.98	0.0041	0.2322	0.0532	0.9440	01.62	63.23	51.95	52.57	
2	-0.2099	0.1213	0.5130	51.07	59.21	0.0591	0.1040	0.0234	0.9752	76.73	77.07	60.19	60.73	
3	-0.2032	0.1304	0.4550	52.56	57.44	0.0782	0.1200	0.0206	0.9721	70.94	79.94	58.73	59.20	
4	-0.3153	0.1435	0.4174	52.02	55.31	0.0090	0.1471	0.0372	0.9674	70.56	80.40	57.36	57.87	
5	-0.3527	0.1647	0.3630	47.50	47.34	0.1285	0.2003	0.0031	0.9409	68.59	69.72	30.33	30.71	
6	-0.4040	0.1633	0.3142	45.92	47.19	0.0745	0.2193	0.0660	0.9634	72.74	69.72	37.72	38.04	
7	-0.4364	0.1699	0.2833	45.01	44.29	0.0094	0.2097	0.0929	0.9523	68.17	69.22	18.64	18.01	
8	-0.4433	0.1953	0.2757	44.96	44.21	0.1050	0.2036	0.0970	0.9533	66.77	67.08	16.00	17.05	
9	-0.4513	0.2463	0.2807	43.07	43.42	0.1001	0.2794	0.0950	0.9566	63.07	64.20	12.06	10.01	
10	-0.4332	0.3055	0.3204	36.09	39.42	0.0015	0.2256	0.0000	0.9722	53.04	54.43	1.05	1.00	

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
RAD/SEC	KG/SEC	%	%	%	%	%	%	%
700.02	01.000	1.1104	1.3200	09.00	71.05	1.0351	0.9600	40.02

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA

UNIFORM INLET FLOW

Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1951	0.1455	162.9	240.4	162.9	148.4	0.0	189.1	0.0	0.9032	0.4900	0.7097	127.2	139.1	0.6216	0.4624	206.7	156.4
2	0.1674	0.1356	163.2	233.4	163.2	161.4	0.0	168.4	0.0	0.8074	0.4910	0.6878	142.3	152.4	0.6515	0.4780	216.6	162.2
3	0.1356	0.1183	163.2	217.4	163.2	162.1	0.0	144.9	0.0	0.7288	0.4890	0.6383	154.3	167.1	0.6866	0.4802	228.0	163.6
4	0.1116	0.0923	162.6	203.2	162.6	159.0	0.0	126.5	0.0	0.6715	0.4890	0.5749	175.0	181.1	0.7184	0.4922	238.8	168.1
5	0.0778	0.0567	161.8	178.9	161.8	148.2	0.0	100.2	0.0	0.5746	0.4866	0.5209	219.1	213.3	0.7975	0.5627	265.2	194.4
6	0.0662	0.0474	162.3	175.4	162.3	147.6	0.0	94.8	0.0	0.5708	0.4882	0.5100	221.1	229.2	0.8396	0.5805	279.2	199.7
7	0.0568	0.0352	163.0	174.5	163.0	147.8	0.0	92.8	0.0	0.4607	0.4904	0.5367	238.0	239.2	0.8676	0.6641	288.4	208.7
8	0.0465	0.0261	163.8	173.5	163.8	148.3	0.0	90.0	0.0	0.5459	0.4929	0.5333	248.6	249.5	0.8958	0.6318	297.7	217.7
9	0.0321	0.0169	164.5	173.3	164.5	149.1	0.0	88.2	0.0	0.5340	0.4939	0.5023	260.2	260.2	0.9262	0.6600	307.8	227.7
10	0.0169	0.0058	164.8	172.6	164.8	148.4	0.0	88.1	0.0	0.5356	0.4958	0.4994	273.2	273.2	0.9602	0.6865	319.1	237.3
11	0.0039	0.0004	164.7	165.4	164.7	139.4	0.0	89.1	0.0	0.5684	0.4957	0.4767	284.2	284.2	0.9887	0.6910	328.5	239.8

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	VR-1	VR-2	PO/PO
RADIAN	RADIAN	RADIAN		RADIAN	TOTAL	TOTAL		TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0129	0.0843	0.2140	0.9872	36.35	34.28	0.4650	0.2597	0.0579	1.2768	86.28	79.58	0.6832	0.3239	-127.2	50.1	1.2768
2	0.0043	0.0406	0.2155	0.8176	36.41	38.97	0.4539	0.1014	0.0257	1.3137	91.69	91.76	0.7177	0.0999	-142.3	16.2	1.3137
3	0.0200	0.1121	0.2348	0.6381	36.39	40.39	0.4596	0.0427	0.0117	1.3099	96.02	95.86	0.7741	0.1360	-159.3	-22.2	1.3099
4	0.0296	0.1189	0.2331	0.4922	36.30	40.40	0.4533	0.0231	0.0045	1.2989	97.54	97.44	0.8225	0.3303	-175.0	-54.6	1.2989
5	0.0263	0.1059	0.1660	0.2637	36.17	38.52	0.4253	0.0512	0.0084	1.2696	95.73	95.58	0.9152	0.6516	-210.1	-113.0	1.2696
6	0.0275	0.0970	0.1248	0.2121	36.26	38.65	0.4058	0.0316	0.0083	1.2733	95.39	95.23	0.9509	0.7388	-227.1	-134.5	1.2733
7	0.0424	0.0919	0.1056	0.1888	36.37	38.83	0.3964	0.0345	0.0090	1.2778	94.83	94.65	0.9707	0.7809	-238.0	-148.4	1.2778
8	0.0508	0.0910	0.0957	0.1888	36.51	39.11	0.3831	0.0327	0.0085	1.2818	94.91	94.73	0.9886	0.8218	-248.6	-159.5	1.2818
9	0.0529	0.0920	0.0869	0.1508	36.62	39.44	0.3714	0.0341	0.0087	1.2871	94.55	94.35	1.0073	0.8565	-260.2	-172.0	1.2871
10	0.0555	0.0943	0.0864	0.1333	36.66	39.29	0.3681	0.0539	0.0137	1.2907	91.27	90.95	1.0282	0.8950	-273.2	-185.1	1.2907
11	0.0526	0.0914	0.1437	0.0953	36.65	36.73	0.3870	0.1039	0.0251	1.2760	83.10	82.51	1.0457	0.9503	-284.2	-195.1	1.2760

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/AI	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.0806	1.2852	92.24	92.52	171.61	1.0806	1.2852	92.24	92.52

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1907	0.1323	218.8	156.4	126.2	147.9	178.7	27.3	0.9547	0.1800	0.6403	0.4310	1.2346	1.0909	1.2346	1.0909	1.2346	1.0909
2	0.1231	0.0890	220.7	167.6	151.0	165.4	161.1	27.2	0.8168	0.1619	0.6472	0.4870	1.2877	1.0888	1.2877	1.0888	1.2877	1.0888
3	0.0769	0.0584	211.6	165.3	159.5	163.6	139.0	23.5	0.7161	0.1421	0.6199	0.4773	1.2908	1.0834	1.2908	1.0834	1.2908	1.0834
4	0.0515	0.0432	201.3	160.1	160.0	158.6	122.2	22.0	0.6515	0.1374	0.5890	0.4625	1.2807	1.0789	1.2807	1.0789	1.2807	1.0789
5	0.0235	0.0252	181.5	151.5	152.6	150.0	98.2	21.3	0.5716	0.1407	0.5249	0.4379	1.2604	1.0739	1.2604	1.0739	1.2604	1.0739
6	0.0164	0.0192	179.1	152.4	152.9	150.8	93.3	21.5	0.5479	0.1415	0.5211	0.4401	1.2612	1.0752	1.2612	1.0752	1.2612	1.0752
7	0.0129	0.0158	178.7	152.8	153.5	151.3	91.6	20.7	0.5378	0.1358	0.5197	0.4409	1.2615	1.0768	1.2615	1.0768	1.2615	1.0768
8	0.0103	0.0130	178.3	153.1	154.4	151.8	89.1	20.3	0.5235	0.1327	0.5182	0.4418	1.2617	1.0778	1.2617	1.0778	1.2617	1.0778
9	0.0079	0.0102	178.6	154.9	155.6	153.4	87.5	20.9	0.5120	0.1352	0.5184	0.4467	1.2656	1.0794	1.2656	1.0794	1.2656	1.0794
10	0.0046	0.0065	178.2	156.4	155.1	154.3	87.7	25.9	0.5148	0.1663	0.5163	0.4505	1.2688	1.0833	1.2688	1.0833	1.2688	1.0833
11	0.0015	0.0025	171.1	148.1	146.2	145.1	88.9	29.6	0.5664	0.2012	0.4938	0.4247	1.2501	1.0876	1.2501	1.0876	1.2501	1.0876

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P	B-1	B-2	VR-1	VR-2	PO/PO
RADIAN	RADIAN	RADIAN		RADIAN	TOTAL	TOTAL		TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0350	0.1173	0.2738	0.7746	30.42	38.34	0.4542	0.1373	0.0285	0.9669	68.32	69.25	0.6832	0.3239	-127.2	50.1	0.9669
2	0.0091	0.0401	0.2046	0.6549	37.34	43.80	0.3745	0.0807	0.0180	0.9802	84.44	84.44	0.7177	0.0999	-142.3	16.2	0.9802
3	0.0667	0.0287	0.1659	0.5740	40.19	43.76	0.3477	0.0628	0.0151	0.9857	90.74	91.07	0.7741	0.1360	-159.3	-22.2	0.9857
4	0.1071	0.0063	0.1515	0.5141	40.79	42.53	0.3297	0.0566	0.0145	0.9882	92.90	93.15	0.8225	0.3303	-175.0	-54.6	0.9882
5	0.1053	0.0529	0.1431	0.4309	39.52	40.21	0.2875	0.0415	0.0120	0.9928	92.58	92.82	0.9152	0.6516	-210.1	-113.0	0.9928
6	0.1876	0.0693	0.1378	0.4065	39.80	40.57	0.2733	0.0576	0.0177	0.9903	91.21	91.49	0.9509	0.7388	-227.1	-134.5	0.9903
7	0.1587	0.0767	0.1297	0.4020	40.07	40.44	0.2725	0.0775	0.0247	0.9870	89.36	89.71	0.9886	0.8218	-248.6	-159.5	0.9870
8	0.2174	0.0919	0.1251	0.3908	40.44	40.52	0.2695	0.0943	0.0310	0.9842	88.82	88.82	0.9509	0.7388	-238.0	-148.4	0.9842
9	0.2397	0.1107	0.1275	0.3768	40.86	40.93	0.2608	0.1015	0.0345	0.9830	87.69	88.10	0.9707	0.7809	-260.2	-172.0	0.9830
10	0.2722	0.1397	0.1664	0.3484	40.72	41.04	0.2457	0.1019	0.0358	0.9831	84.57	85.08	0.9886	0.8218	-248.6	-159.5	0.9831
11	0.2959	0.1611	0.2409	0.3453	38.20	38.29	0.2612	0.1300	0.0467	0.9801	75.21	75.98	0.9886	0.8218	-248.6	-159.5	0.9801

NCCRR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC			%	%			%	%
659.68	1.0806	1.2658	86.46	86.91	1.0806	0.9849	86.46	86.91

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1339	0.1054	136.1	222.3	135.4	103.8	26.5	125.4	0.1918	0.5929	0.3944	0.6341	158.2	168.4	0.5399	0.3379	189.0	188.8
2	0.1177	0.0828	169.0	221.6	167.0	109.5	25.7	116.9	0.1523	0.5423	0.4874	0.6330	171.9	179.3	0.4402	0.3714	222.0	200.1
3	0.0928	0.0647	170.4	213.2	168.9	106.4	22.4	103.5	0.1319	0.5052	0.4929	0.6094	184.7	190.2	0.4774	0.3876	234.2	205.5
4	0.0683	0.0480	167.1	201.2	164.0	177.3	21.3	95.0	0.1276	0.4900	0.4847	0.5745	198.5	202.1	0.7032	0.5916	242.8	207.2
5	0.0212	0.0383	160.5	179.1	159.1	159.1	21.3	82.2	0.1329	0.4765	0.4449	0.5094	229.7	230.7	0.7593	0.6192	262.2	217.7
6	0.0383	0.0611	169.0	169.4	158.7	153.5	20.9	71.5	0.1312	0.4360	0.4630	0.4815	240.7	241.0	0.7842	0.6500	271.1	224.7
7	0.0030	0.0037	159.2	164.7	158.0	152.6	20.1	67.3	0.1268	0.4154	0.4402	0.4737	251.5	251.5	0.8097	0.6794	280.1	239.2
8	0.0052	0.0101	160.2	160.2	158.0	154.2	21.4	67.2	0.1355	0.4110	0.4427	0.4772	264.2	265.2	0.8419	0.7121	291.6	251.0
9	0.0077	0.0117	159.8	164.7	157.4	148.1	24.4	72.8	0.1657	0.4522	0.4404	0.4657	276.3	275.7	0.8518	0.7126	295.5	251.9
10	0.0043	0.0041	150.9	154.7	148.0	135.7	29.5	74.2	0.1968	0.5003	0.4332	0.4353	284.5	286.1	0.8511	0.7083	294.5	251.6

SL	INCS	INCH	DEV	TURN	RMCVN-1	RMCVN-2	D-FAC	OMEGA-B	LOSS-P	POZ/	REFF-P	REFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.1395	-0.1181	0.3046	0.5488	35.65	46.94	0.1406	0.0169	0.0040	1.1945	76.28	98.23	0.7678	0.2271	-131.7	-43.0	1.4797
2	-0.1794	-0.0703	0.1809	0.3928	44.34	51.83	0.2089	0.0789	0.0197	1.1697	89.25	89.01	0.7175	0.3256	-146.2	-64.4	1.5118
3	-0.1466	-0.0475	0.1457	0.3308	44.82	51.89	0.2218	0.0452	0.0116	1.1705	92.93	92.78	0.7646	0.4338	-162.3	-86.7	1.5077
4	-0.1162	-0.0275	0.1189	0.2753	43.99	49.89	0.2367	0.0022	0.0107	1.1640	92.74	92.58	0.8178	0.5425	-177.2	-107.1	1.4858
5	-0.0992	-0.0084	0.0763	0.1679	42.15	45.13	0.2506	0.0058	0.0163	1.1425	86.23	85.96	0.9187	0.7508	-208.4	-148.5	1.4407
6	-0.0428	0.0150	-0.0955	0.1109	42.01	43.60	0.2241	0.0518	0.0123	1.1241	87.04	86.81	0.9455	0.8347	-219.8	-169.4	1.4179
7	-0.0221	0.0145	0.0873	0.0827	41.83	43.33	0.2094	0.0480	0.0113	1.1202	86.95	86.74	0.9717	0.8790	-231.3	-184.2	1.4130
8	-0.0247	0.0141	0.0581	0.0857	42.06	43.76	0.1996	0.0520	0.0124	1.1201	85.91	85.07	0.9948	0.9091	-244.6	-198.0	1.4185
9	-0.0244	0.0145	0.0582	0.0464	41.88	41.88	0.2094	0.0795	0.0188	1.1127	77.76	77.42	1.0081	0.9422	-250.0	-203.8	1.4099
10	0.0015	0.0405	0.1008	0.0470	38.86	37.99	0.2139	0.0894	0.0201	1.1105	75.28	74.91	1.0482	1.0013	-257.7	-211.9	1.3941

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.1285	1.4464	86.58	87.26	140.75	1.0443	1.1427	87.66	87.90

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1216	0.1407	200.1	188.0	157.8	147.9	123.1	4.5	0.6593	0.0240	0.5659	0.5296	1.4446	1.1492	1.1681	1.0535
2	0.0905	0.0991	209.6	199.3	176.9	199.2	112.4	1.3	0.5847	0.0045	0.5963	0.5650	1.4948	1.1431	1.1566	1.0514
3	0.0688	0.0718	207.7	193.7	181.3	193.7	101.4	-2.1	0.5090	-0.0109	0.5928	0.5503	1.4875	1.1353	1.1552	1.0495
4	0.0320	0.0510	200.2	184.4	177.1	184.4	93.3	-2.9	0.4844	-0.0157	0.5714	0.5239	1.4652	1.1228	1.1483	1.0478
5	0.0263	0.0221	191.3	184.7	162.2	164.7	81.0	-2.5	0.4632	-0.0153	0.5159	0.4664	1.4149	1.1228	1.1220	1.0469
6	0.0199	0.0180	171.6	158.3	156.5	158.3	70.4	-3.6	0.4226	-0.0230	0.4882	0.4488	1.3997	1.1181	1.1096	1.0388
7	0.0184	0.0130	168.9	154.0	155.1	154.0	66.8	-2.6	0.4068	-0.0167	0.4604	0.4360	1.3890	1.1105	1.1011	1.0380
8	0.0137	0.0114	170.1	155.7	156.3	155.7	67.1	0.3	0.4057	0.0018	0.4828	0.4403	1.3933	1.1210	1.1002	1.0387
9	0.0106	0.0093	164.4	152.1	150.1	152.0	71.8	4.0	0.4464	0.0283	0.4707	0.4287	1.3850	1.1271	1.0977	1.0400
10	0.0098	0.0045	156.6	143.7	137.9	143.6	74.1	5.6	0.4929	0.0392	0.4409	0.4034	1.3461	1.1318	1.0943	1.0405

SL	INCH	DEV	TURN	RMCVN-1	RMCVN-2	D-FAC	OMEGA-B	LOSS-P	POZ/	REFF-A	REFF-P	REFF-A	REFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.2283	0.1725	0.5353	43.69	51.71	0.1896	0.1213	0.0296	0.9763	74.28	75.57	84.80	85.14
2	-0.1998	0.1468	0.5582	49.42	56.00	0.1676	0.0528	0.0119	0.9887	85.10	85.92	82.60	82.95
3	-0.2251	0.1357	0.5199	50.96	54.97	0.1848	0.0607	0.0145	0.9872	88.78	89.39	84.99	85.29
4	-0.2547	0.1333	0.5001	49.91	52.52	0.1989	0.0676	0.0171	0.9866	89.38	89.94	84.20	84.51
5	-0.2568	0.1429	0.4785	45.82	46.80	0.2235	0.1027	0.0296	0.9830	84.90	85.62	74.36	74.78
6	-0.2996	0.1392	0.4456	44.30	45.04	0.2069	0.0824	0.0248	0.9876	85.39	86.07	77.66	77.99
7	-0.3161	0.1501	0.4235	43.93	43.70	0.2170	0.1166	0.0365	0.9830	83.08	83.85	73.35	73.72
8	-0.3315	0.1788	0.4040	44.23	44.11	0.2143	0.1206	0.0399	0.9822	81.54	82.39	71.36	71.75
9	-0.3353	0.2229	0.4201	42.24	42.83	0.2271	0.1266	0.0434	0.9821	76.77	77.81	64.18	64.63
10	-0.3521	0.2613	0.4537	38.53	40.14	0.2388	0.1160	0.0412	0.9855	70.75	72.01	64.31	64.77

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
				%	%			%
65.88	74.093	1.1285	1.4236	82.67	83.51	1.0443	0.9843	77.07

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1985	0.1640	151.2	230.6	151.2	138.9	0.0	184.0	0.0	0.9219	0.4534	0.6788	127.2	139.1	0.5925	0.4298	197.6	146.0
2	0.1771	0.1310	151.3	224.5	151.3	139.5	0.0	167.1	0.0	0.8373	0.4537	0.6593	142.4	152.4	0.6230	0.4424	207.8	150.6
3	0.1490	0.1037	151.4	210.1	151.4	150.2	0.0	146.9	0.0	0.7728	0.4538	0.6147	159.4	167.2	0.6590	0.4476	219.8	151.6
4	0.1231	0.0824	151.1	197.4	151.1	147.8	0.0	130.7	0.0	0.7231	0.4530	0.5758	175.0	181.2	0.6932	0.4558	231.2	156.2
5	0.0763	0.0493	150.5	174.6	150.5	137.1	0.0	108.1	0.0	0.6677	0.4513	0.5062	210.2	213.3	0.7750	0.5011	258.6	172.8
6	0.0585	0.0372	150.7	173.9	150.7	138.4	0.0	105.4	0.0	0.6507	0.4517	0.5033	227.2	229.3	0.8172	0.5377	272.6	185.8
7	0.0443	0.0295	151.0	174.1	151.0	138.8	0.0	105.1	0.0	0.6479	0.4526	0.5031	238.0	239.3	0.8450	0.5579	281.9	193.1
8	0.0347	0.0214	151.3	173.0	151.3	138.3	0.0	103.9	0.0	0.6442	0.4536	0.4989	248.7	249.6	0.8728	0.5795	291.1	200.9
9	0.0225	0.0132	151.5	171.6	151.5	137.1	0.0	102.2	0.0	0.6455	0.4541	0.4941	260.3	260.3	0.9028	0.6001	301.1	208.5
10	0.0097	0.0045	151.4	170.5	151.4	135.1	0.0	104.0	0.0	0.6561	0.4539	0.4894	273.3	273.3	0.9368	0.6218	312.5	216.6
11	0.0024	0.0005	151.2	165.2	151.2	128.0	0.0	104.4	0.0	0.6842	0.4534	0.4725	284.4	284.3	0.9655	0.6315	322.1	220.8

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0260	0.1208	0.2266	1.0114	34.31	32.95	0.4890	0.2251	0.0503	1.2825	83.90	83.32	0.7001	0.3114	-127.2	64.9	1.2825
2	0.0429	0.1372	0.2196	0.8531	34.33	36.99	0.4861	0.0836	0.0212	1.3180	93.57	93.31	0.7553	0.0967	-142.4	14.6	1.3180
3	0.0586	0.1508	0.2331	0.6784	34.33	38.14	0.4978	0.0371	0.0102	1.3175	96.78	96.65	0.8127	0.1342	-159.4	-20.3	1.3175
4	0.0668	0.1562	0.2310	0.5316	34.29	38.22	0.4931	0.0214	0.0060	1.3092	97.90	97.82	0.8597	0.3281	-175.0	-50.4	1.3092
5	0.0610	0.1406	0.1690	0.2954	34.19	36.21	0.4736	0.0458	0.0123	1.2883	94.41	94.20	0.9499	0.6545	-210.2	-105.2	1.2883
6	0.0622	0.1317	0.1165	0.2551	34.21	36.82	0.4564	0.0506	0.0134	1.3003	93.58	93.34	0.9855	0.7304	-227.2	-124.0	1.3003
7	0.0775	0.1270	0.0931	0.2374	34.27	37.06	0.4518	0.0609	0.0161	1.3082	92.17	91.86	1.0059	0.7684	-238.0	-134.2	1.3082
8	0.0866	0.1268	0.0855	0.2129	34.32	37.01	0.4452	0.0716	0.0187	1.3124	90.57	90.19	1.0245	0.8116	-248.7	-145.7	1.3124
9	0.0895	0.1285	0.0814	0.1908	34.35	36.75	0.4411	0.0876	0.0226	1.3154	88.25	87.78	1.0438	0.8531	-260.3	-157.0	1.3154
10	0.0923	0.1310	0.0889	0.1676	34.34	36.22	0.4415	0.1147	0.0290	1.3191	84.49	83.87	1.0650	0.8974	-273.3	-169.3	1.3191
11	0.0890	0.1277	0.1457	0.1296	34.31	34.23	0.4494	0.1517	0.0366	1.3109	79.27	78.46	1.0820	0.9524	-284.4	-179.9	1.3109

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	KG/SEC	%	%	ROTOR	ROTOR
1.0884	1.3084	89.87	90.25	161.58	1.0884	1.3066	89.87	90.25

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	STAGE
1	0.1589	0.1429	208.1	129.2	114.2	126.6	173.9	25.9	0.9892	0.1996	0.6073	0.3689	1.2382	1.0885	1.2382	1.0885
2	0.1392	0.1061	210.1	149.3	136.8	145.6	159.4	27.9	0.8616	0.1885	0.6178	0.4253	1.2879	1.0881	1.2879	1.0881
3	0.0553	0.0778	202.2	149.1	145.1	147.4	140.9	22.5	0.7712	0.1514	0.5902	0.4283	1.2985	1.0850	1.2985	1.0850
4	0.0696	0.0621	193.6	144.6	146.7	143.2	126.3	20.5	0.7112	0.1422	0.5641	0.4157	1.2924	1.0820	1.2924	1.0820
5	0.0403	0.0438	176.1	136.9	140.7	135.3	105.9	20.6	0.6454	0.1509	0.5110	0.3930	1.2783	1.0798	1.2783	1.0798
6	0.0329	0.0375	176.9	140.1	143.5	138.5	103.5	21.0	0.6252	0.1505	0.5125	0.4020	1.2854	1.0832	1.2854	1.0832
7	0.0286	0.0330	178.3	143.3	145.1	141.6	103.6	22.0	0.6201	0.1546	0.5157	0.4107	1.2926	1.0866	1.2926	1.0866
8	0.0234	0.0274	178.1	145.7	145.9	143.9	102.7	22.8	0.6148	0.1570	0.5145	0.4173	1.2985	1.0894	1.2985	1.0894
9	0.0170	0.0202	177.5	147.4	145.0	145.4	102.4	24.3	0.6150	0.1698	0.5118	0.4218	1.3028	1.0928	1.3028	1.0928
10	0.0092	0.0114	176.9	148.3	143.4	145.3	103.5	29.5	0.6249	0.2003	0.5087	0.4233	1.3049	1.0981	1.3049	1.0981
11	0.0029	0.0041	171.8	139.8	136.6	136.9	104.2	28.3	0.6515	0.2040	0.4924	0.3974	1.2866	1.1026	1.2866	1.1026

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0695	0.1518	0.2934	0.7896	28.25	33.78	0.5254	0.1548	0.0320	0.9698	71.18	72.04	71.18	72.04
2	0.0357	0.1249	0.2312	0.6730	34.64	39.57	0.4329	0.0958	0.0212	0.9785	85.16	85.68	85.16	85.68
3	0.0116	0.0839	0.1752	0.6198	37.34	40.44	0.4039	0.0688	0.0165	0.9855	91.22	91.54	91.22	91.54
4	0.0475	0.0534	0.1562	0.5690	38.16	39.42	0.3935	0.0674	0.0172	0.9869	92.81	93.07	92.81	93.07
5	0.0915	0.0209	0.1533	0.4945	37.10	37.25	0.3649	0.0497	0.0144	0.9919	91.16	91.46	91.16	91.46
6	0.1104	0.0079	0.1469	0.4747	38.00	38.09	0.3519	0.0654	0.0201	0.9893	89.45	89.82	89.45	89.82
7	0.1164	0.0056	0.1484	0.4856	38.49	38.89	0.3424	0.0705	0.0224	0.9883	87.88	88.31	87.88	88.31
8	0.1260	0.0065	0.1493	0.4579	38.64	39.51	0.3304	0.0630	0.0207	0.9896	86.75	87.24	86.75	87.24
9	0.1368	0.0077	0.1580	0.4492	38.53	39.86	0.3200	0.0580	0.0196	0.9905	84.63	85.20	84.63	85.20
10	0.1421	0.0296	0.2004	0.4245	38.11	39.68	0.3102	0.0664	0.0232	0.9893	80.56	81.28	80.56	81.28
11	0.1908	0.0560	0.2436	0.4475	36.20	37.08	0.3481	0.1207	0.0433	0.9816	72.81	73.76	72.81	73.76

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	%	%	%	%	STAGE	STAGE
659.94	1.0884	1.2886	85.03	85.56	1.0884	0.9862	85.03	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1501	0.1037	115.8	203.6	113.1	153.2	25.1	134.1	0.2171	0.7125	0.3298	0.5756	158.2	188.4	0.4973	0.4440	174.6	157.1
2	0.1161	0.0829	148.9	199.8	146.5	157.0	26.5	123.6	0.1786	0.6639	0.4270	0.5652	172.0	179.4	0.5922	0.4712	206.4	166.6
3	0.0905	0.0670	153.1	194.6	151.7	160.1	21.1	110.5	0.1382	0.6025	0.4405	0.5508	184.8	190.2	0.6418	0.5063	223.1	178.8
4	0.0673	0.0491	150.4	186.7	149.1	155.3	19.8	103.6	0.1320	0.5876	0.4330	0.5280	198.6	202.1	0.6702	0.5202	232.8	183.9
5	0.0217	0.0114	145.9	169.5	144.4	141.9	20.5	92.8	0.1408	0.5792	0.4194	0.4774	229.8	230.8	0.7312	0.5572	254.3	197.9
6	0.0107	0.0031	148.5	162.9	147.0	139.9	21.3	83.3	0.1440	0.5372	0.4268	0.4584	240.8	241.1	0.7588	0.5934	264.2	210.8
7	0.0044	0.0016	151.1	160.2	149.4	138.5	22.4	80.5	0.1488	0.5268	0.4335	0.4500	251.6	251.6	0.7849	0.6181	273.6	220.0
8	0.0007	0.0024	153.0	161.4	151.0	139.8	24.8	80.7	0.1628	0.5233	0.4382	0.4523	266.3	265.3	0.8156	0.6491	284.8	231.6
9	0.0004	0.0014	153.0	161.9	150.1	137.3	29.7	85.8	0.1956	0.5583	0.4371	0.4525	276.4	275.8	0.8250	0.6552	288.8	234.5
10	0.0005	0.0006	143.9	155.7	141.1	131.7	28.1	83.1	0.1967	0.5628	0.4094	0.4333	286.6	286.2	0.8378	0.6738	294.5	242.1

SL	INCS	IACH	DEV	TURN	RHCVM-1	RHDVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	R'-1	R'-2	VO'-1	VO'-2	PO/IN
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0440	0.0775	0.2975	0.4655	30.57	43.35	0.2648	-0.0474	-0.0113	1.2311	103.44	103.74	0.8634	0.2179	-133.1	-34.4	1.5257
2	-0.1169	0.0076	0.1946	0.4410	39.97	45.33	0.3222	0.0690	0.0170	1.1929	92.41	92.22	0.7802	0.3392	-145.5	-55.8	1.5438
3	-0.0886	0.0104	0.1722	0.3623	41.43	47.00	0.3129	0.0363	0.0091	1.1939	95.30	95.17	0.8226	0.4603	-163.7	-79.7	1.5500
4	-0.0587	0.0300	0.1361	0.3164	40.70	46.05	0.3182	0.0214	0.0054	1.1967	97.00	96.92	0.8753	0.5647	-178.8	-98.5	1.5433
5	-0.0111	0.0565	0.0968	0.1955	39.39	42.43	0.3198	0.0421	0.0102	1.1842	92.96	92.79	0.9668	0.7713	-209.3	-137.9	1.5180
6	-0.0076	0.0502	0.1060	0.1356	40.07	41.94	0.2858	0.0249	0.0058	1.1673	95.27	95.09	0.9807	0.8451	-219.5	-157.7	1.5052
7	-0.0008	0.0408	0.0985	0.1028	40.72	41.46	0.2744	0.0369	0.0086	1.1574	92.15	91.99	0.9930	0.8902	-229.2	-171.0	1.5011
8	-0.0077	0.0311	0.0717	0.0892	41.10	41.78	0.2626	0.0438	0.0103	1.1567	90.31	90.11	1.0118	0.9226	-241.5	-184.6	1.5077
9	-0.0083	0.0305	0.0609	0.0793	40.71	40.91	0.2655	0.0529	0.0125	1.1584	88.44	88.19	1.0242	0.9449	-246.7	-190.0	1.5116
10	-0.0243	0.0633	0.0953	0.0752	37.99	39.01	0.2549	0.0398	0.0090	1.1658	91.22	91.03	1.0710	0.9957	-258.5	-203.2	1.4984

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SGM			%	%
1.1445	1.5201	87.98	88.66	149.21	1.0515	1.1797	93.75	93.89

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE
1	0.1224	0.1421	186.3	150.8	131.8	150.7	131.6	4.4	0.7813	0.0307	0.5238	0.4201	1.4932	1.1526	1.2051	1.0599
2	0.0905	0.0995	189.9	162.3	146.4	162.3	121.0	2.8	0.6889	0.0171	0.5357	0.4543	1.5330	1.1484	1.1845	1.0560
3	0.0683	0.0708	190.1	162.9	156.2	162.9	108.3	0.2	0.6055	0.0009	0.5374	0.4570	1.5626	1.1433	1.1884	1.0545
4	0.0517	0.0497	186.0	157.5	155.7	157.5	101.7	-0.4	0.5783	-0.0059	0.5261	0.4421	1.5318	1.1399	1.1895	1.0543
5	0.0244	0.0185	171.8	145.2	145.3	145.2	91.5	-2.5	0.5618	-0.0149	0.4839	0.4064	1.5080	1.1392	1.1762	1.0532
6	0.0185	0.0128	165.1	139.8	143.1	139.7	82.3	-3.9	0.5217	-0.0279	0.4650	0.3913	1.4962	1.1365	1.1601	1.0473
7	0.0153	0.0104	162.2	138.2	141.2	138.2	80.0	-3.0	0.5154	-0.0220	0.4560	0.3862	1.4926	1.1392	1.1508	1.0464
8	0.0105	0.0073	163.1	140.7	141.9	140.7	80.4	-1.2	0.5157	-0.0083	0.4573	0.3923	1.4982	1.1450	1.1494	1.0471
9	0.0056	0.0036	163.5	142.0	139.3	141.9	85.6	3.9	0.5512	0.0277	0.4570	0.3948	1.5006	1.1518	1.1500	1.0446
10	0.0012	0.0003	157.1	132.5	133.5	132.4	83.0	5.0	0.5562	0.0374	0.4375	0.3669	1.4791	1.1570	1.1510	1.0492

SL	INCS	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1062	0.1792	0.7506	38.30	44.92	0.3317	0.1244	0.0263	0.9788	79.51	80.63	92.81	93.07
2	-0.0757	0.1574	0.6718	42.94	49.12	0.2842	0.0397	0.0089	0.9930	87.49	88.21	88.49	88.77
3	-0.1286	0.1456	0.6046	46.17	49.78	0.2776	0.0262	0.0062	0.9953	92.04	92.51	92.65	92.83
4	-0.1488	0.1432	0.5842	46.23	46.32	0.2916	0.0350	0.0089	0.9940	92.93	93.34	93.58	93.74
5	-0.1911	0.1414	0.5787	43.33	44.45	0.3118	0.0418	0.0120	0.9938	89.47	90.07	89.18	89.43
6	-0.2004	0.1343	0.5496	42.78	42.80	0.3103	0.0426	0.0128	0.9941	89.40	89.99	91.61	91.78
7	-0.2075	0.1448	0.5374	42.15	42.20	0.3084	0.0428	0.0134	0.9943	87.09	88.28	88.28	88.52
8	-0.2215	0.1688	0.5240	42.32	42.81	0.3027	0.0478	0.0158	0.9936	84.47	85.33	86.02	86.30
9	-0.2305	0.2243	0.5234	41.40	42.96	0.3031	0.0549	0.0188	0.9927	80.98	82.03	83.68	84.00
10	-0.2888	0.2555	0.5188	39.47	39.74	0.3334	0.1038	0.0369	0.9872	75.36	76.68	83.26	83.55

WCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
KG/SEC	KG/SEC			%	%			%
699.94	74.467	1.1445	1.5082	86.22	86.99	1.0515	0.9921	89.16

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

5. 1. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1911	0.1653	161.2	235.9	161.2	145.9	0.0	185.3	0.0	0.9019	0.4846	0.6956	127.0	138.9	0.6165	0.4515	205.2	153.1
2	0.1616	0.1340	160.4	229.4	160.4	157.7	0.0	166.6	0.0	0.8108	0.4820	0.6754	142.2	152.2	0.6442	0.4663	214.3	158.4
3	0.1310	0.1085	158.7	214.8	158.7	157.8	0.0	145.7	0.0	0.7462	0.4768	0.6298	159.1	167.0	0.6752	0.4670	224.8	159.2
4	0.1083	0.0869	156.9	201.7	156.9	155.3	0.0	128.7	0.0	0.6913	0.4713	0.5987	174.8	180.9	0.7053	0.4790	234.9	163.8
5	0.0756	0.0497	155.0	178.4	155.0	146.3	0.0	101.9	0.0	0.6083	0.4652	0.5189	209.9	213.0	0.7831	0.5364	245.9	183.7
6	0.0641	0.0356	155.6	173.2	155.6	143.9	0.0	96.5	0.0	0.5905	0.4669	0.5029	226.9	229.0	0.8257	0.5661	251.1	195.6
7	0.0547	0.0278	156.4	171.6	156.4	143.0	0.0	94.8	0.0	0.5852	0.4696	0.4975	237.7	238.9	0.8563	0.588	264.5	203.1
8	0.0447	0.0200	157.4	169.6	157.4	142.0	0.0	92.7	0.0	0.5781	0.4726	0.4910	248.4	249.2	0.8830	0.6121	294.0	211.4
9	0.0316	0.0128	158.3	168.7	158.3	141.8	0.0	91.4	0.0	0.5725	0.4755	0.4878	259.9	259.9	0.9161	0.6369	304.3	220.3
10	0.0159	0.0044	158.9	169.6	158.9	142.6	0.0	91.7	0.0	0.5714	0.4774	0.4894	272.9	272.9	0.9489	0.6656	315.8	230.6
11	0.0047	0.0001	159.1	163.7	159.1	134.7	0.0	92.9	0.0	0.6035	0.4780	0.4705	283.9	283.9	0.9779	0.6720	325.5	233.7

SL	INCS	IACM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0786	0.0882	0.2311	0.9744	36.06	34.02	0.4746	0.2409	0.0540	1.2754	81.59	80.94	0.6675	0.3069	-127.0	46.4	1.2754
2	0.0121	0.1064	0.2247	0.8162	35.92	38.36	0.4664	0.0942	0.0240	1.3117	92.30	92.00	0.7255	0.0907	-142.2	14.4	1.3117
3	0.0330	0.1251	0.2327	0.6531	35.63	39.54	0.4729	0.0462	0.0127	1.3105	95.78	95.61	0.7870	0.1339	-159.1	-21.3	1.3105
4	0.0444	0.1358	0.2268	0.5154	35.33	39.63	0.4659	0.0280	0.0079	1.3007	97.13	97.02	0.8394	0.3239	-174.8	-52.2	1.3007
5	0.0465	0.1240	0.1636	0.2863	34.98	38.25	0.4289	0.0268	0.0072	1.2767	96.48	96.35	0.9354	0.6491	-209.9	-111.1	1.2767
6	0.0470	0.1165	0.1303	0.2260	35.08	37.82	0.4147	0.0383	0.0101	1.2757	94.61	94.41	0.9703	0.7463	-226.9	-132.5	1.2757
7	0.0410	0.1105	0.1140	0.2001	35.23	37.70	0.4089	0.0480	0.0124	1.2781	93.06	92.81	0.9894	0.7893	-237.7	-144.2	1.2781
8	0.0485	0.1087	0.1079	0.1723	35.40	37.53	0.4008	0.0558	0.0142	1.2793	91.67	91.37	1.0063	0.8340	-248.4	-156.6	1.2793
9	0.0498	0.1086	0.0597	0.1526	35.56	37.55	0.3929	0.0638	0.0161	1.2827	90.23	89.88	1.0239	0.8713	-259.9	-168.5	1.2827
10	0.0709	0.1096	0.0954	0.1396	35.67	37.82	0.3874	0.0786	0.0197	1.2936	87.88	87.43	1.0436	0.9040	-272.9	-181.2	1.2936
11	0.0671	0.1058	0.1497	0.1038	35.70	35.58	0.4006	0.1235	0.0296	1.2708	80.89	80.21	1.0601	0.9564	-283.9	-191.0	1.2708

TO/TO	PO/PO	EFF-AD	EFF-P	WCL/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.0822	1.2866	90.91	91.23	167.09	1.0822	1.2866	90.91	91.23

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1558	0.1380	213.5	141.2	122.1	138.6	175.2	27.2	0.9613	0.1917	0.6242	0.4041	1.2306	1.0890	1.2306	1.0890	1.2306	1.0890
2	0.1327	0.0991	215.8	159.5	145.8	157.1	159.1	27.6	0.8286	0.1729	0.6319	0.4587	1.2831	1.0878	1.2831	1.0878	1.2831	1.0878
3	0.0872	0.0652	207.9	159.5	154.0	157.7	139.7	23.3	0.7367	0.1465	0.6082	0.4595	1.2924	1.0840	1.2924	1.0840	1.2924	1.0840
4	0.0408	0.0526	198.9	155.5	155.3	153.9	124.3	21.9	0.6750	0.1413	0.5810	0.4484	1.2864	1.0804	1.2864	1.0804	1.2864	1.0804
5	0.0319	0.0340	180.4	146.9	150.2	145.2	99.9	21.9	0.5867	0.1495	0.5251	0.4237	1.2681	1.0751	1.2681	1.0751	1.2681	1.0751
6	0.0250	0.0282	176.5	146.9	148.8	145.2	94.9	22.1	0.5677	0.1513	0.5130	0.4234	1.2679	1.0763	1.2679	1.0763	1.2679	1.0763
7	0.0211	0.0241	175.7	147.5	148.7	145.8	93.5	22.1	0.5614	0.1503	0.5099	0.4248	1.2692	1.0783	1.2692	1.0783	1.2692	1.0783
8	0.0170	0.0196	174.5	148.0	148.4	146.4	91.7	21.3	0.5535	0.1445	0.5059	0.4261	1.2704	1.0798	1.2704	1.0798	1.2704	1.0798
9	0.0122	0.0142	174.2	149.6	148.7	148.0	90.7	22.4	0.5474	0.1499	0.5044	0.4305	1.2741	1.0822	1.2741	1.0822	1.2741	1.0822
10	0.0066	0.0080	175.4	151.4	149.7	148.9	91.3	22.4	0.5475	0.1819	0.5070	0.4749	1.2777	1.0865	1.2777	1.0865	1.2777	1.0865
11	0.0022	0.0030	169.7	143.8	142.2	141.0	92.7	28.0	0.5779	0.1963	0.4888	0.4113	1.2609	1.0912	1.2609	1.0912	1.2609	1.0912

SL	INCS	IACM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-3	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-TC	TOT-STC
1	0.0416	0.1239	0.2856	0.7695	29.73	36.26	0.4808	0.1512	0.0313	0.9650	68.68	69.59	68.68	69.59
2	0.0027	0.0920	0.2156	0.6557	36.37	41.93	0.3961	0.0691	0.0199	0.9790	84.19	84.74	84.19	84.74
3	0.0461	0.0494	0.1703	0.5902	39.06	42.55	0.3670	0.0620	0.0149	0.9863	90.56	90.56	90.56	90.56
4	0.0837	0.0171	0.1554	0.5336	39.82	41.67	0.3493	0.0531	0.0136	0.9891	92.86	93.11	92.86	93.11
5	0.1902	0.0377	0.1519	0.4372	39.13	39.35	0.3113	0.0395	0.0115	0.9932	93.59	93.80	93.59	93.80
6	0.1679	0.0496	0.1476	0.4164	38.93	39.29	0.2956	0.0371	0.0114	0.9939	91.99	92.25	91.99	92.25
7	0.1751	0.0532	0.1441	0.4111	38.96	39.41	0.2909	0.0428	0.0136	0.9930	90.67	90.41	90.67	90.41
8	0.1873	0.0618	0.1369	0.4090	38.94	39.54	0.2855	0.0430	0.0141	0.9931	88.11	89.09	88.11	89.09
9	0.2044	0.0754	0.1422	0.3574	39.07	39.91	0.2754	0.0428	0.0145	0.9932	87.25	87.68	87.25	87.68
10	0.2395	0.1070	0.1820	0.3656	39.37	40.05	0.2666	0.0620	0.0217	0.9900	83.86	84.41	83.86	84.41
11	0.2644	0.1296	0.2360	0.3816	37.22	37.62	0.2922	0.0967	0.0348	0.9854	75.11	75.92	75.11	75.92

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC			%	%			%	%
698.93	1.0822	1.2718	86.60	87.06	1.0822	0.9885	86.60	87.06

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

ROTOR 2

																		RUN M3411, SPEED CODE 80, POINT NO 4			
SL	EPSI-1	F/SI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2			
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC			
1	0.1518	0.1040	127.8	214.4	125.0	170.2	26.4	130.4	0.2070	0.4479	0.3644	0.6090	158.0	168.2	0.5179	0.4491	181.5	174.3			
2	0.1152	0.0821	160.2	211.5	158.1	174.8	26.1	119.2	0.1630	0.5953	0.4611	0.6016	171.8	179.1	0.6187	0.5255	215.0	184.8			
3	0.0513	0.0655	163.8	204.3	162.3	174.5	22.2	106.2	0.1358	0.5451	0.4728	0.5815	184.5	189.9	0.6623	0.5509	229.5	193.6			
4	0.0487	0.0484	161.7	194.3	160.3	167.5	21.3	98.5	0.1322	0.5306	0.4672	0.5526	198.3	201.8	0.6899	0.5599	238.8	196.9			
5	0.0266	0.0157	154.5	174.5	153.0	149.7	21.8	89.8	0.1414	0.5402	0.4445	0.4943	229.4	230.4	0.7453	0.5817	257.9	205.4			
6	0.0169	0.0095	154.3	167.0	152.7	146.0	22.0	81.0	0.1432	0.5063	0.4455	0.4726	240.5	240.7	0.7695	0.6125	266.5	216.4			
7	0.0100	0.0048	154.3	144.9	152.9	146.2	21.2	76.2	0.1381	0.4803	0.4451	0.4663	251.2	251.2	0.7964	0.6650	276.1	228.1			
8	0.0024	0.0011	155.8	165.4	154.1	146.9	23.0	76.0	0.1400	0.4776	0.4488	0.4669	265.9	264.9	0.8287	0.6755	287.7	239.3			
9	0.0004	0.0020	156.3	164.0	153.9	142.2	27.6	81.6	0.1774	0.5210	0.4494	0.4612	276.0	275.4	0.8400	0.6762	292.2	240.4			
10	0.0006	0.0001	148.3	158.7	145.6	136.5	27.9	80.8	0.1894	0.5346	0.4246	0.4446	286.2	285.8	0.8489	0.6901	296.5	246.3			

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VB'-1	VB'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0996	0.0218	0.2953	0.5921	33.19	46.51	0.1917	-0.0241	-0.0057	1.2161	102.07	102.12	0.8078	0.2157	-131.6	-37.8	1.4983
2	-0.1543	-0.0450	0.1839	0.4143	42.39	48.90	0.2997	0.0780	0.0193	1.1797	90.35	90.12	0.7428	0.3285	-145.7	-60.0	1.5211
3	-0.1266	-0.0276	0.1576	0.3388	43.94	49.66	0.2617	0.0457	0.0115	1.1775	93.36	93.20	0.7445	0.4457	-162.3	-83.7	1.5208
4	-0.0994	-0.0107	0.1238	0.2824	42.98	48.17	0.2729	0.0386	0.0097	1.1739	93.83	93.69	0.8344	0.5522	-177.0	-103.4	1.5064
5	-0.0419	0.0256	0.0797	0.1818	41.03	43.42	0.2939	0.0727	0.0179	1.1610	86.77	86.48	0.9359	0.7542	-207.7	-140.6	1.4718
6	-0.0277	0.0301	0.0912	0.1303	40.94	42.47	0.2665	0.0540	0.0129	1.1482	88.76	88.53	0.9607	0.8303	-218.4	-159.6	1.4565
7	-0.0097	0.0320	0.0831	0.1093	40.94	42.57	0.2474	0.0449	0.0106	1.1455	89.78	89.58	0.9842	0.8748	-230.0	-175.0	1.4546
8	-0.0141	0.0246	0.0587	0.0957	41.24	42.73	0.2392	0.0524	0.0125	1.1450	87.61	87.37	1.0054	0.9097	-242.9	-188.9	1.4544
9	-0.0162	0.0226	0.0537	0.0786	41.07	41.17	0.2313	0.0798	0.0190	1.1409	81.47	81.12	1.0163	0.9377	-248.5	-193.8	1.4576
10	0.0106	0.0495	0.0827	0.0741	38.59	39.32	0.2430	0.0665	0.0193	1.1483	84.55	84.24	1.0573	0.9832	-258.2	-205.0	1.4464

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	%	%
1.1352	1.4783	87.43	88.11	155.88	1.0490	1.1624	89.62	89.85

STATOR 2

																		RUN M3411, SPEED CODE 80, POINT NO 4			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO	TO2/				
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET	TO1				
1	0.1218	0.1408	194.5	171.2	146.4	171.2	128.1	4.4	0.7151	0.0265	0.5490	0.4800	1.4479	1.1502	1.1915	1.0562					
2	0.0899	0.0985	200.5	181.6	163.1	181.6	116.6	1.3	0.6188	0.0072	0.5682	0.5118	1.5101	1.1450	1.1711	1.0535					
3	0.0678	0.0706	199.2	178.7	164.9	178.7	104.1	-1.4	0.5489	-0.0077	0.5661	0.5046	1.5104	1.1383	1.1697	1.0512					
4	0.0433	0.0499	193.3	170.7	167.3	170.7	96.7	-3.0	0.5236	-0.0177	0.5495	0.4823	1.4933	1.1331	1.1640	1.0500					
5	0.0238	0.0192	176.7	155.0	152.9	154.9	88.6	-3.7	0.5251	-0.0239	0.5006	0.4367	1.4563	1.1297	1.1488	1.0502					
6	0.0171	0.0127	169.2	148.9	149.2	148.8	79.9	-4.3	0.4814	-0.0289	0.4794	0.4196	1.4419	1.1261	1.1366	1.0452					
7	0.0137	0.0100	167.0	146.4	148.9	146.3	75.6	-3.6	0.4499	-0.0244	0.4726	0.4120	1.4355	1.1271	1.1334	1.0452					
8	0.0110	0.0087	167.3	147.2	149.1	147.2	75.9	-0.3	0.4710	-0.0019	0.4725	0.4134	1.4371	1.1317	1.1274	1.0452					
9	0.0077	0.0064	165.8	146.8	144.5	146.8	81.4	3.3	0.5130	0.0223	0.4667	0.4113	1.4359	1.1382	1.1239	1.0473					
10	0.0028	0.0023	160.7	141.5	138.9	141.4	80.7	5.7	0.5264	0.0404	0.4506	0.3950	1.4235	1.1435	1.1302	1.0478					

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1725	0.1750	0.6486	41.35	46.97	0.2514	0.1096	0.0231	0.9797	77.15	78.35	91.20	91.41
2	-0.1457	0.1476	0.6114	46.48	52.90	0.2222	0.0370	0.0083	0.9927	86.23	87.01	86.15	86.46
3	-0.1851	0.1370	0.5566	48.73	52.54	0.2278	0.0333	0.0079	0.9935	90.42	90.96	89.43	89.66
4	-0.2035	0.1313	0.5413	48.20	50.38	0.2459	0.0453	0.0114	0.9916	91.19	91.67	88.63	88.88
5	-0.1978	0.1344	0.5490	46.19	45.64	0.2724	0.0627	0.0181	0.9902	87.45	88.10	80.39	80.78
6	-0.2308	0.1333	0.5203	43.27	43.85	0.2693	0.0677	0.0203	0.9902	87.42	88.06	82.46	82.78
7	-0.2530	0.1424	0.4943	43.23	43.01	0.2722	0.0927	0.0290	0.9869	85.62	86.34	80.64	80.98
8	-0.2663	0.1751	0.4729	43.26	43.12	0.2707	0.1080	0.0357	0.9847	82.95	83.80	77.10	77.48
9	-0.2686	0.2189	0.4907	41.72	42.76	0.2765	0.1071	0.0368	0.9851	78.81	79.86	71.75	72.21
10	-0.3186	0.2623	0.4860	39.92	40.90	0.2857	0.1216	0.0432	0.9842	73.96	75.22	74.37	74.81

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%	%	%	%
68.93	77.07	1.1352	1.4608	84.62	85.42	1.0490	0.9882	82.79

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EP-1-1	EP-1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SFC	M/SFC
1	0.1979	0.1654	144.5	225.1	144.5	130.7	0.0	183.3	0.0	0.9491	0.4325	0.6614	126.9	138.8	0.5756	0.4057	192.3	138.1
2	0.1758	0.1340	144.4	220.9	144.4	141.2	0.0	149.8	0.0	0.8751	0.4320	0.6476	142.1	152.1	0.6061	0.4173	202.5	142.4
3	0.1480	0.1077	144.0	208.4	144.0	145.5	0.0	149.1	0.0	0.7965	0.4309	0.6091	159.0	166.8	0.6419	0.4285	214.5	146.6
4	0.1227	0.0896	143.5	195.9	143.5	143.6	0.0	133.2	0.0	0.7472	0.4294	0.5709	174.6	180.7	0.6762	0.4408	226.0	151.2
5	0.0960	0.0701	142.9	180.0	142.9	132.9	0.0	102.9	0.0	0.6588	0.4276	0.4860	226.6	228.0	0.8015	0.5293	267.9	183.0
6	0.0760	0.0486	142.8	173.2	142.8	135.2	0.0	108.2	0.0	0.6747	0.4272	0.5020	209.7	212.8	0.7589	0.4955	253.7	170.9
7	0.0586	0.0351	142.9	166.0	142.9	132.9	0.0	102.9	0.0	0.6588	0.4276	0.4860	226.6	228.0	0.8015	0.5293	267.9	183.0
8	0.0464	0.0276	143.2	166.8	143.2	131.9	0.0	102.0	0.0	0.6584	0.4284	0.4815	237.5	238.7	0.8296	0.5404	277.3	190.0
9	0.0354	0.0201	143.6	166.0	143.6	131.7	0.0	101.1	0.0	0.6547	0.4296	0.4786	248.1	249.0	0.8577	0.5708	286.7	198.0
10	0.0235	0.0126	143.9	164.8	143.9	130.8	0.0	100.3	0.0	0.6544	0.4305	0.4742	259.6	259.6	0.8881	0.5931	296.8	206.1
11	0.0109	0.0046	143.9	164.4	143.9	129.4	0.0	101.3	0.0	0.6643	0.4307	0.4717	272.7	272.7	0.9224	0.6161	308.3	214.7
12	0.0032	0.0007	143.9	161.2	143.9	123.3	0.0	103.7	0.0	0.6994	0.4305	0.4667	283.7	283.6	0.9517	0.6233	318.1	218.0

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0451	0.1420	0.2113	1.0475	33.08	30.86	0.5147	0.3038	0.0676	1.2624	79.08	78.37	0.7212	-0.3267	-126.9	44.5	1.2624
2	0.0652	0.1595	0.1907	0.9033	33.05	34.66	0.5166	0.1580	0.0400	1.3030	88.47	88.03	0.7786	-0.1247	-142.1	17.8	1.3030
3	0.0821	0.1743	0.2194	0.7156	32.99	36.82	0.5107	0.0770	0.0212	1.3102	93.69	93.44	0.8362	0.1205	-159.0	-17.7	1.3102
4	0.0910	0.1803	0.2216	0.5651	32.89	37.02	0.5062	0.0555	0.0156	1.3037	94.82	94.63	0.8839	0.3188	-174.6	-47.5	1.3037
5	0.0846	0.1642	0.1727	0.3153	32.76	35.70	0.4711	0.0551	0.0147	1.2846	93.47	93.23	0.9735	0.6582	-209.7	-104.6	1.2846
6	0.0852	0.1547	0.1443	0.2502	32.78	35.29	0.4545	0.0666	0.0172	1.2846	91.54	91.24	1.0086	0.7583	-226.6	-125.9	1.2846
7	0.1001	0.1496	0.1277	0.2254	32.84	35.12	0.4503	0.0803	0.0205	1.2882	89.58	89.20	1.0284	0.8030	-237.5	-136.7	1.2882
8	0.1085	0.1487	0.1171	0.2031	32.91	35.14	0.4431	0.0902	0.0228	1.2929	88.03	87.59	1.0464	0.8433	-248.1	-147.9	1.2929
9	0.1105	0.1496	0.1119	0.1814	32.96	34.95	0.4371	0.1034	0.0257	1.2959	85.99	85.46	1.0649	0.8837	-259.6	-159.3	1.2959
10	0.1123	0.1511	0.1153	0.1612	32.97	34.59	0.4367	0.1282	0.0313	1.3012	82.51	81.85	1.0851	0.9239	-272.7	-171.3	1.3012
11	0.1083	0.1471	0.1630	0.1317	32.96	32.86	0.4501	0.1693	0.0399	1.2982	77.05	76.19	1.1014	0.9697	-283.7	-179.8	1.2982

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	PO2/PO1	EFF-A	EFF-P
INLET	INLET	INLET	INLET	AC/SEC		ROTOR	ROTOR
%	%	%	%	SOM		%	%
1.0875	1.2937	87.31	87.77	155.08	1.0875	1.2937	87.31

STATOR 1

SL	EP-1-1	EP-1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1982	0.1435	202.9	118.1	105.7	115.7	173.2	24.0	1.0220	0.2021	0.5914	0.3366	1.2220	1.0879	1.2220	1.0879
2	0.1399	0.1087	206.5	176.9	128.3	134.1	161.8	27.8	0.9003	0.2039	0.6022	0.3915	1.2653	1.0891	1.2653	1.0891
3	0.0976	0.0815	200.6	144.8	140.5	143.0	143.2	23.2	0.7952	0.1610	0.5849	0.4154	1.2898	1.0862	1.2898	1.0862
4	0.0708	0.0638	192.5	143.0	143.1	141.6	128.8	20.6	0.7330	0.1443	0.5605	0.4106	1.2897	1.0834	1.2897	1.0834
5	0.0390	0.0420	175.1	135.3	139.3	133.7	106.1	20.8	0.6508	0.1544	0.5078	0.3884	1.2759	1.0797	1.2759	1.0797
6	0.0315	0.0357	171.3	134.7	138.2	133.2	101.2	20.3	0.6321	0.1510	0.4957	0.3864	1.2752	1.0812	1.2752	1.0812
7	0.0273	0.0315	170.8	136.1	138.1	134.5	100.6	21.2	0.6296	0.1566	0.4937	0.3901	1.2783	1.0839	1.2783	1.0839
8	0.0226	0.0262	170.9	138.4	138.6	136.5	100.0	22.7	0.6250	0.1650	0.4933	0.3962	1.2832	1.0868	1.2832	1.0868
9	0.0167	0.0196	170.3	139.9	138.3	137.9	99.5	23.8	0.6238	0.1707	0.4909	0.4001	1.2868	1.0900	1.2868	1.0900
10	0.0096	0.0116	170.4	140.9	137.4	138.0	100.8	28.5	0.6330	0.2035	0.4897	0.4021	1.2890	1.0954	1.2890	1.0954
11	0.0034	0.0045	167.5	135.2	131.6	132.4	103.6	27.6	0.6667	0.2053	0.4796	0.3841	1.2772	1.1017	1.2772	1.1017

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.1024	0.1846	0.2959	0.8199	25.99	30.83	0.5492	0.1489	0.0308	0.9685	67.12	68.04	67.12	68.74
2	0.0744	0.1636	0.2466	0.6964	32.29	36.24	0.4804	0.1238	0.0273	0.9731	78.11	78.83	78.11	80.93
3	0.0124	0.1078	0.1848	0.6742	36.03	39.13	0.4226	0.0756	0.0176	0.9846	87.57	88.01	87.57	88.01
4	0.0257	0.0752	0.1584	0.5887	37.10	38.92	0.4019	0.0572	0.0146	0.9890	90.49	90.83	90.49	90.83
5	0.0862	0.0263	0.1567	0.4564	36.88	36.80	0.3499	0.0436	0.0126	0.9930	90.56	90.88	90.56	90.88
6	0.1035	0.0148	0.1474	0.4810	36.53	36.82	0.3598	0.0465	0.0143	0.9928	88.62	89.01	88.62	89.01
7	0.1069	0.0130	0.1505	0.4730	36.54	36.92	0.3514	0.0486	0.0154	0.9925	86.62	87.08	86.62	87.08
8	0.1159	0.0056	0.1574	0.4600	36.73	37.43	0.3399	0.0478	0.0157	0.9927	85.13	85.64	85.13	85.64
9	0.1280	0.0010	0.1629	0.4531	36.66	37.43	0.3309	0.0463	0.0157	0.9930	83.07	83.66	83.07	83.66
10	0.1540	0.0216	0.2036	0.4295	36.41	37.64	0.3238	0.0610	0.0213	0.9908	78.96	79.71	78.96	79.71
11	0.1757	0.0408	0.2450	0.4613	34.77	35.80	0.3589	0.1106	0.0397	0.9839	71.24	72.22	71.24	72.22

NCORR	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET			STAGE	
RAC/SEC	%	%	%			%	%
698.23	1.0875	1.2781	83.06	83.64	1.0875	0.9880	83.06

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1472	0.1003	106.7	202.0	104.1	146.7	23.2	140.1	0.2180	0.7959	0.3034	0.5722	157.0	168.0	0.4839	0.4213	170.2	149.3
2	0.1078	0.0769	139.2	197.0	136.5	150.1	27.0	128.0	0.1941	0.7059	0.3980	0.5981	171.6	178.9	0.5688	0.4466	198.0	158.3
3	0.0849	0.0614	150.4	192.6	148.0	153.0	21.7	117.1	0.1445	0.4412	0.4320	0.5438	186.7	189.8	0.6773	0.4782	220.4	169.4
4	0.0543	0.0460	148.6	185.0	147.3	150.5	19.7	108.9	0.1330	0.4557	0.4275	0.5242	198.1	201.4	0.6653	0.4987	231.3	176.8
5	0.0244	0.0141	141.7	170.8	140.3	137.3	20.1	101.6	0.1426	0.6368	0.4073	0.4708	229.2	230.2	0.7236	0.5286	251.0	188.1
6	0.0137	0.0058	141.7	165.1	140.3	135.3	20.4	94.6	0.1447	0.6102	0.4070	0.4684	240.2	240.5	0.7486	0.5584	260.7	199.0
7	0.0062	0.0001	143.6	142.7	141.9	133.7	22.2	92.7	0.1549	0.6042	0.4117	0.4587	250.9	250.9	0.7719	0.5802	269.2	207.2
8	0.0004	0.0045	145.2	144.1	143.2	135.2	24.2	93.0	0.1672	0.6025	0.4157	0.4586	265.7	264.7	0.8036	0.6104	280.8	218.5
9	0.0021	0.0030	145.4	143.1	142.5	130.6	28.7	97.8	0.1988	0.6424	0.4152	0.4561	275.0	275.1	0.8144	0.6131	285.2	220.3
10	0.0011	0.0022	139.1	136.2	136.4	125.2	27.4	93.4	0.1984	0.6410	0.3954	0.4330	285.9	285.5	0.8308	0.6355	292.2	229.3

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VM'-1	VM'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SFC	M/SFC	INLET
1	0.0015	0.1229	0.2655	0.7229	28.03	41.41	0.3040	0.0490	-0.0103	1.2482	102.97	103.06	0.9089	0.1859	-134.6	-28.0	1.5246
2	0.0851	0.0242	0.1756	0.4918	37.02	43.20	0.3481	0.0562	0.0139	1.2069	94.32	94.16	0.8120	0.3202	-144.6	-50.1	1.5382
3	0.0824	0.0167	0.1539	0.3888	40.59	44.72	0.3553	0.0893	0.0209	1.1943	89.98	89.72	0.8288	0.4420	-162.7	-77.7	1.5444
4	0.0560	0.0347	0.1227	0.3287	40.20	44.47	0.3521	0.0626	0.0158	1.1970	91.76	91.55	0.8803	0.5511	-178.4	-92.7	1.5412
5	0.0020	0.0695	0.0783	0.2271	38.28	40.99	0.3651	0.0834	0.0206	1.1960	87.79	87.48	0.9799	0.7528	-209.1	-128.6	1.5248
6	0.0145	0.0722	0.0838	0.1798	38.25	40.50	0.3378	0.0697	0.0168	1.1875	88.73	88.45	1.0028	0.8229	-219.8	-145.9	1.5159
7	0.0220	0.0636	0.0775	0.1466	38.65	40.00	0.3272	0.0762	0.0181	1.1812	86.88	86.56	1.0158	0.8652	-228.8	-158.2	1.5141
8	0.0158	0.0546	0.0523	0.1320	38.96	40.42	0.3165	0.0827	0.0199	1.1837	85.28	84.92	1.0353	0.9033	-241.5	-171.6	1.5235
9	0.0149	0.0537	0.0521	0.1113	38.64	38.88	0.3244	0.1001	0.0239	1.1824	82.31	81.89	1.0474	0.9361	-247.0	-177.4	1.5242
10	0.0387	0.0776	0.0926	0.0923	36.68	37.08	0.3089	0.0882	0.0201	1.1833	83.77	83.37	1.0853	0.9930	-258.5	-192.1	1.5101

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			INLET	ROTOR
		%	%	SQM			%	%
1.1513	1.5261	84.87	85.75	144.33	1.0587	1.1941	88.55	88.84

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01
1	0.1232	0.1428	186.0	140.9	125.3	140.8	137.5	4.3	0.8286	0.0307	0.5222	0.3910	1.4924	1.1503	1.2202	1.0029
2	0.0925	0.1008	187.5	150.6	148.8	150.5	126.1	3.8	0.7359	0.0253	0.5276	0.4194	1.5246	1.1529	1.1962	1.0594
3	0.0708	0.0725	187.2	153.0	147.9	153.0	114.7	-0.1	0.6589	0.0003	0.5276	0.4274	1.5384	1.1482	1.1897	1.0580
4	0.0547	0.0521	183.9	148.9	149.7	148.9	106.9	-1.0	0.6200	0.0066	0.5187	0.4160	1.5340	1.1448	1.1913	1.0575
5	0.0287	0.0224	172.4	138.8	140.3	138.0	100.2	-2.6	0.6201	0.0189	0.4866	0.3870	1.5178	1.1451	1.1905	1.0599
6	0.0227	0.0167	167.1	134.3	138.5	134.2	93.6	-4.1	0.5945	0.0309	0.4693	0.3742	1.5093	1.1440	1.1825	1.0570
7	0.0192	0.0139	164.9	132.9	136.9	132.9	91.9	-3.2	0.5915	0.0243	0.4620	0.3698	1.5073	1.1470	1.1761	1.0562
8	0.0139	0.0103	164.4	135.6	138.3	135.6	92.6	-1.1	0.5903	0.0078	0.4652	0.3764	1.5142	1.1536	1.1763	1.0579
9	0.0082	0.0060	165.6	136.2	133.8	136.2	97.5	3.3	0.6294	0.0243	0.4611	0.3768	1.5156	1.1611	1.1757	1.0595
10	0.0023	0.0014	158.7	127.6	128.4	127.5	93.3	4.6	0.6284	0.0360	0.4402	0.3515	1.4971	1.1671	1.1730	1.0590

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	SEFF-STG
1	-0.0590	0.1793	0.7678	36.29	42.29	0.3911	0.1241	0.0261	0.9790	77.53	78.76	92.93	93.13
2	-0.0286	0.1656	0.7107	40.57	45.81	0.3423	0.0510	0.0115	0.9912	83.74	84.68	89.63	89.90
3	-0.0751	0.1443	0.6593	43.60	47.05	0.3277	0.0223	0.0053	0.9961	88.37	89.06	87.71	88.01
4	-0.1071	0.1425	0.6266	44.35	45.96	0.3383	0.0284	0.0072	0.9952	89.79	90.39	89.06	89.33
5	-0.1028	0.1393	0.6391	41.70	42.87	0.3670	0.0309	0.0088	0.9954	87.26	87.99	85.18	85.54
6	-0.1276	0.1313	0.6254	41.33	41.47	0.3729	0.0316	0.0095	0.9956	86.68	87.43	86.00	86.33
7	-0.1313	0.1425	0.6158	40.83	40.96	0.3741	0.0319	0.0100	0.9957	84.65	85.52	84.36	84.72
8	-0.1470	0.1693	0.5980	41.20	41.65	0.3707	0.0432	0.0143	0.9940	81.93	82.96	81.86	82.28
9	-0.1527	0.2209	0.6051	39.72	41.58	0.3722	0.0421	0.0144	0.9943	78.25	79.52	79.09	79.55
10	-0.2166	0.2581	0.5925	37.91	38.62	0.3952	0.0693	0.0246	0.9914	73.14	74.61	78.98	79.45

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAC/SEC	KG/SEC			%	%			%
698.23	71.474	1.1513	1.5161	83.46	84.41	1.0587	0.9934	85.18

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA UNIFORM INLET FLOW Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1938	0.1637	158.0	237.9	158.0	152.1	0.0	183.0	0.0	0.6750	0.4743	0.7042	120.9	132.2	0.5974	0.4746	198.9	160.4
2	0.1644	0.1315	158.7	230.3	158.7	163.9	0.0	161.8	0.0	0.7770	0.4766	0.4805	139.3	144.8	0.6264	0.4868	208.5	164.8
3	0.1308	0.1063	159.2	214.9	159.2	163.7	0.0	139.3	0.0	0.7039	0.4783	0.4327	151.4	158.9	0.6601	0.4853	219.7	164.9
4	0.1050	0.0852	159.1	201.0	159.1	160.6	0.0	120.8	0.0	0.4442	0.4781	0.5900	166.3	172.1	0.6915	0.4950	230.2	168.6
5	0.0681	0.0491	158.5	174.8	158.5	150.0	0.0	93.5	0.0	0.5570	0.4760	0.5165	194.7	202.7	0.7659	0.5422	255.0	185.6
6	0.0563	0.0352	158.3	172.0	158.3	148.5	0.0	86.8	0.0	0.5290	0.4756	0.5020	215.9	217.9	0.8042	0.5780	267.7	198.1
7	0.0471	0.0270	158.4	169.3	158.4	147.0	0.0	84.1	0.0	0.5187	0.4760	0.4936	226.2	227.3	0.8295	0.5982	276.1	205.2
8	0.0377	0.0180	158.6	164.8	158.6	145.9	0.0	81.0	0.0	0.5067	0.4765	0.4858	236.3	237.1	0.8550	0.6224	284.6	213.7
9	0.0256	0.0113	158.7	165.9	158.7	146.1	0.0	78.5	0.0	0.4927	0.4767	0.4827	247.1	247.3	0.8827	0.6499	291.8	223.3
10	0.0114	0.0028	158.5	165.1	158.5	145.7	0.0	77.6	0.0	0.4893	0.4762	0.4797	259.7	259.7	0.9140	0.6777	304.3	233.2
11	0.0026	0.0007	158.3	158.8	158.3	138.2	0.0	78.1	0.0	0.3144	0.4755	0.4599	270.2	270.1	0.9406	0.6851	313.1	236.5

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-8	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VM'-1	VM'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0227	0.0741	0.2169	0.9744	35.50	34.70	0.4184	0.2729	0.0408	1.2482	78.96	78.28	0.6534	0.3710	-120.9	50.8	1.2482
2	0.0073	0.0873	0.2174	0.8094	35.62	39.00	0.4125	0.1133	0.0288	1.2795	90.46	90.13	0.7064	0.1029	-135.3	17.0	1.2795
3	0.0066	0.0928	0.2174	0.6421	35.71	40.10	0.4272	0.0603	0.0166	1.2747	94.14	93.95	0.7607	0.1185	-151.4	-19.5	1.2747
4	0.0146	0.1040	0.2116	0.4566	35.70	40.06	0.4242	0.0399	0.0112	1.2611	95.56	95.41	0.8075	0.3097	-166.3	-51.3	1.2611
5	0.0116	0.0911	0.1436	0.2714	35.59	38.20	0.3976	0.0423	0.0115	1.2315	93.85	93.66	0.9005	0.6291	-199.7	-109.2	1.2315
6	0.0150	0.0845	0.1090	0.2153	35.57	38.04	0.3774	0.0416	0.0111	1.2300	93.44	93.24	0.9383	0.7230	-215.9	-131.1	1.2300
7	0.0317	0.0812	0.0572	0.1875	35.59	37.74	0.3697	0.0490	0.0129	1.2287	91.98	91.74	0.9601	0.7725	-226.2	-143.2	1.2287
8	0.0420	0.0822	0.0934	0.1803	35.62	37.54	0.3580	0.0518	0.0134	1.2273	91.13	90.89	0.9799	0.8196	-236.3	-156.2	1.2273
9	0.0460	0.0851	0.0856	0.1431	35.63	37.69	0.3444	0.0514	0.0132	1.2292	90.90	90.63	1.0004	0.8573	-247.3	-168.8	1.2292
10	0.0500	0.0888	0.0874	0.1268	35.60	37.60	0.3373	0.0652	0.0165	1.2311	88.26	87.91	1.0228	0.8960	-259.7	-182.1	1.2311
11	0.0478	0.0865	0.1401	0.0941	35.56	35.52	0.3467	0.1085	0.0264	1.2188	80.35	79.79	1.0408	0.9467	-270.2	-192.0	1.2188

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.0706	1.2402	89.95	90.25	167.97	1.0706	1.2402	89.95	90.25

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1518	0.1326	217.4	157.7	131.7	55.3	172.9	27.3	0.9184	0.1722	0.6382	0.4542	1.2069	1.0936	1.2069	1.0936
2	0.1240	0.0889	218.8	173.0	156.9	171.1	154.5	24.2	0.7832	0.5112	0.6436	0.5013	1.2579	1.0810	1.2579	1.0810
3	0.0764	0.0573	210.1	169.5	162.3	168.1	133.5	22.1	0.6875	0.1306	0.6175	0.4918	1.2586	1.0762	1.2586	1.0762
4	0.0503	0.0414	199.9	164.2	162.5	162.9	116.5	20.7	0.4214	0.1263	0.5867	0.4765	1.2477	1.0714	1.2477	1.0714
5	0.0226	0.0237	179.6	154.0	154.5	152.8	91.6	19.5	0.5347	0.1269	0.5252	0.4765	1.2233	1.0654	1.2233	1.0654
6	0.0163	0.0166	175.5	152.9	153.3	151.6	85.5	19.8	0.5086	0.1299	0.5127	0.4438	1.2199	1.0655	1.2199	1.0655
7	0.0129	0.0155	173.2	151.7	152.0	150.4	83.0	19.6	0.4999	0.1292	0.5053	0.4438	1.2199	1.0655	1.2199	1.0655
8	0.0101	0.0127	171.0	150.6	151.1	149.4	80.2	19.2	0.4878	0.1277	0.4966	0.4367	1.2168	1.0662	1.2168	1.0662
9	0.0073	0.0098	170.2	151.2	151.3	149.8	77.8	20.9	0.4750	0.1386	0.4959	0.4385	1.2155	1.0672	1.2155	1.0672
10	0.0037	0.0061	169.4	152.1	150.7	149.9	77.3	26.0	0.4739	0.1717	0.4929	0.4404	1.2173	1.0698	1.2173	1.0698
11	0.0007	0.0023	163.0	143.8	143.1	140.7	78.0	29.4	0.4992	0.2056	0.4726	0.4148	1.1998	1.0731	1.1998	1.0731

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-8	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0012	0.0811	0.2660	0.7462	31.31	39.22	0.4118	0.1385	0.0288	0.9668	66.08	66.97	64.08	66.97
2	0.0427	0.0466	0.1939	0.6321	37.68	44.18	0.3388	0.0705	0.0157	0.9828	83.75	84.27	83.75	84.27
3	0.0954	0.0002	0.1544	0.5569	40.13	43.83	0.3180	0.0547	0.0132	0.9876	89.19	89.54	89.19	89.54
4	0.1370	0.0362	0.1404	0.4953	40.59	42.58	0.2983	0.0463	0.0118	0.9904	91.44	91.70	91.44	91.70
5	0.2022	0.0897	0.1293	0.4079	39.18	39.90	0.2582	0.0385	0.0112	0.9934	90.64	90.90	90.64	90.90
6	0.2269	0.1087	0.1262	0.3787	39.07	39.55	0.2441	0.0497	0.0153	0.9918	89.29	89.59	89.29	89.59
7	0.2366	0.1146	0.1231	0.3707	38.80	39.17	0.2407	0.0596	0.0190	0.9905	87.19	87.55	87.19	87.55
8	0.2593	0.1275	0.1201	0.3401	38.44	38.86	0.2373	0.0693	0.0278	0.9892	85.91	86.29	85.91	86.29
9	0.2768	0.1478	0.1309	0.3364	38.40	38.96	0.2258	0.0732	0.0249	0.9887	85.46	85.86	85.46	85.86
10	0.3131	0.1806	0.1718	0.3021	38.66	38.90	0.2096	0.0725	0.0254	0.9889	82.86	83.33	82.86	83.33
11	0.3433	0.2083	0.2453	0.2936	38.55	38.28	0.2267	0.1067	0.0383	0.9869	73.14	73.83	73.14	73.83

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET				STAGE	STAGE
RAD/SEC			%	%			%	%
665.02	1.0706	1.2452	84.69	85.12	1.0706	0.9878	84.69	85.12

ROTOR 2

RUN NO411, SPEED CODE 76, POINT NO 1																		
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC		
1	0.1548	0.1062	144.7	229.9	142.9	198.7	24.6	115.6	0.1839	0.5217	0.4156	0.6618	150.3	160.0	0.5415	0.5861	186.6	209.6
2	0.1184	0.0828	173.6	228.5	171.9	204.5	24.6	101.9	0.1417	0.4394	0.5033	0.6599	163.4	170.4	0.4404	0.4230	220.9	215.7
3	0.0929	0.0638	174.8	218.0	173.9	199.8	21.2	97.3	0.1217	0.4160	0.5079	0.6302	175.6	180.7	0.4748	0.4374	232.2	220.6
4	0.0680	0.0461	171.6	205.4	170.5	190.0	20.1	78.2	0.1171	0.3900	0.4996	0.5933	188.7	192.0	0.4879	0.4395	239.8	221.5
5	0.0187	0.0040	162.3	181.2	161.1	168.7	19.5	66.0	0.1204	0.3730	0.4724	0.5212	218.3	219.2	0.7448	0.4556	255.9	227.9
6	0.0061	0.0010	140.1	170.7	158.9	162.1	19.6	53.5	0.1228	0.3189	0.4454	0.4914	226.8	229.0	0.7637	0.6877	262.7	238.9
7	0.0037	0.0007	127.2	166.6	156.0	159.4	18.7	48.4	0.1193	0.2947	0.4565	0.4795	239.0	239.0	0.7841	0.7152	270.0	248.5
8	0.0152	0.0040	147.3	154.8	159.3	159.3	22.0	31.1	0.1413	0.3106	0.4536	0.4811	253.0	252.1	0.8069	0.7374	278.1	258.4
9	0.0207	0.0277	154.4	162.5	152.2	152.4	26.4	36.3	0.1720	0.3541	0.4474	0.4657	262.7	262.1	0.8140	0.7538	281.0	258.0
10	0.0153	0.0183	145.2	141.7	142.2	128.2	29.2	60.4	0.2023	0.4403	0.4190	0.4030	272.3	271.9	0.8129	0.7036	281.6	247.4

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	POZ/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1944	0.0730	0.2968	0.4957	36.53	49.57	0.0482	0.1031	0.0245	1.1494	88.03	87.78	0.7129	0.2175	-123.8	-44.4	1.3904
2	0.2192	0.1099	0.1749	0.3564	44.51	52.95	0.1200	0.1123	0.0278	1.1268	81.63	81.42	0.6779	0.3215	-138.8	-88.6	1.4208
3	0.1848	0.0858	0.1478	0.2904	44.83	52.24	0.1322	0.0671	0.0169	1.1222	86.68	86.46	0.7263	0.4359	-154.3	-93.4	1.4064
4	0.1543	0.0656	0.1103	0.2407	43.99	50.16	0.1503	0.0617	0.0157	1.1134	85.14	85.92	0.7797	0.5389	-168.4	-113.8	1.3834
5	0.0882	0.0206	0.0627	0.1526	41.56	44.76	0.1737	0.0948	0.0237	1.0877	73.82	73.50	0.8897	0.7371	-198.8	-153.2	1.3280
6	0.0672	0.0094	0.0860	0.0961	40.98	43.10	0.1382	0.0596	0.0143	1.0699	77.80	77.88	0.9212	0.6231	-209.2	-175.5	1.3030
7	0.0393	0.0023	0.0826	0.0802	40.25	42.38	0.1215	0.0488	0.0111	1.0650	79.42	79.71	0.9545	0.6743	-220.5	-190.6	1.2930
8	0.0391	0.0004	0.0495	0.0799	39.98	42.25	0.1184	0.0594	0.0133	1.0638	75.47	75.76	0.9804	0.9005	-231.0	-201.0	1.2937
9	0.0339	0.0049	0.0494	0.0653	39.28	40.13	0.1304	0.0888	0.0213	1.0558	63.52	63.24	0.9986	0.9333	-236.2	-205.7	1.2813
10	0.0051	0.0338	0.1257	0.0154	38.54	33.24	0.1679	0.1736	0.0374	1.0314	32.49	32.40	1.0416	1.0261	-243.1	-211.6	1.2749

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	INLET	INLET
%	%	%	%	%	%	%	%	%
1.1048	1.3360	81.93	82.65	161.81	1.0319	1.0888	77.02	77.30

STATOR 2

RUN NO411, SPEED CODE 76, POINT NO 1																
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TOT
1	0.1230	0.1427	203.8	212.2	169.2	212.2	113.5	1.8	0.9078	0.0084	0.5812	0.4070	1.3193	1.1336	1.0910	1.0462
2	0.0917	0.1010	214.3	227.4	189.8	227.4	99.6	-2.3	0.4818	-0.0102	0.8158	0.4544	1.3894	1.1254	1.1021	1.0426
3	0.0697	0.0736	211.2	217.4	193.1	217.4	85.5	-2.3	0.4181	-0.0108	0.8090	0.4282	1.3669	1.1159	1.0895	1.0366
4	0.0535	0.0535	203.5	204.7	188.4	204.7	74.8	-1.6	0.3870	-0.0079	0.5971	0.5910	1.3528	1.1086	1.0780	1.0362
5	0.0326	0.0290	182.9	179.6	171.0	179.6	64.9	1.3	0.3628	0.0070	0.5264	0.5164	1.2480	1.1002	1.0386	1.0329
6	0.0265	0.0228	172.4	174.0	164.7	174.0	52.7	0.8	0.3105	0.0048	0.4982	0.5073	1.2619	1.0928	1.0361	1.0252
7	0.0229	0.0193	168.9	166.0	161.9	166.0	48.0	0.3	0.2885	0.0035	0.4864	0.4777	1.2388	1.0906	1.0206	1.0228
8	0.0219	0.0191	169.7	165.3	161.8	165.2	51.0	3.5	0.3352	0.0213	0.4882	0.4749	1.2394	1.0928	1.0193	1.0235
9	0.0195	0.0181	165.2	162.4	155.4	162.4	56.2	8.4	0.3469	0.0517	0.4739	0.4661	1.2357	1.0967	1.0170	1.0247
10	0.0108	0.0111	145.3	149.1	132.2	148.6	60.3	11.9	0.4281	0.0800	0.4136	0.4247	1.2079	1.1024	1.0082	1.0273

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	POZ/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.2998	0.1570	0.5793	44.22	51.87	0.0720	0.2497	0.0526	0.9490	61.67	63.14	54.52	55.09
2	-0.2827	0.1301	0.4921	50.60	57.28	0.0452	0.0968	0.0218	0.4781	78.64	79.61	66.13	66.60
3	-0.3180	0.1339	0.4208	51.11	55.24	0.0885	0.1506	0.0311	0.9712	80.58	81.42	64.11	64.54
4	-0.3401	0.1412	0.3949	49.91	52.15	0.0900	0.1741	0.0440	0.9640	78.77	79.62	56.27	56.51
5	-0.3602	0.1653	0.3557	45.22	45.60	0.1193	0.2594	0.0748	0.9552	70.13	71.11	33.06	33.43
6	-0.4122	0.1670	0.3052	43.65	44.97	0.0741	0.2025	0.0609	0.9684	74.05	74.89	40.36	40.85
7	-0.4344	0.1683	0.2869	42.91	42.32	0.1054	0.2806	0.0879	0.9581	69.68	70.59	25.41	25.43
8	-0.4320	0.1984	0.2859	42.78	42.10	0.1173	0.2790	0.0922	0.9581	68.19	69.14	23.23	23.44
9	-0.4347	0.2483	0.2952	42.77	41.27	0.1224	0.2628	0.0901	0.9616	64.43	65.67	19.74	19.93
10	-0.4169	0.3021	0.3481	34.14	37.38	0.1008	0.2086	0.0740	0.9758	54.18	55.37	8.50	8.61

NCORR	WGORP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	STAGE
KG/SEC	KG/SEC	%	%	%	%	%	%	%
665.02	77.415	1.1048	1.2850	70.91	71.92	1.0319	0.9633	42.42

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA

UNIFORM INLET FLOW

Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-2		M-1		M-2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2004	0.1620	124.7	199.3	124.7	125.7	0.0	154.6	0.0	0.8860	0.3714	0.5886	100.0	104.4	0.4762	0.3545	159.4	133.4																		
2	0.1772	0.1284	125.0	192.9	125.0	136.0	0.0	135.9	0.0	0.7800	0.3763	0.5690	112.0	119.9	0.5514	0.4463	168.3	137.7																		
3	0.1444	0.1078	126.7	179.0	126.7	136.2	0.0	116.2	0.0	0.7049	0.3776	0.5268	125.3	131.5	0.5511	0.4332	178.2	147.0																		
4	0.1150	0.0880	127.4	167.0	127.4	134.0	0.0	99.7	0.0	0.6386	0.3796	0.4906	137.7	142.5	0.5509	0.4132	187.5	164.7																		
5	0.0827	0.0649	127.7	146.9	127.7	125.0	0.0	77.1	0.0	0.5525	0.3806	0.4300	165.3	167.8	0.6226	0.4521	206.9	194.4																		
6	0.0450	0.0340	127.6	144.5	127.6	125.3	0.0	71.9	0.0	0.5210	0.3804	0.4228	178.7	180.4	0.6545	0.4848	219.4	165.7																		
7	0.0340	0.0257	127.6	142.9	127.6	124.6	0.0	70.1	0.0	0.5126	0.3804	0.4179	187.2	188.2	0.6753	0.5013	226.6	171.6																		
8	0.0237	0.0176	127.6	141.3	127.6	123.9	0.0	67.8	0.0	0.5004	0.3803	0.4127	195.6	196.3	0.6961	0.5217	233.5	176.6																		
9	0.0131	0.0093	127.4	140.1	127.4	123.0	0.0	65.6	0.0	0.4871	0.3798	0.4091	204.7	204.7	0.7186	0.5438	241.1	186.2																		
10	0.0018	0.0011	127.1	138.7	127.1	122.6	0.0	64.8	0.0	0.4858	0.3786	0.4045	215.0	215.0	0.7461	0.5656	249.7	191.9																		
11	0.0024	0.0027	126.7	131.3	126.7	113.7	0.0	65.6	0.0	0.5233	0.3774	0.3819	223.6	223.6	0.7658	0.5860	257.0	194.5																		

SL	INCS		INCH		DEV		TURN		RHOVM-1		RHOVM-2		D-FAC		OMEGA-B		LOSS-P		POZ/POI		EFF-P		EFF-A		B-1		B-2		VO-1		VO-2		PO/PO		
	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN
1	0.0009	0.0578	0.1950	1.0210	29.23	29.19	0.4012	0.2865	0.0634	1.1703	79.11	78.63	0.6771	0.3440	-100.0	45.2	1.1703																		
2	0.0160	0.1133	0.1991	0.8457	29.42	33.06	0.3934	0.1114	0.0282	1.1904	90.93	90.70	0.7295	0.1163	-112.0	16.1	1.1904																		
3	0.0271	0.1192	0.2104	0.6656	29.64	33.57	0.4459	0.0640	0.0176	1.1840	93.83	93.68	0.7811	0.1115	-125.3	-15.3	1.1840																		
4	0.0320	0.1213	0.2113	0.5164	29.76	33.44	0.4096	0.0389	0.0110	1.1738	95.60	95.50	0.8249	0.1084	-137.7	-42.0	1.1738																		
5	0.0244	0.1140	0.1418	0.2860	29.83	31.62	0.3874	0.0440	0.0120	1.1536	93.36	93.22	0.9133	0.4273	-165.3	-90.7	1.1536																		
6	0.0273	0.0588	0.0991	0.2375	29.82	31.85	0.3838	0.0350	0.0094	1.1557	94.27	94.16	0.9507	0.7131	-178.2	-108.4	1.1557																		
7	0.0462	0.0937	0.0834	0.2138	29.82	31.71	0.3572	0.0416	0.0111	1.1560	92.94	92.79	0.9726	0.7587	-187.2	-110.1	1.1560																		
8	0.0550	0.0952	0.0774	0.1892	29.81	31.60	0.3467	0.0468	0.0118	1.1558	92.05	91.89	0.9928	0.8036	-195.6	-120.5	1.1558																		
9	0.0596	0.0586	0.0720	0.1703	29.78	31.60	0.3362	0.0463	0.0121	1.1561	91.43	91.24	1.0139	0.8437	-204.7	-139.1	1.1561																		
10	0.0643	0.1030	0.0776	0.1504	29.76	31.30	0.3293	0.0635	0.0163	1.1556	87.96	87.70	1.0370	0.8861	-215.0	-150.2	1.1556																		
11	0.0625	0.1012	0.1401	0.1088	29.62	28.90	0.3495	0.1186	0.0289	1.1434	77.45	77.01	1.0555	0.9467	-223.6	-157.9	1.1434																		

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL
INLET	INLET	INLET	INLET	INLET
%	%	%	%	%
1.0487	1.1616	89.84	90.06	140.12

TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET
%	%	%	%
1.0487	1.1616	89.84	90.06

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-2		M-1		M-2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	
1	0.1898	0.1297	182.9	136.3	110.0	134.3	146.2	23.0	0.9241	0.1671	0.5374	0.3953	1.1440	1.0585	1.1440	1.0585	1.1440																			
2	0.1122	0.0654	183.7	147.9	129.9	146.3	129.9	21.6	0.7842	0.1457	0.5404	0.4305	1.1762	1.0563	1.1762	1.0563	1.1762																			
3	0.0744	0.0359	175.1	142.7	135.2	141.6	111.3	17.7	0.6884	0.1230	0.5146	0.4157	1.1715	1.0525	1.1715	1.0525	1.1715																			
4	0.0503	0.0419	164.0	137.6	135.4	136.5	96.1	17.1	0.6171	0.124	0.4875	0.4012	1.1631	1.0488	1.1631	1.0488	1.1631																			
5	0.0251	0.0263	149.1	129.7	128.6	128.6	75.5	15.5	0.5310	0.119	0.4368	0.3783	1.1484	1.0447	1.1484	1.0447	1.1484																			
6	0.0189	0.0213	147.4	129.4	128.3	128.7	70.8	15.2	0.5012	0.1176	0.4316	0.3777	1.1478	1.0449	1.1478	1.0449	1.1478																			
7	0.0157	0.0183	146.1	129.3	128.7	128.3	69.2	15.8	0.4974	0.1223	0.4276	0.3768	1.1472	1.0457	1.1472	1.0457	1.1472																			
8	0.0128	0.0153	144.7	128.6	128.2	127.6	67.1	16.1	0.4821	0.1253	0.4232	0.3745	1.1460	1.0460	1.1460	1.0460	1.1460																			
9	0.0099	0.0123	143.6	128.1	128.0	127.1	65.0	15.1	0.4700	0.1264	0.4198	0.3731	1.1454	1.0465	1.1454	1.0465	1.1454																			
10	0.0065	0.0086	142.2	127.5	126.7	126.0	64.5	19.5	0.4709	0.1539	0.4151	0.3710	1.1446	1.0482	1.1446	1.0482	1.1446																			
11	0.0027	0.0040	134.7	114.9	117.7	117.9	65.5	21.6	0.5082	0.1816	0.3920	0.3478	1.1320	1.0508	1.1320	1.0508	1.1320																			

SL	INCS		INCH		DEV		TURN		RHOVM-1		RHOVM-2		D-FAC		OMEGA-B		LOSS-P		POZ/POI		EFF-A		EFF-P		EFF-A		EFF-P									
	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN		
1	0.0044	0.1867	0.2609	0.7569	26.52	33.73	0.3926	0.1269	0.0264	0.9774																										
2	0.0417	0.0475	0.1884	0.6384	31.86	37.31	0.3250	0.0677	0.0151	0.9878																										
3	0.0044	0.0010	0.1477	0.5645	33.52	36.32	0.3102	0.0608	0.0146	0.9900																										
4	0.1415	0.0407	0.1384	0.4928	33.83	35.																														

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1957	0.1070	125.4	192.5	123.4	169.1	22.3	91.8	0.1777	0.4922	0.3628	0.5581	126.4	132.5	0.4635	0.4045	160.2	174.0
2	0.1189	0.0831	147.4	193.0	146.0	176.7	20.1	82.0	0.1365	0.4361	0.4293	0.5611	135.3	141.1	0.5417	0.5303	186.0	184.4
3	0.0871	0.0630	146.7	184.1	145.7	169.7	17.1	71.3	0.1167	0.3981	0.4279	0.5354	145.3	149.6	0.5662	0.5637	194.1	186.9
4	0.0655	0.0422	143.6	173.5	142.7	161.1	16.5	64.5	0.1149	0.3801	0.4105	0.5043	156.2	159.0	0.5832	0.5428	199.7	166.8
5	0.0133	0.0006	136.7	153.4	135.8	144.6	15.2	51.3	0.1111	0.3405	0.3991	0.4450	166.7	161.5	0.6254	0.5645	214.1	194.6
6	0.0004	0.0000	135.5	143.6	134.6	137.9	15.5	40.0	0.1143	0.2823	0.3545	0.4167	189.4	185.4	0.6520	0.5904	219.9	207.5
7	0.0081	0.0159	133.6	139.7	132.7	134.9	16.0	36.3	0.1199	0.2829	0.3896	0.4052	197.8	197.8	0.6566	0.6105	225.1	210.4
8	0.0155	0.0217	131.6	136.0	130.5	132.9	16.9	37.1	0.1287	0.2725	0.3835	0.4000	209.4	208.7	0.6778	0.6289	232.6	217.0
9	0.0180	0.0234	129.2	134.1	127.6	128.0	19.8	39.9	0.1541	0.3020	0.3759	0.3878	217.4	216.9	0.6845	0.6313	235.2	218.5
10	0.0124	0.0150	121.1	118.2	119.1	110.4	21.5	42.1	0.1785	0.3642	0.3513	0.3401	225.4	225.1	0.6652	0.6152	236.1	213.7

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.2188	0.0974	0.3127	0.4555	31.36	42.11	0.0321	0.0837	0.0198	1.0985	88.47	88.02	0.6886	0.2331	-102.1	-40.7	1.2595
2	0.2308	0.1215	0.1797	0.3420	37.31	44.44	0.0998	0.0756	0.0187	1.0903	86.53	87.37	0.6883	0.3243	-115.2	-59.1	1.2825
3	0.1901	0.0911	0.1428	0.2901	37.15	43.68	0.1172	0.0371	0.0094	1.0892	92.15	92.06	0.7210	0.4309	-128.2	-78.3	1.2738
4	0.1995	0.0768	0.1010	0.2449	36.36	41.73	0.1385	0.0381	0.0087	1.0828	90.47	90.87	0.7745	0.5296	-139.7	-94.5	1.2559
5	0.0942	0.0266	0.0585	0.1503	34.62	37.59	0.1519	0.0654	0.0185	1.0614	79.40	79.20	0.8837	0.7329	-165.6	-130.2	1.2183
6	0.0763	0.0185	0.0667	0.0862	34.33	35.89	0.1167	0.0387	0.0093	1.0446	82.55	82.42	0.9120	0.8259	-173.9	-149.6	1.1986
7	0.0533	0.0117	0.0806	0.0552	33.85	35.06	0.1008	0.0313	0.0074	1.0387	82.44	82.54	0.9405	0.8753	-181.9	-161.4	1.1904
8	0.0444	0.0057	0.0804	0.0436	33.32	34.45	0.1009	0.0490	0.0116	1.0354	72.76	72.61	0.9753	0.9114	-192.6	-173.5	1.1840
9	0.0352	0.0036	0.0809	0.0524	32.56	33.03	0.1067	0.0675	0.0159	1.0314	43.17	43.01	0.9972	0.9448	-197.6	-177.1	1.1781
10	0.0047	0.0343	0.1275	0.0141	30.26	28.20	0.1312	0.1291	0.0278	1.0175	32.73	32.59	1.0420	1.0279	-203.9	-183.0	1.1502

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
%	%	%	%	50M	%	%	%	%
1.0703	1.2199	83.12	83.59	142.21	1.0206	1.0599	81.26	81.43

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1215	0.1402	171.2	180.7	145.5	180.7	90.2	0.8	0.5516	0.0042	0.4932	0.5221	1.2209	1.0908	1.2209	1.0908	1.0653	1.0336
2	0.0904	0.0987	182.1	191.0	163.5	190.9	80.2	-2.0	0.4545	-0.0102	0.5276	0.5550	1.2601	1.0856	1.2601	1.0856	1.0715	1.0289
3	0.0691	0.0719	179.4	182.8	165.2	182.7	69.8	-3.5	0.3991	-0.0191	0.5210	0.5314	1.2456	1.0793	1.2456	1.0793	1.0661	1.0268
4	0.0526	0.0514	172.8	173.5	160.8	173.5	63.3	-3.3	0.3749	-0.0188	0.5022	0.5043	1.2267	1.0740	1.2267	1.0740	1.0580	1.0252
5	0.0307	0.0267	155.1	151.3	148.7	151.3	50.2	0.4	0.3300	0.0025	0.4500	0.4387	1.1805	1.0671	1.1805	1.0671	1.0284	1.0215
6	0.0252	0.0213	145.5	147.1	140.1	147.1	39.2	0.3	0.2730	0.0020	0.4225	0.4273	1.1735	1.0614	1.1735	1.0614	1.0227	1.0152
7	0.0219	0.0183	141.4	138.5	136.8	138.5	36.0	-0.2	0.2577	-0.0012	0.4105	0.4017	1.1574	1.0598	1.1574	1.0598	1.0099	1.0132
8	0.0200	0.0175	139.6	136.7	134.6	136.7	37.1	1.1	0.2687	0.0004	0.4048	0.3961	1.1555	1.0613	1.1555	1.0613	1.0089	1.0139
9	0.0171	0.0158	135.7	134.2	129.8	134.1	39.8	5.8	0.2977	0.0436	0.3927	0.3882	1.1523	1.0634	1.1523	1.0634	1.0083	1.0141
10	0.0092	0.0093	120.4	123.7	112.8	123.4	42.0	9.2	0.3567	0.0746	0.3467	0.3565	1.1352	1.0668	1.1352	1.0668	1.0039	1.0157

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	BEFF-A	BEFF-P	BEFF-A	BEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.3360	0.1527	0.5474	17.41	44.43	0.0531	0.1974	0.0416	0.9698	64.62	65.61	59.57	59.94
2	-0.3107	0.1301	0.4448	42.30	47.89	0.0519	0.1801	0.0225	0.9827	79.88	80.53	68.93	69.23
3	-0.3344	0.1255	0.4183	42.80	46.12	0.0772	0.1266	0.0297	0.9790	81.72	82.29	68.86	69.15
4	-0.3522	0.1302	0.3938	41.70	43.90	0.0920	0.1445	0.0365	0.9773	81.21	81.75	64.20	64.48
5	-0.3530	0.1608	0.3275	38.02	38.22	0.1169	0.2329	0.0671	0.9697	72.44	73.08	37.48	37.75
6	-0.4492	0.1642	0.2710	36.37	37.31	0.0708	0.1807	0.0544	0.9791	76.25	76.78	47.02	47.24
7	-0.4621	0.1656	0.2589	35.48	35.06	0.1011	0.2524	0.0791	0.9723	71.39	71.98	21.42	21.53
8	-0.4686	0.1854	0.2603	34.82	34.57	0.1057	0.2416	0.0799	0.9742	68.79	69.47	18.35	18.46
9	-0.4840	0.2402	0.2541	33.40	33.84	0.1030	0.2241	0.0768	0.9769	65.41	66.09	16.83	16.89
10	-0.481	0.2967	0.2821	28.75	30.94	0.0755	0.1699	0.0603	0.9859	55.29	56.08	7.34	7.39

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
KG/SEC	KG/SEC	%	%	%	%	%	%	%
552.49	64.580	1.0703	1.1908	72.78	73.45	1.0206	0.9762	47.43

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN N0411, SPEED CODE 63, POINT NO. 2																		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1587	0.1620	117.9	192.4	117.5	116.2	0.0	153.4	0.0	0.9202	0.3508	0.5671	100.0	109.4	0.4599	0.3661	156.4	124.2
2	0.1730	0.1287	118.5	165.0	118.5	125.6	0.0	135.0	0.0	0.8219	0.3526	0.5643	112.0	119.8	0.4850	0.3726	163.1	126.6
3	0.1412	0.1031	119.2	172.3	119.2	126.3	0.0	117.1	0.0	0.7641	0.3547	0.5058	125.3	131.4	0.5166	0.3733	173.0	127.2
4	0.1133	0.0825	119.5	161.3	119.5	126.7	0.0	102.2	0.0	0.6855	0.3557	0.4726	137.6	142.4	0.5423	0.3861	182.3	131.1
5	0.0474	0.0491	119.5	142.0	119.5	116.2	0.0	81.7	0.0	0.6126	0.3557	0.4147	165.3	167.7	0.6069	0.4222	204.0	144.4
6	0.0509	0.0363	119.5	140.4	119.5	117.3	0.0	77.6	0.0	0.5843	0.3555	0.4104	178.4	180.3	0.6394	0.4550	214.9	155.9
7	0.0397	0.0279	119.5	139.9	119.5	117.3	0.0	76.2	0.0	0.5742	0.3556	0.4079	187.1	188.1	0.6406	0.4727	222.1	162.1
8	0.0289	0.0187	119.5	138.8	119.5	117.4	0.0	74.1	0.0	0.5631	0.3556	0.4045	195.5	196.2	0.6818	0.4936	229.2	169.4
9	0.0261	0.0095	119.4	137.5	119.4	117.0	0.0	72.2	0.0	0.5532	0.3551	0.4003	204.4	204.6	0.7068	0.5164	236.9	174.7
10	0.0034	0.0001	118.9	135.5	118.9	114.5	0.0	72.4	0.0	0.5439	0.3538	0.3938	214.9	214.9	0.7304	0.5313	245.4	182.8
11	0.0016	0.0026	118.5	129.1	118.5	106.2	0.0	73.5	0.0	0.4057	0.3526	0.3743	223.6	223.5	0.7527	0.5325	253.0	189.7

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-E	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	
TOTAL																		
	RADIAN	RADIAN	RADIAN	RADIAN						P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.0280	0.1246	0.1774	1.0647	27.85	27.69	0.4393	0.2672	0.0588	1.1746	91.11	90.88	0.7041	0.3606	-100.0	44.0	1.1746	
2	0.0445	0.1380	0.1858	0.8834	27.97	30.76	0.4414	0.1158	0.0293	1.1905	91.11	90.88	0.7579	0.1255	-112.0	15.9	1.1905	
3	0.0570	0.1492	0.2115	0.6584	28.12	31.54	0.4569	0.0558	0.0164	1.1872	94.62	94.49	0.8111	0.1127	-125.3	-14.3	1.1872	
4	0.0631	0.1525	0.2163	0.5447	28.18	31.51	0.4488	0.0355	0.0100	1.1798	96.31	96.21	0.8561	0.3114	-137.6	-40.2	1.1798	
5	0.0560	0.1355	0.1517	0.3077	28.18	29.75	0.4279	0.3472	0.0128	1.1635	93.56	93.42	0.9449	0.6372	-165.3	-86.0	1.1635	
6	0.0580	0.1275	0.1052	0.2622	28.17	30.19	0.4043	0.0401	0.0158	1.1682	94.14	94.01	0.9814	0.7192	-178.6	-102.7	1.1682	
7	0.0743	0.1238	0.0864	0.2409	28.17	30.25	0.3967	0.0455	0.0121	1.1707	93.15	93.00	1.0027	0.7618	-187.1	-111.9	1.1707	
8	0.0844	0.1246	0.0790	0.2171	28.17	30.33	0.3863	0.0469	0.0123	1.1722	92.63	92.47	1.0223	0.8051	-195.5	-122.1	1.1722	
9	0.0884	0.1274	0.0756	0.1955	28.16	30.26	0.3736	0.0227	0.0137	1.1726	91.40	91.21	1.0427	0.8472	-204.6	-132.4	1.1726	
10	0.0926	0.1313	0.0852	0.1715	28.05	29.60	0.3761	0.0814	0.0208	1.1716	88.43	88.13	1.0653	0.9938	-214.9	-142.5	1.1716	
11	0.0502	0.1290	0.1482	0.1285	27.67	27.33	0.3953	0.1341	0.0323	1.1620	77.73	77.26	1.0833	0.9548	-223.6	-150.0	1.1620	

TO/TO	PO/PO	EFF-AD	EFF-P	MC/1	LOSS-P	PO2/PO1	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2
INLET	INLET	%	%	1/1	KG/SEC		%	%				
1.0518	1.1727	90.05	90.26	132.55		1.0518	1.1727	90.05	90.26			

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN N1411, SPEED CODE 63, POINT NO. 2																		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1932	0.1348	176.4	121.3	100.5	119.4	145.0	21.5	0.9634	0.1759	0.5172	0.3509	1.1465	1.0580	1.1465	1.0580	1.1465	1.0580
2	0.1262	0.0923	175.4	133.7	118.1	132.1	129.8	20.9	0.8317	0.1560	0.5148	0.3880	1.1762	1.0563	1.1762	1.0563	1.1762	1.0563
3	0.0798	0.0621	167.7	121.1	124.5	129.9	112.3	17.4	0.7336	0.1331	0.4917	0.3807	1.1765	1.0531	1.1765	1.0531	1.1765	1.0531
4	0.0557	0.0480	159.6	126.7	125.4	125.6	98.7	16.4	0.6668	0.1301	0.4674	0.3681	1.1702	1.0502	1.1702	1.0502	1.1702	1.0502
5	0.0299	0.0315	143.6	119.8	119.3	118.7	80.0	16.1	0.5906	0.1349	0.4196	0.3482	1.1588	1.0474	1.1588	1.0474	1.1588	1.0474
6	0.0237	0.0262	143.1	120.8	121.1	119.7	76.3	16.1	0.5625	0.1394	0.4179	0.3510	1.1604	1.0484	1.1604	1.0484	1.1604	1.0484
7	0.0205	0.0229	142.9	121.6	121.5	120.5	75.2	16.1	0.5544	0.1331	0.4170	0.3530	1.1617	1.0496	1.1617	1.0496	1.1617	1.0496
8	0.0174	0.0196	142.2	121.7	121.9	120.6	73.3	16.2	0.5418	0.1332	0.4148	0.3532	1.1622	1.0503	1.1622	1.0503	1.1622	1.0503
9	0.0140	0.0159	141.1	121.8	121.6	120.7	71.6	16.3	0.5324	0.1342	0.4113	0.3534	1.1627	1.0511	1.1627	1.0511	1.1627	1.0511
10	0.0092	0.0107	139.4	121.6	119.3	119.9	72.1	20.3	0.5436	0.1675	0.4055	0.3523	1.1626	1.0530	1.1626	1.0530	1.1626	1.0530
11	0.0037	0.0046	133.0	114.1	110.9	112.2	73.4	20.8	0.5847	0.1831	0.3858	0.3297	1.1508	1.0549	1.1508	1.0549	1.1508	1.0549

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	
TOTAL																		
	RADIAN	RADIAN	RADIAN	RADIAN						P01	TOT-INLET	TOT-INLET	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.0438	0.1261	0.2697	0.7875	24.57	30.55	0.4556	0.1434	0.0298	0.9761	88.72	89.33	0.872	0.6933	68.72	69.33	0.9761	
2	0.0508	0.0950	0.1987	0.6757	24.33	34.24	0.3750	0.0718	0.0160	0.9881	84.41	84.75	0.844	0.6475	84.41	84.75	0.9881	
3	0.0492	0.0463	0.1569	0.6005	31.29	33.90	0.3525	0.0582	0.0140	0.9912	89.59	89.82	0.895	0.6959	89.59	89.82	0.9912	
4	0.0919	0.0090	0.1441	0.5111	31.74	32.84	0.3363	0.0570	0.0146	0.9921	91.56	91.74	0.915	0.7156	91.56	91.74	0.9921	
5	0.1463	0.0339	0.1373	0.4557	30.49	31.04	0.2955	0.0359	0.0104	0.9959	90.86	91.05	0.908	0.7086	90.86	91.05	0.9959	
6	0.1730	0.0547	0.1298	0.4292	31.07	31.77	0.2864	0.0594	0.0183	0.9933	89.03	90.04	0.893	0.7004	89.03	90.04	0.9933	
7	0.1821	0.0602	0.1270	0.4212	31.22	31.46	0.2818	0.0685	0.0218	0.9923	88.29	88.53	0.882	0.6929	88.29	88.53	0.9923	
8	0.1991	0.0736	0.1256	0.4086	31.36	31.48	0.2777	0.0767	0.0252	0.9914	87.34	87.60	0.873	0.6860	87.34	87.60	0.9914	
9	0.2194	0.0736	0.1265	0.3981	31.32	31.49	0.2714	0.0772	0.0263	0.9915	86.15	86.45	0.861	0.6815	86.15	86.45	0.9915	
10	0.2377	0.1108	0.1676	0.3761	30.69	31.21	0.2600	0.0720	0.0253	0.9923	81.85	82.23	0.818	0.6823	81.85	82.23	0.9923	
11	0.2577	0.1228	0.2228	0.4016	28.43	29.05	0.2869	0.0975	0.0351	0.9905	72.10	72.65	0.721	0.6810	72.10	72.65	0.9905	

MCRR	TO/TO	PO/PO	EFF-AD	EFF-P	LOSS-P	PO2/PO1	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2
INLET	INLET	INLET	%	%	KG/SEC		%	%				
950.28	1.0518	1.1624	84.94	85.26		1.0518	0.9912	84.94				

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1536	C.1054	110.9	177.1	108.9	148.5	20.9	96.6	0.1881	0.5712	0.3199	0.5107	124.4	132.4	0.4336	0.4403	150.2	152.7
2	0.1162	C.0821	133.8	176.4	132.4	152.5	19.6	88.3	0.1467	0.5205	0.3885	0.5100	135.2	141.0	0.5102	0.4673	175.7	161.8
3	0.0903	C.0636	134.4	169.8	133.3	150.5	18.7	78.6	0.1245	0.4797	0.3907	0.4907	145.3	149.5	0.5986	0.4808	185.2	166.4
4	0.0652	C.0443	131.7	160.9	130.7	143.7	16.0	72.3	0.1218	0.4652	0.3833	0.4646	156.1	158.9	0.5577	0.4866	191.6	167.8
5	0.0417	C.0052	126.4	143.2	125.4	129.7	15.9	60.7	0.1263	0.4378	0.3678	0.4126	180.6	181.4	0.6024	0.5104	207.0	177.2
6	0.0054	C.0025	126.6	135.5	125.6	125.5	16.0	51.0	0.1267	0.3861	0.3682	0.3903	189.3	189.5	0.6224	0.5385	214.0	186.9
7	0.0017	C.0074	126.2	132.9	125.2	123.9	16.1	48.2	0.1276	0.3709	0.3668	0.3827	197.8	197.8	0.6413	0.5593	220.7	194.2
8	0.0070	C.0108	125.5	131.8	124.4	122.4	17.0	48.7	0.1357	0.3781	0.3644	0.3789	209.4	208.6	0.6651	0.5792	229.1	201.4
9	0.0079	C.0110	124.0	130.2	122.3	119.6	20.3	51.5	0.1646	0.4069	0.3595	0.3737	217.3	216.6	0.6723	0.5856	231.9	204.0
10	0.0051	C.0067	116.5	120.0	114.7	108.7	20.6	50.8	0.1782	0.4369	0.3348	0.3432	225.3	225.0	0.6781	0.5875	236.6	205.4

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1502	C.0288	0.3135	0.5233	28.14	38.57	0.1190	0.0103	0.0024	1.1199	98.83	98.80	C.7572	0.2339	-103.5	-35.8	1.2855
2	0.1808	C.0715	0.1856	0.3861	34.42	40.44	0.1870	0.0601	0.0149	1.1062	91.26	91.13	0.7163	0.7502	-115.6	-52.6	1.3032
3	0.1448	C.0458	0.1508	0.3274	34.65	40.23	0.1578	0.0253	0.0064	1.1063	95.70	95.64	0.7663	0.4389	-126.6	-70.9	1.2995
4	0.1144	C.0257	0.1130	0.2781	33.95	38.67	0.2135	0.0214	0.0054	1.1028	96.00	95.94	0.8196	0.5416	-140.1	-86.6	1.2877
5	0.0579	C.0056	0.0749	0.1707	32.58	35.06	0.2205	0.0443	0.0110	1.0863	89.42	89.29	0.9199	0.7493	-164.7	-120.7	1.2598
6	0.0447	C.0131	0.0556	0.1090	32.63	33.95	0.1868	0.0228	0.0054	1.0728	93.10	93.01	0.9637	0.8347	-173.3	-138.5	1.2460
7	0.0263	C.0153	0.0876	0.0882	32.53	33.48	0.1750	0.0249	0.0059	1.0604	91.59	91.51	0.9675	0.8793	-181.7	-149.6	1.2216
8	0.0227	C.0160	0.0663	0.0795	32.31	33.03	0.1741	0.0432	0.0102	1.0662	85.17	85.04	0.9968	0.9173	-192.4	-159.9	1.2397
9	0.0174	C.0214	0.0606	0.0704	31.72	32.15	0.1741	0.0508	0.0120	1.0653	82.53	82.36	1.0150	0.9446	-197.0	-165.3	1.2371
10	0.0135	C.0524	0.1126	0.0471	29.59	29.05	0.1777	0.0662	0.0146	1.0607	76.87	76.66	1.0601	1.0130	-204.7	-174.3	1.2195

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
%	%	%	%	SCM	%	%	%	%
1.0792	1.7617	36.77	87.20	133.39	1.0261	1.0854	90.88	91.00

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1215	C.1400	160.0	154.4	128.8	154.4	94.9	1.8	0.6313	0.0114	0.4591	0.4424	1.2629	1.0932	1.1002	1.0333
2	0.0896	C.0974	167.8	164.3	143.9	164.3	86.4	-0.6	0.5388	-0.0039	0.4836	0.4730	1.2948	1.0891	1.0991	1.0379
3	0.0674	C.0695	166.3	158.9	147.4	158.9	77.0	-2.3	0.4808	-0.0146	0.4799	0.4578	1.2877	1.0842	1.0966	1.0306
4	0.0505	C.0487	160.7	151.6	144.2	151.5	71.0	-3.1	0.4571	-0.0207	0.4661	0.4367	1.2746	1.0803	1.0919	1.0295
5	0.0254	C.0211	145.0	134.6	132.1	134.5	59.8	-2.5	0.4249	-0.0182	0.4180	0.3870	1.2419	1.0758	1.0708	1.0266
6	0.0194	C.0155	137.1	130.0	127.7	130.0	50.0	-3.0	0.3734	-0.0230	0.3953	0.3742	1.2337	1.0718	1.0622	1.0215
7	0.0164	C.0131	134.4	125.1	125.6	125.1	47.9	-3.4	0.3641	-0.0269	0.3872	0.3596	1.2248	1.0721	1.0540	1.0209
8	0.0142	C.0120	133.0	123.8	123.7	123.8	48.6	-1.9	0.3744	-0.0155	0.3824	0.3554	1.2228	1.0745	1.0516	1.0218
9	0.0109	C.0058	131.2	123.3	120.7	123.3	51.4	2.1	0.4026	0.0173	0.3764	0.3534	1.2224	1.0775	1.0525	1.0221
10	0.0050	C.0067	121.2	114.9	110.1	114.9	50.7	3.8	0.4316	0.0335	0.3468	0.3286	1.2097	1.0803	1.0512	1.0221

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.2563	C.1599	0.6199	34.28	40.65	0.1559	0.1308	0.0276	0.9824	74.06	74.91	83.12	83.36
2	-0.2257	C.1364	0.5428	38.53	43.94	0.1365	0.0434	0.0098	0.9936	86.06	86.56	85.42	85.62
3	-0.2532	C.1300	0.4954	35.58	42.72	0.1566	0.0595	0.0142	0.9913	89.02	89.40	87.30	87.47
4	-0.2760	C.1286	0.4778	38.80	40.85	0.1719	0.0713	0.0180	0.9903	89.44	89.79	86.20	86.36
5	-0.2580	C.1400	0.4432	35.61	36.20	0.1947	0.1189	0.0343	0.9865	84.32	84.79	74.11	74.36
6	-0.3488	C.1392	0.3964	34.47	35.03	0.1679	0.0915	0.0275	0.9907	86.20	86.61	80.92	81.10
7	-0.3588	C.1399	0.3910	33.90	33.63	0.1888	0.1372	0.0430	0.9865	82.78	83.27	72.46	72.66
8	-0.3629	C.1615	0.3898	33.33	33.21	0.1942	0.1419	0.0469	0.9864	79.47	80.06	66.62	66.87
9	-0.3761	C.2139	0.3853	32.40	32.99	0.1911	0.1287	0.0442	0.9879	76.29	76.96	66.46	66.72
10	-0.4135	C.2556	0.3981	29.38	30.57	0.1910	0.1120	0.0358	0.9910	69.35	70.16	64.69	65.16

NCORR	W CORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
RAD/SEC	KG/SEC	%	%	%	%	%	%	%
550.28	61.088	1.0792	1.7473	82.35	82.90	1.0261	0.9886	78.04

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	N-1	N-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1999	0.1625	105.9	176.2	105.9	99.9	0.0	145.2	0.0	0.9655	0.3143	0.5175	100.4	109.8	0.4330	0.3113	145.9	106.3
2	0.1782	0.1291	106.2	172.9	106.2	110.5	0.0	135.0	0.0	0.8753	0.3152	0.5073	112.4	120.3	0.4588	0.3263	154.6	111.2
3	0.1484	0.0992	106.5	162.6	106.5	114.1	0.0	115.9	0.0	0.7917	0.3162	0.4761	125.8	131.9	0.4892	0.3373	164.8	115.2
4	0.1199	0.0765	106.6	153.1	106.6	113.1	0.0	103.1	0.0	0.7180	0.3164	0.4474	138.1	143.0	0.5178	0.3506	174.5	119.9
5	0.0869	0.0393	106.1	134.4	106.1	105.5	0.0	84.9	0.0	0.6773	0.3148	0.3945	165.9	168.4	0.5843	0.3910	196.9	134.5
6	0.0474	0.0267	105.7	131.5	105.7	103.3	0.0	81.4	0.0	0.6669	0.3135	0.3825	179.3	181.0	0.6175	0.4174	201.1	143.5
7	0.0361	0.0198	105.5	131.1	105.5	102.8	0.0	81.3	0.0	0.6690	0.3129	0.3808	187.9	188.8	0.6392	0.4322	215.4	148.8
8	0.0260	0.0124	105.3	131.2	105.3	103.1	0.0	81.0	0.0	0.6660	0.3124	0.3806	194.3	197.0	0.6608	0.4503	222.7	155.2
9	0.0167	0.0055	105.1	130.0	105.1	101.8	0.0	81.0	0.0	0.6722	0.3118	0.3769	205.4	205.4	0.6845	0.4658	230.7	160.7
10	0.0042	0.0009	104.7	128.4	104.7	99.0	0.0	82.1	0.0	0.6920	0.3106	0.3720	215.7	215.7	0.7113	0.4810	239.4	164.3
11	0.0000	0.0019	104.4	125.7	104.4	93.3	0.0	86.2	0.0	0.7346	0.3097	0.3625	224.4	224.4	0.7342	0.4954	247.5	168.3

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B ² -1	B ² -2	V0 ² -1	V0 ² -2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN		M/SEC	M/SEC		TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0833	0.1802	0.1992	1.0982	25.31	24.30	0.5168	0.2882	0.0639	1.1648	81.35	80.93	0.7595	0.3387	-100.4	35.4	1.1448
2	0.1017	0.1560	0.2013	0.9292	25.37	27.52	0.5064	0.1223	0.0310	1.1877	91.34	91.13	0.8151	0.1161	-112.4	12.7	1.1877
3	0.1154	0.2075	0.2384	0.7299	25.44	28.94	0.4988	0.0429	0.0118	1.1898	96.49	96.40	0.8694	0.1395	-125.8	-16.1	1.1898
4	0.1215	0.2108	0.2409	0.5764	25.46	29.03	0.4900	0.0203	0.0057	1.1859	98.08	98.02	0.9164	0.3380	-138.1	-39.9	1.1859
5	0.1132	0.1926	0.1832	0.3335	25.34	27.43	0.4644	0.0409	0.0108	1.1737	94.96	94.84	1.0022	0.6687	-165.9	-87.4	1.1737
6	0.1150	0.1845	0.1528	0.2716	25.25	26.94	0.4517	0.0597	0.0153	1.1735	92.13	91.95	1.0384	0.7668	-179.3	-99.6	1.1735
7	0.1310	0.1805	0.1322	0.2518	25.21	26.84	0.4493	0.0757	0.0193	1.1764	89.84	89.61	1.0594	0.8076	-187.9	-107.5	1.1764
8	0.1406	0.1808	0.1177	0.2346	25.18	26.94	0.4424	0.0862	0.0218	1.1801	88.18	87.89	1.0784	0.8438	-196.3	-115.9	1.1801
9	0.1435	0.1826	0.1136	0.2127	25.13	26.60	0.4408	0.1052	0.0261	1.1815	85.30	84.94	1.0979	0.8852	-205.4	-124.4	1.1815
10	0.1461	0.1849	0.1244	0.1859	25.05	25.86	0.4455	0.1368	0.0330	1.1826	80.71	80.26	1.1189	0.9330	-215.7	-133.6	1.1826
11	0.1423	0.1810	0.1767	0.1519	24.98	24.30	0.4419	0.1789	0.0413	1.1804	74.93	74.33	1.1353	0.9833	-224.4	-140.1	1.1804

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.0549	1.1797	88.17	88.46	119.07	1.0549	1.1797	88.17	88.46

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	N-1	N-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1549	0.1395	160.2	98.8	82.8	96.6	137.2	20.5	1.0271	0.2070	0.4683	0.2848	1.1432	1.0551	1.1432	1.0551
2	0.1345	0.1023	162.6	114.0	101.7	111.7	126.8	22.5	0.8995	0.1979	0.4755	0.3296	1.1709	1.0553	1.1709	1.0553
3	0.0931	0.0765	157.1	114.7	110.8	113.2	111.3	17.9	0.7877	0.1567	0.4592	0.3319	1.1763	1.0530	1.1763	1.0530
4	0.0706	0.0636	150.5	112.1	112.7	110.8	99.7	16.4	0.7262	0.1467	0.4397	0.3246	1.1741	1.0511	1.1741	1.0511
5	0.0556	0.0487	136.6	106.6	108.4	105.5	83.1	15.7	0.6539	0.1476	0.3980	0.3088	1.1676	1.0493	1.1676	1.0493
6	0.0383	0.0423	133.8	106.6	107.2	105.4	80.0	16.0	0.6411	0.1508	0.3892	0.3084	1.1682	1.0507	1.1682	1.0507
7	0.0335	0.0373	133.9	108.0	107.3	106.7	80.1	16.5	0.6413	0.1531	0.3892	0.3122	1.1707	1.0528	1.1707	1.0528
8	0.0278	0.0311	134.6	109.9	108.2	108.5	80.1	17.4	0.6375	0.1590	0.3909	0.3176	1.1742	1.0549	1.1742	1.0549
9	0.0208	0.0235	133.9	110.4	107.2	109.1	80.3	17.9	0.6429	0.1623	0.3885	0.3193	1.1758	1.0574	1.1758	1.0574
10	0.0119	0.0136	132.9	110.0	104.8	108.3	81.6	19.3	0.6614	0.1767	0.3846	0.3170	1.1752	1.0610	1.1752	1.0610
11	0.0041	0.0050	130.0	103.3	99.2	101.5	84.1	19.7	0.7033	0.1915	0.3753	0.2968	1.1655	1.0654	1.1655	1.0654

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN		M/SEC	M/SEC		TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.1074	0.1897	0.3008	0.8201	20.59	25.23	0.5331	0.1316	0.0272	0.9816	70.78	71.34	70.78	71.34
2	0.0687	0.1579	0.2406	0.6767	25.70	29.48	0.4610	0.0922	0.0204	0.9868	83.44	85.80	83.44	85.80
3	0.0649	0.1004	0.1805	0.6310	21.33	30.06	0.4131	0.0838	0.0201	0.9887	89.75	89.97	89.75	89.97
4	0.0344	0.0664	0.1607	0.5776	24.03	29.49	0.3980	0.0814	0.0208	0.9898	91.97	92.14	91.97	92.14
5	0.0830	0.0294	0.1500	0.5063	28.15	28.09	0.3640	0.0523	0.0152	0.9946	91.80	91.97	91.80	91.97
6	0.0944	0.0239	0.1471	0.4904	27.88	28.04	0.3515	0.0466	0.0137	0.9956	89.60	89.82	89.60	89.82
7	0.0952	0.0267	0.1470	0.4881	27.92	28.37	0.3451	0.0448	0.0142	0.9956	87.34	87.62	87.34	87.62
8	0.1033	0.0222	0.1514	0.4785	28.15	28.82	0.3376	0.0489	0.0160	0.9951	85.52	85.85	85.52	85.85
9	0.1088	0.0202	0.1545	0.4807	27.90	28.95	0.3338	0.0483	0.0164	0.9952	82.55	82.95	82.55	82.95
10	0.1255	0.0070	0.1768	0.4848	27.25	28.64	0.3386	0.0641	0.0225	0.9938	77.39	77.90	77.39	77.90
11	0.1391	0.0042	0.2312	0.5118	25.72	26.66	0.3867	0.1361	0.0490	0.9874	68.51	69.18	68.51	69.18

NCCRP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET				STAGE	
RAD/SEC	%	%	%				%	%
552.37	1.0549	1.1698	83.59	83.96	1.0549	0.9916	83.59	

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1499	0.1026	88.5	163.1	86.2	120.9	19.9	109.5	0.2254	0.7297	0.2547	0.4676	126.9	132.9	0.3911	0.3533	135.8	123.1
2	0.1133	0.0812	114.1	159.2	112.0	123.6	21.4	100.3	0.1883	0.6782	0.3298	0.4566	135.7	141.6	0.4628	0.3798	162.1	130.3
3	0.0893	0.0653	117.0	154.7	115.8	125.6	16.8	90.3	0.1440	0.6216	0.3391	0.4438	145.8	150.1	0.5023	0.3991	179.4	140.1
4	0.0666	0.0485	115.8	148.8	114.7	122.5	15.8	84.5	0.1367	0.6030	0.3357	0.4267	156.7	159.5	0.5268	0.4119	181.7	143.6
5	0.0235	0.0144	111.6	135.9	110.5	112.1	15.6	76.9	0.1405	0.6012	0.3232	0.3887	181.3	182.1	0.5771	0.4395	199.1	153.7
6	0.0126	0.0061	112.0	136.7	110.4	110.6	16.0	69.6	0.1436	0.5615	0.3264	0.3736	190.0	190.2	0.5974	0.4679	206.3	163.7
7	0.0056	0.0009	113.9	128.3	112.0	108.9	17.0	68.0	0.1497	0.5583	0.3295	0.3662	198.5	198.5	0.6180	0.4850	213.6	170.0
8	0.0019	0.0006	113.8	128.3	113.4	108.9	18.0	68.0	0.1572	0.5582	0.3316	0.3654	210.2	209.4	0.6445	0.5081	223.1	178.4
9	0.0012	0.0001	113.7	128.1	112.0	107.7	19.4	69.4	0.1712	0.5719	0.3277	0.3640	218.2	217.7	0.6578	0.5207	228.7	183.3
10	0.0004	0.0000	106.4	122.0	105.1	102.0	19.8	66.9	0.1842	0.5808	0.3072	0.3456	226.2	225.9	0.6661	0.5349	231.8	188.8

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VB'-1	VB'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0274	0.0940	0.2687	0.6909	22.69	32.59	0.2671	-0.0155	-0.0037	1.1468	101.15	101.17	0.8800	0.1891	-105.0	-23.4	1.3117
2	0.1094	0.0059	0.1753	0.4737	29.64	33.78	0.3214	0.0772	0.0191	1.1279	91.71	91.58	0.7977	0.3199	-114.3	-41.7	1.3198
3	0.0729	0.0261	0.1547	0.3953	30.69	34.68	0.3189	0.0526	0.0132	1.1241	83.37	83.25	0.8382	0.4429	-129.0	-59.8	1.3222
4	0.0667	0.0420	0.1204	0.3383	30.39	34.06	0.3232	0.0396	0.0100	1.1247	84.50	84.40	0.8873	0.5490	-140.9	-74.0	1.3192
5	0.0050	0.0226	0.0792	0.2293	29.26	31.35	0.3331	0.0654	0.0162	1.1195	89.42	89.24	0.9829	0.7536	-165.7	-	1.3071
6	0.0153	0.0731	0.0896	0.1750	29.35	31.00	0.2990	0.0421	0.0101	1.1121	92.23	92.10	1.0036	0.8287	-174.0	-120.1	1.3003
7	0.0216	0.0632	0.0840	0.1387	29.86	30.46	0.2924	0.0574	0.0135	1.1062	88.68	88.31	1.0154	0.8757	-181.5	-130.5	1.2979
8	0.0181	0.0568	0.0635	0.1270	29.45	30.40	0.2860	0.0707	0.0167	1.1059	85.31	85.10	1.0376	0.9145	-192.2	-141.4	1.3004
9	0.0251	0.0639	0.0584	0.1152	29.49	30.00	0.2841	0.0764	0.0181	1.1079	84.06	83.82	1.0576	0.9424	-198.8	-148.3	1.3019
10	0.0535	0.0524	0.0998	0.0999	27.51	28.29	0.2696	0.0584	0.0131	1.1098	87.32	87.13	1.1001	1.0002	-206.6	-158.9	1.2927

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SUM			%	%
1.0925	1.3072	86.04	86.56	119.24	1.0357	1.1174	90.37	90.52

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1225	0.1420	149.6	120.2	104.1	120.1	107.5	3.1	0.7981	0.0255	0.4275	0.3412	1.2930	1.2930	1.0967	1.1306	1.0395	
2	0.0906	0.0992	151.4	128.9	115.2	128.9	98.2	2.5	0.7043	0.0194	0.4332	0.3672	1.3148	1.3148	1.0941	1.1197	1.0371	
3	0.0683	0.0706	151.0	128.6	122.3	128.6	88.5	-0.3	0.6256	-0.0024	0.4327	0.3667	1.3185	1.3185	1.0908	1.1210	1.0364	
4	0.0521	0.0500	148.0	124.7	122.5	124.7	83.0	-1.5	0.5948	-0.0119	0.4242	0.3556	1.3142	1.3142	1.0886	1.1204	1.0362	
5	0.0259	0.0202	137.6	115.8	114.7	115.8	75.9	-2.4	0.4842	-0.0206	0.3934	0.3297	1.3020	1.3020	1.0886	1.1152	1.0367	
6	0.0199	0.0143	132.5	111.8	113.2	111.8	68.8	-3.0	0.4457	-0.0265	0.3788	0.3184	1.2961	1.2961	1.0869	1.1084	1.0334	
7	0.0163	0.0115	130.1	109.8	111.2	109.8	67.5	-3.0	0.4453	-0.0276	0.3713	0.3123	1.2931	1.2931	1.0897	1.1021	1.0331	
8	0.0110	0.0077	129.9	111.1	110.9	111.0	67.7	-1.9	0.4481	-0.0168	0.3701	0.3151	1.2953	1.2953	1.0941	1.1015	1.0343	
9	0.0059	0.0039	129.7	111.9	109.7	111.8	69.2	1.2	0.4625	0.0105	0.3685	0.3167	1.2965	1.2965	1.0988	1.1033	1.0354	
10	0.0015	0.0007	123.6	103.8	103.9	103.8	66.9	2.3	0.5717	0.0226	0.3501	0.2930	1.2837	1.2837	1.1024	1.1021	1.0347	

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.0895	0.1740	0.7726	28.55	33.55	0.3415	0.1205	0.0254	0.9858	78.80	79.56	92.47	90.54
2	-0.0603	0.1598	0.6848	31.79	36.37	0.2891	0.0311	0.0070	0.9962	86.48	86.99	94.60	88.77
3	-0.1084	0.1423	0.6280	33.93	36.50	0.2872	0.0231	0.0055	0.9972	90.61	90.97	91.02	91.16
4	-0.1323	0.1372	0.6066	34.10	35.47	0.3008	0.0324	0.0082	0.9962	91.69	92.01	91.32	91.45
5	-0.1387	0.1377	0.6048	32.03	32.92	0.3220	0.0371	0.0107	0.9962	88.45	88.88	86.18	86.39
6	-0.1765	0.1357	0.5722	31.67	31.81	0.3191	0.0346	0.0104	0.9967	88.60	89.01	89.28	89.44
7	-0.1776	0.1392	0.5729	31.07	31.16	0.3253	0.0411	0.0129	0.9963	85.45	85.97	85.07	85.28
8	-0.1891	0.1603	0.5649	30.92	31.40	0.3222	0.0443	0.0146	0.9960	81.61	82.28	81.62	81.88
9	-0.2192	0.2070	0.5521	30.50	31.51	0.3174	0.0466	0.0160	0.9958	77.97	78.76	80.35	80.63
10	-0.2733	0.2447	0.5491	28.78	29.05	0.3459	0.0302	0.0931		72.25	73.21	81.25	81.51

MCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
552.37	54.875	1.0925	1.3009	84.44	85.01	1.0357	0.9952	86.41

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN N7411, SPEED CODE 63, POINT NO 3																		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2004	0.1605	111.3	143.1	111.3	109.9	0.0	146.5	0.0	0.9248	0.3306	0.3388	100.0	109.4	0.4444	0.3412	149.6	116.0
2	0.1779	0.1244	111.9	77.4	111.9	119.0	0.0	131.6	0.0	0.8334	0.3323	0.5214	112.0	119.9	0.4701	0.3513	158.3	119.6
3	0.1458	0.0567	112.5	45.4	112.5	119.0	0.0	115.0	0.0	0.7466	0.3341	0.4853	125.3	131.5	0.5002	0.3523	168.4	120.2
4	0.1162	0.0754	112.7	155.2	112.7	117.2	0.0	101.7	0.0	0.7136	0.3348	0.4542	137.6	142.4	0.5284	0.3631	177.9	124.1
5	0.0631	0.0419	112.3	137.6	112.3	109.0	0.0	82.9	0.0	0.6445	0.3336	0.4012	165.3	167.7	0.5936	0.4046	195.8	138.7
6	0.0443	0.0300	111.9	135.4	111.9	109.4	0.0	79.8	0.0	0.6297	0.3324	0.3944	178.6	180.3	0.6262	0.4323	210.8	148.6
7	0.0330	0.0226	111.7	135.1	111.7	109.4	0.0	79.3	0.0	0.6275	0.3319	0.3932	187.2	188.1	0.6674	0.4489	218.0	154.3
8	0.0229	0.0148	111.5	134.3	111.5	109.3	0.0	78.0	0.0	0.6194	0.3313	0.3903	195.5	196.2	0.6607	0.4682	225.1	161.1
9	0.0120	0.0069	111.3	132.9	111.3	108.5	0.0	76.8	0.0	0.6163	0.3305	0.3881	204.6	204.6	0.6918	0.4888	232.9	167.6
10	0.0018	0.0007	110.8	131.2	110.8	105.7	0.0	77.7	0.0	0.6360	0.3291	0.3803	214.9	214.9	0.7181	0.5019	241.8	173.7
11	0.0014	0.0022	110.5	127.1	110.5	99.2	0.0	79.4	0.0	0.6753	0.3280	0.3673	223.6	223.6	0.7405	0.5056	249.4	174.0

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VR*-1	VR*-2	PO/PO	
RUN N7411, SPEED CODE 63, POINT NO 3																		
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.0569	0.1537	0.2137	1.0573	26.46	26.60	0.4651	0.2294	0.0511	1.1728	84.52	84.18	0.7330	-0.3243	-100.0	37.1	1.1728	
2	0.0739	0.1682	0.2171	0.8854	26.57	29.52	0.4635	0.3811	0.0206	1.1906	93.92	93.78	0.7873	-0.0983	-112.0	11.8	1.1906	
3	0.0865	0.1747	0.2353	0.7041	26.70	30.06	0.4795	0.0372	0.0102	1.1882	96.75	96.66	0.8406	0.1365	-125.3	-16.4	1.1882	
4	0.0925	0.1818	0.2362	0.5520	26.75	29.92	0.4744	0.0217	0.0061	1.1820	97.83	97.78	0.8854	0.3333	-137.6	-40.7	1.1820	
5	0.0853	0.1649	0.1718	0.3169	26.66	28.39	0.4477	0.0375	0.0100	1.1691	95.14	95.03	0.9743	0.6574	-165.3	-84.8	1.1691	
6	0.0879	0.1574	0.1289	0.2683	26.59	28.40	0.4315	0.0469	0.0123	1.1720	93.94	93.99	1.0112	0.7429	-178.6	-100.5	1.1720	
7	0.1044	0.1539	0.1073	0.2501	26.55	28.43	0.4289	0.0586	0.0153	1.1752	91.77	91.98	1.0327	0.7826	-187.2	-108.8	1.1752	
8	0.1166	0.1548	0.0986	0.2277	26.51	28.45	0.4189	0.0654	0.0189	1.1772	90.50	90.27	1.0524	0.8247	-195.5	-118.3	1.1772	
9	0.1184	0.1575	0.0952	0.2059	26.45	28.26	0.4095	0.0773	0.0196	1.1779	88.43	88.15	1.0728	0.8669	-204.6	-127.8	1.1779	
10	0.1220	0.1607	0.1057	0.1804	26.35	27.90	0.4146	0.1102	0.0273	1.1778	83.36	82.96	1.0967	0.9143	-214.9	-137.2	1.1778	
11	0.1189	0.1576	0.1612	0.1440	26.23	25.73	0.4315	0.1557	0.0367	1.1729	76.58	76.04	1.1119	0.9679	-223.6	-144.1	1.1729	

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/BI	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	RDYDR	RDYDR
%	%	%	%	%	%	%	%	%
1.0531	1.1770	89.83	90.07	125.27	1.0531	1.1770	89.83	90.07

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN N0411, SPEED CODE 63, POINT NO 3																		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1581	0.1412	166.8	109.9	93.1	107.5	138.4	22.9	0.9783	0.2073	0.4084	0.3176	1.1454	1.0554	1.1454	1.0554	1.0554	1.0554
2	0.1367	0.1035	167.3	123.2	110.4	120.8	125.7	24.4	0.8503	0.1982	0.4901	0.3570	1.1738	1.0546	1.1738	1.0546	1.0546	1.0546
3	0.0826	0.0755	160.3	122.2	116.2	120.7	110.4	19.0	0.7599	0.1556	0.4693	0.3544	1.1775	1.0524	1.1775	1.0524	1.0524	1.0524
4	0.0683	0.0608	152.9	118.4	117.1	117.2	98.4	17.3	0.6588	0.1464	0.4472	0.3436	1.1732	1.0502	1.1732	1.0502	1.0502	1.0502
5	0.0426	0.0447	134.8	111.2	112.6	110.0	81.1	16.3	0.6245	0.1475	0.4048	0.3225	1.1633	1.0480	1.1633	1.0480	1.0480	1.0480
6	0.0359	0.0389	137.7	112.8	113.2	111.5	78.4	16.9	0.6059	0.1508	0.4013	0.3270	1.1666	1.0496	1.1666	1.0496	1.0496	1.0496
7	0.0313	0.0342	138.1	114.6	113.8	113.2	78.2	17.5	0.6027	0.1531	0.4020	0.3319	1.1698	1.0514	1.1698	1.0514	1.0514	1.0514
8	0.0259	0.0284	137.8	115.8	114.2	114.4	77.1	18.3	0.593	0.1589	0.4009	0.3355	1.1725	1.0528	1.1725	1.0528	1.0528	1.0528
9	0.0196	0.0216	136.9	115.9	113.7	114.4	76.2	18.7	0.5906	0.1620	0.3978	0.3354	1.1732	1.0543	1.1732	1.0543	1.0543	1.0543
10	0.0117	0.0130	135.4	115.3	111.2	113.5	77.3	20.2	0.6077	0.1765	0.3928	0.3331	1.1726	1.0576	1.1726	1.0576	1.0576	1.0576
11	0.0043	0.0050	131.3	108.5	104.7	106.5	79.3	20.7	0.6484	0.1915	0.3799	0.3126	1.1623	1.0614	1.1623	1.0614	1.0614	1.0614

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-I	EFF-S	EFF-P
RUN N0411, SPEED CODE 63, POINT NO 3														
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0586	0.1409	0.3011	0.7710	23.09	27.86	0.4833	0.1539	0.0318	0.9768	71.46	71.99	71.46	71.99
2	0.0244	0.1137	0.2409	0.6521	27.78	31.67	0.3578	0.0883	0.0195	0.9866	85.85	86.16	85.85	86.16
3	0.0229	0.0726	0.1795	0.6043	29.56	31.85	0.3749	0.0650	0.0156	0.9909	91.34	91.54	91.34	91.54
4	0.0399	0.0610	0.1605	0.5524	29.98	30.98	0.3616	0.0592	0.0151	0.9924	93.18	93.32	93.18	93.32
5	0.1124	0.0001	0.1499	0.4770	29.07	29.09	0.3350	0.0450	0.0131	0.9952	92.12	92.28	92.12	92.28
6	0.1297	0.0114	0.1471	0.4551	29.30	29.50	0.3188	0.0422	0.0130	0.9956	90.86	91.06	90.86	91.06
7	0.1343	0.0124	0.1469	0.4491	29.47	29.93	0.3109	0.0419	0.0133	0.9956	89.19	89.44	89.19	89.44
8	0.1469	0.0214	0.1512	0.4351	29.60	30.23	0.3008	0.0374	0.0123	0.9961	88.21	88.46	88.21	88.46
9	0.1611	0.0321	0.1543	0.4287	29.47	30.20	0.2973	0.0355	0.0130	0.9960	86.00	86.30	86.00	86.30
10	0.1793	0.0467	0.1766	0.4312	28.79	29.89	0.2583	0.0442	0.0155	0.9955	80.81	81.24	80.81	81.24
11	0.1439	0.0591	0.2312	0.4568	27.02	27.89	0.3371	0.0958	0.0345	0.9909	71.55	72.15	71.55	72.15

MCCR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
RAC/SEC	%	%	%	%	%	%	%	%
550.31	1.0531	1.1383	85.65	85.97	1.0531	0.9926	85.66	85.66

ROTOR 2

RUN NO411, SPEED CODE 63, POINT NO 3																		
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1516	0.1043	98.7	168.5	96.2	131.3	22.2	105.6	0.2253	0.6714	0.2866	0.4865	124.4	132.4	0.4067	0.3852	140.3	134.0
2	0.1142	0.0823	122.7	166.8	120.5	135.1	23.0	97.8	0.1881	0.6233	0.3556	0.4799	135.2	141.0	0.4772	0.4082	164.7	141.9
3	0.0893	0.0651	124.6	161.3	123.3	136.5	17.9	86.0	0.1437	0.5604	0.3618	0.4642	145.3	149.6	0.5147	0.4394	177.3	150.5
4	0.0652	0.0467	122.4	153.7	121.3	131.4	14.7	79.8	0.1364	0.5450	0.3555	0.4422	156.1	158.9	0.5367	0.4412	184.8	153.4
5	0.0485	0.0390	117.5	138.3	116.4	119.0	14.5	70.5	0.1406	0.5344	0.3411	0.3968	180.7	181.4	0.5842	0.4668	201.2	162.7
6	0.0374	0.0309	118.8	132.6	117.6	117.2	17.0	61.9	0.1439	0.4863	0.3447	0.3803	189.3	189.5	0.6051	0.4970	208.6	173.2
7	0.0310	0.0235	120.2	129.8	118.8	114.9	18.0	60.3	0.1503	0.4833	0.3485	0.3719	197.8	197.8	0.6248	0.5133	215.5	179.2
8	0.0213	0.0237	120.0	128.9	118.5	113.9	18.9	60.4	0.1577	0.4874	0.3474	0.3687	206.4	206.6	0.6497	0.5346	224.4	186.9
9	0.0307	0.0219	118.8	128.3	117.0	112.4	20.3	61.8	0.1716	0.5029	0.3433	0.3660	217.3	216.9	0.6625	0.5464	229.2	191.5
10	0.0000	0.0004	112.0	122.9	110.1	106.9	20.6	60.6	0.1847	0.5158	0.3227	0.3498	225.3	225.0	0.6699	0.5581	232.5	196.1

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	V0'-1	V0'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN						TOT	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0948	0.0267	0.2785	0.6138	25.15	34.97	0.2025	0.0157	-0.0038	1.1363	101.31	101.33	0.8126	0.1989	-102.2	-26.8	1.3024
2	0.1492	0.0399	0.1634	0.4399	31.71	36.53	0.2640	0.0587	0.0148	1.1187	92.94	92.82	0.7479	0.3080	-112.2	-43.3	1.3144
3	0.1105	0.0215	0.1466	0.3659	32.46	37.30	0.2612	0.0233	0.0059	1.1187	96.69	96.64	0.8006	0.4347	-127.4	-63.6	1.3163
4	0.0792	0.0095	0.1127	0.3135	31.90	36.15	0.2733	0.0181	0.0046	1.1173	97.17	97.13	0.8548	0.5413	-139.5	-79.1	1.3088
5	0.0236	0.0439	0.0758	0.2040	30.62	32.90	0.2841	0.0479	0.0119	1.1064	90.96	90.82	0.9542	0.7502	-164.2	-111.0	1.2890
6	0.0184	0.0413	0.0887	0.1441	30.94	32.46	0.2471	0.0237	0.0057	1.0956	94.73	94.60	0.9719	0.8278	-172.3	-127.4	1.2802
7	0.0071	0.0345	0.0827	0.1123	31.27	31.79	0.2417	0.0406	0.0096	1.0889	90.01	89.89	0.9867	0.8744	-179.8	-137.5	1.2763
8	0.0053	0.0335	0.064	0.0987	31.15	31.44	0.2377	0.0564	0.0133	1.0878	85.72	85.55	1.0142	0.9155	-190.5	-148.2	1.2762
9	0.0024	0.0412	0.0595	0.0913	30.68	30.93	0.2370	0.0645	0.0152	1.0886	83.66	83.46	1.0349	0.9435	-197.1	-155.0	1.2761
10	0.0308	0.0698	0.0936	0.0834	28.70	29.31	0.2275	0.0520	0.0118	1.0915	86.58	86.40	1.0775	0.9941	-204.8	-164.4	1.2678

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SOH			%	%
1.0861	1.2905	87.87	88.31	125.50	1.0913	1.1046	92.13	92.24

STATOR 2

RUN N1411, SPEED CODE 63, POINT NO 3																
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1213	0.1401	154.1	134.2	113.9	134.2	103.7	3.4	0.7349	0.3254	0.4412	0.3826	1.2832	1.0941	1.1197	1.0367
2	0.0884	0.0944	158.9	143.5	126.9	143.4	95.7	2.7	0.6442	0.0187	0.4554	0.4104	1.3086	1.0910	1.1120	1.0350
3	0.0663	0.0685	157.9	140.9	133.5	140.9	84.2	-0.2	0.5618	-0.0015	0.4541	0.4037	1.3080	1.0871	1.1118	1.0337
4	0.0505	0.0486	153.4	135.4	131.8	135.4	78.4	-1.6	0.5360	-0.0116	0.4412	0.3879	1.2998	1.0844	1.1098	1.0332
5	0.0245	0.0196	140.1	123.7	121.6	123.7	69.5	-2.5	0.5189	-0.0202	0.4020	0.3537	1.2804	1.0826	1.0989	1.0322
6	0.0187	0.0141	134.3	119.0	119.6	118.9	61.0	-3.2	0.4714	-0.0268	0.3854	0.3403	1.2725	1.0798	1.0888	1.0277
7	0.0155	0.0116	131.4	116.3	116.9	116.2	60.0	-3.3	0.4743	-0.0281	0.3765	0.3322	1.2679	1.0814	1.0817	1.0275
8	0.0110	0.0085	130.2	115.6	115.4	115.5	60.2	-1.8	0.4809	-0.0157	0.3724	0.3296	1.2668	1.0848	1.0798	1.0285
9	0.0071	0.0056	129.3	115.2	113.7	115.1	61.6	1.2	0.4968	0.0101	0.3692	0.3278	1.2660	1.0890	1.0800	1.0294
10	0.0026	0.0021	124.1	110.0	108.3	109.9	60.6	2.5	0.5097	0.0225	0.3533	0.3121	1.2575	1.0926	1.0827	1.0294

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN						PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1527	0.1739	0.7095	30.93	36.74	0.2637	0.1177	0.0248	0.9853	78.48	79.22	89.44	89.61
2	-0.1203	0.1591	0.6255	34.69	39.74	0.2278	0.0444	0.0100	0.9941	87.86	88.31	87.98	88.16
3	-0.1723	0.1432	0.5632	36.67	39.26	0.2333	0.0467	0.0111	0.9939	91.58	91.90	91.26	91.41
4	-0.1911	0.1374	0.5476	36.28	37.81	0.2475	0.0539	0.0136	0.9933	92.23	92.51	91.10	91.24
5	-0.2041	0.1380	0.5391	33.55	34.50	0.2644	0.0591	0.0170	0.9938	88.61	89.01	84.90	85.10
6	-0.2508	0.1354	0.4982	33.07	33.20	0.2578	0.0602	0.0181	0.9941	89.34	89.70	86.88	89.01
7	-0.2486	0.1386	0.5024	32.27	32.37	0.2658	0.0704	0.0220	0.9934	86.22	86.67	82.61	82.81
8	-0.2564	0.1613	0.4566	31.81	32.08	0.2697	0.0808	0.0267	0.9926	82.48	83.06	77.84	78.09
9	-0.2849	0.2067	0.4867	31.25	31.85	0.2706	0.0876	0.0301	0.9921	78.39	79.10	75.63	75.89
10	-0.3353	0.2446	0.4872	29.65	30.25	0.2809	0.0983	0.0353	0.9919	73.07	73.94	78.27	78.51

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
KG/SEC	KG/SEC			%	%			%	%
550.31	57.732	1.0861	1.2810	85.25	84.77	1.0913	0.9927	85.24	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2010	0.1593	97.2	156.0	57.2	100.4	0.0	120.4	0.0	0.8720	0.2880	0.4621	79.0	87.2	0.3725	0.3117	125.7	105.0
2	0.1771	0.1235	98.0	151.5	98.0	109.5	0.0	104.6	0.0	0.7599	0.2902	0.4463	89.3	95.6	0.3927	0.3238	132.5	109.9
3	0.1420	0.0961	98.8	140.5	98.8	108.5	0.0	89.2	0.0	0.6859	0.2928	0.4131	99.9	104.8	0.4164	0.3226	140.5	109.7
4	0.1107	0.0751	99.2	131.3	99.2	107.2	0.0	75.9	0.0	0.6147	0.2940	0.3859	109.7	113.6	0.4384	0.3339	147.9	113.6
5	0.0968	0.0610	99.3	116.2	99.3	100.4	0.0	58.5	0.0	0.5269	0.2962	0.3408	131.8	133.8	0.4890	0.3681	165.0	125.5
6	0.0389	0.0284	99.1	114.5	95.1	100.3	0.0	55.3	0.0	0.5036	0.2937	0.3356	142.4	143.8	0.5143	0.3921	173.5	133.8
7	0.0278	0.0206	99.0	113.4	99.0	99.7	0.0	54.0	0.0	0.4963	0.2935	0.3323	149.2	150.0	0.5308	0.4056	179.1	138.4
8	0.0180	0.0125	98.9	112.2	98.9	99.3	0.0	52.3	0.0	0.4847	0.2932	0.3286	155.9	156.5	0.5472	0.4215	184.7	143.9
9	0.0076	0.0047	98.7	111.2	98.7	99.0	0.0	50.8	0.0	0.4745	0.2925	0.3257	163.2	163.2	0.5651	0.4383	190.7	149.7
10	0.0029	0.0035	98.3	109.8	98.3	97.3	0.0	50.8	0.0	0.4614	0.2912	0.3211	171.4	171.4	0.5854	0.4531	197.6	154.9
11	0.0047	0.0046	97.9	103.7	97.9	89.6	0.0	52.2	0.0	0.5277	0.2900	0.3026	178.3	178.2	0.6026	0.4513	203.4	154.6

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VM-1	VM-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0120	0.1689	0.2206	1.0055	23.41	24.29	0.3938	0.2306	0.0915	1.1091	83.05	82.79	0.6882	0.3173	-7.8	33.2	1.1091
2	0.0271	0.1216	0.2332	0.8228	23.57	26.97	0.3788	0.0595	0.0151	1.1196	95.02	94.93	0.7405	0.0821	-89.3	9.1	1.1196
3	0.0381	0.1302	0.2417	0.4492	23.74	27.04	0.4000	0.0242	0.0066	1.1146	97.58	97.51	0.7921	0.1429	-99.9	-15.7	1.1146
4	0.0433	0.1326	0.2406	0.4485	23.85	28.90	0.3875	-0.3018	-0.0005	1.1084	100.25	100.25	0.8362	0.3377	-109.7	-37.7	1.1084
5	0.0264	0.1160	0.1575	0.2822	23.86	25.39	0.3619	0.0089	0.0024	1.0963	98.56	98.56	0.9253	0.6431	-131.8	-75.3	1.0963
6	0.0394	0.1091	0.1091	0.2399	23.82	25.41	0.3452	0.0114	0.0031	1.0973	97.99	97.99	0.9629	0.7231	-142.4	-88.5	1.0973
7	0.0966	0.1062	0.0910	0.2187	23.81	25.30	0.3397	0.0201	0.0053	1.0976	96.35	96.31	0.9850	0.7663	-149.2	-96.0	1.0976
8	0.0676	0.1078	0.0836	0.1957	23.79	25.19	0.3298	0.0250	0.0065	1.0975	95.23	95.17	1.0055	0.8097	-155.9	-104.2	1.0975
9	0.0324	0.1115	0.0171	0.1781	23.74	25.13	0.3199	0.0307	0.0079	1.0973	93.92	93.83	1.0268	0.8487	-163.2	-112.4	1.0973
10	0.0374	0.1161	0.0831	0.1584	23.64	24.69	0.3213	0.0564	0.0144	1.0963	88.63	88.47	1.0501	0.8917	-171.4	-120.5	1.0963
11	0.0757	0.1144	0.1463	0.1158	23.56	22.65	0.3474	0.1170	0.0282	1.0885	76.63	76.35	1.0687	0.9529	-178.3	-126.0	1.0885

TO/TO	PO/PO	EFF-AD	EFF-P	NC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.0300	1.1010	93.06	93.16	111.98	1.0300	1.1010	93.08	93.16

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE
1	0.1907	0.1306	144.2	111.5	88.6	110.0	113.8	18.1	0.9075	0.1613	0.4237	0.3253	1.0925	1.0363	1.0925	1.0363
2	0.1222	0.0871	144.4	120.0	104.2	118.8	100.1	16.9	0.7641	0.1402	0.4248	0.3509	1.1115	1.0345	1.1115	1.0345
3	0.0760	0.0586	137.4	115.0	107.7	114.1	85.5	14.4	0.6703	0.1254	0.4040	0.3363	1.1072	1.0321	1.1072	1.0321
4	0.0535	0.0458	130.5	110.4	108.0	109.6	73.2	13.7	0.5951	0.1243	0.3833	0.3232	1.1014	1.0296	1.1014	1.0296
5	0.0310	0.0320	117.8	104.5	103.0	103.7	57.3	12.7	0.5074	0.1218	0.3457	0.3057	1.0934	1.0270	1.0934	1.0270
6	0.0245	0.0264	116.7	104.4	103.2	103.6	54.4	12.2	0.4851	0.1168	0.3423	0.3053	1.0933	1.0275	1.0933	1.0275
7	0.0208	0.0229	115.9	104.0	102.9	103.3	53.3	12.1	0.4781	0.1165	0.3398	0.3041	1.0929	1.0281	1.0929	1.0281
8	0.0174	0.0154	114.9	103.3	102.5	102.6	51.8	12.0	0.4675	0.1164	0.3366	0.3019	1.0922	1.0283	1.0922	1.0283
9	0.0140	0.0158	114.0	102.7	102.2	102.0	50.4	12.0	0.4583	0.1169	0.3339	0.3002	1.0917	1.0287	1.0917	1.0287
10	0.0095	0.0112	112.6	101.9	100.6	100.9	50.6	14.1	0.4662	0.1391	0.3295	0.2976	1.0910	1.0301	1.0910	1.0301
11	0.0062	0.0052	106.3	95.5	92.7	94.1	52.1	16.0	0.5124	0.1679	0.3105	0.2783	1.0830	1.0322	1.0830	1.0322

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0122	0.0701	0.2551	0.7462	21.80	27.62	0.3623	0.1299	0.0270	0.9849	70.60	70.97	70.60	70.97
2	0.0618	0.0275	0.1829	0.6239	25.88	30.13	0.2962	0.0625	0.0139	0.9927	88.91	89.08	88.91	89.08
3	0.1125	0.0170	0.1492	0.5449	26.91	29.04	0.2840	0.0589	0.0142	0.9938	91.97	92.09	91.97	92.09
4	0.1636	0.0627	0.1384	0.4707	27.13	27.93	0.2671	0.0809	0.0156	0.9942	94.62	94.69	94.62	94.69
5	0.2296	0.1171	0.1241	0.3856	26.00	26.44	0.2235	0.0344	0.0100	0.9973	95.61	95.67	95.61	95.67
6	0.2504	0.1321	0.1131	0.3684	26.11	26.42	0.2179	0.0470	0.0145	0.9983	93.94	94.03	93.94	94.03
7	0.2584	0.1365	0.1104	0.3615	26.04	26.31	0.2169	0.0551	0.0176	0.9958	91.77	91.88	91.77	91.88
8	0.2733	0.1479	0.1088	0.3511	25.96	26.12	0.2156	0.0619	0.0204	0.9953	90.26	90.39	90.26	90.39
9	0.2935	0.1644	0.1092	0.3414	25.89	25.97	0.2146	0.0681	0.0232	0.9949	88.67	88.63	88.67	88.63
10	0.3208	0.1883	0.1392	0.3271	25.46	25.66	0.2095	0.0659	0.0233	0.9952	83.70	83.90	83.70	83.90
11	0.3299	0.1951	0.2076	0.3445	23.38	23.84	0.2265	0.0775	0.0280	0.9950	71.60	71.92	71.60	71.92

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC			%	%			%	%
438.85	1.0300	1.0950	87.69	87.86	1.0300	0.9945	87.70	

ROTOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	0-1	0-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1955	0.1047	102.4	154.3	100.9	137.6	17.6	74.1	0.1717	0.4890	0.2983	0.4560	99.2	105.6	0.3779	0.4118	129.8	141.2
2	0.1174	0.0819	118.9	157.0	117.8	141.8	15.8	67.5	0.1331	0.4417	0.3476	0.4587	107.8	112.5	0.4372	0.4348	149.5	148.7
3	0.0898	0.0611	117.6	150.1	116.8	137.7	13.9	59.7	0.1162	0.4078	0.3444	0.4385	115.9	119.3	0.4539	0.4383	155.1	150.0
4	0.0621	0.0394	114.9	141.5	114.1	130.6	13.3	54.5	0.1158	0.3945	0.3364	0.4132	124.5	124.7	0.4667	0.4358	159.3	149.2
5	0.0102	0.0010	109.6	123.9	108.9	116.2	12.3	43.2	0.1123	0.3560	0.3210	0.3463	144.1	144.7	0.5008	0.4496	171.0	154.2
6	0.0019	0.0040	108.7	116.4	108.0	111.6	12.0	39.0	0.1111	0.2873	0.3181	0.3395	151.0	151.1	0.5152	0.4740	176.0	162.6
7	0.0091	0.0195	107.2	113.3	104.5	109.2	12.0	29.9	0.1119	0.2675	0.3136	0.3303	157.7	157.7	0.5282	0.4901	180.5	160.1
8	0.0153	0.0202	105.5	111.2	104.7	107.1	12.4	29.8	0.1181	0.2716	0.3084	0.3240	167.0	166.4	0.5459	0.5055	184.7	173.5
9	0.0168	0.0212	103.4	107.9	102.4	103.3	14.4	31.0	0.1395	0.2914	0.3019	0.3138	173.3	172.9	0.5523	0.5108	189.1	175.4
10	0.0112	0.0135	96.7	95.4	95.4	89.9	15.8	32.5	0.1645	0.3466	0.2819	0.2772	179.7	179.5	0.5527	0.4997	189.6	172.3

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.2303	0.1009	0.3017	0.4550	23.55	34.29	0.0305	0.0976	0.0232	1.0628	86.73	86.60	0.6771	0.2221	-81.6	-31.5	1.1625
2	0.2355	0.1262	0.1608	0.3542	29.92	35.82	0.1002	0.0843	0.0210	1.0596	84.98	84.86	0.6616	0.3054	-92.0	-45.0	1.1770
3	0.1945	0.0954	0.1187	0.3099	29.63	35.05	0.1180	0.0448	0.0114	1.0596	90.72	90.64	0.7167	0.4068	-102.0	-59.6	1.1714
4	0.1618	0.0731	0.0740	0.2675	28.93	33.38	0.1428	0.0517	0.0134	1.0553	88.08	87.97	0.7723	0.5044	-111.2	-72.3	1.1604
5	0.0978	0.0302	0.0434	0.1622	27.64	29.73	0.1631	0.0963	0.0246	1.0376	70.43	70.30	0.8801	0.7179	-131.8	-101.5	1.1344
6	0.0978	0.0206	0.0746	0.0963	27.41	28.60	0.1211	0.0610	0.0148	1.0271	72.82	72.67	0.9100	0.8137	-138.9	-118.1	1.1227
7	0.0540	0.0124	0.0718	0.0763	27.04	27.96	0.1079	0.0577	0.0138	1.0232	69.41	69.28	0.9398	0.8635	-145.8	-127.8	1.1176
8	0.0444	0.0056	0.0543	0.0498	26.59	27.34	0.1066	0.0726	0.0174	1.0204	60.06	59.94	0.9751	0.9053	-154.5	-136.5	1.1139
9	0.0338	0.0050	0.0576	0.0571	25.94	26.31	0.1060	0.0832	0.0197	1.0177	53.00	52.93	0.9987	0.9416	-159.0	-141.9	1.1088
10	0.0031	0.0358	0.1214	0.0217	24.12	22.75	0.1277	0.1328	0.0288	1.0095	27.25	27.14	1.0435	1.0218	-163.8	-147.0	1.0923

TO/TO	PO/PO	EFF-AD	EFF-P	WCL/AI	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
1.0446	1.1366	83.60	83.88	118.38	1.0142	1.0380	75.42	75.55

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	0-1	0-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1216	0.1399	140.0	145.1	119.5	145.1	72.8	-0.1	0.5439	-0.0004	0.4065	0.4219	1.1397	1.0573	1.0421	1.3203
2	0.0905	0.0578	149.0	155.8	135.6	155.6	66.0	-1.9	0.4578	-0.0121	0.4344	0.4483	1.1641	1.0541	1.0481	1.0196
3	0.0690	0.0707	147.0	147.4	134.9	147.3	58.5	-2.8	0.4086	-0.0187	0.4292	0.4303	1.1561	1.0502	1.0443	1.0184
4	0.0522	0.0501	141.5	140.0	131.0	139.9	53.5	-2.7	0.3872	-0.0193	0.4134	0.4086	1.1447	1.0469	1.0413	1.0176
5	0.0274	0.0233	125.3	121.3	118.0	121.3	42.2	-0.7	0.3436	-0.0036	0.3655	0.3536	1.1144	1.0425	1.0193	1.0158
6	0.0218	0.0180	117.9	116.9	113.4	116.9	32.1	-0.2	0.2757	-0.0016	0.3439	0.3410	1.1079	1.0386	1.0176	1.0103
7	0.0189	0.0157	114.5	110.9	110.6	110.9	29.7	-0.2	0.2629	-0.0021	0.3339	0.3231	1.0900	1.0381	1.0062	1.0095
8	0.0174	0.0152	112.1	108.3	108.1	108.3	29.8	0.6	0.2487	0.0031	0.3265	0.3152	1.0957	1.0390	1.0038	1.0097
9	0.0153	0.0142	108.6	105.9	104.1	105.9	31.0	3.4	0.2893	0.0325	0.3159	0.3080	1.0932	1.0403	1.0031	1.0095
10	0.0084	0.0086	96.7	98.1	91.1	98.0	32.4	5.1	0.3421	0.0519	0.2804	0.2847	1.0835	1.0425	1.0013	1.0100

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.3437	0.1482	0.3442	30.40	35.99	0.0719	0.1818	0.0383	0.9805	66.54	67.16	58.46	58.71
2	-0.3068	0.1283	0.4699	34.10	38.54	0.0711	0.0893	0.0201	0.9891	82.17	82.58	68.86	69.09
3	-0.3254	0.1260	0.4273	34.47	37.16	0.0956	0.1064	0.0254	0.9874	84.43	84.74	70.56	70.76
4	-0.3399	0.1298	0.4065	33.50	35.36	0.1099	0.1183	0.0299	0.9869	83.99	84.29	66.07	66.28
5	-0.3793	0.1324	0.3492	30.14	30.60	0.1293	0.1892	0.0548	0.9833	76.07	76.46	56.88	57.06
6	-0.4445	0.1406	0.2773	29.01	29.54	0.0908	0.1648	0.0496	0.9871	77.04	77.38	57.14	57.23
7	-0.4600	0.1400	0.2650	28.26	27.97	0.1137	0.2232	0.0700	0.9834	71.90	72.28	48.60	48.63
8	-0.4685	0.1822	0.2636	27.57	27.27	0.1204	0.2285	0.0755	0.9837	67.90	68.52	44.17	44.19
9	-0.4924	0.2291	0.2568	26.47	26.83	0.1160	0.2133	0.0732	0.9854	64.20	64.65	39.42	39.47
10	-0.5030	0.2740	0.2902	23.02	24.55	0.0908	0.1544	0.0549	0.9913	54.59	55.10	31.61	31.63

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%	%	%	STAGE
438.85	51.610	1.0446	1.1204	74.05	74.48	1.0142	0.9257	66.50

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ¹ -1	M ¹ -2	V ¹ -1	V ¹ -2
RUN NO411, SPEED CODE 50, POINT NO 2																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2007	0.1377	94.8	151.7	94.8	96.8	0.0	116.9	0.0	0.8764	0.2808	0.4469	79.2	86.7	0.3659	0.2986	123.6	101.4
2	0.1773	0.1205	95.2	145.9	95.2	102.8	0.0	103.4	0.0	0.7864	0.2419	0.4294	88.7	95.0	0.3854	0.3035	130.1	103.1
3	0.1437	0.0927	95.5	134.7	95.5	101.6	0.0	88.5	0.0	0.7151	0.2027	0.3958	99.3	104.2	0.4080	0.3019	137.7	102.8
4	0.1129	0.0719	95.4	125.6	95.4	100.7	0.0	75.2	0.0	0.6401	0.1624	0.3688	109.0	112.9	0.4290	0.3155	144.9	107.5
5	0.0588	0.0389	94.3	111.9	94.3	94.5	0.0	60.1	0.0	0.5658	0.1291	0.3280	131.0	132.9	0.4778	0.3496	161.4	119.3
6	0.0404	0.0268	93.6	111.3	93.6	94.8	0.0	58.4	0.0	0.5516	0.1272	0.3259	141.5	142.9	0.5025	0.3718	169.7	127.0
7	0.0289	0.0192	93.3	110.7	93.3	94.7	0.0	57.3	0.0	0.5440	0.1262	0.3240	148.3	149.1	0.5187	0.3860	175.2	131.9
8	0.0184	0.0112	93.0	109.7	93.0	94.6	0.0	55.4	0.0	0.5300	0.1253	0.3208	154.9	155.5	0.5350	0.4028	180.7	137.7
9	0.0073	0.0031	92.6	108.7	92.6	94.4	0.0	53.9	0.0	0.5190	0.1241	0.3178	162.1	162.1	0.5527	0.4199	186.7	143.6
10	0.0031	0.0016	92.0	107.0	92.0	91.8	0.0	54.8	0.0	0.5381	0.1223	0.3124	170.3	170.3	0.5729	0.4309	193.6	147.5
11	0.0049	0.0051	91.5	101.7	91.5	84.4	0.0	56.7	0.0	0.5913	0.2709	0.2963	177.2	177.1	0.5902	0.4285	195.4	147.1

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B ¹ -1	B ¹ -2	VO ¹ -1	VO ¹ -2	PD/PO	
RUN NO411, SPEED CODE 50, POINT NO 2																		
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC
1	0.0211	0.1180	0.2371	0.9581	22.88	23.65	0.4123	0.1596	0.0358	1.1121	88.26	88.08	0.6973	0.3009	-79.2	30.2	1.1121	INLET
2	0.0382	0.1326	0.2323	0.8348	22.96	25.52	0.4181	0.0338	0.0086	1.1204	97.21	97.15	0.7517	0.0871	-88.7	8.6	1.1204	INLET
3	0.0521	0.1443	0.2309	0.6941	23.02	25.49	0.4375	0.0083	0.0023	1.1150	99.18	99.17	0.8062	0.1521	-99.3	-15.6	1.1150	INLET
4	0.0999	0.1493	0.2604	0.4953	23.00	25.44	0.4157	-0.0190	-0.0053	1.1089	102.27	102.30	0.8528	0.3575	-109.0	-37.7	1.1089	INLET
5	0.0581	0.1377	0.1710	0.2905	22.75	24.05	0.3891	0.0036	0.0010	1.0998	99.44	99.43	0.9470	0.6565	-131.0	-72.9	1.0998	INLET
6	0.0630	0.1325	0.1140	0.2584	22.61	24.17	0.3766	0.0148	0.0039	1.1019	97.63	97.62	0.9864	0.7280	-141.5	-84.5	1.1019	INLET
7	0.0809	0.1304	0.0941	0.2398	22.54	24.17	0.3691	0.0228	0.0060	1.1029	96.23	96.18	1.0093	0.7694	-148.3	-91.8	1.1029	INLET
8	0.0924	0.1326	0.0871	0.2170	22.47	24.17	0.3561	0.0258	0.0067	1.1031	95.52	95.45	1.0303	0.8133	-154.9	-100.1	1.1031	INLET
9	0.0576	0.1367	0.0821	0.1982	22.38	24.12	0.3446	0.0318	0.0082	1.1031	94.24	94.16	1.0520	0.8530	-162.1	-108.2	1.1031	INLET
10	0.1027	0.1415	0.0903	0.1766	22.25	23.44	0.3337	0.0695	0.0175	1.1019	87.37	87.19	1.0755	0.8989	-170.3	-115.5	1.1019	INLET
11	0.1009	0.1396	0.1579	0.1344	22.15	21.47	0.3816	0.1308	0.0313	1.0956	76.57	76.26	1.0939	0.9595	-177.2	-120.4	1.0956	INLET

TO/TO	PD/PO	EFF-AD	EFF-P	MCI/A1	TO2/TO1	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SOM			%	%
1.0308	1.1048	93.87	93.97	106.77	1.0308	1.1048	93.87	93.97

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PD/PO	TO/TO	PD/PO	TO/TO
RUN NO411, SPEED CODE 50, POINT NO 2																
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	STAGE
1	0.1572	0.1380	139.4	103.0	65.1	101.5	110.5	17.3	0.9138	0.1670	0.4094	0.3001	1.0919	1.0350	1.0919	1.0350
2	0.1316	0.0970	138.9	112.3	97.5	110.9	99.0	17.4	0.7927	0.1549	0.4091	0.3279	1.1109	1.0341	1.1109	1.0341
3	0.0847	0.0670	131.6	107.6	100.5	106.6	85.0	14.4	0.7015	0.1336	0.3864	0.3143	1.1077	1.0319	1.1077	1.0319
4	0.0623	0.0545	124.6	102.8	101.3	102.0	72.7	12.9	0.6223	0.1299	0.3658	0.3005	1.1023	1.0293	1.1023	1.0293
5	0.0402	0.0412	113.4	97.0	97.0	97.2	58.8	11.0	0.5448	0.1138	0.3324	0.2858	1.0967	1.0276	1.0967	1.0276
6	0.0327	0.0346	113.5	99.0	97.9	98.3	57.4	11.0	0.5303	0.1118	0.3324	0.2891	1.0987	1.0288	1.0987	1.0288
7	0.0279	0.0298	113.3	99.4	98.1	98.8	56.5	11.1	0.5228	0.1120	0.3316	0.2904	1.0996	1.0295	1.0996	1.0295
8	0.0232	0.0249	112.5	99.3	98.2	98.6	54.9	11.5	0.5098	0.1139	0.3292	0.2898	1.0998	1.0298	1.0998	1.0298
9	0.0185	0.0198	111.6	98.8	98.0	98.1	53.5	12.2	0.4996	0.1237	0.3266	0.2885	1.0996	1.0302	1.0996	1.0302
10	0.0124	0.0134	110.1	97.8	95.6	96.8	54.5	14.1	0.5184	0.1443	0.3216	0.2853	1.0986	1.0322	1.0986	1.0322
11	0.0053	0.0059	104.6	91.4	88.0	90.3	56.6	14.2	0.5715	0.1556	0.3050	0.2660	1.0909	1.0347	1.0909	1.0347

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RUN NO411, SPEED CODE 50, POINT NO 2														
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0059	0.0764	0.2608	0.7468	21.12	25.70	0.3983	0.1654	0.0364	0.9820	72.72	73.07	72.72	73.07
2	0.0332	0.0561	0.1976	0.6378	24.41	28.35	0.3216	0.0768	0.0171	0.9917	89.67	89.81	89.67	89.81
3	0.0813	0.0141	0.1574	0.5679	25.32	27.35	0.3097	0.0663	0.0159	0.9935	93.20	93.31	93.20	93.31
4	0.1364	0.0355	0.1399	0.4964	25.62	26.21	0.2965	0.0670	0.0172	0.9941	96.39	96.45	96.39	96.45
5	0.1521	0.0796	0.1162	0.4310	24.65	24.98	0.2605	0.0316	0.0092	0.9977	96.96	97.00	96.96	97.00
6	0.2053	0.0870	0.1082	0.4185	24.91	25.28	0.2543	0.0390	0.0120	0.9971	94.78	94.85	94.78	94.85
7	0.2136	0.0917	0.1059	0.4108	24.98	25.40	0.2505	0.0406	0.0130	0.9970	93.22	93.32	93.22	93.32
8	0.2311	0.1056	0.1083	0.3939	25.01	25.34	0.2454	0.0419	0.0138	0.9970	92.49	92.59	92.49	92.59
9	0.2522	0.1231	0.1160	0.3759	24.97	25.20	0.2413	0.0450	0.0153	0.9968	91.01	91.13	91.01	91.13
10	0.2686	0.1361	0.1444	0.3740	24.33	24.83	0.2416	0.0447	0.0198	0.9969	84.61	84.81	84.61	84.81
11	0.2708	0.1360	0.1955	0.4157	22.32	23.07	0.2744	0.0689	0.0249	0.9957	72.52	72.86	72.52	72.86

NCORR	TO/TO	PD/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAC/SEC	%	%	%	%			%	%
436.07	1.0308	1.0993	89.09	89.25	1.0308	0.9950	89.09	89.09

ROTOR 2

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1531	0.1050	93.4	146.5	91.9	126.1	16.8	74.5	0.1797	0.5280	0.2718	0.4264	98.6	104.9	0.3579	0.3777	123.0	129.8
2	0.1147	0.0806	111.0	146.1	109.7	129.0	16.3	68.5	0.1473	0.4853	0.3241	0.4257	107.2	111.8	0.4160	0.3969	142.5	136.1
3	0.0875	0.0608	109.5	140.4	108.6	125.9	13.7	62.0	0.1249	0.4562	0.3201	0.4090	115.1	116.5	0.4345	0.4021	168.7	138.0
4	0.0605	0.0399	106.6	132.9	105.9	119.7	12.3	57.6	0.1158	0.4475	0.3117	0.3869	113.7	123.9	0.4495	0.4019	193.7	137.9
5	0.0103	0.0001	103.2	117.7	102.6	108.3	10.9	45.9	0.1062	0.4007	0.3018	0.3421	143.2	143.8	0.4094	0.4264	167.4	146.0
6	0.0001	0.0005	103.5	110.4	102.9	104.1	11.0	36.7	0.1064	0.3392	0.3025	0.3209	150.0	150.2	0.3056	0.4677	173.0	154.0
7	0.0010	0.0107	103.0	109.4	102.4	103.8	11.2	24.5	0.1094	0.3207	0.3010	0.3181	156.7	156.7	0.3198	0.4663	177.9	160.4
8	0.0086	0.0116	101.7	106.0	101.0	99.8	12.6	35.7	0.1237	0.3436	0.2970	0.3076	165.9	165.3	0.3561	0.4748	185.6	165.5
9	0.0049	0.0089	99.9	104.8	98.9	98.5	14.1	35.9	0.1412	0.3493	0.2913	0.3040	172.2	171.8	0.3440	0.4870	186.5	167.9
10	0.0040	0.0052	93.6	97.2	92.6	90.8	14.1	34.8	0.1510	0.3657	0.2725	0.2813	178.5	178.3	0.3692	0.4919	188.7	169.8

SL	INCS	INCM	DEV	TURN	RMCVM-1	RMCVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.1833	-0.0618	0.3137	0.4900	23.45	32.11	0.0732	0.0205	0.0049	1.0717	97.40	97.36	0.7241	0.2341	-61.8	-30.5	1.1716
2	-0.2075	-0.0582	0.1768	0.3682	28.10	33.22	0.1460	0.0562	0.0139	1.0643	90.91	90.83	0.6896	0.3214	-90.8	-43.2	1.1823
3	-0.1809	-0.0619	0.1320	0.3301	27.80	32.63	0.1659	0.0267	0.0068	1.0660	95.12	95.07	0.7502	0.4201	-101.3	-56.5	1.1790
4	-0.1236	-0.0349	0.0892	0.2926	27.09	31.15	0.1933	0.0402	0.0104	1.0633	92.08	91.99	0.8104	0.5179	-111.4	-68.3	1.1760
5	-0.0672	0.0003	0.0601	0.1762	26.28	28.23	0.2014	0.0774	0.0194	1.0478	79.70	79.59	0.9107	0.7345	-132.2	-97.9	1.1505
6	-0.0547	0.0030	0.0892	0.1052	26.36	27.14	0.1651	0.0547	0.0131	1.0368	80.32	80.20	0.9336	0.8284	-139.0	-113.5	1.1400
7	-0.0363	0.0054	0.0749	0.0909	26.23	27.07	0.1481	0.0452	0.0108	1.0353	81.90	81.78	0.9575	0.8666	-145.3	-122.2	1.1386
8	-0.0310	0.0077	0.0637	0.0738	25.86	25.93	0.1578	0.0790	0.0187	1.0309	68.27	68.14	0.9885	0.9146	-153.4	-129.6	1.1335
9	-0.0206	0.0183	0.0598	0.0681	25.29	25.36	0.1468	0.0703	0.0166	1.0311	70.35	70.27	1.0119	0.9436	-158.2	-136.0	1.1319
10	-0.0114	0.0503	0.1066	0.0511	23.59	23.45	0.1453	0.0757	0.0169	1.0295	66.90	66.79	1.0581	1.0070	-164.5	-143.6	1.1218

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.0473	1.1519	87.28	87.52	112.48	1.0160	1.0479	64.14	64.21

STATOR 2

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO/TO	PO/PO	TO/TO
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE	INLET	TO1
1	0.1207	0.1391	132.4	133.5	110.4	133.5	73.1	1.2	0.5818	0.0086	0.3842	0.3874	1.1561	1.0562	1.2574	1.0205		
2	0.0898	0.0975	139.2	137.9	122.0	137.9	67.0	-0.6	0.5010	-0.0042	0.4049	0.4010	1.1699	1.0538	1.0533	1.0198		
3	0.0687	0.0705	134.2	134.2	123.7	134.2	60.8	-1.9	0.4560	-0.0144	0.4015	0.3905	1.1670	1.0509	1.0554	1.0194		
4	0.0514	0.0493	133.1	128.5	120.6	128.5	56.5	-2.5	0.4382	-0.0191	0.3878	0.3738	1.1595	1.0485	1.0532	1.0192		
5	0.0247	0.0206	119.0	117.1	110.2	113.1	44.8	-1.7	0.3862	-0.0155	0.3461	0.3286	1.1359	1.0454	1.0343	1.0165		
6	0.0182	0.0146	112.0	109.2	106.1	109.2	35.9	-1.3	0.3268	-0.0123	0.3257	0.3174	1.1301	1.0425	1.02.8	1.0127		
7	0.0153	0.0124	110.4	104.2	104.9	104.2	34.4	-1.3	0.3166	-0.0126	0.3210	0.3027	1.1229	1.0424	1.0210	1.0122		
8	0.0132	0.0114	106.5	101.4	100.4	101.4	35.6	-0.6	0.3409	-0.0057	0.3092	0.2942	1.1191	1.0439	1.0179	1.0128		
9	0.0099	0.0090	105.2	100.9	98.9	100.9	35.8	1.8	0.3470	0.0181	0.3051	0.2926	1.1188	1.0455	1.0192	1.0125		
10	0.0047	0.0045	97.7	95.2	91.4	95.1	34.7	4.1	0.3631	0.0434	0.2828	0.2753	1.1115	1.0475	1.0195	1.0124		

SL	INCM	DEV	TURN	RMCVM-1	RMCVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.3058	0.1571	0.5732	28.57	34.04	0.1052	0.1375	0.0290	0.9867	75.29	75.79	78.29	78.47
2	-0.2635	0.1362	0.5052	31.67	35.48	0.1178	0.0977	0.0220	0.9846	85.31	85.64	75.65	75.84
3	-0.2780	0.1302	0.4704	32.16	34.68	0.1337	0.0941	0.0224	0.9901	88.68	88.91	80.05	80.20
4	-0.2889	0.1300	0.4572	31.35	33.26	0.1455	0.0951	0.0241	0.9907	89.10	89.32	77.66	77.82
5	-0.3367	0.1428	0.4017	28.67	29.23	0.1600	0.1467	0.0423	0.9883	81.81	82.13	58.50	58.73
6	-0.3954	0.1449	0.3391	27.61	28.25	0.1250	0.1217	0.0366	0.9914	83.76	84.03	61.99	62.11
7	-0.4063	0.1541	0.3292	27.31	26.91	0.1571	0.1967	0.0618	0.9864	79.60	79.73	48.86	49.05
8	-0.3963	0.1713	0.3466	26.08	26.13	0.1804	0.1946	0.0643	0.9875	74.56	74.96	39.70	39.84
9	-0.4347	0.2146	0.3269	25.65	25.97	0.1926	0.1842	0.0632	0.9884	71.79	72.23	43.45	43.61
10	-0.4820	0.2655	0.3197	23.59	24.38	0.1990	0.1710	0.0608	0.9907	64.65	65.18	44.92	45.08

NCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAC/SEC	KG/SEC			%	%			%	%
436.07	49.206	1.0473	1.1393	80.33	80.67	1.0180	0.9890	64.10	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2002	0.1584	85.7	144.9	85.7	87.8	0.0	115.3	0.0	0.9171	0.2533	0.4262	79.6	87.0	0.3458	0.2715	116.9	92.3
2	0.1754	0.1215	86.2	140.6	86.2	95.8	0.0	102.9	0.0	0.8181	0.2551	0.4132	89.1	95.4	0.3867	0.2525	124.0	96.1
3	0.1405	0.0932	86.9	130.9	86.9	94.6	0.0	90.5	0.0	0.7616	0.2569	0.3861	99.7	104.6	0.3911	0.2806	132.2	95.6
4	0.1074	0.0722	87.1	122.5	87.1	93.5	0.0	79.1	0.0	0.7007	0.2577	0.3590	109.2	113.4	0.4139	0.2919	139.9	95.6
5	0.0760	0.0583	87.1	108.8	87.1	88.2	0.0	63.7	0.0	0.6251	0.2575	0.3184	131.5	133.5	0.4465	0.3290	157.7	112.3
6	0.0378	0.0258	86.9	107.6	86.9	87.6	0.0	62.4	0.0	0.6185	0.2569	0.3144	142.2	143.5	0.4927	0.3490	166.6	119.4
7	0.0269	0.0184	86.7	107.3	86.7	87.5	0.0	62.1	0.0	0.6176	0.2565	0.3133	148.9	149.7	0.5098	0.3615	172.4	123.0
8	0.0171	0.0104	86.6	106.8	86.6	87.5	0.0	61.2	0.0	0.6107	0.2562	0.3117	155.4	156.2	0.5267	0.3769	178.1	129.1
9	0.0065	0.0026	86.4	105.7	86.4	86.7	0.0	60.5	0.0	0.6090	0.2554	0.3083	162.9	162.9	0.5452	0.3914	184.3	134.2
10	0.0025	0.0042	86.0	104.2	86.0	83.8	0.0	61.9	0.0	0.6359	0.2542	0.3034	171.0	171.0	0.5661	0.4009	191.4	137.6
11	0.0037	0.0040	85.6	100.8	85.6	78.2	0.0	63.7	0.0	0.6831	0.2532	0.2932	177.9	177.9	0.5839	0.4025	197.5	136.4

SL	INCS	INCM	DEV	TURN	R-CVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0735	0.1703	0.2284	1.0590	20.82	21.60	0.4532	0.1982	0.0444	1.1091	86.79	86.59	0.7496	-0.3094	-79.6	28.2	1.1091
2	0.0895	0.1838	0.2377	0.8806	20.95	23.94	0.4439	0.0430	0.0109	1.1195	96.76	96.73	0.8029	-0.0776	-89.1	7.5	1.1195
3	0.1011	0.1932	0.2462	0.7077	21.09	23.87	0.4717	0.0198	0.0054	1.1171	98.24	98.22	0.8551	0.1674	-99.7	-14.1	1.1171
4	0.1062	0.1955	0.2531	0.5488	21.15	23.76	0.4996	0.0004	0.0001	1.1126	99.98	99.98	0.8991	0.3502	-109.5	-34.3	1.1126
5	0.0572	0.1768	0.1830	0.3176	21.13	22.59	0.4261	0.0131	0.0035	1.1047	98.19	98.15	0.9862	0.6686	-131.5	-69.8	1.1047
6	0.0990	0.1885	0.1325	0.2758	21.09	22.48	0.4191	0.0333	0.0087	1.1068	95.18	95.12	1.0223	0.7465	-142.2	-81.1	1.1068
7	0.1151	0.1846	0.1108	0.2573	21.06	22.45	0.4160	0.0468	0.0122	1.1085	93.08	92.99	1.0435	0.7862	-148.9	-97.6	1.1085
8	0.1251	0.1853	0.1002	0.2365	21.03	22.47	0.4072	0.0546	0.0141	1.1098	91.64	91.50	1.0629	0.8264	-155.6	-95.0	1.1098
9	0.1288	0.1878	0.0566	0.2149	20.98	22.28	0.4012	0.0681	0.0172	1.1101	89.26	89.09	1.0831	0.8683	-162.9	-102.4	1.1101
10	0.1323	0.1711	0.1076	0.1889	20.89	21.51	0.4130	0.1079	0.0266	1.1098	82.96	82.70	1.1051	0.9161	-171.0	-109.2	1.1098
11	0.1292	0.1880	0.1637	0.1519	20.81	20.05	0.4537	0.1558	0.0366	1.1069	75.62	75.28	1.1222	0.9704	-177.9	-114.2	1.1069

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.0331	1.1098	91.30	91.43	99.19	1.0331	1.1098	91.30	91.43

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1972	0.1397	132.5	90.8	75.4	89.3	108.9	16.5	0.9643	0.1805	0.3886	0.2641	1.0921	1.0347	1.0921	1.0347
2	0.1342	0.1014	133.0	101.0	89.5	99.5	98.3	17.4	0.8321	0.1722	0.3900	0.2944	1.1095	1.0340	1.1095	1.0340
3	0.0502	0.0736	127.1	58.8	92.7	97.7	86.9	14.2	0.7529	0.1440	0.3725	0.2880	1.1097	1.0326	1.1097	1.0326
4	0.0675	0.0602	120.8	95.4	93.4	94.4	76.5	13.6	0.6863	0.1434	0.3539	0.2783	1.1066	1.0311	1.1066	1.0311
5	0.0452	0.0461	109.6	90.2	90.2	89.3	42.3	12.9	0.6046	0.1433	0.3208	0.2631	1.1014	1.0293	1.1014	1.0293
6	0.0386	0.0402	109.2	91.2	90.4	90.3	41.3	13.1	0.5957	0.1446	0.3194	0.2659	1.1033	1.0308	1.1033	1.0308
7	0.0337	0.0232	109.4	92.1	90.7	91.1	41.2	13.3	0.5941	0.1448	0.3197	0.2682	1.1047	1.0321	1.1047	1.0321
8	0.0286	0.0298	109.3	92.4	91.0	91.4	40.6	13.5	0.5870	0.1463	0.3193	0.2690	1.1055	1.0330	1.1055	1.0330
9	0.0229	0.0237	108.5	92.3	90.5	91.3	40.0	13.6	0.5853	0.1483	0.3168	0.2686	1.1059	1.0340	1.1059	1.0340
10	0.0146	0.0152	107.3	91.7	87.9	90.6	41.5	14.3	0.6103	0.1561	0.3127	0.2665	1.1055	1.0365	1.1055	1.0365
11	0.0058	0.0061	103.9	86.2	82.3	85.1	63.5	13.9	0.6577	0.1622	0.3023	0.2501	1.0993	1.0392	1.0993	1.0392

SL	INCS	INCM	DEV	TURN	R-CVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.0447	0.1270	0.2743	0.7838	18.89	22.84	0.4581	0.1539	0.3319	0.9848	73.51	73.6	73.51	73.85
2	0.0062	0.0955	0.2149	0.6400	22.55	25.46	0.3752	0.0855	0.0190	0.9915	88.74	88.91	88.74	88.91
3	0.0299	0.0656	0.1678	0.6089	23.50	25.29	0.3597	0.0725	0.0174	0.9934	92.30	92.31	92.20	92.31
4	0.0724	0.0285	0.1574	0.5429	23.78	24.47	0.3432	0.0665	0.0170	0.9945	94.66	94.74	94.66	94.74
5	0.1324	0.0198	0.1457	0.4613	23.08	23.16	0.3088	0.0405	0.0117	0.9972	95.49	95.56	95.49	95.56
6	0.1399	0.0216	0.1410	0.4510	23.16	23.41	0.3007	0.0442	0.0136	0.9970	92.55	92.67	92.55	92.67
7	0.1424	0.0205	0.1387	0.4493	23.23	23.60	0.2988	0.0490	0.0156	0.9966	90.07	90.21	90.07	90.21
8	0.1538	0.0183	0.1387	0.4407	23.35	23.67	0.2978	0.0566	0.0186	0.9961	88.24	88.41	88.24	88.41
9	0.1665	0.0374	0.1405	0.4370	23.19	23.63	0.2960	0.0567	0.0193	0.9962	85.84	86.05	85.84	86.05
10	0.1767	0.0442	0.1562	0.4342	22.51	23.40	0.3021	0.0606	0.0213	0.9960	79.83	80.11	79.83	80.11
11	0.1846	0.0497	0.2019	0.4955	21.01	21.89	0.3454	0.1111	0.0402	0.9932	70.11	70.51	70.11	70.51

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	
RAD/SEC	%	%	%	%			%	%
437.47	1.0331	1.1039	86.53	86.72	1.0331	0.9946	86.53	

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1909	0.1027	81.9	139.1	80.3	111.9	16.0	82.7	0.1934	0.6303	0.2378	0.4037	99.0	105.4	0.3359	0.3313	115.5	114.2
2	0.1115	0.0787	100.3	137.8	48.9	114.1	16.4	76.8	0.1641	0.5880	0.2923	0.3991	107.4	112.2	0.3921	0.3671	130.5	119.6
3	0.0852	0.0600	100.4	132.7	99.5	113.8	13.6	68.3	0.1398	0.5392	0.2929	0.3893	115.6	119.8	0.4156	0.3616	142.5	124.5
4	0.0999	0.0606	98.3	126.1	87.4	106.3	13.2	64.6	0.1347	0.5371	0.2870	0.3658	124.3	124.3	0.4311	0.3618	147.7	124.7
5	0.0145	0.0060	94.8	113.0	93.9	97.5	12.9	57.1	0.1364	0.5246	0.2765	0.3272	143.8	144.4	0.4700	0.3789	161.1	130.9
6	0.0049	0.0003	95.5	108.0	94.6	96.2	13.1	49.1	0.1378	0.4721	0.2783	0.3128	150.7	150.8	0.4867	0.4054	166.9	140.0
7	0.0011	0.0044	95.8	105.8	94.9	94.9	13.3	46.8	0.1396	0.4584	0.2792	0.3061	157.4	157.4	0.5027	0.4215	172.5	145.7
8	0.0035	0.0031	95.5	104.4	94.5	93.4	13.7	46.6	0.1439	0.4423	0.2779	0.3016	166.4	166.0	0.5234	0.4382	174.8	151.7
9	0.0030	0.0040	94.3	103.2	93.3	92.5	14.2	45.8	0.1511	0.4594	0.2743	0.2979	174.0	172.6	0.5554	0.4530	184.1	157.0
10	0.0017	0.0022	89.0	97.1	87.9	86.8	13.8	43.6	0.1561	0.4656	0.2583	0.2796	179.3	179.1	0.5638	0.4634	187.4	160.9

SL	INCS	IACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	V0'-1	V0'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1085	0.0129	0.2774	0.6010	20.67	28.95	0.1664	0.0337	0.0080	1.0828	96.79	96.74	0.7988	0.1978	-83.0	-22.7	1.1836
2	0.1543	0.0450	0.1559	0.4423	25.56	29.83	0.2393	0.0913	0.0228	1.0725	88.47	88.35	0.7428	0.3005	-91.2	-35.6	1.1913
3	0.1144	0.0193	0.1294	0.3792	25.70	29.93	0.2365	0.0462	0.0117	1.0733	93.12	93.05	0.7968	0.4175	-102.0	-50.7	1.1901
4	0.0840	0.0047	0.0897	0.3317	25.18	28.55	0.2618	0.0579	0.0149	1.0711	90.72	90.65	0.8508	0.5184	-111.0	-61.9	1.1840
5	0.0294	0.0381	0.0556	0.2184	24.28	25.81	0.2830	0.1017	0.0236	1.0614	80.43	80.29	0.9484	0.7500	-130.9	-87.3	1.1703
6	0.0197	0.0380	0.0740	0.1555	24.44	25.49	0.2393	0.0668	0.0162	1.0594	84.12	84.02	0.9686	0.8131	-137.6	-101.7	1.1643
7	0.0055	0.0362	0.0701	0.1265	24.52	25.12	0.2280	0.0709	0.0170	1.0510	51.44	51.34	0.9884	0.8616	-144.1	-110.6	1.1618
8	0.0022	0.0366	0.0559	0.1104	24.39	24.70	0.2262	0.0871	0.0208	1.0495	76.42	76.26	1.0173	0.9069	-152.9	-119.5	1.1607
9	0.0071	0.0459	0.0564	0.0992	24.03	24.41	0.2160	0.0827	0.0196	1.0494	76.55	76.39	1.0396	0.9404	-155.8	-126.8	1.1597
10	0.0356	0.0746	0.1009	0.0810	22.57	22.81	0.2070	0.0768	0.0172	1.0485	77.06	76.92	1.0823	1.0013	-165.5	-135.5	1.1521

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			STAGE	ROTOR
1.0541	1.1714	89.63	85.96	104.17	1.0202	1.0612	84.59	84.74

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO/TO	PO/PO	TO/TO
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	INLET	INLET	INLET	INLET
1	0.1222	0.1404	127.2	114.7	97.9	114.7	81.2	0.6	0.6886	0.0048	0.3681	0.3311	1.1714	1.0593	1.0719	1.0238		
2	0.0949	0.0969	131.3	122.0	107.7	122.0	75.0	-0.1	0.6064	0.0009	0.3806	0.3532	1.1879	1.0973	1.0646	1.0229		
3	0.0680	0.0693	130.2	118.6	111.7	118.6	67.0	-1.2	0.5994	0.0100	0.3779	0.3433	1.1854	1.0549	1.0691	1.0219		
4	0.0518	0.0494	126.0	113.3	108.9	113.3	63.5	-2.0	0.5276	0.0100	0.3856	0.3279	1.1791	1.0531	1.0667	1.0219		
5	0.0236	0.0190	114.4	102.5	99.6	102.5	56.2	-2.6	0.5140	0.0254	0.3313	0.2963	1.1649	1.0521	1.0565	1.0213		
6	0.0168	0.0129	109.3	98.6	98.1	98.6	48.1	-2.5	0.4563	0.0254	0.3165	0.2891	1.1597	1.0501	1.0501	1.0179		
7	0.0138	0.0106	104.8	95.7	96.1	95.6	46.8	-2.4	0.4514	0.0254	0.3091	0.2763	1.1556	1.0511	1.0454	1.0177		
8	0.0101	0.0081	103.1	94.6	94.3	94.5	46.4	-2.1	0.4570	0.0227	0.3037	0.2727	1.1541	1.0533	1.0436	1.0162		
9	0.0067	0.0056	103.7	94.2	93.1	94.2	45.6	-0.3	0.4854	0.0032	0.2991	0.2713	1.1535	1.0555	1.0439	1.0161		
10	0.0026	0.0023	97.6	88.6	87.4	88.6	43.5	0.4	0.4622	0.0045	0.2812	0.2549	1.1467	1.0576	1.0436	1.0177		

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	INLET	TOT	STG
1	-0.1990	0.1533	0.4638	25.68	30.15	0.2296	0.1146	0.0242	0.9898	78.07	78.55	84.29	84.45
2	-0.1582	0.1394	0.4073	28.36	32.35	0.1961	0.0297	0.0067	0.9972	88.17	88.45	84.94	85.07
3	-0.1944	0.1347	0.5494	29.46	31.94	0.2128	0.0405	0.0097	0.9962	90.85	91.06	87.92	88.05
4	-0.1997	0.1311	0.5454	28.75	31.17	0.2310	0.0459	0.0116	0.9960	90.82	91.03	85.12	85.27
5	-0.2009	0.1328	0.5394	26.32	27.26	0.2510	0.0559	0.0161	0.9959	85.58	85.89	74.30	74.50
6	-0.2659	0.1368	0.4816	25.96	26.24	0.2360	0.0543	0.0163	0.9946	86.30	86.49	78.82	78.99
7	-0.2714	0.1414	0.4768	25.42	25.40	0.2480	0.0817	0.0236	0.9948	82.65	82.99	72.23	72.36
8	-0.2802	0.1544	0.4777	24.91	25.04	0.2529	0.0912	0.0301	0.9943	78.45	78.89	67.22	67.42
9	-0.3261	0.1934	0.4588	24.54	24.89	0.2441	0.0855	0.0293	0.9948	75.09	75.58	68.20	68.36
10	-0.3829	0.2266	0.4576	22.96	23.34	0.2499	0.0865	0.0308	0.9954	69.32	69.90	69.34	69.49

WCI/A1	WCI/A1	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
437.47	45.714	1.0541	1.1658	83.00	83.56	1.0202	0.9952	77.71

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ¹ -1	N ¹ -2	V ¹ -1	V ¹ -2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC			M/SEC	M/SEC
1	0.1936	0.1405	79.4	140.7	75.4	78.7	0.0	116.2	0.0	0.9732	0.2344	0.4121	79.9	87.4	0.3320	0.2461	112.6	83.8
2	0.1441	0.1239	79.6	138.1	79.6	87.3	0.0	107.0	0.0	0.8840	0.2352	0.4054	89.4	95.7	0.3537	0.2584	119.7	88.0
3	0.1304	0.1237	79.8	129.8	79.8	88.6	0.0	96.8	0.0	0.8173	0.2356	0.3804	100.1	105.0	0.3781	0.2615	128.0	89.2
4	0.1019	0.0706	79.7	121.9	79.7	88.7	0.0	83.4	0.0	0.7547	0.2355	0.3569	109.9	113.8	0.4011	0.2762	135.8	93.6
5	0.0548	0.0312	79.2	108.1	79.2	82.8	0.0	69.5	0.0	0.6979	0.2361	0.3158	132.0	134.0	0.4549	0.3065	154.0	104.9
6	0.0385	0.0176	79.0	105.6	79.0	80.2	0.0	68.7	0.0	0.7076	0.2353	0.3080	142.7	144.0	0.4817	0.3210	167.1	110.1
7	0.0286	0.0125	78.8	105.5	78.8	79.7	0.0	69.1	0.0	0.7139	0.2328	0.3074	149.5	150.3	0.4992	0.3316	169.0	113.8
8	0.0194	0.0033	78.7	105.5	78.7	79.5	0.0	69.4	0.0	0.7178	0.2324	0.3073	156.2	156.7	0.5166	0.3438	174.9	118.1
9	0.0085	0.0031	78.5	104.7	78.5	78.1	0.0	69.7	0.0	0.7207	0.2318	0.3064	163.4	163.4	0.5356	0.3549	181.3	122.0
10	0.0005	0.0070	78.1	103.1	78.1	76.5	0.0	71.3	0.0	0.7633	0.2306	0.2993	171.6	171.6	0.5570	0.3670	188.6	125.0
11	0.0022	0.0047	77.8	101.0	77.8	69.9	0.0	72.8	0.0	0.8095	0.2298	0.2928	178.6	178.5	0.5753	0.3674	194.8	126.7

SL	INCS	INCR	DEV	TURN	ANGVM-1	ANGVM-2	D-FAC	OMEGA-8	LOSS-P	POZ/	SEFF-P	SEFF-A	B ¹ -1	B ¹ -2	VB ¹ -1	VB ¹ -2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1125	0.2096	0.1866	1.1383	19.39	19.35	0.5089	0.3035	0.0670	1.1031	81.37	81.11	0.7887	0.3496	-79.9	28.8	1.1031
2	0.1302	0.2245	0.1871	0.9715	19.43	21.81	0.5000	0.1280	0.0324	1.1176	91.32	91.18	0.8434	0.1262	-89.4	11.3	1.1176
3	0.1441	0.2362	0.2127	0.7843	19.47	22.39	0.5127	0.0686	0.0184	1.1184	96.38	96.49	0.8981	0.1139	-100.1	-18.2	1.1184
4	0.1504	0.2398	0.2297	0.6165	19.45	22.36	0.4963	0.0360	0.0101	1.1156	96.48	96.44	0.9433	0.3268	-109.9	-30.1	1.1156
5	0.1412	0.2207	0.1753	0.3493	19.35	21.24	0.4743	0.0578	0.0154	1.1085	91.00	92.88	1.0701	0.6408	-132.0	-44.4	1.1085
6	0.1419	0.2114	0.1398	0.3115	19.28	20.60	0.4784	0.0927	0.0241	1.1093	88.24	88.05	1.0453	0.7537	-142.7	-75.4	1.1093
7	0.1573	0.2068	0.1192	0.2911	19.25	20.48	0.4794	0.1104	0.0285	1.1115	85.75	85.34	1.0856	0.7965	-149.5	-81.2	1.1115
8	0.1663	0.2065	0.1062	0.2718	19.22	20.43	0.4774	0.1249	0.0319	1.1139	83.59	83.35	1.1062	0.8323	-154.2	-87.3	1.1139
9	0.1689	0.2080	0.1047	0.2469	19.17	20.07	0.4786	0.1451	0.0364	1.1152	80.40	80.30	1.1233	0.8764	-163.4	-93.8	1.1152
10	0.1712	0.2100	0.1239	0.2115	19.08	19.13	0.4913	0.1830	0.0442	1.1154	75.43	75.05	1.1440	0.9325	-171.6	-100.4	1.1154
11	0.1670	0.2057	0.1795	0.1759	19.01	17.95	0.5054	0.2186	0.0502	1.1148	70.70	70.26	1.1600	0.9861	-178.6	-105.7	1.1148

TO/TO	PO/PO	EFF-AD	EFF-P	M/L/A1	TOZ/TOL	POZ/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	Σ	Σ	Σ	Σ	Σ
1.0365	1.1130	85.17	85.39	91.02	1.0365	1.1130	85.17	85.39

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ¹ -1	N ¹ -2	V ¹ -1	V ¹ -2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC			M/SEC	M/SEC
1	0.1992	0.1446	127.3	75.7	84.4	74.2	109.8	16.6	1.0399	0.1919	0.3727	0.2184	1.0876	1.0351	1.0876	1.0876	1.0351	1.0351
2	0.1433	0.1125	129.4	87.4	79.7	85.4	102.0	18.4	0.9079	0.2138	0.3791	0.2541	1.1036	1.0354	1.1036	1.1036	1.0354	1.0354
3	0.1334	0.0884	125.0	90.8	85.4	89.4	91.1	16.0	0.8173	0.1769	0.3659	0.2641	1.1126	1.0345	1.1126	1.1126	1.0345	1.0345
4	0.0805	0.0742	119.4	88.8	87.8	87.7	81.0	14.0	0.7459	0.1584	0.3495	0.2583	1.1094	1.0331	1.1094	1.1094	1.0331	1.0331
5	0.0586	0.0467	109.5	82.8	84.7	81.7	67.8	12.9	0.6757	0.1572	0.3169	0.2408	1.1043	1.0320	1.1043	1.1043	1.0320	1.0320
6	0.0527	0.0554	107.0	82.9	83.2	81.8	67.3	13.2	0.6806	0.1602	0.3121	0.2409	1.1054	1.0320	1.1054	1.1054	1.0320	1.0320
7	0.0471	0.0498	107.4	84.6	83.2	83.5	67.9	13.5	0.6950	0.1606	0.3130	0.2457	1.1079	1.0355	1.1079	1.1079	1.0355	1.0355
8	0.0395	0.0417	108.1	86.7	83.6	85.6	68.5	14.0	0.7047	0.1626	0.3148	0.2518	1.1110	1.0375	1.1110	1.1110	1.0375	1.0375
9	0.0302	0.0317	107.6	86.8	82.6	85.4	69.0	14.7	0.6941	0.1732	0.3133	0.2518	1.1118	1.0392	1.1118	1.1118	1.0392	1.0392
10	0.0183	0.0191	106.5	84.4	79.6	83.9	70.7	16.1	0.7249	0.1891	0.3094	0.2474	1.1107	1.0420	1.1107	1.1107	1.0420	1.0420
11	0.0070	0.0074	104.4	80.4	75.0	78.9	72.6	15.2	0.7693	0.1907	0.3030	0.2322	1.1053	1.0449	1.1053	1.1053	1.0449	1.0449

SL	INCS	INCR	DEV	TURN	ANGVM-1	ANGVM-2	D-FAC	OMEGA-8	LOSS-P	POZ/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	0.1203	0.2023	0.2857	0.6980	16.07	19.11	0.5596	0.1504	0.0311	0.9862	69.29	69.65	69.29	69.65
2	0.0820	0.1713	0.2565	0.4941	20.09	22.12	0.4471	0.1211	0.0267	0.9886	80.73	81.06	80.79	81.06
3	0.0365	0.1300	0.2008	0.4403	21.72	23.24	0.4191	0.0807	0.0193	0.9928	88.01	88.17	88.01	88.17
4	0.0128	0.0881	0.1724	0.5875	22.39	22.85	0.4027	0.0718	0.0183	0.9941	91.13	91.26	91.13	91.26
5	0.0012	0.0512	0.1594	0.5185	21.71	21.32	0.3856	0.0570	0.0165	0.9962	90.00	90.15	90.00	90.15
6	0.0369	0.0634	0.1566	0.5204	21.33	21.33	0.3807	0.0506	0.0155	0.9967	86.36	86.26	86.04	86.26
7	0.0515	0.0704	0.1545	0.5244	21.33	21.75	0.3722	0.0475	0.0129	0.9973	83.85	84.09	83.85	84.09
8	0.0542	0.0713	0.1550	0.5241	21.44	22.28	0.3636	0.0366	0.0120	0.9976	82.03	82.31	82.03	82.31
9	0.0557	0.0734	0.1625	0.5259	21.18	22.25	0.3559	0.0426	0.0144	0.9972	78.55	78.87	78.55	78.87
10	0.0601	0.0725	0.1892	0.5378	20.38	21.77	0.3800	0.0465	0.0233	0.9957	72.51	72.92	72.51	72.92
11	0.0731	0.0618	0.2304	0.5786	19.19	20.39	0.4320	0.1380	0.0496	0.9915	64.73	65.23	64.73	65.23

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TOZ/TOL	POZ/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	Σ	Σ	Σ	Σ
479.54	1.0365	1.1067	80.56	80.88	1.0365	0.9943	80.56	80.88

ROTOR 2

																RUN NO 411, SPEED CODE 50, POINT NO 4			
SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1464	0.0987	67.1	129.8	65.6	96.6	14.1	86.8	0.2107	0.7256	0.1944	0.3754	99.4	105.8	0.3118	0.2844	107.5	98.4	
2	0.1052	0.0745	87.3	126.4	85.4	97.0	18.3	81.1	0.2098	0.6932	0.2537	0.3657	108.0	112.6	0.3400	0.2949	123.9	102.0	
3	0.0810	0.0584	92.5	123.0	91.2	99.2	15.0	72.7	0.1629	0.6308	0.2691	0.3557	116.0	119.5	0.3961	0.3171	145.1	109.6	
4	0.0990	0.0427	90.8	118.5	89.8	96.6	13.3	68.7	0.1469	0.6177	0.2644	0.3428	124.7	124.9	0.4167	0.3260	145.1	112.7	
5	0.0175	0.0111	86.1	108.7	85.2	88.5	12.9	63.1	0.1501	0.6190	0.2504	0.3135	144.3	144.9	0.4554	0.3478	156.0	129.5	
6	0.0070	0.0030	87.1	104.9	86.1	88.4	13.2	56.5	0.1522	0.5683	0.2533	0.3026	151.2	151.4	0.4730	0.3741	162.7	129.7	
7	0.0011	0.0013	89.7	102.8	88.6	86.9	13.8	54.9	0.1540	0.5637	0.2605	0.2942	158.0	158.0	0.4918	0.3883	169.3	134.8	
8	0.0004	0.0002	90.3	102.5	89.0	86.8	14.8	54.7	0.1650	0.5621	0.2620	0.2949	167.2	166.6	0.5122	0.4073	176.5	141.6	
9	0.0012	0.0015	88.8	102.0	87.3	86.0	16.0	54.9	0.1815	0.5684	0.2573	0.2949	173.6	173.2	0.5220	0.4199	180.2	146.2	
10	0.0007	0.0011	83.8	97.5	82.5	82.7	15.1	51.7	0.1815	0.5706	0.2424	0.2794	180.0	179.7	0.5329	0.4369	184.3	152.4	

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PC2/	EFF-P	EFF-A	B ² -1	B ² -2	VO ² -1	VO ² -2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0043	0.1257	0.2713	0.7208	16.96	25.36	0.2046	0.0194	-0.0046	1.0949	101.41	101.42	0.9117	0.1917	-85.2	-19.0	1.1916
2	0.0088	0.0205	0.1673	0.4963	22.15	25.68	0.1205	0.3645	0.0160	1.0805	93.23	93.16	0.6882	0.3119	-89.7	-31.5	1.1954
3	0.0762	0.0228	0.1564	0.3962	23.72	26.43	0.3177	0.0577	0.0145	1.0772	92.58	92.50	0.8349	0.4387	-101.0	-46.7	1.1966
4	0.0423	0.0463	0.1128	0.2502	23.37	25.04	0.3293	0.0591	0.0150	1.0779	91.81	91.71	0.8917	0.5414	-111.4	-58.2	1.1949
5	0.0178	0.0854	0.0719	0.2494	22.15	23.75	0.3400	0.0830	0.0206	1.0757	86.78	86.64	0.9957	0.7463	-131.4	-81.9	1.1882
6	0.0245	0.0823	0.0816	0.1922	22.38	23.76	0.2976	0.0519	0.0125	1.0707	90.29	90.20	1.0129	0.8207	-138.0	-94.9	1.1848
7	0.0281	0.0677	0.0782	0.1500	23.02	23.32	0.2938	0.0751	0.0178	1.0655	84.61	84.45	1.0199	0.8699	-144.2	-103.0	1.1830
8	0.0224	0.0611	0.0603	0.1305	23.09	23.24	0.2864	0.0826	0.0196	1.0650	82.25	82.07	1.0419	0.9113	-152.4	-112.0	1.1841
9	0.0321	0.0709	0.0581	0.1225	22.59	22.99	0.2741	0.0750	0.0178	1.0666	83.47	83.31	1.0646	0.9421	-157.6	-118.3	1.1844
10	0.0402	0.0991	0.0968	0.1096	21.25	22.06	0.2548	0.0553	0.0125	1.0676	87.02	86.89	1.1068	0.9972	-164.8	-128.0	1.1797

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SGM	%	%	%	%
1.0605	1.1882	83.58	83.97	95.51	1.0231	1.0736	88.70	88.84

STATOR 2

																RUN NO 411, SPEED CODE 50, POINT NO 4			
SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	TO/TO	TO2/			
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1			
1	0.1241	0.1431	119.5	56.4	84.4	84.4	85.2	0.8	0.7868	0.0081	0.3461	0.2770	1.1799	1.0619	1.0844	1.0259			
2	0.0921	0.1000	120.8	103.0	91.0	103.0	79.4	1.0	0.7158	0.0095	0.3490	0.2964	1.1924	1.0602	1.0777	1.0240			
3	0.0695	0.0710	120.4	102.5	57.0	102.5	71.3	0.1	0.6327	0.0008	0.3481	0.2955	1.1945	1.0582	1.0754	1.0232			
4	0.0514	0.0505	118.1	99.5	96.9	99.4	67.5	-1.1	0.6080	0.0111	0.3415	0.2966	1.1922	1.0571	1.0754	1.0236			
5	0.0255	0.0154	110.0	92.4	50.7	92.4	62.2	-1.7	0.6011	-0.0185	0.3173	0.2665	1.1855	1.0581	1.0732	1.0243			
6	0.0191	0.0135	106.2	89.7	90.4	89.7	55.7	-1.7	0.5523	-0.0189	0.3065	0.2582	1.1822	1.0572	1.0683	1.0218			
7	0.0154	0.0117	104.0	88.3	88.6	88.3	54.6	-1.7	0.5523	-0.0188	0.2997	0.2537	1.1805	1.0592	1.0632	1.0217			
8	0.0097	0.0066	103.5	88.7	88.0	88.7	54.5	-1.6	0.5540	-0.0182	0.2977	0.2546	1.1812	1.0625	1.0624	1.0221			
9	0.0046	0.0027	102.9	89.3	87.1	89.3	54.8	0.2	0.5616	0.0027	0.2954	0.2559	1.1818	1.0654	1.0641	1.0223			
10	0.0007	0.0001	98.3	83.1	83.7	83.1	51.6	0.6	0.5530	0.0068	0.2818	0.2576	1.1744	1.0677	1.0628	1.0217			

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PC2/	EFF-A	EFF-P	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PC1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.1007	0.1567	0.7787	22.39	25.87	0.3421	0.1229	0.0259	0.4702	78.25	78.76	90.54	90.66
2	-0.0488	0.1498	0.7063	24.25	27.32	0.2928	0.0309	0.0069	0.9955	85.80	86.14	90.12	90.22
3	-0.1014	0.1454	0.6319	25.93	27.81	0.2882	0.0215	0.0051	0.9133	89.59	89.84	90.32	90.42
4	-0.1191	0.1379	0.6191	25.95	27.02	0.3091	0.0298	0.0075	0.6677	90.24	90.48	88.85	88.97
5	-0.1218	0.1358	0.6196	24.31	25.13	0.3268	0.0329	0.0095	0.4978	85.89	86.22	83.94	84.12
6	-0.1701	0.1435	0.5709	24.27	24.35	0.3180	0.0350	0.0102	0.6955	85.65	85.99	87.52	87.64
7	-0.1832	0.1489	0.5722	23.55	23.90	0.3207	0.0350	0.0110	0.9979	82.04	82.44	81.53	81.71
8	-0.2201	0.1953	0.5389	23.26	23.96	0.3216	0.0423	0.0140	0.9476	78.03	78.54	78.77	78.96
9	-0.2201	0.1953	0.5389	23.26	24.05	0.3140	0.0412	0.0141	0.9976	74.75	75.33	80.19	80.38
10	-0.2920	0.2289	0.5462	22.30	22.29	0.3399	0.0839	0.1299	0.9955	69.48	70.16	80.84	81.02

MCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	%	%	STAGE	%
439.54	41.97	1.0705	1.1846	82.07	82.50	1.0231	0.9970	84.92	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-2		V-1		V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	11.951	0.823	757.6	1047.8	757.6	600.0	0.0	796.5	0.0	796.5	0.0	726.1	0.0	44.9	0.7120	0.9498	546.6	597.8	0.8779	0.6629	936.2	709.2														
2	11.019	0.936	768.0	1022.4	768.0	721.6	0.0	620.6	0.0	620.6	0.0	41.6	0.7399	0.8357	484.9	718.5	0.9823	0.6309	1041.4	705.3																
3	8.821	7.161	786.5	936.3	786.5	698.5	0.0	536.0	0.0	536.0	0.0	38.1	0.7511	0.7726	752.1	778.5	1.0339	0.6449	1396.4	726.7																
4	6.840	6.155	795.1	666.1	795.1	682.9	0.0	409.2	0.0	409.2	0.0	32.9	0.7566	0.6656	903.4	916.7	1.1410	0.7166	1296.9	811.4																
5	2.908	3.585	800.4	753.8	800.4	633.1	0.0	371.0	0.0	371.0	0.0	31.5	0.7716	0.6245	976.3	985.5	1.1899	0.7588	1259.5	862.4																
6	2.096	2.033	795.6	709.8	795.6	605.2	0.0	356.9	0.0	356.9	0.0	30.5	0.7500	0.6137	1022.9	1028.3	1.2231	0.7934	1296.9	902.9																
7	1.588	1.537	796.0	658.4	796.0	601.4	0.0	341.3	0.0	341.3	0.0	29.2	0.7494	0.6157	1068.8	1072.6	1.2572	0.8380	1331.1	954.5																
8	1.075	1.086	793.5	700.6	793.5	611.9	0.0	330.2	0.0	330.2	0.0	27.9	0.7482	0.6198	1118.4	1118.4	1.2963	0.8820	1370.7	1006.8																
9	0.593	0.486	792.4	705.3	792.4	623.2	0.0	328.2	0.0	328.2	0.0	28.1	0.7456	0.6111	1176.6	1176.6	1.3361	0.9168	1415.5	1046.6																
10	-0.021	-0.119	789.5	697.7	789.5	615.6	0.0	328.2	0.0	328.2	0.0	30.4	0.7425	0.5779	1221.9	1221.9	1.3714	0.9170	1453.4	1094.6																
11	-0.231	-0.203	786.5	664.5	786.5	573.2	0.0	328.2	0.0	328.2	0.0																									

SL	INCS	INCM	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	P2/P1	EFF-P	EFF-A	B-1	B-2	U-1	U-2	M-1	M-2	V-1	V-2	PO/PO	TO/TI	STAGE	TO/TI
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL		TJT	TJT	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC		INLET		
1	-2.03	2.72	14.65	52.09	45.51	42.80	0.4479	0.3356	0.0757	1.4369	72.56	71.13	35.91	-16.18	-546.6	198.7	1.4369							
2	-2.17	3.23	12.64	44.13	45.81	49.34	0.4545	0.1730	0.0640	1.5262	85.25	84.75	38.70	-5.45	-611.9	69.0	1.5262							
3	-1.97	3.31	13.64	33.25	46.27	51.42	0.4912	0.0983	0.0269	1.5282	90.35	89.78	41.23	7.98	-684.9	-97.9	1.5282							
4	-1.97	3.15	16.00	23.90	46.96	51.95	0.4873	0.0767	0.0209	1.4958	91.56	91.06	43.46	19.56	-752.1	-242.5	1.4958							
5	-2.48	2.08	10.91	9.72	46.88	49.58	0.4464	0.0836	0.0220	1.4190	87.95	87.34	46.45	38.75	-903.4	-507.6	1.4190							
6	-2.24	1.90	10.25	5.39	46.56	47.58	0.4237	0.1024	0.0256	1.3881	84.08	83.33	50.82	45.43	-976.3	-614.5	1.3881							
7	-1.01	1.83	9.54	3.95	46.52	47.48	0.4058	0.1028	0.0252	1.3822	83.51	82.74	52.18	48.23	-1022.9	-673.4	1.3822							
8	-0.33	1.58	8.48	3.33	46.30	48.55	0.3830	0.0909	0.0222	1.3921	85.09	84.37	53.41	50.08	-1068.8	-731.3	1.3921							
9	0.00	2.24	7.46	3.62	46.47	49.69	0.3819	0.0811	0.0197	1.4036	86.45	85.78	54.69	51.67	-1118.4	-788.2	1.4036							
10	0.35	2.57	7.64	2.11	46.41	48.99	0.3556	0.1047	0.0250	1.4001	82.45	81.65	56.08	53.97	-1176.6	-846.4	1.4001							
11	0.32	2.54	10.86	0.14	46.33	45.09	0.3714	0.1667	0.0377	1.3888	72.44	71.19	57.22	57.08	-1221.9	-885.2	1.3888							

TO/TI	PO/PO	EFF-AD	EFF-P	MC/AL	TO2/TO1	P2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	SOFT			%	%
1.1285	1.4300	83.76	84.56	44.86	1.1285	1.4300	83.76	84.56

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-2		V-1		V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	11.024	7.551	947.8	641.0	576.0	630.8	752.7	114.3	52.5	10.1	0.6554	0.5508	1.3552	1.1528	1.3552	1.1528	1.3552	1.1528																		
2	7.083	4.566	572.0	728.2	673.8	718.6	690.7	118.4	45.2	9.3	0.6704	0.6315	1.4673	1.1522	1.4673	1.1522	1.4673	1.1522																		
3	4.280	2.642	538.3	770.7	744.3	723.7	596.5	130.9	39.4	7.9	0.6396	0.6366	1.4884	1.1426	1.4884	1.1426	1.4884	1.1426																		
4	2.677	1.746	691.5	709.1	754.0	732.2	519.4	58.2	35.6	7.9	0.7962	0.6191	1.4678	1.1333	1.4678	1.1333	1.4678	1.1333																		
5	1.076	0.712	795.8	649.8	675.3	641.8	421.8	94.9	32.7	8.4	0.6964	0.5664	1.4000	1.1202	1.4000	1.1202	1.4000	1.1202																		
6	0.719	0.474	738.3	621.0	641.6	614.2	365.4	91.7	29.7	8.5	0.6516	0.5414	1.3697	1.1173	1.3697	1.1173	1.3697	1.1173																		
7	0.558	0.375	724.6	613.5	674.4	606.8	350.2	90.5	28.5	8.5	0.6386	0.5366	1.3606	1.1172	1.3606	1.1172	1.3606	1.1172																		
8	0.461	0.357	725.6	620.4	642.2	614.3	337.8	87.2	27.7	8.1	0.6394	0.5409	1.3650	1.1176	1.3650	1.1176	1.3650	1.1176																		
9	0.411	0.338	729.4	635.1	651.8	624.1	27.5	87.3	26.7	7.9	0.6427	0.5541	1.3769	1.1188	1.3769	1.1188	1.3769	1.1188																		
10	0.255	0.235	721.4	636.6	643.4	624.1	126.6	126.4	26.4	11.4	0.6336	0.5543	1.3771	1.1240	1.3771	1.1240	1.3771	1.1240																		
11	0.081	0.090	687.2	594.0	594.6	594.9	135.7	124.7	29.2	12.0	0.5989	0.5167	1.3411	1.1320	1.3411	1.1320	1.3411	1.1320																		

SL	INCS	INCM	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	P2/P1	EFF-P	EFF-A	B-1	B-2	U-1	U-2	M-1	M-2	V-1	V-2	PO/PO	TO/TI	STAGE	TO/TI
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL		TJT	TJT	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC		INLET		
1	-0.19	4.52	15.52	42.38	39.26	46.94	0.4618	0.1503	0.0312	0.9638	59.38	61.07	59.38	61.07										
2	-2.09	3.63	11.75	35.93	48.63	57.75	0.3811	0.1112	0.0225	0.9625	76.07	77.32	76.07	77.32										
3	-5.41	0.06	9.28	21.53	53.14	59.33	0.3450	0.0665	0.0160	0.9755	84.41	85.26	84.41	85.26										
4	-7.88	-2.10	9.75	27.64	54.28	57.86	0.3205	0.0455	0.0127	0.9837	87.08	87.76	87.08	87.76										
5	-11.48	-5.04	8.55	22.33	51.97	52.50	0.2826	0.0451	0.0131	0.9876	83.93	84.68	83.93	84.68										
6	-12.49	-5.71	8.24	21.16	49.60	49.93	0.2704	0.0456	0.0140	0.9988	80.19	81.04	80.19	81.74										
7	-17.30	-6.32	8.13	20.41	49.33	49.18	0.2674	0.0644	0.0211	0.9841	78.50	79.42	78.50	79.42										
8	-14.71	-7.57	7.64	19.66	49.25	49.77	0.2598	0.0831	0.0273	0.9800	79.09	79.99	79.09	79.99										
9	-10.40	-9.00	7.46	18.78	51.28	51.01	0.2424	0.0832	0.0273	0.9805	80.59	81.45	80.59	81.45										
10	-18.17	-10.58	11.45	15.47	50.56	50.57	0.2146	0.0667	0.0233	0.9843	77.24	78.25	77.24	78.25										
11	-19.01	-11.29	14.31	17.21	48.62	46.53	0.2415	0.0912	0.0327	0.9804	66.29	67.65	66.29	67.65										

MC/PR	MC/CR	TC/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	P2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
				%	%			%	%
0.754	222.44	1.1285	1.4300	78.57	79.57	1.1285	0.9791	78.57	

ROTGR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	RUN NO	411	SPEED	CODE	15	POINT	NO	1
CEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE		R-2	U-1	U-2	M-1	M-1	V-1	V-2	
1	8.781	5.853	589.3	574.4	574.6	804.0	111.1	549.8	10.9	37.8	0.5004	0.8316	679.9	723.8	0.6912	0.7069	808.5	828.4	
2	6.754	4.537	735.1	950.7	724.5	820.0	112.2	481.1	8.7	30.2	0.6383	0.8132	739.1	770.8	0.8333	0.7638	950.6	869.7	
3	5.645	3.641	750.3	898.0	733.9	791.4	87.7	424.4	7.5	29.1	0.6559	0.7683	794.1	817.4	0.8908	0.7563	1019.0	887.6	
4	4.605	2.622	735.5	839.2	729.2	744.2	85.9	388.0	7.5	27.5	0.6448	0.7171	853.7	888.4	0.9217	0.7570	1051.4	885.9	
5	2.439	1.216	672.6	731.0	664.2	645.1	82.3	343.9	7.9	28.1	0.5392	0.6210	987.4	591.6	0.9776	0.7766	1115.8	914.2	
6	1.819	0.642	654.0	692.5	647.7	610.9	80.3	326.0	7.4	26.1	0.5721	0.5664	1034.8	1035.9	1.0019	0.7934	1145.2	974.6	
7	1.211	0.523	652.5	692.8	646.6	617.2	87.0	314.7	7.7	27.0	0.5708	0.5867	1081.0	1081.0	1.0370	0.8332	1185.8	983.9	
8	0.332	-0.156	648.7	706.4	641.8	631.2	95.2	318.3	8.2	26.7	0.5851	0.5980	1144.4	1140.2	1.0855	0.8767	1240.5	1236.7	
9	-0.055	-0.451	641.2	697.7	649.1	598.4	125.9	356.8	11.0	30.8	0.5767	0.5861	1188.0	1185.7	1.0856	0.8597	1244.7	1227.0	
10	-0.112	-0.292	622.2	649.8	609.7	545.0	123.7	353.0	11.5	33.0	0.5788	0.5417	1231.5	1230.0	1.0950	0.8802	1264.5	1031.8	

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	P22/	EFF-P	EFF-A	R-1	R-2	VO-1	VO-2	PO/PO
CEGREE	DEGREE	DEGREE	DEGREE							PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.46	-0.50	16.96	32.13	45.73	64.23	0.1219	0.0618	0.0147	1.3219	94.12	93.88	44.53	12.40	-568.8	-180.1	1.8313
2	-10.69	-4.43	11.05	21.38	59.73	67.63	0.2507	0.1518	0.0774	1.2796	79.17	78.52	40.71	19.33	-627.0	-289.7	1.8354
3	-9.12	-3.45	9.81	16.76	40.22	67.34	0.2265	0.1457	0.0363	1.2166	76.03	75.97	43.08	24.32	-696.4	-393.0	1.8038
4	-7.41	-2.33	8.46	13.29	58.85	64.47	0.2407	0.1357	0.0338	1.2049	74.15	75.52	44.10	32.82	-757.5	-480.7	1.7549
5	-2.67	1.20	6.47	8.24	53.25	56.86	0.2572	0.1234	0.0295	1.2079	76.14	75.51	53.36	45.12	-895.1	-647.7	1.6628
6	-1.06	2.25	6.94	6.20	51.61	53.88	0.2543	0.1247	0.0287	1.1937	74.53	73.89	55.57	49.29	-944.6	-709.6	1.6284
7	0.02	2.46	5.79	5.81	51.44	54.69	0.2401	0.1186	0.0251	1.2023	77.90	76.40	54.96	51.15	-994.0	-764.3	1.6370
8	-0.67	1.56	3.71	5.28	52.81	56.11	0.2347	0.1162	0.0275	1.2049	74.81	74.14	57.75	52.47	-1049.2	-822.0	1.6405
9	-0.59	1.63	3.51	4.41	51.57	52.80	0.2530	0.1441	0.0339	1.2026	70.15	69.36	58.56	54.15	-1062.0	-826.4	1.6521
10	1.47	3.43	6.53	3.05	47.85	47.42	0.2594	0.1601	0.0352	1.1991	67.23	66.38	61.17	58.12	-1107.7	-878.1	1.5044

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC				
1-2134	1.7303	76.69	78.35	38.82	1.0757	1.2144	75.67	76.32

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	RUN NO	411	SPEED	CODE	15	POINT	NO	1
CEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE		R-2	U-1	U-2	M-1	M-1	V-1	V-2	
1	4.793	7.954	656.8	882.2	670.1	880.9	534.0	-48.1	38.3	-3.1	0.7203	0.7437	1.7191	1.2542	1.2549	1.0880			
2	4.921	4.676	673.9	869.1	736.4	865.3	476.4	-82.3	32.5	-5.4	0.7400	0.7359	1.7236	1.2412	1.1635	1.0800			
3	4.017	4.517	647.2	803.3	778.2	840.1	415.7	-71.5	29.3	-5.1	0.7202	0.6795	1.6493	1.2256	1.1127	1.0755			
4	3.588	3.819	629.7	758.7	714.3	754.1	391.1	-62.1	28.1	-4.7	0.6893	0.6421	1.6090	1.2128	1.1038	1.0723			
5	2.425	2.624	736.2	710.4	673.4	704.3	339.3	-53.9	27.5	-4.4	0.6258	0.6021	1.5876	1.1984	1.1465	1.0717			
6	1.811	1.673	745.0	684.4	628.8	682.7	322.4	-48.0	27.2	-4.0	0.5780	0.5793	1.5688	1.1956	1.1476	1.0703			
7	1.297	1.129	708.6	675.0	636.2	674.4	312.1	-28.6	26.1	-2.4	0.6011	0.5707	1.5607	1.1961	1.1445	1.0705			
8	1.626	0.496	726.4	688.0	673.5	688.0	314.3	0.1	25.8	0.0	0.6153	0.5630	1.5561	1.2015	1.1294	1.0735			
9	0.860	0.800	714.5	663.1	625.5	683.0	355.5	5.9	29.6	0.5	0.6066	0.5562	1.5520	1.2115	1.1275	1.0777			
10	0.401	0.395	675.8	630.3	576.1	630.3	353.4	5.4	31.5	0.5	0.5648	0.5246	1.5202	1.2228	1.1352	1.0707			

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	P22/	EFF-P	EFF-A	R-1	R-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE						PO1	TOT-INLET	TOT-INLET	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-12.51	5.41	41.45	47.50	71.03	0.1126	0.1586	0.0334	0.9536	65.80	68.27	76.39	77.14			
2	-11.33	4.62	37.89	44.16	71.00	0.1458	0.1983	0.0444	0.9398	69.66	71.86	54.84	55.77			
3	-12.71	3.18	34.45	44.87	66.01	0.1578	0.2977	0.0693	0.9149	68.07	70.21	40.85	41.73			
4	-13.56	3.85	32.77	43.01	62.92	0.2018	0.3073	0.0774	0.9161	68.39	70.41	39.51	40.34			
5	-13.97	4.71	31.81	47.44	60.24	0.1919	0.2017	0.0580	0.9529	71.13	72.97	55.47	56.32			
6	-14.13	5.27	31.27	44.95	58.17	0.1889	0.1801	0.0540	0.9612	69.96	71.79	57.01	57.84			
7	-15.26	7.13	28.57	45.91	57.47	0.1977	0.2129	0.0647	0.9539	69.15	71.00	56.38	57.21			
8	-16.41	10.15	25.82	47.53	56.74	0.2222	0.2778	0.0918	0.9374	68.87	68.81	48.08	48.96			
9	-15.17	11.77	29.11	44.80	55.90	0.2477	0.2824	0.0969	0.9377	63.26	65.43	44.81	45.73			
10	-16.89	13.22	31.03	49.53	52.41	0.2524	0.2731	0.0972	0.9466	57.07	59.50	46.00	46.95			

NGORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET				
0754	1.2244	1.2134	1.5489	67.20	69.27	1.0757	0.9403	51.25	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	21.616	5.539	755.3	1032.5	75.3	672.3	0.0	783.6	0.0	69.2	0.7096	0.9352	542.5	593.3	0.8736	0.6329	929.9	698.7
2	10.456	7.977	765.0	1011.4	76.0	715.4	0.0	715.0	0.0	44.9	0.7107	0.9129	667.4	650.2	0.9109	0.6483	976.8	718.3
3	8.492	7.237	779.0	938.8	77.0	706.2	0.0	616.2	0.0	41.0	0.7363	0.8611	679.8	713.1	0.9765	0.6405	1035.9	714.8
4	6.809	5.657	787.9	872.9	78.9	692.7	0.0	531.1	0.0	37.5	0.7436	0.7783	746.5	772.7	1.0243	0.6541	1085.4	733.6
5	3.559	2.855	794.7	752.1	79.7	632.6	0.0	406.7	0.0	32.7	0.7507	0.6644	896.6	909.9	1.1318	0.7141	1198.1	808.3
6	2.549	2.024	793.6	709.8	79.6	606.3	0.0	369.1	0.0	31.3	0.7496	0.6249	969.0	978.1	1.1830	0.7566	1252.6	859.6
7	2.032	1.632	793.5	696.1	79.5	600.3	0.0	352.4	0.0	30.4	0.7499	0.6121	1015.3	1020.6	1.2173	0.7898	1288.9	898.3
8	1.537	1.199	795.3	657.3	79.3	610.1	0.0	337.7	0.0	29.0	0.7513	0.6132	1060.8	1064.6	1.2525	0.8315	1325.8	949.5
9	0.895	0.678	796.1	701.5	79.1	620.6	0.0	327.0	0.0	27.8	0.7522	0.6169	1110.1	1110.1	1.2906	0.8786	1366.0	999.2
10	0.119	0.016	795.1	694.7	79.1	614.1	0.0	326.7	0.0	27.9	0.7511	0.6090	1165.8	1165.8	1.3330	0.9129	1411.1	1041.6
11	-0.164	-0.174	792.8	657.9	79.8	566.2	0.0	335.0	0.0	30.6	0.7487	0.5721	1212.8	1212.4	1.3683	0.9001	1448.9	1044.3

SL	INCS	INCH	DEV	TURN	RH	VM-1	MOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	KEFF-P	KEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1	-2.98	2.57	15.09	51.49	4.44	43.27	0.4535	0.2920	0.0661	1.4473	75.95	74.67	35.76	-15.73	-542.5	190.2	1.4473	
2	-2.33	3.20	11.71	43.71	4.73	49.80	0.4554	0.1347	0.0742	1.5383	88.48	87.76	38.55	-5.16	-607.4	64.8	1.5383	
3	-2.01	3.27	13.44	33.40	4.12	52.32	0.4756	0.0734	0.0201	1.5353	92.87	92.43	41.19	7.79	-679.8	-96.9	1.5353	
4	-1.93	3.19	13.65	21.29	4.36	52.90	0.4710	0.0502	0.0140	1.5050	94.42	94.08	43.50	19.21	-746.5	-241.5	1.5050	
5	-2.47	2.08	10.67	9.97	4.54	49.95	0.4423	0.0661	0.0175	1.4274	90.60	90.11	48.44	38.49	-896.6	-503.2	1.4274	
6	-2.22	1.77	9.95	5.56	4.51	48.20	0.4207	0.0799	0.0201	1.3999	87.69	87.08	50.69	45.13	-969.0	-609.1	1.3999	
7	-1.21	1.63	9.37	3.92	4.11	47.93	0.4044	0.0809	0.0199	1.3951	87.11	86.48	51.98	48.07	-1015.3	-668.2	1.3951	
8	-0.59	1.72	8.39	3.15	4.55	49.04	0.3816	0.0868	0.0167	1.4054	89.06	88.52	53.15	49.99	-1060.8	-726.9	1.4054	
9	-0.33	1.91	7.39	2.75	4.57	50.15	0.3621	0.0571	0.0139	1.4174	90.44	89.96	54.36	51.60	-1110.1	-783.1	1.4174	
10	-0.03	2.19	7.54	1.84	4.54	49.56	0.3560	0.0790	0.0191	1.4156	86.57	85.89	55.71	53.86	-1165.8	-861.1	1.4156	
11	-0.07	2.15	10.95	-0.34	4.49	45.12	0.3760	0.1500	0.0339	1.3802	75.15	74.00	56.83	57.16	-1212.8	-877.4	1.3802	

TOZ/TO1	POZ/PO1	EFF-AD	EFF-P
INLET	INLET	ROTOR	ROTOR
%	%	%	%
1.1263	1.4406	87.07	87.72
1.1263	1.4406	87.07	87.72

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	11.059	7.659	932.6	836.3	56.9	625.8	740.5	115.1	52.5	13.3	0.8314	0.5474	1.3586	1.1492	1.3586	1.1492	1.1492	1.1492
2	7.204	5.141	558.5	720.4	67.4	708.9	682.0	128.3	45.2	10.2	0.8578	0.6250	1.4674	1.1492	1.4674	1.1492	1.1492	1.1492
3	4.996	3.142	523.9	724.3	71.6	717.3	590.4	100.4	39.7	7.9	0.8260	0.6313	1.4913	1.1492	1.4913	1.1492	1.1492	1.1492
4	2.741	2.031	876.6	791.3	71.7	694.6	511.9	97.1	35.7	7.9	0.7821	0.6124	1.4718	1.1306	1.4718	1.1306	1.1306	1.1306
5	0.984	0.854	770.2	640.7	65.4	636.0	397.1	62.2	31.1	8.3	0.6819	0.5594	1.4053	1.1184	1.4053	1.1184	1.1184	1.1184
6	0.589	0.585	728.5	616.5	63.6	609.5	363.2	62.0	29.9	8.6	0.6428	0.5377	1.3789	1.1158	1.3789	1.1158	1.1158	1.1158
7	0.435	0.452	715.9	609.7	62.8	603.2	347.7	69.0	29.1	8.4	0.6509	0.5315	1.3707	1.1154	1.3707	1.1154	1.1154	1.1154
8	0.379	0.409	717.7	616.4	63.8	610.4	336.4	66.0	27.8	8.0	0.6325	0.5377	1.3751	1.1156	1.3751	1.1156	1.1156	1.1156
9	0.340	0.381	721.9	631.0	64.4	626.7	324.5	68.9	26.7	8.1	0.6362	0.5508	1.3871	1.1167	1.3871	1.1167	1.1167	1.1167
10	0.214	0.269	714.1	630.6	63.5	622.3	327.7	101.6	27.0	9.3	0.6273	0.5491	1.3853	1.1220	1.3853	1.1220	1.1220	1.1220
11	0.066	0.107	676.2	590.2	58.5	577.2	336.8	123.3	29.7	12.1	0.5891	0.5100	1.3479	1.1306	1.3479	1.1306	1.1306	1.1306

SL	INCS	INCH	DEV	TURN	RH	VM-1	MOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	KEFF-A	KEFF-P	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1	-0.20	4.52	15.67	42.20	3.50	48.92	0.4552	0.1691	0.0351	0.9383	61.33	62.96	61.33	62.96	61.33	62.96	61.33	62.96
2	-4.00	3.11	12.85	35.17	4.87	57.34	0.3764	0.1220	0.0271	0.9534	77.60	78.78	77.60	78.78	77.60	78.78	77.60	78.78
3	-5.17	0.30	9.31	21.74	5.08	59.22	0.3410	0.0779	0.0187	0.9720	86.21	86.97	86.21	86.97	86.21	86.97	86.21	86.97
4	-7.77	-1.99	8.75	27.75	5.20	57.70	0.3169	0.0534	0.0152	0.9804	89.40	89.97	89.40	89.97	89.40	89.97	89.40	89.97
5	-11.12	-4.67	8.41	22.84	5.48	52.34	0.2798	0.0396	0.0144	0.9969	86.26	86.91	86.26	86.91	86.26	86.91	86.26	86.91
6	-12.25	-5.67	8.38	21.31	4.65	50.05	0.2564	0.0359	0.0172	0.9865	83.07	83.67	83.07	83.67	83.07	83.67	83.07	83.67
7	-13.15	-6.16	8.03	20.67	4.44	49.41	0.2634	0.0773	0.0245	0.9819	81.69	82.49	81.69	82.49	81.69	82.49	81.69	82.49
8	-14.67	-7.49	7.58	19.75	5.49	49.99	0.2563	0.0396	0.0315	0.9773	82.47	83.24	82.47	83.24	82.47	83.24	82.47	83.24
9	-16.37	-8.97	7.66	18.61	5.56	51.21	0.2390	0.0398	0.0319	0.9776	83.96	84.69	83.96	84.69	83.96	84.69	83.96	84.69
10	-18.14	-10.54	9.28	17.68	5.83	50.76	0.2261	0.0869	0.0305	0.9799	80.07	80.96	80.07	80.96	80.07	80.96	80.07	80.96
11	-18.59	-10.86	14.33	17.62	4.35	46.36	0.2410	0.1075	0.0385	0.9775	68.20	69.51	68.20	69.51	68.20	69.51	68.20	69.51

TOZ/TO1	POZ/PO1	EFF-AD	EFF-P
INLET	INLET	STAGE	STAGE
%	%	%	%
1.1263	0.9761	81.00	81.90
1.1263	0.9761	81.00	81.90

ROTOR 2

RUN N1411, SPEED CODE 15, POINT NO. 2																
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V'-1	V'-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	4.782	5.982	578.4	915.7	56.45	743.6	111.8	534.3	11.1	35.4	0.4950	0.7775	674.8	718.4	0.6841	0.6505
2	4.802	4.783	126.0	908.2	71.9	767.0	121.3	486.3	9.6	32.2	0.6307	0.7737	733.6	765.1	0.8183	0.6953
3	5.650	3.873	763.6	870.2	73.21	757.1	96.9	428.9	7.5	29.4	0.6501	0.7473	788.2	811.3	0.8837	0.7236
4	4.477	2.991	127.8	814.2	72.7	712.7	96.4	393.8	7.5	28.9	0.6383	0.6961	867.0	867.1	0.9145	0.7269
5	2.230	1.250	495.6	703.6	65.3	607.8	91.0	356.8	7.9	30.3	0.5832	0.5957	980.0	984.2	0.9697	0.7496
6	1.894	1.017	666.3	669.4	64.0	577.2	89.7	337.1	8.0	30.3	0.5672	0.5645	1027.0	1028.2	0.9941	0.7605
7	1.195	0.715	666.7	665.3	64.1	583.9	84.8	327.2	7.5	29.3	0.5658	0.5649	1072.9	1072.9	1.0306	0.7994
8	0.451	0.124	663.1	668.2	65.8	599.8	91.2	333.3	7.9	29.1	0.5805	0.5783	1135.9	1131.7	1.0862	0.8417
9	0.079	-0.201	654.5	677.7	64.2	579.5	103.9	353.0	9.1	31.4	0.5710	0.5679	1179.1	1174.4	1.0944	0.8633
10	-0.037	-0.167	614.8	638.4	60.4	521.5	122.5	369.1	11.5	35.2	0.5324	0.5308	1222.3	1220.8	1.0859	0.8313

SL	INCS	INCP	DEV	TURN	RM	VM-1	RMQVM-2	D-FAC	OMEGA-B	LOSS-P	POZ/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE			TOTAL		TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.40	-0.46	18.30	30.85	4.53	62.33	0.1829	-0.0005	-0.0001	1.3367	99.99	99.98	44.59	13.74	-563.0	-164.1	1.8193	
2	-10.94	-4.68	11.57	29.61	5.29	66.93	0.2410	0.0888	0.0218	1.2662	88.20	87.79	40.46	19.85	-612.4	-278.8	1.8753	
3	-9.07	-3.40	10.20	16.44	6.14	67.92	0.2543	0.0775	0.0192	1.2556	88.04	87.65	43.13	26.71	-691.4	-382.4	1.8662	
4	-7.31	-2.23	8.71	12.54	5.74	65.11	0.2682	0.0675	0.0167	1.2475	88.68	88.31	46.21	33.27	-752.6	-468.3	1.8217	
5	-2.58	1.29	7.36	7.45	5.25	56.33	0.2904	0.0778	0.0183	1.2419	85.83	85.39	53.45	46.00	-889.0	-629.4	1.7259	
6	-1.03	2.28	7.75	5.44	5.72	53.58	0.2837	0.0775	0.0176	1.2344	85.13	84.68	55.60	50.14	-937.3	-691.1	1.6957	
7	0.09	2.47	6.58	5.19	5.65	54.42	0.2707	0.0707	0.0160	1.2432	86.10	85.67	57.03	51.94	-986.1	-765.7	1.7053	
8	-0.58	1.64	4.32	4.76	5.02	56.08	0.2654	0.0837	0.0195	1.2485	83.33	82.80	57.83	53.07	-1044.6	-798.4	1.7329	
9	-0.17	2.05	4.26	4.08	5.89	53.69	0.2778	0.1107	0.0255	1.2490	78.71	78.03	56.99	54.90	-1075.1	-823.4	1.7268	
10	1.32	3.55	6.96	2.74	4.73	47.85	0.2841	0.1092	0.0237	1.2548	79.41	78.74	61.29	58.55	-1099.8	-852.7	1.6878	

TO/TO	P /PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			RTNR	RTNR
		%	%	SQRT			%	%
1.2140	1.7634	82.19	83.54	78.61	1.0778	1.2542	85.69	86.14

STATOR 2

RUN N1411, SPEED CODE 15, POINT NO. 2																		
SL	I-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO/TO	PO/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	INLET	INLET	STAGE	TO1
1	6.588	6.656	813.4	723.1	62.2	723.1	524.6	7.6	39.9	0.6	0.6825	0.6005	1.7587	1.2477	1.2905	1.0857		
2	5.167	5.675	847.2	788.8	70.0	788.8	475.8	-1.1	34.1	-0.1	0.7163	0.6443	1.8415	1.2380	1.2430	1.0792		
3	3.961	4.164	835.7	753.1	72.4	753.1	420.2	-5.3	30.1	-0.4	0.7099	0.6339	1.8396	1.2241	1.2383	1.0764		
4	3.135	3.054	798.5	766.5	69.5	766.5	386.9	-6.4	29.0	-0.6	0.6794	0.5953	1.7923	1.2110	1.2275	1.0737		
5	1.734	1.599	707.5	666.3	61.8	666.3	350.2	-7.1	29.7	-0.7	0.5992	0.5087	1.6917	1.1996	1.2175	1.0746		
6	1.420	1.276	676.2	583.2	58.3	583.1	333.4	-11.3	29.5	-1.1	0.5716	0.4889	1.6714	1.1971	1.2165	1.0731		
7	1.17	1.031	680.1	586.4	56.6	586.4	324.7	-7.8	28.5	-0.8	0.5746	0.4914	1.6761	1.1986	1.2220	1.0747		
8	0.917	0.819	700.0	605.4	61.3	605.3	331.9	8.8	28.3	0.8	0.5908	0.5066	1.6963	1.2053	1.2223	1.0788		
9	0.667	0.622	694.4	601.1	55.8	600.5	351.9	26.7	30.5	2.5	0.5822	0.5004	1.6920	1.2163	1.2224	1.0838		
10	0.275	0.267	656.8	557.6	54.2	556.8	367.7	30.2	34.0	3.1	0.5469	0.4606	1.6508	1.2266	1.2268	1.0849		

SL	INCP	DEV	TURN	RM	VM-1	RMQVM-2	D-FAC	OMEGA-B	LOSS-P	POZ/	EFF-A	EFF-P	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE			TOTAL		TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-10.52	9.11	30.34	5.52	65.48	0.2434	0.1241	0.0262	0.9668	70.60	72.81	87.89	88.32	
2	-9.73	7.96	34.15	6.57	71.65	0.2181	0.0622	0.0140	0.9820	80.06	81.69	80.81	81.40	
3	-11.91	7.49	70.54	6.20	71.33	0.2187	0.0474	0.0113	0.9865	84.85	86.09	82.24	82.77	
4	-12.70	7.46	24.52	6.41	67.37	0.2386	0.0588	0.0149	0.9845	85.92	87.02	81.93	82.45	
5	-11.75	8.39	30.34	5.85	57.63	0.2889	0.0910	0.0262	0.9804	81.15	82.49	77.33	77.96	
6	-11.83	8.18	70.66	5.40	55.40	0.2916	0.0728	0.0219	0.9855	80.17	81.54	78.61	79.20	
7	-12.84	8.75	29.28	5.41	55.73	0.2905	0.0840	0.0263	0.9832	80.04	81.43	78.81	79.40	
8	-13.53	10.47	27.48	5.23	57.48	0.2867	0.0996	0.0329	0.9791	79.37	80.83	74.76	75.46	
9	-14.70	17.81	27.94	5.05	56.53	0.2954	0.1025	0.0351	0.9789	74.94	76.70	70.31	71.14	
10	-14.37	15.63	30.94	4.52	51.65	0.3347	0.1209	0.0430	0.9777	67.90	70.66	70.67	71.50	

NCORR	WCOMP	TO/TO	P /PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBM/SEC			%	%			%
2685	222.39	1.2140	1.7295	74.15	80.68	1.0778	0.9808	78.12

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	11.602	9.603	762.1	1028.3	767.1	667.6	0.0	782.2	0.0	49.4	0.7167	0.9303	547.1	598.4	0.8822	0.6264	938.2	692.4
2	10.500	7.822	770.4	1011.8	777.4	717.8	0.0	713.1	0.0	44.7	0.7253	0.9129	612.5	655.7	0.9266	0.6497	986.2	720.1
3	6.697	6.441	782.9	952.7	787.9	726.3	0.0	616.7	0.0	40.3	0.7303	0.8950	685.6	719.2	0.9814	0.6582	1040.7	733.5
4	7.002	4.923	791.8	889.8	797.8	711.1	0.0	535.0	0.0	36.9	0.7474	0.7945	752.9	779.2	1.0316	0.6713	1092.6	751.8
5	3.690	2.334	799.3	771.8	797.3	654.3	0.0	409.3	0.0	32.0	0.7555	0.6828	904.3	917.6	1.1407	0.7330	1206.9	828.5
6	2.994	1.575	797.7	722.6	797.7	620.4	0.0	370.4	0.0	30.8	0.7538	0.6767	977.3	986.5	1.1921	0.7703	1261.5	874.3
7	2.074	1.261	797.7	702.4	797.7	607.2	0.0	353.0	0.0	30.2	0.7534	0.6176	1023.9	1029.3	1.2263	0.7993	1297.8	908.9
8	1.657	0.961	798.2	695.4	797.2	607.9	0.0	337.6	0.0	29.0	0.7543	0.6111	1069.8	1073.6	1.2615	0.8390	1334.8	954.7
9	1.093	0.606	799.3	702.4	797.3	622.0	0.0	326.4	0.0	27.7	0.7555	0.6175	1119.5	1119.5	1.3002	0.8860	1375.6	1007.9
10	0.335	0.017	799.3	700.2	797.3	620.5	0.0	324.5	0.0	27.6	0.7555	0.6138	1175.7	1175.7	1.3438	0.9235	1421.7	1053.4
11	-0.024	-0.110	798.0	672.1	797.6	583.2	0.0	334.2	0.0	29.8	0.7542	0.5851	1223.1	1222.8	1.3802	0.9253	1460.5	1062.9

SL	INCS	INCM	DFV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	R-1	R-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-3.00	2.55	15.49	51.07	47.64	42.56	0.4642	0.3241	0.0735	1.4295	72.95	71.54	35.74	-15.33	-547.1	183.8	1.4295
2	-2.28	3.12	13.51	43.15	45.98	49.46	0.4563	0.1617	0.0411	1.5237	86.05	85.20	38.60	-4.56	-612.5	57.4	1.5237
3	-1.90	3.38	13.69	33.28	47.23	53.07	0.4598	0.0807	0.0221	1.5362	92.23	91.74	41.30	8.02	-685.6	-102.6	1.5362
4	-1.81	3.31	13.37	24.69	47.46	53.78	0.4578	0.0559	0.0157	1.5102	93.82	93.45	43.62	18.93	-752.9	-244.3	1.5102
5	-2.39	2.17	10.00	10.72	47.65	51.35	0.4302	0.0632	0.0168	1.4373	91.07	90.60	48.54	37.82	-904.3	-508.3	1.4373
6	-2.12	1.86	9.61	6.06	47.61	48.96	0.4136	0.0850	0.0215	1.4012	86.91	86.27	50.78	44.78	-977.3	-616.0	1.4012
7	-1.09	1.75	9.38	4.02	47.60	48.07	0.4006	0.0929	0.0229	1.3890	85.14	84.43	52.10	48.08	-1023.9	-676.3	1.3890
8	-0.45	1.85	8.84	2.84	47.62	48.37	0.3814	0.0671	0.0211	1.3906	85.63	84.95	53.28	50.45	-1069.8	-736.1	1.3906
9	-0.20	2.04	7.69	2.58	47.65	49.80	0.3598	0.0728	0.0176	1.4059	87.76	87.16	54.48	51.90	-1119.5	-793.1	1.4059
10	0.06	2.28	7.59	1.88	47.65	49.69	0.3519	0.0894	0.0213	1.4095	84.93	84.18	55.79	53.91	-1175.7	-851.3	1.4095
11	-0.02	2.20	10.51	0.15	47.62	48.21	0.3678	0.1491	0.0341	1.3833	75.27	74.11	56.88	56.72	-1223.1	-888.6	1.3833

TO/TO	P-1/PO	EFF-AD	EFF-P	WGL/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	ROTOR
1.1275	1.4382	85.82	86.53	44.88	1.1275	1.4382	85.82	86.53

STATOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	10.945	7.555	928.9	626.1	567.7	616.5	739.2	109.2	52.6	9.9	0.8273	0.5378	1.3566	1.1502	1.3566	1.1502	1.1502	1.1502
2	6.940	4.931	957.3	714.3	673.5	706.6	680.2	117.2	45.2	9.4	0.8562	0.6191	1.4666	1.1501	1.4666	1.1501	1.1501	1.1501
3	4.156	2.957	931.5	723.6	720.7	716.3	590.2	102.1	39.3	8.1	0.8333	0.6303	1.4940	1.1414	1.4940	1.1414	1.1414	1.1414
4	2.578	1.920	886.4	703.5	721.4	697.7	515.1	90.4	35.5	7.4	0.7911	0.6141	1.4763	1.1326	1.4763	1.1326	1.1326	1.1326
5	0.957	0.902	782.9	647.5	677.7	640.4	400.5	95.4	30.8	6.5	0.6936	0.5853	1.4133	1.1200	1.4133	1.1200	1.1200	1.1200
6	0.613	0.642	734.0	618.2	637.1	611.1	384.4	93.4	29.8	6.7	0.6475	0.5389	1.3822	1.1171	1.3822	1.1171	1.1171	1.1171
7	0.462	0.509	714.7	608.4	624.2	599.4	348.2	91.6	29.2	6.7	0.6294	0.5282	1.3697	1.1166	1.3697	1.1166	1.1166	1.1166
8	0.355	0.404	709.5	612.7	625.8	562.2	334.3	89.1	28.1	6.4	0.6245	0.5340	1.3741	1.1165	1.3741	1.1165	1.1165	1.1165
9	0.239	0.292	716.5	629.3	636.1	672.7	323.7	91.4	26.9	6.3	0.6308	0.5491	1.3877	1.1176	1.3877	1.1176	1.1176	1.1176
10	0.070	0.132	712.6	632.3	634.9	611.3	323.5	117.3	27.0	10.7	0.6256	0.5306	1.3884	1.1230	1.3884	1.1230	1.1230	1.1230
11	-0.036	0.009	682.8	593.1	595.7	577.3	334.0	135.9	29.3	13.2	0.5949	0.5124	1.3515	1.1315	1.3515	1.1315	1.1315	1.1315

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-0.05	4.66	15.30	42.72	38.79	48.31	0.4652	0.1421	0.0295	0.9485	60.62	62.27	60.62	62.27
2	-2.10	3.01	11.64	35.83	48.43	57.11	0.3842	0.1014	0.0226	0.9614	77.02	78.22	77.02	78.22
3	-3.58	-0.11	9.45	21.19	53.53	59.23	0.3468	0.0758	0.0182	0.9723	86.01	86.78	86.01	86.78
4	-7.97	-2.20	8.45	28.13	56.47	57.99	0.3246	0.0580	0.0149	0.9805	88.84	89.44	88.84	89.44
5	-11.47	-5.03	8.60	22.28	57.39	52.93	0.2819	0.0490	0.0142	0.9866	86.54	87.18	86.54	87.18
6	-12.38	-5.50	8.48	11.06	49.51	50.21	0.2691	0.0456	0.0140	0.9889	82.73	83.51	82.73	83.51
7	-13.05	-6.06	8.33	20.47	46.06	49.10	0.2651	0.0564	0.0179	0.9889	70.73	71.57	70.73	71.57
8	-14.34	-7.15	7.92	19.75	46.44	49.66	0.2517	0.0587	0.0191	0.9865	61.61	62.42	61.61	62.42
9	-16.20	-8.81	7.91	18.52	50.83	51.07	0.2335	0.0614	0.0209	0.9855	53.50	54.24	53.50	54.24
10	-18.09	-10.50	10.70	16.31	50.50	50.70	0.2144	0.0606	0.0212	0.9861	49.95	50.86	49.95	50.86
11	-18.97	-11.25	15.52	16.04	46.90	46.40	0.2368	0.1036	0.0370	0.9780	68.36	69.67	68.36	69.67

WCGRR	WGRPP	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	%	%	%	%	STAGE
876.3	222.55	1.1275	1.4091	80.74	81.65	1.1275	0.9797	80.74

ROTOR 2

																		RUN NO411, SPEED CODE 15, POINT NO 3			
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC			
1	8.751	5.909	573.2	905.4	563.3	727.9	106.2	538.3	10.6	36.1	0.4901	0.7664	680.6	724.6	0.6879	0.6360	804.5	751.4			
2	6.758	4.683	724.3	896.9	715.5	751.0	112.0	490.5	8.9	33.0	0.6287	0.7614	739.9	771.6	0.8264	0.6807	951.9	801.9			
3	5.591	3.822	744.4	864.7	738.1	742.5	96.6	443.2	7.5	30.7	0.6537	0.7352	794.9	818.2	0.8881	0.7073	1016.1	831.8			
4	4.472	2.936	731.1	814.8	725.6	706.6	89.5	405.7	7.0	29.6	0.6408	0.6923	854.2	869.5	0.9239	0.7182	1056.1	845.2			
5	2.240	1.247	670.0	711.6	663.4	601.4	93.7	380.4	8.0	32.3	0.5868	0.6004	988.4	992.6	0.9756	0.7240	1113.8	858.1			
6	1.672	0.930	647.7	675.0	641.2	570.7	91.6	360.5	8.1	32.3	0.5664	0.5682	1035.8	1036.9	0.9980	0.7449	1141.3	885.0			
7	1.125	0.570	643.4	672.6	637.3	571.2	88.1	355.1	7.9	31.9	0.5625	0.5653	1082.1	1082.1	1.0322	0.7771	1180.7	924.8			
8	0.352	-0.051	662.0	692.2	654.9	588.6	56.5	364.2	8.4	31.7	0.5791	0.5808	1145.5	1141.3	1.0819	0.8181	1236.7	974.9			
9	0.025	-0.310	654.8	685.5	643.8	560.3	114.3	394.9	10.5	35.2	0.5710	0.5719	1189.1	1186.4	1.0888	0.8091	1248.6	969.8			
10	-0.028	-0.173	615.1	652.4	600.1	508.9	135.0	408.3	12.7	38.7	0.5325	0.5402	1232.7	1231.2	1.0830	0.8012	1251.1	967.8			

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-8.61	0.35	18.74	31.20	45.20	62.21	0.2102	0.0296	-0.0070	1.3562	102.60	102.71	45.38	14.18	-574.4	-186.2	1.8468
2	-10.22	-3.96	12.11	20.78	58.30	66.68	0.2676	0.0833	0.0204	1.2917	89.19	89.80	41.18	20.40	-627.9	-281.1	1.8992
3	-8.83	-3.15	10.20	16.67	60.28	67.79	0.2789	0.0714	0.0177	1.2749	89.47	89.10	43.38	26.71	-698.3	-375.0	1.8993
4	-7.01	-1.92	8.68	13.27	59.08	65.71	0.2880	0.0572	0.0142	1.2715	90.83	90.51	44.51	33.24	-764.7	-463.7	1.8631
5	-2.57	1.30	6.86	7.95	53.62	54.78	0.3170	0.0735	0.0174	1.2731	87.66	87.23	53.46	45.51	-894.7	-612.1	1.7764
6	-0.60	2.51	7.50	5.98	51.85	54.00	0.3073	0.0662	0.0151	1.2694	88.33	87.92	55.83	49.85	-944.1	-674.4	1.7450
7	0.40	2.51	7.50	5.49	51.33	54.21	0.2995	0.0683	0.0155	1.2782	87.82	87.39	57.34	51.84	-993.9	-727.0	1.7514
8	-0.40	1.88	6.48	5.17	52.91	56.05	0.2952	0.0847	0.0203	1.2841	84.42	83.86	58.01	52.85	-1049.0	-777.1	1.7838
9	-0.23	2.02	4.05	4.25	51.76	53.00	0.3120	0.1140	0.0265	1.2854	80.24	79.53	58.96	54.70	-1069.8	-791.6	1.7810
10	1.36	3.59	6.67	3.07	47.63	47.66	0.3172	0.1097	0.0240	1.2970	81.53	80.84	61.33	58.26	-1097.8	-822.9	1.7489

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AI	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	SOFT			%	%
1.2227	1.8086	82.76	84.13	38.57	1.0844	1.2835	87.33	87.78

STATOR 2

																		RUN NO411, SPEED CODE 15, POINT NO 3			
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/	TO2/				
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	INLET	STAGE	TO1				
1	7.033	6.077	802.2	885.0	603.5	685.9	528.5	11.4	41.0	0.9	0.6706	0.5667	1.7875	1.2518	1.3147	1.0883					
2	5.284	5.716	833.3	733.0	681.0	732.9	480.3	9.2	35.1	0.7	0.7018	0.6106	1.8687	1.2431	1.2610	1.0825					
3	4.065	4.208	827.6	726.6	704.4	724.6	434.4	-2.2	31.6	-0.2	0.7005	0.6082	1.8800	1.2303	1.2621	1.0804					
4	3.159	3.124	796.5	685.6	689.7	684.5	398.5	-7.8	30.0	-0.7	0.6753	0.5746	1.8421	1.2185	1.2570	1.0783					
5	1.840	1.712	714.5	590.6	607.9	590.6	375.4	-7.2	31.7	-0.7	0.6029	0.4928	1.7520	1.2092	1.2550	1.0817					
6	1.622	1.439	682.4	563.0	581.7	562.9	356.7	-14.0	31.5	-1.4	0.5748	0.4693	1.7289	1.2064	1.2567	1.0802					
7	1.416	1.238	683.2	563.7	585.5	563.7	352.0	-4.0	31.0	-0.4	0.5749	0.4695	1.7325	1.2085	1.2647	1.0827					
8	1.132	1.005	707.3	588.8	607.5	588.7	362.1	11.0	30.8	1.1	0.5944	0.4898	1.7606	1.2162	1.2680	1.0878					
9	0.798	0.738	704.1	584.3	584.0	583.8	393.3	22.8	34.0	2.2	0.5885	0.4833	1.7572	1.2279	1.2661	1.0932					
10	0.312	0.296	673.6	543.6	536.1	543.0	407.8	25.0	37.3	2.6	0.5588	0.4461	1.7189	1.2392	1.2739	1.0952					

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-9.84	9.46	40.07	54.88	64.10	0.2784	0.1217	0.0257	0.9683	71.62	73.82	91.79	92.11
2	-8.70	8.74	34.39	62.88	70.39	0.2465	0.0575	0.0129	0.9839	80.44	82.07	82.81	83.37
3	-10.43	8.11	31.80	65.79	71.02	0.2469	0.0760	0.0086	0.9900	86.97	85.77	85.28	85.76
4	-11.66	7.89	30.65	64.84	67.54	0.2675	0.0432	0.0109	0.9887	87.21	88.26	86.07	86.52
5	-9.72	8.37	32.40	58.12	0.3284	0.3653	0.0188	0.9858	83.03	84.30	81.91	82.49	
6	-5.85	7.87	32.95	54.85	55.39	0.3346	0.0492	0.0148	0.9901	82.02	83.34	83.98	84.49
7	-10.40	9.15	31.42	55.27	55.48	0.3374	0.0504	0.0158	0.9899	81.50	82.87	83.82	84.35
8	-11.44	11.21	29.73	57.42	57.97	0.3293	0.0584	0.0193	0.9876	81.11	82.54	79.75	80.42
9	-10.33	13.50	31.73	54.76	57.00	0.3516	0.0696	0.0239	0.9854	78.66	78.42	74.63	75.46
10	-11.16	15.36	34.62	49.73	52.24	0.3961	0.0918	0.0326	0.9824	69.93	72.10	75.06	75.90

ACCRR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBM/SEC			%	%			%
876.1	222.55	1.2227	1.7827	80.54	82.08	1.0844	0.9857	82.13

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

RUN N0411, SPEED CODE 15, POINT NO 4																		
SL	EP1-1	EP1-2	V-1	V-2	VM-1	VM-2	VB-1	VB-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2		
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	11.800	9.437	769.9	1014.4	769.9	639.8	0.0	787.2	0.0	90.8	0.7247	0.9151	546.9	598.1	0.8890	0.6019	944.4	667.1
2	10.809	8.082	774.1	999.1	779.1	684.2	0.0	788.1	0.0	44.7	0.7343	0.8981	612.3	655.4	0.9339	0.6185	990.9	688.0
3	8.804	6.100	793.0	944.3	793.0	701.0	0.0	832.8	0.0	42.1	0.7489	0.8447	685.3	718.9	0.9897	0.6318	1046.0	706.2
4	7.087	6.715	801.1	887.4	801.1	691.0	0.0	852.3	0.0	38.6	0.7574	0.7845	752.5	778.9	1.0392	0.6481	1099.1	727.9
5	5.524	2.987	804.3	775.7	804.3	646.0	0.0	829.4	0.0	33.6	0.7608	0.6847	903.9	917.2	1.1444	0.7145	1209.9	806.5
6	2.801	1.891	800.2	714.6	758.2	607.7	0.0	876.1	0.0	32.3	0.7565	0.6471	978.9	986.0	1.1938	0.7556	1262.8	859.1
7	2.163	1.437	798.2	714.6	758.2	607.7	0.0	876.1	0.0	31.8	0.7544	0.6270	1023.5	1028.8	1.2247	0.7825	1298.0	891.9
8	1.615	1.084	797.2	706.2	747.2	606.8	0.0	861.3	0.0	30.8	0.7533	0.6190	1069.3	1073.2	1.2403	0.8199	1333.8	935.4
9	1.030	0.661	795.9	717.4	755.9	624.9	0.0	852.4	0.0	29.4	0.7519	0.6289	1119.0	1119.0	1.2473	0.8670	1373.2	989.0
10	0.294	0.077	793.7	714.2	793.7	621.9	0.0	851.3	0.0	29.5	0.7496	0.6241	1175.2	1175.2	1.2494	0.9021	1418.1	1032.3
11	-0.048	-0.118	791.4	680.5	791.4	578.6	0.0	858.1	0.0	31.8	0.7472	0.5903	1222.6	1222.2	1.2750	0.9021	1454.4	1039.9

SL	INCS	INCM	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VB*-1	VB*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-3.26	2.29	14.43	51.87	45.87	40.92	0.4963	0.3441	0.0776	1.4182	70.94	69.47	35.48	-16.39	-546.9	189.1	1.4182
2	-2.58	2.83	12.02	44.35	46.12	47.24	0.4573	0.1956	0.0497	1.5133	83.05	82.04	38.30	-4.04	-612.3	72.7	1.5133
3	-2.27	3.01	12.68	33.92	46.49	51.44	0.4957	0.1029	0.0283	1.5362	90.06	89.44	40.94	7.02	-685.3	-86.1	1.5362
4	-2.15	2.57	12.77	24.94	46.70	52.52	0.4882	0.0730	0.0205	1.5142	91.99	91.51	43.28	18.33	-752.5	-228.6	1.5142
5	-2.57	1.98	9.23	11.31	46.77	50.99	0.4528	0.0740	0.0199	1.4546	89.95	89.40	48.36	37.05	-903.9	-687.8	1.4546
6	-2.22	1.76	8.44	7.07	46.67	49.46	0.4323	0.0886	0.0229	1.4295	87.07	86.40	50.69	43.62	-976.9	-592.9	1.4295
7	-1.13	1.71	8.35	5.01	46.62	48.46	0.4203	0.0993	0.0249	1.4164	84.99	84.23	52.06	47.05	-1023.5	-652.8	1.4164
8	-0.43	1.87	7.95	3.75	46.60	48.61	0.4022	0.0974	0.0240	1.4168	84.88	84.11	53.30	49.55	-1069.3	-711.9	1.4168
9	-0.10	2.14	6.61	3.77	46.56	50.39	0.3799	0.0834	0.0206	1.4370	86.93	86.24	54.58	50.82	-1119.0	-766.6	1.4370
10	0.23	2.45	6.63	3.01	46.51	50.13	0.3729	0.1035	0.0253	1.4401	87.76	82.90	55.97	52.96	-1175.2	-823.9	1.4401
11	0.19	2.41	9.98	0.89	46.45	46.16	0.3886	0.1643	0.0380	1.4081	74.41	73.15	57.09	56.19	-1222.6	-864.1	1.4081

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AI	PO2/PO1	EFF-A	EFF-P
INLET	INLET	%	%	LBM/SEC		%	%
1.1340	1.4545	84.32	85.13	44.96	1.1340	1.4545	84.32

STATOR 1

RUN N3411, SPEED CODE 15, POINT NO 4																
SL	EP1-1	EP1-2	V-1	V-2	VM-1	VM-2	VB-1	VB-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	INLET	STAGE	TO1
1	11.062	7.704	920.3	591.1	541.8	580.8	743.9	109.9	53.9	10.6	0.8182	0.5060	1.3531	1.1511	1.3531	1.1511
2	7.251	5.160	948.2	682.6	646.4	672.3	693.7	117.8	47.0	9.9	0.8457	0.5888	1.4586	1.1531	1.4586	1.1531
3	4.561	3.184	928.9	704.1	701.4	656.7	609.0	101.9	40.9	9.3	0.8288	0.6108	1.4981	1.1460	1.4981	1.1460
4	2.917	2.079	888.9	698.1	711.1	681.7	533.4	56.0	36.9	7.8	0.7919	0.5983	1.4859	1.1374	1.4859	1.1374
5	1.159	0.988	796.1	641.2	675.7	634.0	421.0	96.2	31.9	6.6	0.7044	0.5578	1.4326	1.1263	1.4326	1.1263
6	0.809	0.769	757.4	622.3	651.1	615.0	387.0	94.9	30.7	6.8	0.6677	0.5408	1.4208	1.1244	1.4208	1.1244
7	0.628	0.619	736.7	613.5	636.4	607.0	371.1	89.0	30.2	6.3	0.6480	0.5328	1.4008	1.1242	1.4008	1.1242
8	0.472	0.474	729.0	616.1	635.3	610.0	357.6	86.1	29.4	6.0	0.6406	0.5351	1.4015	1.1246	1.4015	1.1246
9	0.330	0.345	740.3	631.1	652.5	625.3	349.4	85.9	28.2	7.8	0.6506	0.5484	1.4135	1.1268	1.4135	1.1268
10	0.178	0.219	736.3	635.0	647.9	624.6	349.8	114.3	28.4	10.4	0.6451	0.5504	1.4147	1.1327	1.4147	1.1327
11	0.042	0.073	702.1	555.5	604.2	582.5	357.6	123.9	30.6	12.0	0.6104	0.5124	1.3774	1.1408	1.3774	1.1408

SL	INCS	INCM	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	STAGE		%	%
1	1.18	5.89	15.96	43.28	37.26	46.08	0.4992	0.1285	0.0266	0.9542	59.71	61.39	59.71	61.39	59.71	61.39
2	-0.34	4.77	12.33	37.09	46.34	55.00	0.4148	0.0936	0.0208	0.9650	74.39	75.71	74.39	75.71	74.39	75.71
3	-3.42	1.55	9.66	32.64	52.02	58.18	0.3720	0.0683	0.0164	0.9752	83.89	84.78	83.89	84.78	83.89	84.78
4	-6.62	-0.84	8.64	29.01	53.88	57.29	0.3492	0.0542	0.0139	0.9817	87.24	87.93	87.24	87.93	87.24	87.93
5	-10.31	-3.87	8.76	23.29	52.70	53.03	0.3104	0.0511	0.0148	0.9857	85.66	86.37	85.66	86.37	85.66	86.37
6	-11.42	-4.44	8.57	21.95	51.14	51.19	0.2956	0.0477	0.0146	0.9877	83.07	83.88	83.07	83.88	83.07	83.88
7	-11.96	-4.97	7.98	21.90	50.13	50.38	0.2888	0.0436	0.0138	0.9893	81.43	82.29	81.43	82.29	81.43	82.29
8	-13.07	-5.88	7.60	21.34	50.26	50.58	0.2793	0.0449	0.0161	0.9882	81.26	82.14	81.26	82.14	81.26	82.14
9	-14.89	-7.50	7.38	20.36	51.97	51.83	0.2705	0.0720	0.0245	0.9821	81.97	82.83	81.97	82.83	81.97	82.83
10	-16.73	-9.14	10.37	17.99	51.47	51.50	0.2510	0.0709	0.0248	0.9827	78.53	79.55	78.53	79.55	78.53	79.55
11	-17.64	-9.92	14.28	18.61	47.65	47.32	0.2732	0.0945	0.0339	0.9790	68.05	69.46	68.05	69.46	68.05	69.46

WCI/AI	PO2/PO1	EFF-AD	EFF-P
LBM/SEC		%	%
8759.222.95	1.1340	1.4262	79.66

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.708	5.928	538.6	872.2	527.9	670.3	106.8	556.1	11.4	39.4	0.4591	0.7335	680.3	724.2	0.6644	0.5808	779.5	690.6
2	6.762	4.744	695.0	858.7	685.8	697.4	112.6	500.9	9.3	35.5	0.6003	0.7233	739.5	771.2	0.8026	0.6301	929.2	748.0
3	5.626	3.921	727.6	837.2	721.1	699.6	96.9	459.9	7.6	33.2	0.6333	0.7065	794.6	817.9	0.8734	0.6633	1003.4	785.9
4	4.571	3.094	717.3	800.2	711.4	672.1	91.9	434.4	7.4	32.8	0.6263	0.6750	853.8	869.1	0.9102	0.6752	1042.4	800.4
5	2.396	1.403	670.0	717.2	663.2	586.8	94.7	412.3	8.1	35.1	0.5849	0.6009	987.9	992.1	0.9713	0.6912	1112.6	825.0
6	1.781	1.008	654.0	686.0	647.7	563.8	90.9	390.7	8.0	34.7	0.5702	0.5736	1035.3	1036.5	0.9984	0.7168	1145.1	857.3
7	1.267	0.681	648.0	676.7	642.3	556.9	85.8	384.5	7.6	34.6	0.5646	0.5644	1081.6	1081.6	1.0325	0.7461	1184.9	892.2
8	0.533	0.130	66.8	693.8	657.6	574.9	90.8	388.4	7.9	34.0	0.5783	0.5772	1145.0	1140.8	1.0825	0.7878	1242.5	946.9
9	0.181	-0.138	65.0	690.4	648.9	546.1	115.1	422.4	10.1	37.7	0.5723	0.5710	1188.6	1185.9	1.0894	0.7764	1254.4	938.7
10	0.057	-0.069	620.1	663.2	607.7	503.8	123.0	431.3	11.4	40.6	0.5347	0.5444	1232.2	1230.6	1.0906	0.7755	1264.7	944.8

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.80	2.15	18.31	33.44	42.81	59.64	0.2670	0.0881	-0.0208	1.3926	107.11	107.45	47.19	13.75	-573.5	-166.1	1.8884
2	-9.05	-2.79	12.77	21.28	56.37	64.20	0.3098	0.0469	0.0114	1.3071	94.31	94.09	42.34	21.06	-626.9	-270.3	1.9294
3	-8.19	-2.51	10.51	17.00	59.56	66.18	0.3195	0.0538	0.0133	1.2985	92.58	92.30	44.02	27.02	-697.7	-358.1	1.9455
4	-6.54	-1.46	8.30	14.11	58.64	64.80	0.3302	0.0421	0.0105	1.3059	93.88	93.64	46.97	32.86	-761.9	-434.7	1.9702
5	-2.61	1.27	6.02	8.76	54.28	57.64	0.3549	0.0538	0.0130	1.3196	91.86	91.53	53.42	44.66	-893.3	-579.9	1.8749
6	-1.06	2.25	6.53	6.69	52.85	55.60	0.3428	0.0469	0.0109	1.3169	92.55	92.25	55.57	48.88	-944.4	-645.8	1.8505
7	0.24	2.63	6.02	5.80	52.37	55.00	0.3388	0.0593	0.0136	1.3224	90.47	90.08	57.18	51.38	-995.8	-697.1	1.8501
8	-0.38	1.64	3.85	5.43	53.66	56.94	0.3307	0.0751	0.0177	1.3311	87.76	87.26	55.04	52.61	-1054.2	-752.4	1.8826
9	-0.31	1.91	3.78	4.42	52.69	53.77	0.3500	0.1033	0.0242	1.3344	83.78	83.10	58.86	54.42	-1073.5	-763.6	1.8849
10	1.31	2.54	6.18	3.50	48.71	49.15	0.3559	0.0980	0.0218	1.3528	85.09	84.44	61.28	57.77	-1109.1	-799.3	1.8595

TO/TO	PO/PO	EFF-AD	EFF-P	WGL/AI	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	ROTOR
1.2383	1.8898	83.62	5.01	38.29	1.0920	1.5251	90.85	91.20

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	7.053	8.140	374.9	608.0	548.0	607.9	547.8	11.4	44.8	1.1	0.6444	0.4978	1.8252	1.2571	1.3472	1.0921
2	5.340	5.789	795.5	638.7	626.2	658.6	490.7	13.5	38.0	1.2	0.6652	0.5433	1.9012	1.2500	1.2884	1.0843
3	4.164	4.272	799.9	688.8	661.0	668.8	450.5	3.6	34.2	0.3	0.6721	0.5545	1.9315	1.2399	1.2887	1.0837
4	3.262	3.153	782.3	643.8	656.0	643.8	426.2	-0.5	33.0	-0.0	0.6585	0.5346	1.9164	1.2312	1.2955	1.0844
5	1.866	1.563	722.1	515.5	556.8	575.4	406.6	-8.6	34.3	-0.9	0.6054	0.4762	1.8602	1.2261	1.3083	1.0888
6	1.566	1.265	695.4	548.6	577.8	548.3	386.9	-16.1	33.8	-1.7	0.5819	0.4533	1.8377	1.2240	1.3066	1.0887
7	1.382	1.135	688.9	541.7	574.0	541.8	380.9	-9.6	33.6	-1.0	0.5753	0.4470	1.8345	1.2271	1.3111	1.0916
8	1.097	0.939	710.7	573.1	567.0	573.0	385.5	5.2	32.9	0.5	0.5923	0.4720	1.8689	1.2362	1.3218	1.0970
9	0.728	0.646	711.1	573.2	573.5	572.8	420.5	20.9	36.3	2.1	0.5894	0.4695	1.8699	1.2491	1.3213	1.1028
10	0.252	0.220	686.3	533.8	534.3	533.2	430.8	25.4	38.9	2.7	0.5645	0.4337	1.8316	1.2622	1.3315	1.1064

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	P02/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-6.06	9.58	43.72	51.56	59.80	0.3588	0.1364	0.0287	0.9668	72.88	75.05	96.23	96.39
2	-5.81	9.22	36.82	59.78	66.37	0.3055	0.0563	0.0126	0.9856	80.53	82.19	88.85	89.24
3	-7.82	8.60	33.93	67.90	68.63	0.2963	0.0283	0.0067	0.9926	86.19	87.40	89.53	89.90
4	-6.67	8.50	33.03	63.91	66.69	0.3144	0.0304	0.0077	0.9923	88.28	89.29	90.80	91.13
5	-7.15	8.21	35.13	58.49	59.75	0.3694	0.0392	0.0113	0.9914	85.74	86.93	88.64	89.06
6	-7.56	7.61	35.49	56.73	56.92	0.3865	0.0371	0.0112	0.9924	84.70	85.94	89.34	89.74
7	-7.85	8.54	34.58	56.35	56.16	0.3899	0.0372	0.0117	0.9925	83.29	84.65	87.66	88.12
8	-9.39	10.67	32.33	58.65	59.41	0.3685	0.0318	0.0105	0.9933	82.74	84.18	85.36	85.93
9	-8.54	13.35	34.16	55.93	58.86	0.3871	0.0424	0.0145	0.9911	80.53	80.32	80.36	81.12
10	-9.54	15.46	36.15	51.58	53.95	0.4329	0.0787	0.0280	0.9847	71.91	74.17	79.86	80.66

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
8759	222.95	1.2383	1.8694	82.06	83.55	1.0920	0.9892	87.20

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

RUN NO411, SPEED CODE 15, POINT NO. 5																			
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	4-1	M-2	U-1	U-2	M-1	M-1	V1-1	V1-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	11.885	9.798	758.2	1018.5	758.2	848.8	0.0	785.1	0.0	50.3	0.7126	0.9196	547.3	598.5	0.8789	0.6095	935.1	675.0	
2	10.894	7.943	104.9	1003.5	764.9	690.1	0.0	728.6	0.0	46.5	0.7196	0.9026	612.7	655.9	0.9219	0.8242	980.0	693.9	
3	9.544	6.005	777.9	951.5	777.9	706.6	0.0	637.3	0.0	42.0	0.7331	0.8518	685.7	719.4	0.9772	0.8367	1037.0	711.4	
4	7.982	4.701	789.4	892.5	789.4	698.1	0.0	556.2	0.0	38.5	0.7451	0.7952	753.0	779.4	1.0297	0.8529	1090.9	732.9	
5	4.452	2.481	803.5	776.9	803.5	642.4	0.0	436.9	0.0	34.2	0.7599	0.6851	904.5	917.9	1.1443	0.7076	1209.8	802.5	
6	3.446	2.011	804.7	737.4	804.7	617.6	0.0	402.9	0.0	33.1	0.7612	0.6476	977.5	986.7	1.1977	0.7463	1266.1	849.9	
7	2.792	1.465	804.2	723.3	804.2	611.1	0.0	386.9	0.0	32.3	0.7628	0.6341	1026.2	1029.5	1.2333	0.7775	1303.4	886.8	
8	2.080	1.319	808.3	721.0	808.3	618.0	0.0	371.4	0.0	31.0	0.7650	0.6318	1070.1	1073.9	1.2692	0.8209	1341.0	935.6	
9	1.321	0.824	809.3	723.6	809.3	626.4	0.0	362.1	0.0	30.0	0.7661	0.6337	1119.8	1119.8	1.3079	0.8609	1381.6	983.1	
10	0.450	0.180	808.6	718.1	808.6	620.2	0.0	362.0	0.0	30.3	0.7654	0.6266	1176.0	1176.0	1.3508	0.8929	1427.2	1023.3	
11	0.018	-0.080	806.9	680.6	806.9	570.4	0.0	371.4	0.0	33.1	0.7635	0.5890	1223.4	1223.0	1.3868	0.8870	1465.5	1025.1	

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VB*-1	VB*-2	PI/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.44	2.71	14.83	51.89	45.53	41.41	0.4822	0.3453	0.0780	1.4150	71.50	65.85	35.90	-15.99	-547.3	186.6	1.4190
2	-2.04	3.37	12.08	44.83	45.73	47.48	0.4849	0.2012	0.0511	1.5136	82.96	81.45	38.84	-5.99	-612.7	72.7	1.5134
3	-1.64	3.44	12.27	34.96	46.09	51.60	0.4826	0.1110	0.0305	1.5385	89.73	89.69	41.56	6.60	-685.7	-82.0	1.5385
4	-1.65	3.47	12.14	26.08	46.40	52.98	0.4775	0.0724	0.0204	1.5236	92.38	91.91	43.78	17.70	-753.0	-223.2	1.5236
5	-2.50	2.06	8.96	11.63	46.76	50.95	0.4586	0.0746	0.0202	1.4651	90.14	89.59	48.43	36.81	-904.5	-480.9	1.4651
6	-2.34	1.64	8.20	7.18	46.79	49.47	0.4422	0.0881	0.0228	1.4445	87.52	86.85	50.57	43.38	-977.5	-583.8	1.4445
7	-1.38	1.46	7.75	5.37	46.82	49.23	0.4281	0.0899	0.0228	1.4415	86.86	86.17	51.81	46.44	-1024.2	-642.7	1.4415
8	-0.79	1.52	7.06	4.28	46.87	50.16	0.4069	0.0778	0.0195	1.4508	88.29	87.66	52.95	48.67	-1070.1	-732.5	1.4508
9	-0.53	1.71	6.21	3.73	46.90	51.14	0.3901	0.0724	0.0181	1.4635	88.94	88.33	54.15	50.42	-1119.8	-757.6	1.4635
10	-0.25	1.97	6.37	2.79	46.88	50.60	0.3858	0.0966	0.0237	1.4650	89.21	84.39	55.49	52.70	-1176.0	-814.0	1.4650
11	-0.30	1.92	9.97	0.41	46.84	46.00	0.4062	0.1650	0.0782	1.4289	74.98	73.69	56.59	56.19	-1223.4	-851.7	1.4289

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	SQFT			%	%
1.1365	1.4696	85.16	85.94	44.93	1.1365	1.4696	85.16	85.94

STATOR 1

RUN NO411, SPEED CODE 15, POINT NO. 5																			
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	4-1	M-2	PI/PO	TO/TO	PO/PO	TO2/			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TC1			
1	11.022	7.840	511.2	569.9	529.0	557.7	742.0	116.9	54.4	11.7	0.8092	0.4870	1.3500	1.1508	1.3500	1.1508			
2	7.302	5.428	939.7	662.4	833.0	651.8	694.5	117.6	47.6	10.2	0.8369	0.5702	1.4920	1.1533	1.4920	1.1533			
3	4.621	3.514	921.1	694.0	690.4	686.1	639.8	104.1	41.4	8.6	0.8209	0.6012	1.5015	1.1465	1.5015	1.1465			
4	2.958	2.353	882.8	680.3	701.8	673.7	555.6	94.8	37.3	8.0	0.7855	0.5908	1.4927	1.1383	1.4927	1.1383			
5	0.995	1.033	790.1	636.4	844.4	629.3	427.7	94.5	32.8	8.5	0.6979	0.3528	1.4430	1.1285	1.4430	1.1285			
6	C.530	C.878	754.2	621.9	641.5	614.8	398.8	93.7	31.7	8.7	0.6636	0.5396	1.4243	1.1277	1.4243	1.1277			
7	C.755	C.520	742.0	614.4	636.3	607.8	381.8	90.1	31.0	8.4	0.6519	0.5328	1.4146	1.1279	1.4146	1.1279			
8	0.368	0.453	741.0	617.3	643.2	611.3	367.9	85.4	29.8	8.0	0.6508	0.5353	1.4150	1.1283	1.4150	1.1283			
9	0.262	0.398	744.3	631.7	651.7	625.5	359.5	88.4	28.9	8.0	0.6533	0.5480	1.4265	1.1304	1.4265	1.1304			
10	0.166	0.287	738.8	635.6	644.8	625.5	340.8	114.7	29.2	10.4	0.6661	0.5501	1.4283	1.1369	1.4283	1.1369			
11	C.652	C.122	701.1	556.9	566.9	582.6	371.0	130.1	31.9	12.6	0.6080	0.5124	1.3912	1.1461	1.3912	1.1461			

SL	INCS	INCH	D-V	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET
1	1.75	6.44	17.08	42.74	36.67	44.56	0.5155	0.1396	0.0288	0.9511	59.37	61.05	59.37	61.05	59.37	61.05
2	0.29	5.41	12.62	37.44	45.72	53.60	0.4311	0.1088	0.0242	0.9599	73.32	74.68	73.32	74.68	73.32	74.68
3	-3.42	2.05	9.47	32.82	51.61	57.71	0.3780	0.0693	0.0166	0.9751	84.11	84.99	84.11	84.99	84.11	84.99
4	-6.14	-0.36	8.80	29.33	53.61	57.07	0.3551	0.0598	0.0143	0.9814	87.74	88.41	87.74	88.41	87.74	88.41
5	-9.47	-3.03	8.68	24.21	52.25	53.06	0.3148	0.0486	0.0141	0.9866	86.00	86.71	86.00	86.71	86.00	86.71
6	-10.42	-3.65	8.45	27.06	50.87	51.54	0.2982	0.0517	0.0159	0.9868	83.32	84.13	83.32	84.13	83.32	84.13
7	-11.24	-4.25	8.08	22.53	50.73	50.78	0.2976	0.0784	0.0249	0.9805	81.49	82.38	81.49	82.38	81.49	82.38
8	-12.68	-5.49	7.52	21.81	51.64	51.01	0.2937	0.1035	0.0340	0.9743	81.31	82.21	81.31	82.21	81.31	82.21
9	-14.20	-6.80	7.60	20.83	52.61	52.17	0.2764	0.1054	0.0358	0.9737	81.92	82.81	81.92	82.81	81.92	82.81
10	-15.86	-8.27	10.36	18.87	52.01	51.88	0.2579	0.1021	0.0358	0.9750	78.33	79.39	78.33	79.39	78.33	79.39
11	-16.31	-8.59	14.86	19.36	47.44	47.58	0.2740	0.1153	0.0413	0.9746	67.73	69.19	67.73	69.19	67.73	69.19

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RPM	LBM/SEC			%	%			%	%
8765.	222.80	1.1365	1.4352	79.65	80.66	1.1365	0.9766	79.65	79.65

ROTOR 2

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M'-1		M'-2		V'-1		V'-2		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	8.639	5.955	524.4	854.3	512.0	641.6	113.6	570.2	12.4	41.3	0.4465	0.7203	480.7	724.7	0.6506	0.5938	764.1	659.9																			
2	6.692	4.759	680.6	845.6	671.4	676.4	111.6	507.5	9.4	36.7	0.5868	0.7104	740.0	771.8	0.7929	0.6101	919.6	726.2																			
3	5.570	3.958	722.9	826.5	716.0	677.1	79.1	474.1	7.9	34.9	0.6287	0.6955	795.1	818.4	0.8685	0.6392	998.6	759.6																			
4	4.547	3.167	712.8	796.8	706.9	658.9	91.8	448.1	7.4	34.2	0.6218	0.6704	854.4	869.7	0.9070	0.6581	1039.8	782.2																			
5	2.440	1.464	669.0	718.7	662.4	581.5	93.2	422.3	8.0	36.0	0.5832	0.6009	988.6	992.8	0.9710	0.6808	1113.8	814.7																			
6	1.819	1.032	654.3	689.7	647.9	560.2	91.3	402.4	8.0	35.7	0.5695	0.5751	1056.0	1057.2	0.9971	0.7058	1145.5	846.6																			
7	1.292	0.683	648.3	680.0	642.1	554.1	85.0	394.2	7.5	35.4	0.5610	0.5655	1082.3	1082.3	1.0321	0.7347	1180.5	883.4																			
8	0.950	0.133	662.5	696.9	656.0	569.2	92.4	402.1	8.0	35.2	0.5761	0.5780	1145.8	1141.6	1.0792	0.7740	1241.0	933.2																			
9	0.177	-0.133	658.5	695.5	648.2	543.4	115.8	434.1	10.1	36.8	0.5707	0.5734	1189.4	1186.7	1.0869	0.7654	1254.1	928.3																			
10	0.034	-0.102	619.7	667.6	608.0	496.5	129.4	446.4	12.0	42.0	0.5330	0.5462	1233.0	1231.5	1.0830	0.7599	1259.1	928.9																			

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VB*-1	VB*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.25	2.71	17.94	34.36	41.65	58.07	0.2934	-0.1249	-0.1296	1.4093	109.55	110.02	47.74	13.38	-567.2	-154.5	1.9062
2	-8.39	-2.12	12.93	21.80	55.37	63.25	0.3282	0.2248	0.0060	1.3230	97.06	96.94	43.01	21.21	-628.4	-44.3	1.9474
3	-6.05	-2.38	10.37	17.28	59.52	65.01	0.3461	0.0603	0.0150	1.3073	92.00	91.69	44.15	24.88	-696.0	-344.3	1.9669
4	-4.34	-1.26	8.02	14.60	58.67	64.54	0.3499	0.0405	0.0101	1.3213	94.36	94.14	47.18	32.58	-762.6	-421.5	1.9634
5	-2.50	1.37	5.81	9.07	54.40	58.07	0.3681	0.0476	0.0115	1.3367	93.05	92.75	53.52	44.46	-895.4	-570.5	1.9159
6	-1.06	2.25	6.23	6.99	53.25	56.15	0.3560	0.0400	0.0094	1.3349	93.87	93.61	55.57	48.58	-944.7	-634.7	1.8943
7	0.27	2.65	5.80	6.05	52.78	55.65	0.3501	0.0513	0.0119	1.3403	92.02	91.67	57.21	51.16	-997.3	-688.1	1.8939
8	-0.34	1.89	3.65	5.67	53.92	57.32	0.3446	0.0705	0.0167	1.3502	88.96	88.48	58.08	52.40	-1053.4	-739.5	1.9274
9	-0.29	1.94	3.52	4.70	53.00	54.42	0.3619	0.0959	0.0226	1.3549	85.47	84.83	58.87	54.17	-1073.6	-752.7	1.9327
10	1.26	3.49	6.10	3.54	48.87	49.26	0.3666	0.0866	0.0193	1.3728	87.28	86.69	61.23	57.69	-1103.6	-785.1	1.9063

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
%	%	%	%	%	%	%	%	%
1.2445	1.9266	84.20	85.58	38.07	1.0950	1.3424	92.18	92.51

STATOR 2

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M'-1		M'-2		V'-1		V'-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	6.584	8.106	764.8	500.2	521.2	580.1	559.7	14.6	46.8	1.4	0.6350	0.4734	1.8452	1.2592	1.3652	1.0973																				
2	5.316	5.796	783.8	628.4	606.1	628.3	497.0	14.8	39.3	1.3	0.6538	0.5164	1.9139	1.2526	1.3019	1.0858																				
3	4.172	4.288	789.3	645.0	638.2	644.9	464.5	4.9	36.0	0.4	0.6613	0.5327	1.9499	1.2439	1.2954	1.0865																				
4	3.268	3.155	778.7	627.3	642.8	627.3	439.6	-2.4	34.3	-0.2	0.6538	0.5190	1.9638	1.2361	1.3069	1.0877																				
5	1.876	1.565	723.7	568.4	591.9	568.4	416.5	-4.8	35.1	-0.5	0.6051	0.4687	1.8995	1.2326	1.3242	1.0929																				
6	1.579	1.264	699.5	544.0	574.9	543.9	398.4	-7.5	34.7	-0.8	0.5837	0.4480	1.8799	1.2313	1.3234	1.0914																				
7	1.406	1.131	692.4	536.2	571.6	536.2	390.7	-4.0	34.4	-0.4	0.5766	0.4408	1.8762	1.2344	1.3276	1.0944																				
8	1.117	0.945	714.3	567.6	592.6	567.5	398.9	10.1	33.9	1.0	0.5935	0.4698	1.9113	1.2442	1.3396	1.1006																				
9	0.755	0.663	717.1	569.4	572.4	568.9	431.9	24.1	37.0	2.4	0.5925	0.4667	1.9143	1.2575	1.3402	1.1062																				
10	0.276	0.242	691.7	531.4	528.9	530.7	445.9	28.2	40.1	3.0	0.5671	0.4301	1.8771	1.2711	1.3509	1.1090																				

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-INLET	TOT-STG
										%	%	%	%
1	-4.02	9.94	45.40	49.73	58.29	0.3890	0.1337	0.0282	0.9682	74.00	76.12	99.38	99.42
2	-4.55	9.39	37.91	58.69	64.47	0.3351	0.0681	0.0153	0.9830	80.61	82.28	90.95	91.29
3	-6.04	8.73	35.58	62.58	67.35	0.3208	0.0741	0.0081	0.9913	86.12	87.36	88.49	88.90
4	-7.31	8.32	34.57	63.63	66.16	0.3375	0.0421	0.0106	0.9895	88.49	89.51	90.44	90.76
5	-6.28	8.59	35.62	68.98	60.15	0.3831	0.0427	0.0123	0.9906	86.41	87.57	89.68	90.09
6	-6.65	8.51	35.51	57.38	57.55	0.3977	0.0402	0.0121	0.9917	85.37	86.60	90.55	90.92
7	-7.06	9.13	34.78	57.05	56.66	0.4031	0.0399	0.0125	0.9920	83.96	85.30	89.08	89.51
8	-8.29	11.16	32.93	59.17	59.95	0.3834	0.0354	0.0117	0.9925	83.19	84.64	86.40	86.96
9	-7.75	13.69	34.61	56.76	59.58	0.4005	0.0480	0.0164	0.9898	79.10	80.90	81.93	82.67
10	-8.28	15.77	37.09	51.90	57.73	0.4471	0.0797	0.0283	0.9844	72.63	74.92	82.19	82.84

NCCRR	WCCRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
RPM	LBM/SEC	%	%	%	%	%	%	%	%
8765	222.80	1.2445	1.9038	82.53	84.03	1.0950	0.9882	88.	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	H-1	H-2	M-1	M-2	U-1	U-2	M*1	M*2	V*1	V*2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.384	10.124	736.3	997.8	736.3	876.5	0.0	768.4	0.0	50.3	0.6900	0.9025	521.0	570.5	0.8456	0.9029	407.3	666.6
2	10.233	8.597	738.6	972.0	738.6	877.4	0.0	697.9	0.0	45.8	0.6924	0.8764	593.9	625.1	0.8826	0.8139	941.5	781.3
3	8.727	6.046	742.0	913.1	742.0	881.5	0.0	607.7	0.0	41.7	0.6959	0.8181	653.6	685.6	0.9273	0.6146	988.8	784.0
4	7.148	5.518	744.2	853.1	744.2	887.5	0.0	531.2	0.0	38.5	0.6982	0.7603	717.7	747.9	0.9700	0.6263	1133.5	700.3
5	4.264	3.734	747.2	740.7	747.2	814.3	0.0	412.6	0.0	33.9	0.7012	0.6538	862.1	876.8	1.0706	0.6792	1167.4	768.4
6	3.226	2.983	749.8	715.8	749.8	805.2	0.0	382.2	0.0	32.3	0.7040	0.6308	931.7	940.4	1.1728	0.7258	1196.0	873.4
7	2.643	2.567	753.0	705.8	753.0	801.7	0.0	369.0	0.0	31.5	0.7072	0.6210	976.2	981.3	1.1579	0.7553	1232.8	858.4
8	2.091	1.967	757.0	700.5	757.0	804.5	0.0	354.3	0.0	30.4	0.7114	0.6162	1019.9	1023.5	1.1936	0.7930	1275.1	801.9
9	1.404	1.352	760.6	696.8	760.6	808.0	0.0	344.5	0.0	29.5	0.7151	0.6139	1067.3	1067.3	1.2322	0.8298	1310.8	846.7
10	0.572	0.567	762.8	698.5	762.8	809.8	0.0	340.7	0.0	29.2	0.7173	0.6122	1120.9	1120.9	1.2751	0.8679	1354.8	890.2
11	0.089	0.110	762.8	699.9	762.8	813.8	0.0	345.8	0.0	31.1	0.7174	0.5936	1166.1	1165.7	1.3194	0.8718	1393.4	1000.8

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2	EFF-P	EFF-A	H*1	H*2	VM*1	VM*2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-3.38	2.17	13.59	52.59	44.85	41.28	0.4681	0.3043	0.0683	1.4138	74.71	73.46	35.36	-17.23	-521.6	197.4	1.4918
2	-2.46	2.54	11.94	44.54	44.43	47.17	0.4689	0.1619	0.0741	1.4867	86.06	85.27	38.42	-6.12	-589.4	72.7	1.4940
3	-1.73	3.95	17.18	34.96	45.04	50.00	0.4752	0.0968	0.0286	1.4901	90.84	90.31	41.47	6.51	-653.6	-77.9	1.4901
4	-1.40	3.72	12.02	26.45	45.11	50.62	0.4736	0.0716	0.0202	1.4701	92.35	91.92	44.03	17.59	-717.7	-211.7	1.4701
5	-1.81	2.74	9.15	12.14	45.20	48.48	0.4478	0.0721	0.0195	1.4439	90.78	89.79	49.12	34.97	-862.1	-442.7	1.4439
6	-1.71	2.27	7.52	8.44	45.28	48.33	0.4250	0.0695	0.0182	1.4105	90.02	89.53	51.19	62.70	-931.7	-556.2	1.4105
7	-0.82	2.02	6.82	6.85	45.37	48.32	0.4126	0.0702	0.0181	1.4117	89.61	89.09	52.37	45.52	-976.2	-612.3	1.4117
8	-0.30	2.00	6.31	5.51	45.49	48.89	0.3968	0.0616	0.0157	1.4176	90.57	90.09	53.43	47.92	-1019.9	-648.2	1.4176
9	-0.15	2.09	5.73	4.60	45.60	49.41	0.3807	0.0593	0.0149	1.4249	90.72	90.24	54.53	49.94	-1067.3	-722.6	1.4249
10	0.57	2.24	5.66	3.77	45.66	49.67	0.3712	0.0704	0.0176	1.4327	88.86	88.28	55.77	51.99	-1120.9	-780.2	1.4327
11	-0.09	2.13	4.80	1.79	45.66	46.38	0.3850	0.1248	0.0298	1.4074	80.30	79.33	56.81	55.01	-1166.1	-820.0	1.4074

TO/T0	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	ROTOR	ROTOR	ROTOR	ROTOR
1.1237	1.4327	87.45	88.07	43.76	1.1237	1.4327	87.45	88.07

STATOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	H-1	H-2	M-1	M-2	U-1	U-2	PO/PO	TO/T0	PO/PO	TO/T0
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	INLET	INLET	STAGE	TOT
1	10.469	7.625	900.2	591.9	532.0	583.4	726.2	130.2	53.7	4.6	0.9021	0.5091	1.3424	1.1407	1.3424	1.1407	1.1407	1.1407
2	6.919	4.984	916.8	670.7	630.3	663.0	665.8	101.3	46.5	8.6	0.8191	0.5814	1.4350	1.1400	1.4350	1.1400	1.1400	1.1400
3	4.082	3.011	886.7	675.7	665.5	668.5	781.3	98.2	46.9	9.3	0.7914	0.5880	1.4547	1.1328	1.4547	1.1328	1.1328	1.1328
4	2.474	1.477	844.0	656.3	671.5	644.7	511.4	63.1	37.3	8.1	0.7516	0.5720	1.4795	1.1256	1.4795	1.1256	1.1256	1.1256
5	0.775	0.875	744.6	612.4	631.6	605.1	403.7	96.1	32.6	8.6	0.6630	0.5340	1.3952	1.1156	1.3952	1.1156	1.1156	1.1156
6	0.441	0.612	723.0	609.4	624.3	601.9	376.5	95.1	31.1	9.0	0.6430	0.5312	1.3597	1.1156	1.3597	1.1156	1.1156	1.1156
7	0.307	0.489	720.7	607.6	621.9	600.2	364.2	94.6	30.3	9.0	0.6351	0.5294	1.3817	1.1163	1.3817	1.1163	1.1163	1.1163
8	0.266	0.421	717.2	610.2	625.5	602.9	350.9	93.8	29.3	9.8	0.6317	0.5316	1.3981	1.1166	1.3981	1.1166	1.1166	1.1166
9	0.188	0.351	716.2	615.2	624.3	611.6	341.9	96.9	28.5	9.0	0.6303	0.5306	1.3957	1.1182	1.3957	1.1182	1.1182	1.1182
10	0.088	0.272	716.0	626.9	630.4	617.2	339.6	109.5	28.3	10.1	0.6288	0.5454	1.4019	1.1229	1.4019	1.1229	1.1229	1.1229
11	0.002	0.088	687.0	592.6	593.9	574.2	345.4	124.9	30.2	12.2	0.5995	0.5123	1.3703	1.1297	1.3703	1.1297	1.1297	1.1297

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2	EFF-P	EFF-A	H*1	H*2	VM*1	VM*2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.00	5.77	15.00	44.07	37.16	46.27	0.4853	0.1407	0.0293	0.9514	62.40	63.92	62.40	63.92	62.40	63.92	1.3424
2	-0.81	4.30	11.09	37.87	45.76	54.19	0.4446	0.0938	0.0209	0.9665	77.65	78.76	77.65	78.76	77.65	78.76	1.4350
3	-3.43	1.54	7.70	32.58	50.07	55.54	0.3866	0.0698	0.0167	0.9764	85.14	85.91	85.14	85.91	85.14	85.91	1.4547
4	-0.21	-0.43	8.95	29.11	51.22	54.23	0.3453	0.0589	0.0150	0.9817	87.37	88.00	87.37	88.00	87.37	88.00	1.4795
5	-9.65	-3.21	8.57	23.73	49.55	50.38	0.3306	0.0473	0.0137	0.9887	86.47	87.05	86.47	87.05	86.47	87.05	1.4795
6	-11.06	-4.28	8.77	22.11	49.49	44.98	0.2826	0.0610	0.0187	0.9852	85.31	85.94	85.31	85.94	85.31	85.94	1.3952
7	-11.85	-5.86	8.60	21.39	49.55	44.95	0.2763	0.0713	0.0245	0.9816	84.22	84.53	84.22	84.53	84.22	84.53	1.3597
8	-13.15	-5.77	8.41	20.45	52.13	49.95	0.2681	0.0511	0.0249	0.9785	84.75	84.75	84.75	84.75	84.75	84.75	1.3817
9	-14.57	-7.17	8.56	19.51	50.88	50.87	0.2527	0.0904	0.0306	0.9788	84.54	84.54	84.54	84.54	84.54	84.54	1.3957
10	-16.78	-9.19	10.07	18.25	50.66	51.00	0.2391	0.0940	0.0326	0.9783	82.49	83.31	82.49	83.31	82.49	83.31	1.4019
11	-18.68	-10.36	14.44	18.01	47.55	47.26	0.2544	0.1182	0.0424	0.9746	72.64	73.83	72.64	73.83	72.64	73.83	1.3703

ROTOR	STATOR	TO/T0	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR	ROTOR	ROTOR
8354	217.03	1.1237	1.4013	81.85	82.70	1.1237	0.9783	81.85	

ROTOR 2

SL	PPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	M-1	M-2	M-1	M-2	U-1	U-2	W-1	W-2	VI-1	VI-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	9.611	5.782	553.2	738.1	544.6	784.6	97.5	514.3	10.1	32.9	0.4743	0.8040	648.8	640.7	0.6444	0.6892	775.0	804.2
2	4.389	4.310	685.3	917.4	682.4	795.9	97.6	456.2	2.1	29.6	0.5997	0.7878	765.3	735.6	0.7960	0.7244	913.8	843.4
3	4.980	3.189	704.5	976.2	658.1	774.2	96.9	412.2	7.7	27.8	0.6155	0.7532	757.8	780.1	0.6711	0.7774	962.7	858.0
4	3.610	2.035	690.1	825.1	694.1	735.6	91.3	373.9	7.6	26.9	0.6042	0.7085	814.3	828.9	0.6714	0.7426	995.4	864.4
5	1.044	0.015	647.2	709.8	640.3	632.0	94.1	323.1	8.4	27.1	0.5663	0.6093	842.3	846.3	0.9299	0.7569	1062.7	887.5
6	0.444	-0.251	635.1	683.2	632.0	613.9	94.4	299.7	8.5	26.0	0.5589	0.5819	987.4	888.6	0.9501	0.7863	1094.1	972.4
7	-0.008	-0.540	634.9	681.6	628.1	619.0	93.0	285.6	8.4	24.8	0.5546	0.5809	1031.6	1031.6	0.9804	0.8264	1129.3	864.3
8	-0.939	-1.067	640.8	694.1	633.7	627.3	99.3	285.1	8.9	24.4	0.5593	0.5866	1092.1	1088.1	1.0276	0.8574	1172.4	1019.0
9	-0.882	-1.249	637.2	672.7	627.4	601.5	111.6	301.2	10.1	24.6	0.5568	0.5695	1133.6	1131.1	1.0461	0.8677	1199.3	1074.0
10	-0.587	-0.760	599.6	613.2	586.6	526.5	124.3	314.4	12.0	24.8	0.5187	0.5144	1175.2	1173.7	1.0411	0.8454	1203.5	1007.9

SL	INCS	IACM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	WFF-P	WFF-A	M-1	M-2	WV-1	WV-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-6.83	0.13	17.08	32.64	43.93	62.73	0.1168	0.6659	0.1156	1.2951	93.70	93.47	45.16	12.52	-551.4	-176.5	1.7493
2	-9.82	-3.56	13.93	22.34	55.76	66.07	0.1866	0.1378	0.0740	1.2288	81.26	80.70	41.58	19.22	-607.7	-279.4	1.7797
3	-8.75	-1.07	8.93	18.02	57.12	65.95	0.2042	0.1145	0.0780	1.2156	81.94	81.43	43.46	25.44	-662.9	-369.4	1.7628
4	-6.95	-1.87	7.13	14.88	55.89	63.61	0.2177	0.1043	0.0263	1.2046	81.75	81.27	44.56	31.68	-723.1	-453.0	1.7214
5	-3.08	0.79	5.95	8.36	52.32	59.02	0.2405	0.1486	0.0350	1.1966	68.74	68.09	52.95	44.99	-848.1	-623.1	1.6052
6	-1.72	1.39	5.94	6.42	51.64	53.49	0.2246	0.1402	0.0330	1.1430	67.40	66.78	54.71	48.29	-893.0	-688.4	1.5953
7	-0.93	1.65	4.95	5.90	51.40	54.11	0.2061	0.1226	0.0280	1.1449	69.71	69.13	56.21	50.31	-938.5	-745.0	1.5481
8	-0.94	1.28	3.24	5.47	51.94	54.86	0.1956	0.1228	0.0293	1.1441	68.41	67.81	57.47	51.95	-992.7	-803.0	1.4688
9	-0.70	1.52	3.42	4.39	51.40	52.10	0.2083	0.1585	0.0374	1.1322	60.09	59.39	58.46	54.07	-1022.1	-825.8	1.5813
10	0.86	3.09	6.91	2.32	47.61	44.84	0.2284	0.2036	0.0443	1.1140	50.21	49.44	60.83	58.50	-1050.9	-959.4	1.5222

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AT	EFF-P
INLET	INLET	R	R	SOFT	R	R	R	R
1.1966	1.6474	77.96	79.45	37.76	1.0644	1.1756	72.81	73.43

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	M-1	M-2	M-1	M-2	U-1	U-2	W-1	W-2	VI-1	VI-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	6.833	8.305	832.4	879.5	661.7	876.3	504.9	-75.8	37.1	-4.9	0.7038	0.7480	1.6708	1.2339	1.2336	1.0817		
2	4.991	5.744	851.4	867.5	725.2	862.5	446.1	-93.0	31.5	-6.1	0.7251	0.7405	1.6764	1.2224	1.1570	1.0767		
3	4.097	4.588	835.3	853.8	732.5	811.5	401.6	-83.4	28.7	-5.9	0.7145	0.6868	1.6085	1.2090	1.096	1.0702		
4	3.733	3.948	804.0	760.5	715.2	756.5	367.3	-77.9	27.2	-5.9	0.6886	0.6480	1.5678	1.1983	1.096	1.0671		
5	2.495	2.368	716.7	712.5	642.0	711.0	318.6	-65.8	26.4	-3.7	0.6117	0.6077	1.5487	1.1841	1.130	1.0724		
6	1.826	1.653	694.4	685.6	628.0	685.6	296.4	-7.7	25.3	-0.6	0.5922	0.5841	1.5247	1.1813	1.106	1.0584		
7	1.356	1.158	694.2	669.7	633.7	669.6	283.5	10.4	24.1	0.9	0.5923	0.5700	1.5138	1.1799	1.0915	1.0549		
8	1.079	0.929	701.7	681.1	641.7	660.7	284.1	23.7	23.9	2.1	0.5981	0.5613	1.5076	1.1836	1.0789	1.0577		
9	0.909	0.834	685.8	649.3	616.5	648.7	300.4	27.6	26.0	2.4	0.5814	0.5486	1.4974	1.1918	1.0708	1.0576		
10	0.459	0.453	624.4	600.6	544.3	600.1	314.0	24.3	30.0	2.3	0.5278	0.5032	1.4532	1.2012	1.0629	1.0632		

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	WFF-P	WFF-P	WFF-A	WFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-13.71	3.59	42.07	56.62	49.60	0.0896	0.1595	0.0335	0.9550	67.50	69.73	75.40	76.11
2	-12.30	1.90	31.84	62.82	49.71	0.1223	0.1957	0.0438	0.9423	71.43	73.41	56.62	57.48
3	-13.36	2.35	34.63	64.00	45.07	0.1731	0.3024	0.0717	0.9130	69.54	71.49	42.80	43.62
4	-14.48	2.06	33.06	62.64	41.87	0.1949	0.3293	0.0820	0.9101	69.11	71.98	39.75	41.42
5	-15.02	5.38	30.10	55.66	39.49	0.1558	0.1728	0.0497	0.9611	72.09	73.74	49.69	50.44
6	-16.11	8.65	25.91	54.41	37.45	0.1457	0.1768	0.0532	0.9626	70.87	72.84	47.49	49.19
7	-17.31	10.45	23.22	55.05	36.13	0.1581	0.2210	0.0693	0.9533	69.88	71.56	44.43	45.11
8	-18.36	12.20	21.83	55.76	35.24	0.1797	0.2653	0.0876	0.9430	67.77	69.47	36.00	36.66
9	-18.80	13.70	21.54	53.05	33.84	0.1734	0.2664	0.0913	0.9449	63.75	65.73	32.54	33.18
10	-18.44	15.04	27.66	46.05	49.07	0.2113	0.2667	0.0948	0.9535	55.99	58.22	27.74	28.37

NCCRP	WCRP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AT
INLET	INLET	INLET	INLET	R	R	R	R	STAGE
RPM	LBM/SEC							
8354	217.03	1.1966	1.9525	68.11	70.01	1.0644	0.9424	45.73

ROTOR 2

														RUN N1411, SPEED CODE 10, POINT NO 2									
SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	M-1	M-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2					
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC					
1	8.640	5.871	541.3	894.3	532.0	725.8	99.7	522.5	10.5	35.4	0.4647	0.7627	645.2	606.8	0.6535	0.6347	761.9	744.2					
2	6.458	4.501	677.8	882.4	670.7	749.5	97.8	665.6	8.3	31.7	0.5888	0.7543	711.3	731.4	0.7839	0.6798	912.3	794.2					
3	5.107	3.465	696.4	846.5	650.1	734.2	93.5	421.4	7.7	29.8	0.6092	0.7244	757.5	775.6	0.8340	0.6976	954.9	815.1					
4	3.807	2.399	684.5	798.7	678.4	700.5	91.2	383.7	7.7	28.7	0.5983	0.6830	809.7	824.2	0.8647	0.7076	988.1	827.5					
5	1.330	0.441	647.0	655.6	635.9	614.2	95.8	344.8	8.5	29.7	0.5660	0.5107	936.9	940.9	0.9244	0.7208	1056.8	848.8					
6	0.842	0.220	637.9	660.6	630.6	578.8	96.2	318.3	8.7	28.8	0.5570	0.5599	981.9	983.0	0.9494	0.7467	1087.2	881.3					
7	0.468	0.021	631.4	655.9	624.6	581.1	92.5	304.2	8.4	27.6	0.5510	0.5557	1025.7	1025.7	0.9800	0.7849	1123.0	926.4					
8	-0.094	-0.406	640.5	665.6	632.9	591.7	98.3	304.8	8.8	27.2	0.5597	0.5633	1085.9	1081.9	1.0233	0.8268	1173.0	976.7					
9	-0.311	-0.565	641.9	659.8	632.1	574.8	111.9	324.0	10.0	29.4	0.5587	0.5557	1127.2	1124.7	1.0411	0.8301	1196.0	985.6					
10	-0.200	-0.316	608.7	622.6	556.8	527.8	119.9	330.2	11.4	32.0	0.5266	0.5206	1168.5	1167.1	1.0439	0.8274	1206.6	989.5					

SL	INCS	INCM	DEV	TURN	RMCVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	M-1	M-2	VR-1	VR-2	PO/PO
	DEGREE	CEGREF	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-6.446	0.449	17.16	32.92	43.19	50.72	0.1733	0.0118	0.0029	1.3177	98.88	98.83	45.53	12.60	-545.4	-164.3	1.7747
2	-9.52	-1.26	11.11	22.49	55.13	65.01	0.2321	0.0924	0.0227	1.2564	88.07	87.68	41.88	19.39	-603.6	-265.7	1.8150
3	-8.54	-2.86	9.16	18.00	56.80	65.28	0.2456	0.0733	0.0186	1.2451	89.09	88.75	43.67	25.66	-660.0	-354.2	1.8078
4	-6.89	-1.80	7.55	14.52	55.72	63.30	0.2526	0.0547	0.0137	1.2374	90.93	90.66	46.63	32.11	-718.5	-440.5	1.7729
5	-3.29	0.58	5.47	8.13	52.47	55.12	0.2782	0.0973	0.0274	1.2036	81.42	80.94	52.74	44.61	-841.1	-596.1	1.6815
6	-2.07	1.24	6.60	5.61	51.62	52.84	0.2627	0.0922	0.0214	1.1872	80.51	80.03	54.55	48.95	-885.7	-664.6	1.6503
7	-0.74	1.65	5.19	5.05	51.14	53.22	0.2451	0.0785	0.0181	1.1912	82.63	82.19	56.21	51.15	-933.2	-721.4	1.6515
8	-1.08	1.15	3.95	4.63	51.90	54.29	0.2350	0.0824	0.0194	1.1955	81.23	80.75	57.34	52.70	-987.6	-777.1	1.6676
9	-1.06	1.16	3.67	3.77	51.72	52.38	0.2471	0.1146	0.0269	1.1872	74.50	73.87	58.09	54.32	-1015.3	-807.6	1.6633
10	0.39	2.62	6.17	2.59	48.33	47.56	0.2523	0.1256	0.0279	1.1863	72.54	71.86	60.35	57.76	-1046.7	-836.9	1.6271

TO/TO	PO/PO	EFF-AD	EFF-P	W1/W1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	INLET	INLET	%	ROTOR	ROTOR	
1.2013	1.7095	82.19	83.47	37.67	1.0685	1.2181	83.05	86.39

STATOR 2

														RUN N1411, SPEED CODE 10, POINT NO 2									
SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	M-1	M-2	M-1	M-2	U-1	U-2	PO/PO	TO/TO	PO/PO	TO/TO					
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	INLET	INLET	STAGE	TOT					
1	7.009	8.079	803.7	725.3	618.7	725.2	513.0	9.2	39.5	0.7	0.6779	0.6066	1.7114	1.2319	1.2702	1.9829	1.9829						
2	5.251	5.743	820.7	765.0	694.7	764.9	655.6	-5.0	33.7	-0.4	0.7057	0.6450	1.7850	1.2228	1.2337	1.9765	1.9765						
3	4.026	4.224	819.9	747.2	702.5	747.2	612.4	-7.0	30.2	-0.5	0.6994	0.6323	1.7797	1.2106	1.2265	1.9725	1.9725						
4	3.003	3.088	789.4	707.9	693.7	737.9	376.8	-6.1	28.5	-0.5	0.6763	0.5995	1.7419	1.1998	1.2166	1.9690	1.9690						
5	1.653	1.505	700.6	613.5	612.4	613.5	340.2	2.2	29.1	0.2	0.5993	0.5170	1.6463	1.1906	1.1790	1.9670	1.9670						
6	1.468	1.122	667.5	590.4	589.0	590.4	314.1	-2.8	28.1	-0.3	0.5661	0.4973	1.6251	1.1874	1.1693	1.9623	1.9623						
7	1.021	0.887	664.3	583.5	591.6	583.5	302.1	-1.1	27.1	-0.1	0.5693	0.4913	1.6189	1.1871	1.1674	1.9623	1.9623						
8	0.810	0.716	674.5	594.8	611.8	594.7	304.6	12.5	26.8	1.7	0.5712	0.5002	1.6296	1.1920	1.1661	1.9642	1.9642						
9	0.596	0.546	668.1	588.8	584.6	588.0	323.5	30.3	29.0	3.0	0.5631	0.4929	1.6233	1.2014	1.1584	1.9679	1.9679						
10	0.259	0.248	632.1	553.3	539.3	552.1	329.8	35.8	31.4	3.7	0.5291	0.4601	1.5906	1.2101	1.1595	1.9695	1.9695						

SL	INCM	DEV	TURN	RMCVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	M-1	M-2	EFF-P	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	%	%	%
1	-11.39	4.23	38.75	54.71	64.51	0.2276	0.1351	0.0285	0.9642	71.50	73.55	85.23	85.72	80.79	82.27	81.25
2	-10.44	7.66	33.55	62.23	69.92	0.2628	0.0620	0.0140	0.9426	80.79	81.15	82.71	83.20	84.99	86.59	83.81
3	-11.89	7.75	30.70	64.02	69.30	0.2094	0.0528	0.0126	0.9853	84.99	86.15	84.36	85.41	80.31	81.63	77.46
4	-13.17	8.05	28.58	63.00	66.06	0.2746	0.0630	0.0159	0.9835	80.31	81.63	73.02	73.21	79.39	80.74	74.66
5	-12.37	9.28	28.85	55.66	56.95	0.2631	0.0417	0.0264	0.9805	79.39	79.39	78.85	78.85	77.97	77.97	73.21
6	-13.30	9.45	26.35	53.96	54.76	0.2585	0.0754	0.0227	0.9853	77.97	77.97	74.43	74.43	73.70	73.70	63.96
7	-14.36	9.45	27.16	53.96	54.09	0.2644	0.1023	0.0321	0.9802	73.70	73.70	67.46	67.46	69.49	69.49	62.86
8	-15.39	11.35	25.64	54.98	55.03	0.2607	0.1155	0.0362	0.9771	67.46	67.46	62.86	62.86			
9	-15.83	14.22	26.00	53.03	53.96	0.2702	0.1249	0.0428	0.9758							
10	-16.97	16.43	27.74	48.38	50.03	0.2910	0.1296	0.0460	0.9774							

WCOM	WCOM	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%	%	%	STAGE
RPM	LBM/SEC							
6307.	216.80	1.2013	1.6747	78.80	80.27	1.0689	0.9797	74.98

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTO

ROTOR 1

RUN NO411, SPEED CODE 10, POINT NO 3		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2	
SL	EPS1-1	EPS1-2	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	11.000	9.942	713.4	988.4	713.4	814.8	0.0	763.7	0.0	51.1	0.6444	0.8851	518.0	546.5	0.6238	0.5829	881.6	645.7															
2	11.051	8.312	719.1	957.4	719.1	856.4	0.0	696.9	0.0	46.4	0.6724	0.8612	579.9	620.8	0.6438	0.5944	923.8	648.8															
3	9.440	6.594	729.6	931.5	729.6	863.8	0.0	618.0	0.0	42.5	0.6731	0.8044	649.0	680.9	0.6143	0.5972	976.5	647.6															
4	8.063	5.434	738.2	844.5	738.2	852.6	0.0	535.9	0.0	39.4	0.6920	0.7519	712.8	737.7	0.6619	0.6082	1026.2	683.1															
5	4.871	3.684	749.2	735.6	749.2	802.6	0.0	421.9	0.0	35.0	0.7033	0.6490	856.1	868.0	1.0400	0.6619	1137.7	750.3															
6	3.694	2.877	751.6	714.9	751.6	796.7	0.0	393.7	0.0	33.4	0.7057	0.6291	925.2	935.9	1.1193	0.7084	1192.0	805.0															
7	2.967	2.430	753.6	708.1	753.6	796.1	0.0	382.2	0.0	32.7	0.7070	0.6222	969.4	974.5	1.1523	0.7384	1227.8	844.3															
8	2.263	1.927	755.7	702.4	755.7	798.2	0.0	368.5	0.0	31.4	0.7100	0.6168	1012.0	1016.5	1.1873	0.7742	1263.7	881.9															
9	1.483	1.384	756.8	701.3	756.8	802.7	0.0	358.6	0.0	30.8	0.7111	0.6151	1059.9	1059.9	1.2200	0.8110	1307.4	924.7															
10	0.569	0.520	756.5	700.7	756.5	803.7	0.0	355.4	0.0	30.5	0.7108	0.6130	1113.1	1113.1	1.2444	0.8475	1345.8	968.7															
11	0.067	0.071	755.1	699.2	755.1	803.5	0.0	360.9	0.0	32.4	0.7094	0.6016	1158.0	1157.6	1.2988	0.8481	1382.5	975.8															

SL	INCS	INCH	DEV	TURN	RHOVR-1	RHOVR-2	D-FAC	OMEGA-B	LOSS-P	P02/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.47	2.88	13.09	53.80	44.10	40.25	0.4776	0.3160	0.8707	1.4893	74.45	73.20	36.07	-17.73	-518.0	197.2	1.4893
2	-1.83	3.57	11.47	45.64	44.29	46.08	0.4797	0.1699	0.8431	1.4773	85.75	84.94	39.04	-6.60	-579.9	76.1	1.4773
3	-1.37	3.91	11.75	35.74	44.64	49.11	0.4870	0.0967	0.8266	1.4899	91.09	90.57	41.83	6.09	-649.0	-70.9	1.4899
4	-1.36	3.82	11.81	1.96	44.92	49.94	0.4888	0.0660	0.8189	1.4751	92.99	92.60	44.13	17.17	-712.8	-201.8	1.4751
5	-2.87	2.47	8.75	1.29	45.26	49.00	0.4846	0.0638	0.8178	1.4269	91.35	90.91	48.87	36.57	-856.1	-644.9	1.4269
6	-1.95	2.03	6.99	8.78	45.33	48.21	0.4414	0.0614	0.8162	1.4298	91.46	91.01	50.95	42.17	-925.2	-540.3	1.4298
7	-1.82	1.87	6.14	7.33	45.39	48.47	0.4285	0.0600	0.8159	1.4346	91.33	90.88	52.17	44.84	-969.4	-592.3	1.4346
8	-0.45	1.84	5.89	5.99	45.45	48.98	0.4115	0.0540	0.8141	1.4409	91.95	91.52	53.29	47.30	-1012.8	-648.0	1.4409
9	-0.20	2.04	5.12	5.15	45.49	49.42	0.3961	0.0520	0.8133	1.4496	92.19	91.76	54.48	49.33	-1059.9	-701.4	1.4496
10	0.87	2.29	5.12	4.35	45.48	49.82	0.3889	0.0527	0.8166	1.4577	90.05	89.50	55.80	51.45	-1113.1	-757.5	1.4577
11	-0.68	2.21	8.51	2.16	45.44	48.11	0.4028	0.1247	0.8300	1.4293	81.14	80.16	56.89	54.73	-1158.0	-796.7	1.4293

TO/T0	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	INLET	INLET	INLET	INLET
2	2	2	2	2	2	2	2	2
1.1258	1.4460	88.36	88.95	43.54	1.1258	1.4460	88.36	88.95

STATOR 1

RUN NO411, SPEED CODE 10, POINT NO 3		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2	
SL	EPS1-1	EPS1-2	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	17.972	7.661	883.0	563.6	883.0	508.7	513.5	721.7	106.7	54.7	10.8	0.7856	0.4841	1.3428	1.1389	1.3428	1.1389																
2	6.899	5.619	900.6	644.5	900.6	607.7	634.9	664.7	110.8	47.5	9.8	0.8033	0.5575	1.4322	1.1389	1.4322	1.1389																
3	4.086	3.038	874.0	657.6	874.0	651.0	650.0	584.1	99.4	41.9	8.7	0.7795	0.5713	1.4585	1.1324	1.4585	1.1324																
4	2.468	1.966	835.9	641.6	835.9	657.2	634.9	516.5	92.5	38.1	8.3	0.7434	0.5582	1.4448	1.1261	1.4448	1.1261																
5	0.716	0.761	747.8	624.9	747.8	623.1	597.7	413.0	93.1	33.5	8.9	0.6605	0.5266	1.4089	1.1173	1.4089	1.1173																
6	0.346	0.463	731.1	605.0	731.1	619.8	596.9	387.8	98.9	32.0	9.4	0.6445	0.5265	1.4035	1.1183	1.4035	1.1183																
7	0.222	0.351	725.9	604.1	725.9	620.2	598.5	377.3	95.2	31.3	9.1	0.6391	0.5253	1.4026	1.1197	1.4026	1.1197																
8	0.182	0.303	722.2	604.2	722.2	623.2	599.7	364.9	93.3	30.3	8.9	0.6354	0.5270	1.4051	1.1205	1.4051	1.1205																
9	0.160	0.267	721.9	611.9	721.9	628.1	607.4	355.8	101.8	29.5	9.5	0.6345	0.5255	1.4188	1.1222	1.4188	1.1222																
10	0.106	0.201	721.5	621.9	721.5	628.5	612.5	354.3	113.5	29.4	10.5	0.6326	0.5407	1.4160	1.1273	1.4160	1.1273																
11	0.034	0.088	684.9	591.8	684.9	588.2	576.0	360.5	130.5	31.5	12.8	0.6008	0.5094	1.3861	1.1344	1.3861	1.1344																

SL	INCS	INCH	DEV	TURN	RHOVR-1	RHOVR-2	D-FAC	OMEGA-B	LOSS-P	P02/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	2.06	4.77	18.16	43.96	35.81	44.50	0.5047	0.1286	0.8266	0.9369	63.29	64.78	44.78	43.29	64.78	44.78	
2	0.18	5.30	12.29	37.66	44.46	52.51	0.4204	0.0887	0.8197	0.9493	77.84	78.93	77.84	78.93	77.84	78.93	
3	-3.00	2.47	10.04	35.18	49.10	54.65	0.3796	0.0647	0.8155	0.9784	85.92	86.65	85.92	86.65	85.92	86.65	
4	-5.34	0.44	9.08	29.85	50.57	53.62	0.3588	0.0567	0.8145	0.9827	88.37	88.89	88.37	88.89	88.37	88.89	
5	-8.71	-2.26	8.99	24.67	49.34	50.36	0.3121	0.0446	0.8129	0.9888	87.79	86.37	87.79	86.37	87.79	86.37	
6	-10.12	-3.34	9.20	22.62	49.63	50.13	0.2942	0.0701	0.8151	0.9830	86.35	86.99	86.35	86.99	86.35	86.99	
7	-10.89	-3.90	8.71	22.24	49.95	49.96	0.2920	0.0957	0.8104	0.9777	84.79	85.50	84.79	85.50	84.79	85.50	
8	-12.10	-4.91	8.42	21.49	50.50	50.10	0.2854	0.1135	0.8172	0.9730	84.37	85.10	84.37	85.10	84.37	85.10	
9	-13.84	-6.15	9.07	20.02	51.14	50.79	0.2675	0.1162	0.8194	0.9724	84.55	85.29	84.55	85.29	84.55	85.29	
10	-15.68	-8.09	10.50	18.92	51.28	51.04	0.2577	0.1219	0.8247	0.9712	82.89	82.94	82.89	82.94	82.89	82.94	
11	-16.76	-9.03	11.64	18.74	47.59	47.42	0.2654	0.1360	0.8486	0.9706	72.77	73.99	72.77	73.99	72.77	73.99	

NCORR	MCORR	TO/T0	PO/PO	EFF-AD	EFF-P	TO2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
RPM	LBM/SEC	2	2	2	2	2	2	2	2
8296	215.92	1.1258	1.4125	82.45	83.29	1.1258	0.9768	82.45	83.29

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	0.593	5.816	524.6	474.9	514.2	491.9	103.8	528.9	11.3	37.0	0.4491	0.7400	444.3	484.0	0.4367	0.6029	744.0	709.5
2	6.393	4.493	662.7	654.4	654.3	713.8	105.7	477.5	9.1	33.6	0.5744	0.7311	700.5	730.5	0.7664	0.6447	884.2	757.3
3	5.003	3.528	685.5	828.4	478.9	706.1	94.9	435.2	7.9	31.4	0.5977	0.7062	752.6	774.7	0.8241	0.6486	945.2	784.4
4	3.813	2.517	673.4	784.9	667.3	677.3	90.1	396.7	7.7	30.3	0.5883	0.6687	808.7	823.2	0.8567	0.6818	980.4	800.3
5	1.292	0.492	640.8	690.4	633.5	524.8	90.1	362.2	8.4	31.3	0.5597	0.5897	935.7	939.7	0.9189	0.7019	1051.8	829.0
6	0.494	0.100	635.0	663.5	627.6	571.8	90.7	336.4	8.8	30.5	0.5539	0.5607	980.6	981.7	0.9454	0.7284	1084.1	862.0
7	0.485	-0.367	639.2	648.4	630.4	581.0	104.1	330.5	9.4	29.6	0.5567	0.5634	1024.4	1024.4	0.9781	0.7625	1122.2	903.4
8	-0.306	-0.549	637.9	662.4	627.3	564.4	115.4	346.7	10.4	31.6	0.5542	0.5556	1084.5	1080.5	1.0154	0.7997	1165.7	944.7
9	-0.203	-0.318	604.0	626.8	589.7	513.4	130.4	359.6	12.5	35.0	0.5216	0.5220	1125.8	1123.3	1.0333	0.8052	1189.3	960.0
10													1167.1	1165.4	1.0299	0.7946	1192.7	955.4

SL	INCL	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-5.75	1.20	17.19	33.42	42.62	59.29	0.2027	0.0225	-0.0053	1.3298	101.49	131.96	44.24	12.63	-540.5	-157.1	1.7922
2	-9.24	-2.97	11.10	27.78	34.15	63.27	0.2613	0.0801	0.0197	1.2659	90.49	89.75	42.16	19.39	-594.8	-253.0	1.8219
3	-8.17	-2.50	9.21	18.32	56.36	64.16	0.2786	0.0694	0.0174	1.2564	90.15	89.82	44.03	25.72	-657.6	-341.5	1.8309
4	-6.41	-1.33	7.59	14.95	55.29	62.54	0.2787	0.0492	0.0123	1.2533	92.32	92.07	47.10	32.15	-718.6	-426.4	1.8028
5	-3.07	0.81	5.50	8.82	52.40	55.59	0.2991	0.0800	0.0196	1.2309	85.66	85.24	52.96	44.15	-839.6	-577.5	1.7317
6	-2.33	1.31	4.10	6.78	51.86	53.50	0.2843	0.0797	0.0187	1.2134	84.46	84.03	54.63	48.45	-893.9	-645.1	1.7028
7	-0.75	1.63	5.58	5.24	51.60	53.34	0.2712	0.0794	0.0185	1.2119	83.78	83.33	56.19	50.95	-932.4	-701.7	1.6991
8	-1.17	1.05	3.47	5.01	52.18	54.58	0.2607	0.0795	0.0189	1.2189	83.55	83.88	57.24	52.23	-980.4	-750.0	1.7213
9	-1.00	1.23	3.34	4.17	51.76	52.68	0.2709	0.1077	0.0255	1.2154	78.15	77.53	58.16	53.99	-1010.4	-776.5	1.7175
10	0.39	2.63	5.92	2.86	48.15	47.42	0.2785	0.1162	0.0260	1.2168	76.97	76.33	60.36	57.51	-1036.7	-806.0	1.6830

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	ROTOR
%	%	%	%				%	%
1.2079	1.7500	83.36	84.61	37.31	1.0729	1.2390	86.43	86.84

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	7.001	8.754	780.2	674.4	590.3	674.3	519.3	11.6	41.1	1.0	0.6614	0.5654	1.7405	1.2334	1.2912	1.0830		
2	5.211	5.654	659.7	711.9	661.3	716.9	467.2	7.7	35.2	0.6	0.6953	0.6000	1.8057	1.2254	1.2672	1.0774		
3	3.975	4.122	802.7	771.1	681.5	738.1	424.2	-1.4	31.9	-0.1	0.6823	0.5958	1.8100	1.2143	1.2423	1.0747		
4	3.041	3.004	775.5	673.8	670.5	673.8	389.7	-4.0	30.1	-0.3	0.6600	0.5675	1.7802	1.2044	1.2383	1.0722		
5	1.664	1.492	710.1	595.4	603.0	595.3	357.6	-6.4	30.7	-0.4	0.5938	0.4995	1.7644	1.1974	1.2116	1.0715		
6	1.329	1.162	669.9	571.3	581.0	571.1	332.3	-11.9	29.7	-1.2	0.5684	0.4789	1.6827	1.1948	1.1992	1.0674		
7	1.122	0.969	662.5	563.4	579.8	563.4	320.5	0.4	28.9	0.0	0.5594	0.4718	1.6761	1.1904	1.1955	1.0676		
8	0.687	0.762	677.7	579.9	592.0	579.8	329.8	11.7	29.1	1.2	0.5716	0.4850	1.6826	1.2015	1.1986	1.0700		
9	0.631	0.580	671.6	575.5	575.4	574.4	344.1	29.0	31.0	2.9	0.5638	0.4793	1.6881	1.2117	1.1941	1.0737		
10	0.261	0.248	637.4	534.9	526.6	534.0	359.1	31.7	34.3	3.4	0.5314	0.4423	1.6514	1.2201	1.1937	1.0754		

SL	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-9.71	9.49	40.17	53.18	62.78	0.2697	0.1137	0.0240	0.9711	73.45	75.42	91.04	91.36			
2	-8.65	8.65	34.54	60.57	67.86	0.2410	0.0534	0.0120	0.9556	81.38	83.03	84.02	84.52			
3	-10.24	8.17	31.97	42.86	68.02	0.2429	0.0386	0.0092	0.9887	86.24	87.33	85.73	86.17			
4	-11.51	8.29	36.44	42.84	68.14	0.2582	0.0470	0.0119	0.9882	87.49	88.45	87.08	87.47			
5	-10.75	8.44	31.28	56.18	57.37	0.3003	0.0701	0.0202	0.9851	83.29	84.49	78.70	79.47			
6	-8.63	8.13	36.94	56.23	54.99	0.3023	0.0585	0.0176	0.9884	82.27	83.93	78.93	79.44			
7	-12.46	4.63	26.69	54.12	54.16	0.3007	0.0701	0.0222	0.9865	81.12	82.43	77.27	77.63			
8	-13.12	11.24	27.47	55.36	55.68	0.2987	0.0841	0.0278	0.9833	80.49	81.87	75.80	76.41			
9	-13.76	14.15	28.13	53.44	54.74	0.2664	0.0900	0.0309	0.9825	76.39	78.05	76.34	71.09			
10	-14.12	16.12	30.90	48.42	50.21	0.3444	0.1684	0.0385	0.9810	69.98	72.00	68.68	49.45			

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	ROTOR
RPM	LBM/SEC	%	%	%	%			%
8296	215.92	1.2079	1.7230	86.84	87.26	1.0729	1.2390	79.46

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

RUN NO411, SPEED CODE 10, POINT NO. 4																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	12.338	9.342	711.0	975.4	711.0	615.8	0.0	756.4	0.0	50.7	0.6641	0.8801	520.9	569.7	0.8233	0.8607	861.4	863.5	
2	11.220	7.789	717.9	953.2	717.9	654.4	0.0	692.9	0.0	44.5	0.6712	0.8548	583.2	624.3	0.8046	0.8516	924.9	956.2	
3	9.644	6.499	729.5	897.2	729.5	659.7	0.0	608.1	0.0	42.6	0.6831	0.8020	652.7	684.7	0.9164	0.9937	978.9	844.1	
4	7.987	5.447	738.5	842.3	738.5	656.5	0.0	535.0	0.0	39.4	0.6923	0.7495	716.7	741.9	0.9647	0.8672	1029.1	682.0	
5	6.466	4.558	744.5	759.5	744.5	656.8	0.0	422.7	0.0	34.9	0.7036	0.6524	860.9	873.6	1.0716	0.6670	1141.5	736.0	
6	5.457	3.531	751.5	720.3	751.5	651.4	0.0	396.4	0.0	33.4	0.7057	0.6338	930.4	939.2	1.1231	0.7128	1196.0	810.1	
7	2.887	2.311	753.6	711.3	753.6	597.7	0.0	385.5	0.0	32.8	0.7078	0.6247	974.8	975.9	1.1573	0.7404	1232.1	843.0	
8	1.883	1.589	755.9	704.0	755.9	597.3	0.0	372.6	0.0	32.0	0.7102	0.6175	1018.5	1022.2	1.1917	0.7740	1268.4	892.4	
9	0.935	1.252	756.7	700.5	756.7	599.4	0.0	362.4	0.0	31.2	0.7110	0.6137	1065.8	1065.8	1.2283	0.8097	1307.1	924.2	
10	0.282	0.432	755.7	695.4	755.7	595.8	0.0	358.5	0.0	31.0	0.7109	0.6075	1119.3	1119.3	1.2689	0.8442	1350.5	966.4	
11	-0.016	0.672	754.3	673.5	754.3	566.9	0.0	363.6	0.0	32.7	0.7089	0.5851	1164.5	1164.1	1.3033	0.8521	1387.4	960.9	

SL	INCS	INCM	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-P	TEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.44	3.15	14.03	53.13	44.01	46.52	0.4773	0.3105	0.0699	1.4043	74.90	73.67	36.34	-16.79	-520.9	186.7	1.4043
2	-1.61	3.79	12.11	45.23	44.25	44.12	0.4818	0.1685	0.0428	1.4780	85.87	85.07	39.26	-5.96	-593.2	88.6	1.4780
3	-1.21	4.07	12.28	35.37	44.64	48.48	0.4916	0.0980	0.0269	1.4902	90.95	90.40	41.99	0.62	-657.7	-76.7	1.4902
4	-1.10	3.96	12.06	26.64	44.93	49.94	0.4892	0.0657	0.0186	1.4778	93.16	92.70	44.27	17.63	-716.7	-206.9	1.4778
5	-1.93	2.63	8.81	12.38	45.27	48.52	0.4428	0.0600	0.0163	1.4348	92.10	91.49	49.00	36.82	-860.9	-450.9	1.4348
6	-1.88	2.18	6.89	4.03	45.33	48.87	0.4410	0.0589	0.0156	1.4372	91.83	91.40	51.10	42.07	-930.4	-542.7	1.4372
7	-0.88	1.99	6.15	7.47	45.39	48.83	0.4306	0.0635	0.0166	1.4396	90.97	90.49	52.32	44.85	-974.8	-594.4	1.4396
8	-0.81	2.06	5.80	6.22	45.46	48.86	0.4159	0.0628	0.0161	1.4426	90.88	90.31	53.43	47.41	-1018.5	-449.5	1.4426
9	-0.65	2.19	5.36	5.6	45.48	49.22	0.4012	0.0641	0.0163	1.4471	90.37	89.86	54.43	49.57	-1045.8	-703.4	1.4471
10	0.24	2.46	5.61	4.04	45.45	48.94	0.3924	0.0632	0.0208	1.4486	87.41	86.73	55.98	51.93	-1119.3	-764.8	1.4486
11	0.17	2.39	6.48	2.37	45.41	46.25	0.4023	0.1312	0.0316	1.4301	80.26	79.24	57.07	54.70	-1144.5	-806.5	1.4301
	TO/TO	PO/PO	TEFF-AD	TEFF-P	MC1/A1					TO2/TO1	PO2/PO1	TEFF-AD	TEFF-P				
	INLET	INLET	INLET	INLET	LRM/SEC					%	%	ROTOR	ROTOR				
			%	%	%							%	%				
	1.1269	1.4483	87.97	88.58	43.53					1.1269	1.4483	87.97	88.58				

STATOR 1

RUN NO411, SPEED CODE 10, POINT NO. 4																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	11.096	7.784	879.1	542.1	511.6	551.9	714.8	106.7	54.3	10.8	0.7819	0.4828	1.3409	1.1383	1.3409	1.3409	1.1383	1.1383	
2	7.059	5.222	897.5	640.9	67.4	630.5	600.8	112.4	47.4	10.0	0.8002	0.5542	1.4284	1.1386	1.4284	1.4284	1.1386	1.1386	
3	4.222	3.244	871.5	655.9	648.2	646.6	582.5	97.5	41.9	8.5	0.7762	0.5695	1.4566	1.1331	1.4566	1.4566	1.1331	1.1331	
4	4.723	2.158	835.2	648.6	654.6	636.2	516.2	91.7	38.1	8.2	0.7425	0.5592	1.4481	1.1268	1.4481	1.4481	1.1268	1.1268	
5	1.634	0.976	752.1	609.2	627.7	62.6	414.3	93.9	33.4	8.9	0.6845	0.5304	1.4138	1.1184	1.4138	1.4138	1.1184	1.1184	
6	0.893	0.691	735.7	638.1	623.7	600.5	390.2	95.5	32.0	8.0	0.6485	0.5290	1.4496	1.1197	1.4496	1.4496	1.1197	1.1197	
7	0.265	0.569	728.1	635.1	626.8	598.0	380.4	92.0	31.5	8.7	0.6407	0.5258	1.4050	1.1214	1.4050	1.4050	1.1214	1.1214	
8	0.553	0.498	721.8	604.4	610.5	597.4	368.7	91.5	30.7	8.7	0.6344	0.5249	1.4032	1.1224	1.4032	1.4032	1.1224	1.1224	
9	0.434	0.420	718.1	612.3	621.8	605.6	359.3	94.7	30.0	8.9	0.6304	0.5318	1.4096	1.1241	1.4096	1.4096	1.1241	1.1241	
10	0.264	0.420	712.6	619.6	616.9	607.6	356.7	122.1	30.0	11.4	0.6238	0.5374	1.4156	1.1289	1.4156	1.4156	1.1289	1.1289	
11	0.061	0.661	690.3	590.0	587.3	575.6	362.9	129.6	31.7	12.7	0.6007	0.5085	1.3880	1.1381	1.3880	1.3880	1.1381	1.1381	

SL	INCS	INCM	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-A	TEFF-P	TEFF-A	TEFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	1.65	6.36	16.18	43.53	36.17	44.37	0.5027	0.1364	0.0283	0.9545	63.22	64.71	64.71	64.71
2	0.04	5.15	12.49	35.37	44.57	52.13	0.4211	0.0979	0.0217	0.9643	77.25	78.36	77.25	78.36
3	-2.95	2.52	9.90	33.37	44.99	54.46	0.3798	0.0693	0.0166	0.9772	85.30	86.05	85.30	86.05
4	-5.33	0.445	8.99	29.95	57.64	53.73	0.3576	0.0621	0.0158	0.9811	88.04	88.66	88.04	88.66
5	-8.41	-2.37	8.99	24.95	49.84	50.75	0.3113	0.0547	0.0159	0.9861	87.91	88.49	87.91	88.49
6	-10.12	-3.35	8.82	22.49	50.04	50.46	0.2969	0.0789	0.0242	0.9866	86.11	86.77	86.11	86.77
7	-10.12	-3.72	8.39	22.75	50.04	50.09	0.2954	0.1004	0.0319	0.9750	84.05	84.80	84.05	84.80
8	-11.74	-4.54	8.27	22.00	50.26	49.95	0.2898	0.1157	0.0380	0.9726	83.09	83.88	83.09	83.88
9	-13.16	-5.66	8.46	21.12	50.57	50.56	0.2735	0.1113	0.0377	0.9739	83.08	83.88	83.08	83.88
10	-15.06	-7.46	11.37	16.47	50.21	50.64	0.2473	0.0989	0.0345	0.9772	81.03	81.94	81.03	81.94
11	-16.55	-8.63	14.57	15.02	47.50	47.41	0.2686	0.1345	0.0481	0.9709	77.23	73.45	72.26	73.45
	MCORR	MCORR	TO/TO	PO/PO	TEFF-AD	TEFF-P				TO2/TO1	PO2/PO1	TEFF-AD	TEFF-P	
	INLET	INLET	INLET	INLET	INLET	INLET				%	%	STAGE	STAGE	
			%	%	%	%						%	%	
	8342	21589	1.1269	1.4435	81.92	82.78				1.1269	0.9760	81.92	82.78	

ROTOR 2

RUN NO411, SPEED CODE 10, POINT NO 4																
SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	8.614	5.823	518.8	847.2	508.4	659.8	103.7	531.5	11.3	38.5	0.4441	0.7174	647.9	689.8	0.6375	0.5747
2	6.438	4.564	457.2	835.8	448.4	685.2	107.1	478.6	9.3	34.7	0.4692	0.7093	704.4	734.6	0.7635	0.6207
3	5.182	3.648	462.8	812.7	476.5	687.7	92.7	433.1	7.8	32.1	0.5951	0.6410	756.8	779.0	0.8261	0.6545
4	3.945	2.688	473.6	774.7	467.6	642.6	89.6	401.4	7.6	31.2	0.5883	0.6584	813.2	827.8	0.8598	0.6496
5	1.558	0.716	444.8	694.7	437.6	588.8	94.4	368.8	8.4	32.1	0.5629	0.5870	941.0	945.0	0.9255	0.6960
6	1.014	0.382	438.3	662.3	431.5	568.0	92.9	343.5	8.4	30.9	0.5465	0.5585	986.1	987.2	0.9538	0.7258
7	0.623	0.152	432.1	651.6	425.6	562.4	90.6	329.1	8.2	30.3	0.5105	0.5485	1030.2	1030.2	0.9938	0.7564
8	0.006	-0.352	436.8	667.4	430.8	577.9	99.1	335.0	8.9	30.1	0.5557	0.5616	1090.6	1086.6	1.0227	0.7971
9	-0.283	-0.581	436.5	680.3	426.5	549.9	123.3	365.5	11.1	39.6	0.5944	0.5523	1132.1	1129.5	1.0311	0.7874
10	-0.149	-0.299	607.1	626.1	593.2	508.2	129.1	369.2	12.3	36.0	0.5240	0.5218	1173.6	1172.1	1.0368	0.7895

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VP*-1	VP*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-5.23	1.73	17.89	33.43	41.59	57.78	0.2634	0.0478	-0.0113	1.3425	103.99	104.15	44.76	13.33	-544.2	-156.3	1.8036
2	-6.86	-2.59	12.07	22.18	53.65	81.90	0.2885	0.0596	0.0146	1.2762	92.73	92.47	42.54	20.36	-597.2	-256.0	1.8426
3	-7.79	-2.11	10.10	17.81	56.19	83.84	0.2915	0.0485	0.0121	1.2692	93.18	92.94	44.42	24.61	-614.1	-345.9	1.8492
4	-8.22	-1.84	8.16	14.58	55.37	82.28	0.2956	0.0318	0.0079	1.2681	95.13	94.96	47.29	32.71	-723.8	-426.3	1.8276
5	-8.11	0.86	5.74	8.64	52.77	56.06	0.3118	0.0602	0.0146	1.2525	89.64	89.31	53.02	44.38	-846.6	-576.2	1.7688
6	-11.88	1.43	6.36	4.04	52.14	54.17	0.2939	0.0545	0.0127	1.2369	89.70	89.38	54.74	48.71	-893.2	-646.7	1.7399
7	-9.48	1.79	5.94	5.08	51.62	53.69	0.2818	0.0525	0.0125	1.2370	89.47	89.16	56.34	51.27	-839.5	-701.1	1.7348
8	-6.89	1.33	3.68	5.09	52.09	55.30	0.2709	0.0545	0.0129	1.2478	88.20	88.85	57.52	52.43	-891.4	-731.6	1.7604
9	-1.00	1.22	3.60	3.97	51.61	52.29	0.2891	0.0894	0.0211	1.2422	82.80	82.27	58.16	54.25	-1008.8	-784.0	1.7553
10	0.44	2.67	6.08	2.74	48.39	47.86	0.2919	0.0962	0.0216	1.2448	81.79	81.22	60.41	57.67	-1044.5	-803.6	1.7245

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
%	%	%	%	SOFT			%	%
1.2117	1.7803	84.59	85.78	37.29	1.0752	1.2595	90.39	90.70

STATOR 2

RUN NO411, SPEED CODE 10, POINT NO 4																
SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	7.621	8.954	768.7	641.3	564.5	641.2	521.8	12.4	42.6	1.1	0.6453	0.5317	1.7525	1.2340	1.3033	1.0841
2	5.211	5.596	769.1	685.5	635.0	685.4	468.4	9.4	36.3	0.7	0.6661	0.5724	1.8246	1.2265	1.2609	1.0776
3	3.954	4.058	787.5	684.1	683.4	684.1	424.3	2.2	32.6	0.2	0.6676	0.5736	1.8332	1.2161	1.2587	1.0754
4	3.044	2.973	764.3	654.4	654.7	654.9	394.3	-3.1	31.0	-0.3	0.6488	0.5499	1.8086	1.2075	1.2554	1.0734
5	1.671	1.477	698.3	587.2	596.1	587.2	363.9	-5.1	31.4	-0.5	0.5902	0.4914	1.7451	1.2019	1.2364	1.0742
6	1.385	1.179	667.4	562.4	577.0	562.2	336.4	-14.3	30.2	-1.5	0.5635	0.4702	1.7229	1.1997	1.2248	1.0699
7	1.191	1.022	654.2	554.1	572.6	554.5	326.7	0.3	29.7	0.0	0.5553	0.4630	1.7186	1.2007	1.2239	1.0701
8	0.976	0.858	677.7	574.2	589.4	574.1	334.3	1.7	29.6	0.4	0.5702	0.4789	1.7370	1.2071	1.2313	1.0733
9	0.679	0.620	671.0	586.2	563.3	587.5	344.6	26.6	32.9	2.7	0.5618	0.4716	1.7916	1.2171	1.2246	1.0775
10	0.250	0.237	640.1	529.3	523.3	528.5	368.7	78.2	35.2	3.1	0.5324	0.4363	1.6960	1.2263	1.2240	1.0793

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG		
1	-8.36	9.62	41.45	51.71	60.69	0.3031	0.1201	0.0253	0.9707	74.25	76.18	93.19	93.54		
2	-7.48	8.79	35.57	56.95	66.39	0.2611	0.0459	0.0103	0.9882	82.42	83.83	87.62	88.21		
3	-9.51	8.47	32.38	62.79	67.24	0.2577	0.0322	0.0077	0.9917	87.64	88.44	89.67	90.00		
4	-10.62	8.27	31.31	61.90	64.77	0.2734	0.0408	0.0108	0.9900	88.87	89.76	90.82	91.11		
5	-10.61	6.97	31.91	56.62	57.95	0.3113	0.0390	0.0176	0.9876	85.39	86.49	84.12	84.57		
6	-11.13	7.84	31.71	54.87	55.44	0.3165	0.0498	0.0150	0.9903	84.39	85.93	85.20	85.62		
7	-11.71	4.99	29.68	54.47	54.58	0.3137	0.0351	0.0173	0.9896	83.15	84.37	84.64	85.07		
8	-12.67	11.02	28.69	56.15	56.48	0.3101	0.0668	0.0221	0.9868	82.48	83.78	83.40	83.88		
9	-11.86	13.94	30.23	53.29	55.38	0.3271	0.0730	0.0250	0.9859	78.25	79.85	76.76	77.42		
10	-13.25	15.78	32.11	49.02	56.91	0.3630	0.0951	0.0338	0.9833	71.94	73.82	74.78	75.49		

MCURR	MCOKK	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RPM	LBM/SEC			%	%			%	%
8343.6	215.89	1.2117	1.7570	82.49	83.81	1.0752	0.9869	85.05	85.05

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	11.932	9.393	708.1	963.7	708.1	963.7	0.016	0.0	51.2	0.6612	0.8679	524.2	573.3	0.9227	0.9655	801.0	628.0	
2	11.169	7.384	714.4	964.5	714.4	964.5	0.0	0.0	47.2	0.6675	0.8474	568.8	620.2	0.9639	0.9773	924.4	647.5	
3	9.653	6.183	724.8	899.8	724.8	847.1	0.0	0.0	43.3	0.6782	0.7940	494.8	689.0	0.9153	0.9816	978.1	651.6	
4	8.014	5.181	733.2	894.7	733.2	836.0	0.0	0.0	40.3	0.6868	0.7412	721.3	746.5	0.9634	0.9937	1028.5	668.5	
5	4.634	3.754	744.7	736.5	744.7	595.5	0.0	0.0	36.1	0.6986	0.6484	866.3	879.1	1.0071	0.9546	1142.4	703.8	
6	3.362	3.148	747.0	720.8	747.0	591.9	0.0	0.0	34.8	0.7011	0.6324	936.3	945.1	1.1241	0.8996	1197.8	797.0	
7	2.737	2.477	749.1	715.9	749.1	592.7	0.0	0.0	34.1	0.7032	0.6273	981.0	986.1	1.1586	0.7296	1234.3	832.6	
8	2.089	1.862	751.5	710.2	751.5	594.7	0.0	0.0	33.1	0.7056	0.6216	1024.9	1028.6	1.1934	0.7656	1271.9	873.9	
9	1.424	1.196	753.0	704.7	753.0	594.7	0.0	0.0	32.4	0.7072	0.6158	1072.5	1072.5	1.2300	0.7991	1313.5	914.3	
10	0.634	0.492	753.5	701.1	753.5	592.8	0.0	0.0	32.3	0.7078	0.6110	1126.4	1126.4	1.2729	0.8344	1355.2	957.5	
11	0.145	0.113	753.1	679.9	753.1	564.7	0.0	0.0	33.9	0.7073	0.5893	1171.8	1171.8	1.3083	0.8634	1392.6	973.2	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	R-1	R-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.13	3.42	14.29	53.14	43.91	41.25	0.4942	0.2936	0.0601	1.4144	76.38	75.20	36.61	-16.53	-524.2	179.4	1.4144
2	-1.36	4.11	12.18	45.47	44.13	45.71	0.4985	0.1589	0.0403	1.4890	84.80	84.03	39.54	-5.89	-568.8	64.3	1.4890
3	-0.85	4.43	12.54	35.47	44.48	48.60	0.5050	0.0907	0.0249	1.5015	91.72	91.23	42.34	6.78	-654.6	-78.3	1.5015
4	-0.77	4.35	12.36	26.74	44.75	49.33	0.5043	0.0657	0.0185	1.4877	93.20	92.81	44.66	17.92	-721.3	-206.0	1.4877
5	-1.57	2.99	9.01	12.54	45.12	48.07	0.4770	0.0625	0.0169	1.4500	92.02	91.59	49.37	36.83	-840.3	-445.7	1.4500
6	-1.46	2.52	6.87	9.38	45.14	46.32	0.4570	0.0632	0.0173	1.4558	91.28	90.80	51.44	42.06	-936.3	-533.8	1.4558
7	-0.53	2.30	5.93	8.03	45.25	46.09	0.4443	0.0668	0.0175	1.4630	90.91	90.41	52.66	44.63	-981.0	-584.7	1.4630
8	0.03	2.33	5.52	6.84	45.33	49.17	0.4277	0.0632	0.0163	1.4691	91.16	90.67	53.76	47.13	-1024.9	-640.4	1.4691
9	0.25	2.44	5.22	5.50	45.37	49.39	0.4139	0.0659	0.0168	1.4736	90.57	90.04	54.94	49.43	-1072.5	-694.5	1.4736
10	0.49	2.71	5.42	4.47	45.39	49.34	0.4050	0.0618	0.0205	1.4796	88.19	87.52	56.22	51.75	-1126.4	-752.0	1.4796
11	0.38	2.60	6.32	2.74	45.38	46.75	0.4144	0.1273	0.0307	1.4629	81.66	80.65	57.27	54.54	-1171.8	-792.7	1.4629

TO/TU	PO/PU	EFF-AD	EFF-P	WCI/A1	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	%	%	SOFT	INLET	INLET	%	%
1.1313	1.4679	88.32	88.94	43.41	1.1313	1.4679	88.32	88.94

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	STAGE
1	11.248	8.605	606.6	530.7	495.1	520.5	711.3	103.1	51.1	11.1	0.7694	0.4546	1.3454	1.1385	1.3454	1.1385
2	7.500	5.666	605.9	609.1	588.8	578.3	661.9	113.8	46.3	10.7	0.7881	0.5249	1.4272	1.1399	1.4272	1.1399
3	4.866	3.822	611.1	634.6	630.9	626.8	586.0	99.3	42.9	9.0	0.7653	0.5495	1.4656	1.1350	1.4656	1.1350
4	3.243	2.666	625.5	625.1	639.2	618.6	522.4	90.9	39.2	8.4	0.7322	0.5423	1.4624	1.1294	1.4624	1.1294
5	1.397	1.293	746.1	593.8	615.6	536.8	425.2	90.7	34.6	8.8	0.6594	0.5153	1.4330	1.1223	1.4330	1.1223
6	0.976	0.936	734.4	596.5	613.2	584.8	404.2	95.4	33.4	9.2	0.6456	0.5171	1.4328	1.1248	1.4328	1.1248
7	0.775	0.766	731.4	597.7	615.1	591.1	395.8	88.4	32.8	8.5	0.6421	0.5177	1.4323	1.1271	1.4323	1.1271
8	0.634	0.638	728.0	601.0	618.4	594.7	384.1	86.8	31.8	8.3	0.6384	0.5204	1.4343	1.1282	1.4343	1.1282
9	0.466	0.465	723.9	609.9	619.3	605.2	374.9	90.1	31.2	8.5	0.6340	0.5280	1.4416	1.1303	1.4416	1.1303
10	0.235	0.263	721.3	618.5	617.6	607.9	372.7	113.9	31.1	10.6	0.6300	0.5346	1.4463	1.1355	1.4463	1.1355
11	0.049	0.071	700.4	587.5	589.6	575.9	378.1	115.8	32.7	11.4	0.6083	0.5047	1.4189	1.1426	1.4189	1.1426

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	R-1	R-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	2.43	7.14	16.46	44.04	35.53	42.51	0.5321	0.1489	0.0308	0.9516	63.89	62.36	63.89	65.36	63.89	65.36	1.4144
2	1.00	6.12	13.16	37.61	43.83	50.10	0.4494	0.1201	0.0266	0.9596	76.46	77.61	76.46	77.61	76.46	77.61	1.4890
3	-1.46	3.44	10.35	33.84	46.33	53.45	0.3986	0.0740	0.0177	0.9761	85.55	86.30	85.55	86.30	85.55	86.30	1.5015
4	-4.23	1.55	9.16	30.88	49.84	53.10	0.3752	0.0555	0.0142	0.9833	89.27	88.68	89.27	88.68	89.27	88.68	1.4877
5	-7.60	-1.15	8.92	25.84	49.38	50.35	0.3346	0.0463	0.0134	0.9883	88.55	89.12	88.55	89.12	88.55	89.12	1.4500
6	-8.76	-1.98	9.00	24.18	49.67	50.35	0.3180	0.0467	0.0198	0.9962	86.76	87.41	86.76	87.41	86.76	87.41	1.4558
7	-9.44	-2.46	8.15	24.25	50.08	50.42	0.3174	0.0470	0.0276	0.9789	85.08	85.82	85.08	85.82	85.08	85.82	1.4630
8	-10.61	-3.42	7.87	23.53	50.63	50.68	0.3096	0.0491	0.0325	0.9762	84.69	85.45	84.69	85.45	84.69	85.45	1.4691
9	-11.89	-4.49	8.06	22.64	50.49	51.37	0.2922	0.0425	0.0314	0.9781	84.58	85.36	84.58	85.36	84.58	85.36	1.4736
10	-13.98	-6.39	10.62	20.49	50.85	51.60	0.2704	0.0406	0.0317	0.9788	82.41	83.31	82.41	83.31	82.41	83.31	1.4796
11	-15.59	-7.67	13.04	18.31	48.29	48.30	0.2982	0.1346	0.0484	0.9703	73.72	74.99	73.72	74.99	73.72	74.99	1.4629

NCURR	MCURR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	INLET	INLET	%	%
8395.0	215.25	1.1313	1.4347	82.77	83.63	1.1313	0.9774	82.77	83.63

ROTOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	0.530	5.011	460.1	825.5	475.0	613.0	100.2	552.9	11.0	41.7	0.4150	0.6955	652.0	694.1	0.6221	0.5300	720.5	629.1
2	0.314	4.538	427.3	810.1	612.7	636.1	109.2	501.7	10.1	38.1	0.5368	0.6832	708.8	739.2	0.7395	0.5726	857.2	679.0
3	5.114	3.691	662.2	791.3	655.0	644.4	93.6	457.0	8.1	35.3	0.5753	0.6676	761.5	783.9	0.8131	0.6101	935.9	722.3
4	3.995	2.798	653.8	759.0	647.9	628.5	87.8	425.5	7.7	34.1	0.5691	0.6410	818.3	833.0	0.8494	0.6326	976.4	749.1
5	1.691	0.994	630.4	699.0	623.4	569.3	93.6	395.5	8.5	35.0	0.5486	0.5792	946.9	950.9	0.9196	0.6653	1056.8	792.5
6	1.135	0.533	629.3	661.7	627.6	551.1	91.3	366.3	8.3	33.6	0.5468	0.5544	992.3	993.4	0.9517	0.6995	1095.2	834.8
7	0.736	0.284	629.2	650.8	623.2	548.3	86.3	350.6	7.9	32.6	0.5462	0.5443	1036.6	1036.6	0.9867	0.7345	1136.5	878.3
8	0.165	-0.157	637.2	646.7	630.4	563.2	92.9	356.7	8.4	32.3	0.5528	0.5564	1097.5	1093.4	1.0290	0.7746	1186.0	927.3
9	-0.065	-0.328	639.0	663.5	629.2	538.2	115.1	387.1	10.4	35.7	0.5537	0.5505	1139.2	1136.6	1.0406	0.7661	1201.9	922.7
10	-0.027	-0.129	606.0	636.6	595.0	596.6	115.2	385.6	11.0	37.3	0.5214	0.5251	1181.0	1179.5	1.0502	0.7768	1220.6	941.8

SL	INCL	INLM	DLV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B*-1	B*-2	VB*-1	VB*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.994	4.01	17.38	36.23	39.49	55.53	0.3014	-0.0706	-0.0164	1.3719	105.28	105.52	49.05	12.82	-951.8	-141.3	1.8507
2	-7.13	-0.87	12.06	23.92	51.44	54.37	0.3263	0.4404	0.0099	1.3046	95.55	95.37	44.27	20.35	-999.6	-237.5	1.8830
3	-6.73	-1.05	11.26	18.71	55.45	61.63	0.3401	0.0555	0.0138	1.2899	92.89	92.63	45.48	26.77	-647.9	-326.3	1.8973
4	-5.04	-3.01	8.35	15.51	54.74	61.14	0.3371	0.0310	0.0077	1.2958	95.70	95.54	48.42	32.91	-730.5	-407.5	1.8879
5	-2.18	1.69	5.84	9.37	52.54	55.86	0.3475	0.0513	0.0124	1.2895	92.06	91.77	53.85	44.44	-853.3	-555.4	1.8475
6	-1.27	2.04	6.35	6.47	52.38	54.59	0.3267	0.0453	0.0166	1.2744	92.33	92.06	55.36	48.69	-901.0	-627.1	1.8254
7	-6.19	2.19	6.00	5.38	52.40	54.40	0.3128	0.0500	0.0115	1.2705	91.09	90.78	56.75	51.37	-950.4	-686.1	1.8213
8	-0.53	1.69	3.63	5.74	53.03	55.99	0.3042	0.0594	0.0140	1.2812	89.36	88.98	57.88	52.59	-1004.6	-736.7	1.8485
9	-0.73	1.50	3.67	4.12	52.79	53.19	0.3229	0.0953	0.0224	1.2772	83.45	82.86	58.43	54.32	-1026.1	-749.5	1.8484
10	0.86	3.09	3.67	3.37	49.38	49.64	0.3202	0.0913	0.0204	1.2882	84.38	83.80	60.82	57.46	-1065.0	-794.0	1.8245

TO/TU	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TU1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	50°F			%	%
1.2249	1.8536	85.69	86.87	36.70	1.0828	1.8921	91.58	91.89

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TU	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TU1
1	7.035	8.085	75.04	577.05	518.1	577.1	542.7	12.05	46.1	1.2	0.6269	0.4748	1.7934	1.2402	1.3302	1.0894
2	5.214	5.693	76.00	622.03	585.1	622.2	491.3	12.6	39.9	1.2	0.6409	0.5151	1.8566	1.2541	1.2661	1.0825
3	3.960	4.021	76.01	632.01	619.9	632.1	448.5	1.1	35.6	0.1	0.6445	0.5256	1.8816	1.2251	1.2793	1.0613
4	3.047	2.911	749.0	613.7	621.6	613.7	417.8	-4.6	32.9	-0.4	0.6318	0.5111	1.8717	1.2181	1.2847	1.0505
5	1.813	1.354	695.2	563.5	575.3	562.9	399.4	-9.0	34.2	-0.9	0.5839	0.4487	1.8300	1.2155	1.2773	1.0819
6	1.291	1.344	689.2	540.1	562.8	539.9	362.1	-14.7	32.8	-1.6	0.5611	0.4486	1.8101	1.2137	1.2897	1.0778
7	1.154	0.945	666.7	539.4	560.9	533.4	347.9	-6.3	31.8	-0.7	0.5524	0.4419	1.8053	1.2157	1.2595	1.0777
8	0.941	0.861	679.1	556.7	577.4	558.7	355.6	5.3	31.6	0.5	0.5645	0.4622	1.8312	1.2235	1.2694	1.0822
9	0.816	0.538	675.9	556.4	554.9	558.9	366.9	22.6	34.4	2.3	0.5619	0.4580	1.8296	1.2367	1.2627	1.0871
10	0.207	0.179	650.9	523.1	524.8	522.2	385.1	29.6	36.3	3.2	0.5376	0.4277	1.7975	1.2449	1.2689	1.0693

SL	INCL	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-4.72	9.75	44.85	41.93	57.16	0.3712	0.1324	0.0279	0.9692	75.54	77.65	94.79	95.60
2	-3.86	9.20	38.77	50.02	62.90	0.3249	0.0583	0.0131	0.9859	82.55	83.99	90.07	90.43
3	-6.22	6.35	35.74	60.13	64.89	0.3121	0.0339	0.0081	0.9918	87.87	88.89	89.54	89.90
4	-7.77	8.11	34.32	60.81	63.44	0.3223	0.0364	0.0092	0.9914	89.86	90.78	92.26	92.53
5	-7.26	8.15	35.08	56.48	58.23	0.3359	0.0449	0.0129	0.9908	87.41	88.43	88.26	88.67
6	-8.62	7.75	34.12	55.55	55.81	0.3628	0.0439	0.0137	0.9916	86.38	87.47	86.71	89.08
7	-9.61	8.88	32.48	55.41	55.04	0.3594	0.0452	0.0142	0.9915	85.20	86.37	87.45	87.86
8	-10.61	10.69	31.08	57.09	57.60	0.3453	0.0472	0.0156	0.9908	84.38	85.64	86.12	89.06
9	-9.97	13.61	32.47	54.55	56.63	0.3617	0.0577	0.0198	0.9888	80.17	81.77	78.95	79.63
10	-12.15	15.97	33.02	51.11	52.71	0.3911	0.0834	0.0296	0.9851	74.39	76.40	76.64	79.35

NCORR	WCORR	TO/TU	PO/PO	EFF-AD	EFF-P	TO2/TU1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%			%	%
6395	21525	1.2249	1.8221	87.95	85.25	1.0828	0.9885	91.51	91.81

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.806	9.905	710.1	969.8	710.1	605.3	0.0	757.7	0.0	51.3	0.6632	0.6742	521.1	569.9	0.8227	0.5713	880.8	633.8
2	10.996	8.258	716.4	966.8	716.4	646.8	0.0	691.5	0.0	45.8	0.6697	0.8504	583.4	624.5	0.8636	0.5840	923.9	650.2
3	5.504	6.564	726.7	891.2	726.7	655.3	0.0	604.1	0.0	42.6	0.6802	0.7964	652.9	685.0	0.9144	0.5900	577.0	460.3
4	7.874	5.423	734.6	834.7	734.6	644.5	0.0	530.4	0.0	39.4	0.6883	0.7424	717.0	742.2	0.9618	0.6034	1026.5	678.4
5	4.578	3.541	742.4	773.8	742.4	603.2	0.0	417.6	0.0	34.7	0.6963	0.6474	861.2	874.0	1.0664	0.6672	1137.0	756.3
6	3.373	2.756	742.5	710.4	742.5	593.0	0.0	391.2	0.0	33.4	0.6964	0.6249	930.8	939.5	1.1167	0.7104	1197.6	817.7
7	2.696	2.316	742.5	697.1	742.9	584.6	0.0	379.6	0.0	33.0	0.6969	0.6119	975.2	980.3	1.1459	0.7357	1276.0	838.2
8	2.104	1.875	742.5	687.9	742.9	582.8	0.0	365.4	0.0	32.1	0.6979	0.6030	1018.9	1022.6	1.1835	0.7790	1261.6	878.4
9	1.477	1.372	744.7	687.5	744.7	587.3	0.0	357.3	0.0	31.3	0.6986	0.6019	1066.3	1066.3	1.2202	0.7761	1300.6	920.6
10	0.699	0.672	745.1	693.6	745.1	596.4	0.0	354.0	0.0	30.7	0.6990	0.6067	1119.8	1119.8	1.2419	0.8484	1345.0	970.6
11	0.175	0.180	744.7	669.7	744.7	567.6	0.0	355.5	0.0	32.1	0.6987	0.5824	1164.9	1164.6	1.2972	0.8595	1382.6	988.3

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	VR*-1	VR*-2	PD/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.38	3.17	13.63	53.55	43.98	40.10	0.4890	0.3062	0.6687	1.4080	75.32	74.10	36.36	-17.19	-521.1	187.8	1.4080
2	-1.56	3.84	12.18	45.21	44.20	45.87	0.4897	0.1670	0.0414	1.4802	86.34	85.57	39.31	-5.89	-583.4	66.5	1.4802
3	-1.10	4.18	12.69	35.07	44.55	48.95	0.4930	0.0882	0.0242	1.4928	91.87	91.40	42.10	7.03	-652.9	-80.9	1.4928
4	-1.00	4.12	12.61	26.25	44.80	49.78	0.4899	0.0578	0.0163	1.4786	93.94	93.59	44.43	18.17	-717.0	-211.7	1.4786
5	-1.65	2.91	9.29	12.17	45.05	48.58	0.4980	0.0468	0.0126	1.4391	93.87	93.55	49.28	37.11	-861.2	-456.2	1.4391
6	-1.46	2.52	7.59	8.68	45.05	48.29	0.4381	0.0513	0.0134	1.4368	92.88	92.50	51.45	42.77	-930.8	-548.3	1.4368
7	-0.47	2.37	7.10	6.93	45.06	47.82	0.4289	0.0609	0.0156	1.4342	91.32	90.87	52.72	45.70	-975.2	-600.7	1.4342
8	0.15	2.45	6.84	5.44	45.10	47.94	0.4125	0.0596	0.0150	1.4357	91.24	90.78	53.88	48.44	-1018.9	-657.1	1.4357
9	0.40	2.64	6.16	4.71	45.12	48.54	0.3979	0.0593	0.0148	1.4446	91.12	90.65	55.08	50.37	-1066.3	-709.7	1.4446
10	0.63	2.85	5.76	4.27	45.13	49.49	0.3843	0.0641	0.0160	1.4604	90.35	89.82	56.36	52.09	-1119.8	-765.8	1.4604
11	0.52	2.73	8.74	2.46	45.12	46.85	0.3919	0.1077	0.0257	1.4410	83.71	82.85	57.41	54.95	-1164.9	-809.1	1.4410

TO/T0	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
%	%	%	%	SQFT			%	%
1.1255	1.4503	89.31	89.86	43.34	1.1255	1.4503	89.31	89.86

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.108	7.875	868.3	937.2	451.1	527.4	716.1	102.1	55.5	10.8	0.7711	0.4604	1.3392	1.1386	1.3392	1.1386	1.3392	1.1386
2	7.215	5.411	885.4	618.6	540.8	609.4	659.5	106.4	48.1	9.9	0.7881	0.5319	1.4246	1.1386	1.4246	1.1386	1.4246	1.1386
3	4.520	3.521	860.6	643.1	636.8	636.5	578.9	92.2	42.2	8.2	0.7657	0.5580	1.4621	1.1325	1.4621	1.1325	1.4621	1.1325
4	2.880	2.262	823.9	632.3	645.8	626.2	511.7	87.5	38.4	7.9	0.7318	0.5497	1.4569	1.1259	1.4569	1.1259	1.4569	1.1259
5	1.113	1.164	745.3	566.5	622.9	590.3	409.2	85.8	33.3	6.3	0.6584	0.5191	1.4228	1.1169	1.4228	1.1169	1.4228	1.1169
6	0.753	0.876	726.4	556.7	615.9	589.1	385.2	94.9	32.0	6.2	0.6401	0.5189	1.4210	1.1182	1.4210	1.1182	1.4210	1.1182
7	0.564	0.692	715.1	593.3	609.1	585.2	374.7	91.6	31.6	6.9	0.6289	0.5155	1.4169	1.1190	1.4169	1.1190	1.4169	1.1190
8	0.421	0.538	708.1	591.7	608.6	585.2	361.9	87.0	30.7	6.5	0.6220	0.5138	1.4147	1.1201	1.4147	1.1201	1.4147	1.1201
9	0.285	0.380	708.8	602.6	613.7	594.7	354.6	97.3	30.0	6.3	0.6220	0.5233	1.4237	1.1276	1.4237	1.1276	1.4237	1.1276
10	0.129	0.203	715.1	614.4	622.1	604.5	352.7	109.7	29.6	6.0	0.6265	0.5328	1.4332	1.1275	1.4332	1.1275	1.4332	1.1275
11	0.023	0.067	691.5	586.0	593.5	574.5	355.0	115.3	30.4	11.6	0.6027	0.5056	1.4067	1.1331	1.4067	1.1331	1.4067	1.1331

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	2.80	7.52	16.20	44.67	35.04	42.76	0.5268	0.1486	0.0308	0.9916	62.80	64.30	64.30	64.30
2	0.78	5.90	12.30	38.25	43.78	50.75	0.4397	0.1098	0.0244	0.9631	76.77	77.90	76.77	77.90
3	-2.61	2.86	9.59	34.02	48.60	54.03	0.3880	0.0641	0.0194	0.9793	86.65	87.34	86.65	87.34
4	-5.10	0.68	8.75	30.42	50.23	53.51	0.3623	0.0450	0.0115	0.9865	90.24	90.75	90.24	90.75
5	-8.94	-2.49	8.40	25.02	49.84	50.44	0.3237	0.0419	0.0121	0.9895	91.14	90.69	91.14	90.69
6	-10.13	-3.35	8.94	22.87	45.71	50.21	0.3016	0.0451	0.0138	0.9892	89.39	89.61	89.39	89.61
7	-10.60	-3.62	8.53	22.71	49.33	49.85	0.2966	0.0517	0.0164	0.9870	87.58	88.18	87.58	88.18
8	-11.72	-4.53	8.52	22.27	44.52	49.70	0.2932	0.0658	0.0216	0.9849	86.76	87.19	86.76	87.19
9	-13.05	-5.66	8.85	20.75	50.15	50.48	0.2744	0.0662	0.0224	0.9848	86.67	87.32	86.67	87.32
10	-15.54	-7.95	10.29	19.26	51.01	51.18	0.2625	0.0820	0.0287	0.9809	84.98	85.72	84.98	85.72
11	-17.38	-9.65	13.62	19.52	48.43	48.15	0.2791	0.1066	0.0383	0.9769	78.97	78.05	78.97	78.05

NCOAR	NCOAR	TO/T0	PO/PO	EFF-AD	EFF-P	TO2/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGF
RPM	LBM/SEC			%	%			%
8346	214.92	1.1255	1.4238	94.65	85.40	1.1255	0.9817	84.65

ROTOR 2

SL	EPISI-1	EPISI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	PUN NO	W/	SPFED	COEF	AO	POINT NO	LS	V'-1	V'-2
1	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE					FT/SEC	FT/SEC				FT/SEC	FT/SEC
1	8.453	5.750	498.4	819.0	488.4	636.5	99.3	515.5	11.4	38.6	0.4259	0.6921	648.2	690.1	0.6279	0.5577	734.8	660.0			
2	6.147	4.372	637.9	808.3	629.8	663.4	100.9	461.8	9.1	34.7	0.5915	0.6844	704.6	734.9	0.7544	0.6076	872.5	717.4			
3	4.829	3.384	673.6	790.6	667.9	687.8	87.5	423.2	7.4	32.3	0.5867	0.6712	757.1	779.3	0.8237	0.6425	945.7	756.8			
4	3.586	2.374	663.0	758.2	657.5	643.9	85.3	400.3	7.4	31.4	0.5787	0.6433	813.5	829.1	0.8564	0.6559	981.1	773.1			
5	1.120	0.348	631.5	688.5	624.9	570.4	91.4	385.5	8.3	34.0	0.5512	0.5802	941.3	945.4	0.9208	0.6735	1055.0	799.2			
6	0.572	0.000	625.0	657.7	618.0	550.8	93.2	359.4	8.6	33.1	0.5447	0.5933	987.5	987.6	0.9467	0.7029	1086.2	835.5			
7	0.230	-0.189	617.2	644.1	611.1	541.7	86.4	348.4	8.0	32.7	0.5373	0.5405	1030.6	1030.6	0.9791	0.7310	1124.7	871.1			
8	-0.171	-0.476	626.1	658.5	618.1	551.3	99.8	360.1	9.2	33.1	0.5446	0.5915	1091.0	1087.0	1.0161	0.7643	1168.7	912.3			
9	-0.281	-0.558	630.1	655.8	620.7	576.7	110.6	376.9	10.1	35.1	0.5471	0.5468	1132.5	1130.0	1.0379	0.7708	1195.4	924.8			
10	-0.129	-0.225	596.6	630.9	587.5	502.4	115.0	381.6	11.1	37.2	0.5170	0.5227	1174.0	1172.6	1.0466	0.7763	1211.1	937.1			

SL	INCS	IACP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LDSS-P	P02/	ZEFF-P	ZEFF-A	R'-1	R'-2	VM'-1	VM'-2	PO/PP
1	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-3.85	3.10	19.71	32.96	40.20	57.40	0.2546	-0.1353	-0.0318	1.3589	111.23	111.72	48.14	15.15	-548.4	-174.1	1.8258
2	-7.73	-1.47	13.95	21.43	52.53	61.70	0.2952	0.0004	0.0001	1.2914	99.91	99.91	47.66	22.23	-403.7	-273.1	1.8623
3	-7.70	-1.52	11.46	17.04	56.10	63.61	0.3025	0.0147	0.0036	1.2806	97.93	97.85	45.01	27.97	-669.6	-356.1	1.8765
4	-9.42	-0.54	8.99	14.35	55.21	62.24	0.3096	0.0060	0.0015	1.2843	99.09	99.05	47.90	33.54	-728.2	-477.8	1.8619
5	-2.35	1.52	5.82	9.22	52.48	55.69	0.3382	0.0597	0.0144	1.2747	90.44	90.10	53.68	44.44	-850.0	-559.8	1.8178
6	-1.31	2.00	6.41	6.57	51.87	53.89	0.3188	0.0534	0.0124	1.2596	90.67	90.35	55.32	48.76	-893.3	-628.2	1.7866
7	0.15	2.53	6.19	5.54	51.29	52.96	0.3122	0.0689	0.0158	1.2572	87.66	87.25	57.09	51.55	-944.2	-682.2	1.7777
8	-0.37	1.85	4.06	5.27	51.95	53.97	0.3047	0.0782	0.0184	1.2638	85.90	85.42	58.04	52.81	-991.2	-726.9	1.8015
9	-0.42	1.80	3.87	4.22	52.05	52.27	0.3157	0.1120	0.0262	1.2590	80.13	79.46	58.74	54.52	-1021.9	-753.1	1.8028
10	1.01	3.24	5.99	3.40	48.86	48.55	0.3176	0.1156	0.0258	1.2680	79.96	79.27	60.98	57.58	-1059.1	-791.0	1.7803

TO/TU	PO/PO	EFF-AD	EFF-P	WCI/A1	TOZ/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	SOFT			%	%
1.2147	1.8194	86.79	87.85	36.87	1.0793	1.2778	91.33	91.67

STATOR 2

SL	EPISI-1	EPISI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PUN NO	W/	SPFED	CODE	AO	POINT NO	LS	TOZ/
1	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE					FT/SEC	FT/SEC				TO/TO
1	7.049	8.102	738.1	607.1	537.4	606.9	506.0	15.8	49.1	1.5	0.6182	0.5024	1.7715	1.7317	1.3193	1.0181	1.0181			
2	5.316	5.713	759.4	652.1	610.1	652.0	452.2	10.5	36.5	0.9	0.6397	0.5435	1.8393	1.2238	1.2754	1.0757	1.0757			
3	4.139	4.210	764.5	658.4	642.2	658.4	414.7	2.2	32.8	0.2	0.6470	0.5514	1.8631	1.2143	1.2714	1.0747	1.0747			
4	3.258	3.130	748.0	639.0	636.3	639.0	395.1	-4.0	31.7	-0.3	0.6330	0.5305	1.8461	1.2073	1.2733	1.0747	1.0747			
5	1.857	1.587	693.7	573.7	579.8	570.6	380.7	-4.1	33.3	-0.6	0.5849	0.4760	1.7945	1.2063	1.2619	1.0795	1.0795			
6	1.907	1.252	664.8	543.9	561.9	543.7	355.3	-12.9	32.3	-1.4	0.5597	0.4532	1.7720	1.2055	1.2493	1.0754	1.0754			
7	1.318	1.092	652.8	530.7	553.7	570.7	345.8	-5.5	32.0	-0.6	0.5482	0.4413	1.7619	1.2061	1.2458	1.0771	1.0771			
8	1.028	0.877	669.0	550.6	564.6	550.6	358.8	5.2	32.4	0.5	0.5608	0.4571	1.7827	1.2130	1.2507	1.0807	1.0807			
9	0.676	0.592	667.3	552.4	551.4	552.0	375.8	21.9	34.3	2.3	0.5967	0.4566	1.7849	1.2241	1.2456	1.0853	1.0853			
10	0.260	0.209	643.5	520.1	518.5	519.2	381.1	30.6	36.3	3.4	0.5317	0.4272	1.7553	1.2334	1.2499	1.0883	1.0883			

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LDSS-P	P02/	ZEFF-A	ZEFF-P	ZEFF-A	ZEFF-P
1	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STC	TOT-STC
1	-7.78	9.99	41.60	50.67	59.02	0.3151	0.1302	0.0274	0.9704	76.55	78.34	100.51	100.49
2	-7.35	8.96	35.53	58.31	64.92	0.2710	0.0514	0.0116	0.9876	84.95	86.18	96.87	95.05
3	-5.24	8.48	32.62	62.07	66.65	0.2665	0.0297	0.0070	0.9928	90.74	91.51	96.91	95.08
4	-9.57	8.27	31.96	61.86	64.54	0.2870	0.0363	0.0092	0.9914	92.27	92.91	95.53	95.49
5	-8.15	8.46	33.90	56.45	58.11	0.3383	0.0487	0.0140	0.9899	98.10	99.03	98.23	96.67
6	-9.07	7.94	33.66	54.79	55.36	0.3497	0.0439	0.0132	0.9916	87.20	88.19	86.88	87.29
7	-9.43	8.56	32.58	53.92	53.88	0.3552	0.0475	0.0149	0.9912	85.12	86.25	83.90	84.39
8	-5.80	10.68	31.90	55.01	55.83	0.3504	0.0536	0.0177	0.9897	83.97	85.21	81.63	82.70
9	-10.51	13.54	32.01	53.40	55.57	0.3547	0.0546	0.0187	0.9896	80.28	81.81	75.76	76.50
10	-12.10	16.10	32.95	49.83	51.66	0.3861	0.0806	0.0286	0.9858	74.66	76.57	74.32	75.12

NCORN	NCORN	TC/TO	PO/PO	EFF-AD	EFF-P	TOZ/TO1	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBM/SEC			%	%			%
8346	214.92	1.2147	1.7987	84.98	86.16	1.0793	0.9886	86.92

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	Epsi-1		Epsi-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1	B-2	N-1	N-2	RUN NO411, SPEED CODE 94, POINT NJ 1		V1-1	V1-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC					U-1	U-2		
1	11.847	9.335	660.2	921.4	680.2	589.8	0.0	711.1	0.0	50.4	0.6130	0.8310	491.1	537.1	0.7640	0.5512	822.8	611.1						
2	10.830	7.987	687.9	893.6	687.9	623.8	0.0	639.8	0.0	45.6	0.6207	0.8033	549.8	588.5	0.8040	0.5627	865.1	625.9						
3	8.852	7.720	678.0	827.2	678.0	613.3	0.0	595.0	0.0	42.2	0.6309	0.7390	619.3	645.5	0.8519	0.5539	915.6	619.9						
4	7.295	6.349	685.9	772.7	685.9	601.6	0.0	484.9	0.0	38.9	0.6368	0.6877	675.7	699.4	0.8952	0.5584	961.4	638.7						
5	4.291	3.353	689.3	682.3	689.3	567.2	0.0	379.2	0.0	33.8	0.6423	0.6035	811.6	823.8	0.9921	0.6373	1044.8	720.6						
6	2.183	2.604	689.9	667.4	689.9	564.0	0.0	356.8	0.0	32.3	0.6428	0.5890	877.2	895.4	1.0398	0.6822	1115.9	772.9						
7	2.500	2.086	690.6	659.2	690.6	559.6	0.0	348.4	0.0	31.9	0.6435	0.5807	919.0	923.8	1.0712	0.7071	1149.6	802.6						
8	1.882	1.582	691.5	652.5	691.5	558.4	0.0	337.5	0.0	31.2	0.6444	0.5742	960.2	962.6	1.1027	0.7383	1183.3	839.0						
9	1.217	1.045	691.7	651.2	691.7	562.6	0.0	328.0	0.0	30.2	0.6446	0.5726	1004.8	1004.8	1.1369	0.7738	1219.9	880.1						
10	0.437	0.355	690.9	651.2	690.9	565.1	0.0	323.8	0.0	29.8	0.6449	0.5715	1052.3	1052.3	1.1754	0.8112	1261.3	924.3						
11	0.015	0.004	689.6	649.2	689.6	525.8	0.0	327.1	0.0	31.9	0.6425	0.5603	1097.8	1097.5	1.2079	0.8139	1296.4	932.7						

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	A-1	A-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DFGRFF	DEGREE	FT/SEC	FT/SEC	INLET	
1	-2.00	3.50	14.35	53.21	42.12	39.57	0.4675	0.2754	0.3621	1.3704	77.86	76.85	36.74	-16.47	-491.1	176.1	1.3704
2	-1.28	4.13	13.39	44.28	42.43	44.84	0.4691	0.1272	0.0324	1.4272	89.10	88.54	39.60	-4.68	-549.8	51.3	1.4272
3	-0.87	4.41	14.00	35.93	42.82	46.36	0.4924	0.0649	0.0176	1.4287	93.69	93.37	42.33	8.40	-615.3	-90.5	1.4287
4	-0.70	4.42	14.07	25.10	43.04	46.71	0.4860	0.0412	0.0115	1.4121	95.46	95.22	44.73	19.64	-877.2	-214.5	1.4121
5	-1.24	3.32	10.27	11.60	43.24	45.52	0.4441	0.0318	0.0085	1.3764	95.57	95.36	49.69	36.09	-811.6	-444.4	1.3764
6	-1.07	2.91	7.57	8.69	43.26	45.68	0.4217	0.0326	0.0085	1.3796	95.22	94.99	51.84	43.15	-877.2	-528.5	1.3796
7	-0.10	2.74	7.11	7.29	43.29	45.49	0.4130	0.0414	0.0106	1.3808	93.79	93.30	53.09	45.81	-919.0	-575.4	1.3808
8	0.52	2.82	6.67	5.97	43.32	45.59	0.3990	0.0431	0.0109	1.3831	93.34	93.03	54.25	48.28	-960.2	-626.1	1.3831
9	0.78	3.02	6.06	5.19	43.33	46.12	0.3829	0.0413	0.0103	1.3894	93.46	93.14	55.46	50.27	-1004.8	-676.8	1.3894
10	1.05	3.27	5.99	4.47	43.30	46.41	0.3712	0.0521	0.0129	1.3562	91.66	91.25	56.79	52.32	-1055.3	-731.5	1.3562
11	0.97	3.19	9.47	2.18	43.25	42.86	0.3857	0.1089	0.0255	1.3699	82.51	81.72	57.87	55.69	-1097.8	-770.4	1.3699

TO/TC	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
%	%	%	%	SQFT			%	%
1.1087	1.3908	91.01	91.42	41.60	1.1087	1.3908	91.01	91.42

STATOR 1

SL	Epsi-1		Epsi-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1	B-2	N-1	N-2	RUN NO411, SPEED CODE 94, POINT NO 1		V1-1	V1-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC					PO/PO	TO/TO		
1	11.055	7.667	832.3	564.8	490.9	555.7	0.72.1	101.3	53.8	10.2	0.7413	0.4988	1.3089	1.1226	1.3089	1.1226								
2	7.175	5.123	845.9	633.7	582.2	625.1	610.9	104.0	46.3	9.4	0.7534	0.5523	1.3866	1.1209	1.3866	1.1209								
3	4.460	3.219	815.9	636.7	617.3	630.0	533.5	92.1	40.8	8.3	0.7278	0.5566	1.4030	1.1149	1.4030	1.1149								
4	2.867	2.183	779.3	614.9	622.0	613.9	469.4	85.9	37.0	8.0	0.6940	0.5426	1.3918	1.1086	1.3918	1.1086								
5	1.163	1.118	705.1	583.7	599.1	577.8	371.8	83.1	31.8	8.2	0.6252	0.5114	1.3580	1.1002	1.3580	1.1002								
6	0.817	0.886	692.9	565.9	57.3	579.6	351.1	85.8	30.4	8.4	0.6132	0.5130	1.3550	1.1016	1.3550	1.1016								
7	0.631	0.737	686.3	565.4	594.0	579.5	343.9	82.6	30.1	8.1	0.6064	0.5121	1.3576	1.1035	1.3576	1.1035								
8	0.475	0.600	681.1	584.6	553.6	578.9	334.1	81.1	29.4	8.0	0.6011	0.5111	1.3563	1.1045	1.3563	1.1045								
9	0.340	0.466	680.4	589.8	557.6	583.5	325.4	85.7	28.6	8.4	0.6000	0.5155	1.3664	1.1060	1.3664	1.1060								
10	0.146	0.323	680.3	594.7	599.1	584.8	322.5	108.1	28.3	10.5	0.5989	0.5191	1.3663	1.1098	1.3663	1.1098								
11	0.049	0.150	649.0	561.3	560.8	549.2	326.5	115.8	30.2	11.9	0.5679	0.4872	1.3362	1.1154	1.3362	1.1154								

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	
1	1.09	5.81	15.58	43.58	35.30	44.09	0.4620	0.1468	0.0309	0.9551	65.22	66.51	80.98	
2	-0.99	4.12	11.84	36.94	43.27	50.95	0.3819	0.0897	0.0200	0.9718	80.98	81.61	80.98	
3	-4.05	1.42	9.67	32.51	46.99	52.17	0.3477	0.0605	0.0145	0.9820	88.46	89.00	88.46	
4	-6.46	-0.68	8.76	29.06	48.13	51.08	0.3273	0.0504	0.0129	0.9862	91.26	91.66	91.26	
5	-10.41	-3.96	8.32	23.63	47.49	48.04	0.2894	0.0549	0.0159	0.9873	91.40	91.77	91.40	
6	-11.70	-4.42	8.21	22.03	47.73	48.10	0.2725	0.0673	0.0207	0.9849	90.19	90.61	90.19	
7	-12.13	-5.19	7.75	21.96	47.81	47.98	0.2687	0.0773	0.0246	0.9830	88.20	88.70	88.20	
8	-13.08	-5.84	7.54	21.39	47.75	47.87	0.2649	0.0909	0.0299	0.9803	87.09	87.67	87.09	
9	-14.51	-7.11	7.41	20.21	48.26	48.22	0.2540	0.0987	0.0335	0.9787	86.79	87.36	86.79	
10	-16.80	-9.21	10.48	17.82	48.47	48.22	0.2381	0.1066	0.0373	0.9771	84.55	85.21	84.55	
11	-18.05	-10.33	14.18	18.30	45.05	44.80	0.2535	0.1220	0.0438	0.9761	74.83	75.84	74.83	

NCCRR	NCRPP	TO/TC	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RPM	LBM/SEC	%	%	%	%			%	%
7865	206.50	1.1087	1.3631	89.21	85.85	1.1087	0.9801	85.21	85.21

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	VI-1	VI-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	8.647	5.874	925.1	891.1	515.8	748.1	98.9	484.3	10.7	12.6	0.4529	0.7694	610.9	650.3	0.6271	0.6616	727.0	766.3
2	6.412	4.360	698.7	673.7	441.1	757.4	99.1	435.6	8.8	29.7	0.5665	0.7559	664.0	692.5	0.7462	0.6919	854.9	799.8
3	4.929	3.195	664.2	638.5	658.3	745.2	86.0	384.4	7.6	27.2	0.5827	0.7262	713.5	736.4	0.7966	0.7130	908.1	823.4
4	3.479	1.973	653.5	793.0	648.1	710.9	83.0	351.3	7.3	26.2	0.5745	0.6660	766.7	780.4	0.8279	0.7184	941.8	830.4
5	0.658	-0.332	420.4	687.7	615.1	622.2	84.9	292.0	7.8	25.2	0.5437	0.5917	887.1	890.9	0.8887	0.7424	1011.2	862.8
6	-0.003	-0.746	615.9	656.0	610.2	604.8	83.6	256.2	7.8	22.8	0.5404	0.5642	929.7	930.7	0.9154	0.7804	1049.2	937.4
7	-0.461	-1.068	608.1	645.2	603.1	599.1	80.2	239.5	7.6	21.8	0.5331	0.5544	971.2	971.2	0.9426	0.8126	1075.9	965.7
8	-1.003	-1.480	607.6	645.1	600.8	597.1	80.2	246.2	8.5	22.2	0.5317	0.5535	1028.2	1028.2	0.9749	0.8430	1113.9	982.5
9	-1.158	-1.544	601.7	631.2	591.7	572.6	109.3	265.7	10.5	24.9	0.5254	0.5392	1067.3	1064.9	0.9831	0.8398	1126.0	983.7
10	-0.764	-0.934	564.6	565.0	552.7	495.3	115.2	271.9	11.8	28.8	0.4902	0.4784	1106.4	1105.0	0.9854	0.8206	1134.9	969.2

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-H	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VB'-1	VB'-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOY	TOY	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.37	-0.41	16.92	32.26	41.60	59.51	0.3916	0.0995	0.0141	1.2604	96.10	94.00	44.62	12.36	-512.4	-166.1	1.6568
2	-10.12	-3.86	10.33	22.67	52.34	62.39	0.1751	0.1711	0.0324	1.2075	82.87	81.70	41.28	16.61	-565.0	-256.9	1.6874
3	-8.74	-3.06	8.55	18.41	53.78	62.88	0.1888	0.0988	0.0249	1.1981	84.10	83.69	43.47	25.06	-625.4	-350.0	1.6773
4	-7.03	-1.95	6.50	15.43	52.90	50.00	0.2056	0.0943	0.0239	1.1877	83.15	82.73	46.48	31.06	-683.3	-429.1	1.6437
5	-3.50	0.37	5.21	8.68	50.27	53.54	0.2201	0.1723	0.0323	1.1776	70.06	69.51	52.54	43.85	-802.6	-597.8	1.5462
6	-2.43	0.86	5.86	5.00	49.87	52.10	0.1914	0.1102	0.0259	1.1170	69.90	69.42	54.70	48.21	-846.1	-676.5	1.5169
7	-1.03	1.35	5.33	5.21	49.31	51.55	0.1780	0.1058	0.0247	1.1113	68.90	68.43	55.91	50.70	-891.0	-731.7	1.5070
8	-1.06	1.16	3.81	4.78	49.26	51.24	0.1715	0.1148	0.0271	1.1063	65.14	64.64	57.35	52.57	-938.0	-760.2	1.5064
9	-0.86	1.36	3.74	3.91	48.47	48.71	0.1821	0.1453	0.0340	1.0981	57.39	56.83	58.30	54.39	-957.9	-799.2	1.4922
10	0.49	3.12	7.68	1.59	44.93	41.43	0.2037	0.1997	0.0425	1.0755	42.74	42.16	60.86	59.27	-991.2	-833.1	1.4331

TO2/TO1	PO2/PO1	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	INLET	INLET	INLET	INLET
%	%	%	%	SOFT	%	%	%	%
1.1697	1.5660	60.56	81.76	76.65	1.0550	1.1488	73.40	73.91

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	INLET	TO1
1	6.908	6.670	792.2	836.2	633.6	835.7	675.5	-28.2	16.7	-1.9	0.6757	0.7169	1.5671	1.1099	1.1900	1.0725
2	5.083	5.769	813.0	834.2	653.6	837.5	425.8	-53.7	31.5	-3.7	0.6993	0.7231	1.5937	1.1941	1.1400	1.0674
3	4.133	4.545	803.6	782.6	710.0	781.2	376.4	-46.3	27.4	-3.4	0.6930	0.6733	1.5355	1.1825	1.0971	1.0632
4	3.640	3.780	776.4	750.7	656.1	749.3	345.0	-45.5	26.4	-3.5	0.6708	0.6461	1.5118	1.1736	1.0421	1.0608
5	2.797	2.213	694.8	694.6	632.1	694.1	288.4	-25.6	24.5	-2.1	0.5982	0.5979	1.4794	1.1603	1.0894	1.0541
6	1.853	1.630	666.2	666.1	617.0	668.1	251.2	5.0	22.2	0.4	0.5736	0.5752	1.4591	1.1543	1.0763	1.0465
7	1.489	1.256	655.9	643.1	611.4	642.9	237.6	16.7	21.2	1.5	0.5642	0.5525	1.4382	1.1537	1.0607	1.0447
8	1.225	1.047	655.7	621.2	608.8	630.1	243.4	37.6	21.8	0.4	0.5631	0.5409	1.4308	1.1568	1.0509	1.0452
9	0.986	0.891	642.2	622.5	585.0	621.4	264.9	34.5	24.4	3.4	0.5491	0.5314	1.4253	1.1634	1.0474	1.0475
10	0.468	0.473	578.0	565.5	510.2	564.7	271.6	29.9	28.0	3.0	0.4899	0.4788	1.3782	1.1710	1.0337	1.0494

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-H	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-14.16	6.59	36.61	53.60	65.13	0.0772	0.2070	0.0436	0.9454	67.13	69.12	70.10	70.82
2	-12.35	4.38	35.12	59.32	66.63	0.1004	0.1991	0.0647	0.9445	73.28	74.96	76.23	57.00
3	-14.16	6.40	31.29	61.19	62.44	0.1508	0.3066	0.0729	0.9159	71.40	73.07	42.42	43.16
4	-15.30	5.06	29.84	63.10	60.40	0.1614	0.3086	0.0779	0.9194	72.20	73.76	41.85	42.61
5	-16.88	6.49	26.65	54.17	56.96	0.1339	0.2543	0.0589	0.9558	73.86	75.26	45.27	45.87
6	-19.21	9.72	21.73	52.88	55.02	0.1104	0.1931	0.0581	0.9613	73.89	75.24	44.46	44.01
7	-20.17	11.04	14.76	52.33	52.84	0.1249	0.2352	0.0737	0.9543	71.18	72.61	37.96	37.40
8	-20.44	13.56	18.34	51.98	51.70	0.1401	0.2594	0.0856	0.9498	68.76	70.29	31.58	32.16
9	-20.43	16.62	21.00	49.51	50.73	0.1581	0.2521	0.0884	0.9527	65.24	66.92	26.05	26.52
10	-20.34	15.76	24.99	42.45	45.43	0.1750	0.2594	0.0923	0.9601	56.12	58.05	19.10	19.48

ACURR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
WPM	LHM/SEC	%	%	%	%	%	%	%	%
766.5	206.30	1.1697	1.4792	69.75	71.36	1.0550	0.9445	42.87	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

RUN N3411, SPEED CODE 94, POINT NO 2																			
SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	U-1	U-2	M-1	M-2	V-1	V-2			
1	11.702	5.946	656.4	920.5	656.4	621.0	0.0	712.0	0.0	50.6	0.6092	0.8301	488.9	534.7	0.7596	0.5498	818.4	609.5	
2	10.908	8.122	663.4	890.8	663.4	621.0	0.0	638.8	0.0	45.7	0.6142	0.8008	467.3	505.9	0.7988	0.5803	860.0	623.3	
3	8.714	7.540	872.2	831.9	872.2	818.1	0.0	556.7	0.0	42.0	0.6270	0.7438	612.6	642.6	0.8456	0.5580	909.4	624.1	
4	7.131	6.171	877.1	779.9	877.1	805.8	0.0	491.3	0.0	39.1	0.6300	0.6944	672.7	696.3	0.8880	0.5693	956.5	639.4	
5	4.138	2.594	880.4	687.8	880.4	805.8	0.0	386.8	0.0	34.2	0.6333	0.6432	805.0	819.9	0.9031	0.6324	1056.3	719.1	
6	3.022	2.045	876.8	671.8	876.8	804.2	0.0	364.6	0.0	32.9	0.6327	0.5927	873.2	881.4	1.0299	0.6751	1106.7	765.7	
7	2.363	2.112	876.8	662.1	876.8	804.2	0.0	355.9	0.0	31.8	0.6330	0.5850	916.9	919.7	1.0608	0.6986	1139.9	793.4	
8	1.786	1.586	880.1	655.7	880.1	801.1	0.0	345.8	0.0	31.8	0.6330	0.5766	955.9	959.3	1.0919	0.7207	1175.2	828.7	
9	1.164	1.057	880.0	652.8	880.0	800.0	0.0	337.8	0.0	31.2	0.6328	0.5733	1000.3	1000.3	1.1257	0.7612	1209.5	866.6	
10	0.477	0.428	878.1	649.8	878.1	800.0	0.0	333.3	0.0	31.1	0.6328	0.5693	1050.6	1050.6	1.1641	0.7940	1251.0	906.4	
11	0.091	0.068	878.1	629.1	878.1	800.0	0.0	338.3	0.0	32.5	0.6310	0.5486	1092.9	1092.9	1.1968	0.8040	1286.2	922.1	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
1	-1.48	3.57	13.98	53.60	41.97	39.51	0.4670	0.2682	0.0403	1.3730	78.59	77.61	36.76	-16.85	-485.9	177.3	1.3730
2	-1.23	4.17	13.24	44.48	42.25	44.73	0.4686	0.1224	0.0311	1.4267	89.56	89.02	39.64	-4.85	-947.3	52.7	1.4267
3	-0.76	4.52	13.58	34.52	42.59	46.69	0.4847	0.0583	0.0160	1.4320	94.41	94.12	42.44	7.92	-612.6	85.9	1.4320
4	-0.55	4.87	13.14	26.18	42.78	46.97	0.4834	0.0394	0.0111	1.4177	95.73	95.52	44.88	18.70	-672.7	-204.9	1.4177
5	-1.00	3.55	9.49	12.61	42.91	45.58	0.4474	0.0369	0.0099	1.3799	94.98	94.75	49.93	17.31	-808.0	-433.4	1.3799
6	-0.79	3.19	7.32	9.62	42.88	45.60	0.4266	0.0413	0.0109	1.3815	94.09	93.81	52.12	42.50	-873.2	-516.8	1.3815
7	0.21	3.05	6.60	8.11	42.89	45.26	0.4187	0.0525	0.0136	1.4009	92.31	91.95	53.40	65.29	-914.9	-563.8	1.4009
8	0.84	3.15	6.16	6.81	42.90	45.33	0.4055	0.0560	0.0143	1.4031	91.58	91.19	54.58	47.77	-955.9	-613.5	1.4031
9	1.12	3.36	5.66	5.93	42.89	45.61	0.3919	0.0592	0.0149	1.3875	90.91	90.48	55.80	49.87	-1000.3	-662.6	1.3875
10	1.39	3.61	5.78	5.01	42.86	45.48	0.3840	0.0765	0.0190	1.3914	88.14	87.57	57.12	52.11	-1050.6	-715.3	1.3914
11	1.29	3.50	8.67	3.30	42.82	43.12	0.3926	0.1199	0.0287	1.3763	81.42	80.97	58.18	54.88	-1092.9	-754.2	1.3763

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%				%	%
1.1103	1.3929	90.07	90.52	41.26	1.1103	1.3929	90.07	90.52

STATOR 1

RUN N3411, SPEED CODE 94, POINT NO 2																			
SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	PO/PO	TO/TO	PO/PO	TO/TO	EFF-P	EFF-A	EFF-P	EFF-A	
1	11.079	7.746	830.2	554.9	880.4	545.7	672.9	100.3	94.1	10.3	0.7394	0.4799	1.3120	1.1222	1.3120	1.1222	1.3120	1.1222	
2	7.253	5.282	839.2	621.2	878.6	612.8	609.8	105.0	46.6	9.5	0.7491	0.5409	1.3859	1.1202	1.3859	1.1202	1.3859	1.1202	
3	4.613	3.489	814.7	625.5	814.1	618.5	936.5	92.7	1.0	8.5	0.7262	0.5462	1.4031	1.1148	1.4031	1.1148	1.4031	1.1148	
4	3.083	2.517	779.9	610.8	618.6	606.5	476.9	87.5	37.5	8.2	0.6943	0.5340	1.3944	1.1096	1.3944	1.1096	1.3944	1.1096	
5	1.388	1.432	705.4	577.5	545.0	511.7	379.0	81.4	32.5	8.1	0.6250	0.5053	1.3657	1.1018	1.3657	1.1018	1.3657	1.1018	
6	1.304	1.134	492.4	578.9	592.1	572.5	358.8	85.8	31.7	8.5	0.6122	0.5044	1.3656	1.1033	1.3656	1.1033	1.3656	1.1033	
7	0.788	0.927	684.3	578.0	587.2	571.8	351.3	84.2	30.3	8.2	0.5987	0.5035	1.3641	1.1052	1.3641	1.1052	1.3641	1.1052	
8	0.600	0.728	679.2	576.9	588.6	571.0	342.4	82.2	30.3	8.5	0.5859	0.5073	1.3658	1.1066	1.3658	1.1066	1.3658	1.1066	
9	0.418	0.528	676.8	581.5	588.1	575.1	335.1	85.8	29.7	8.5	0.5859	0.5073	1.3658	1.1066	1.3658	1.1066	1.3658	1.1066	
10	0.199	0.283	673.9	587.4	585.3	577.1	333.9	110.7	29.7	10.9	0.5418	0.5117	1.3702	1.1132	1.3702	1.1132	1.3702	1.1132	
11	0.024	0.076	653.0	556.4	558.8	545.6	337.8	120.4	31.2	12.5	0.5707	0.4825	1.3441	1.1189	1.3441	1.1189	1.3441	1.1189	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	EFF-P	EFF-A	EFF-P	EFF-A	EFF-P	EFF-A
1	1.38	4.10	15.67	43.78	35.10	43.60	0.4732	0.1458	0.0303	0.9555	66.04	67.31	66.04	67.31	66.04	67.31	66.04	67.31
2	-0.76	4.36	11.94	37.07	42.99	50.28	0.3934	0.0906	0.0201	0.9718	71.37	82.20	81.36	82.20	81.36	82.20	81.36	82.20
3	-3.04	1.64	9.87	32.90	46.92	51.50	0.3610	0.0681	0.0163	0.9798	88.59	89.13	88.59	89.13	88.59	89.13	88.59	89.13
4	-5.97	-0.20	9.03	29.27	47.99	50.57	0.3420	0.0580	0.0148	0.9840	90.94	91.36	90.94	91.36	90.94	91.36	90.94	91.36
5	-6.74	-2.29	8.23	24.39	47.22	47.85	0.3030	0.0444	0.0129	0.9898	91.57	91.93	91.57	91.93	91.57	91.93	91.57	91.93
6	-10.93	-4.16	8.32	22.68	47.34	47.82	0.2856	0.0516	0.0158	0.9885	90.61	90.19	90.61	90.19	90.61	90.19	90.61	90.19
7	-11.31	-4.33	8.03	22.50	47.06	47.66	0.2801	0.0561	0.0178	0.9878	88.21	88.71	88.21	88.71	88.21	88.71	88.21	88.71
8	-14.18	-4.94	7.76	22.07	47.16	47.51	0.2776	0.0697	0.0229	0.9850	86.72	87.28	86.72	87.28	86.72	87.28	86.72	87.28
9	-15.40	-6.01	8.04	21.20	47.42	47.80	0.2672	0.0745	0.0253	0.9841	85.79	86.41	85.79	86.41	85.79	86.41	85.79	86.41
10	-15.39	-7.79	10.87	18.84	47.24	47.81	0.2459	0.0728	0.0255	0.9846	83.91	83.18	83.91	83.18	83.91	83.18	83.91	83.18
11	-17.11	-5.38	14.76	18.67	46.89	44.58	0.2686	0.1160	0.0345	0.9771	74.18	75.23	74.18	75.23	74.18	75.23	74.18	75.23

NCON	NCON	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			ROTOR	ROTOR
RPM	LBM/SEC			%	%			%	%
7830	204.60	1.1103	1.3680	84.95	85.61	1.1103	0.9822	84.95	85.61

ROTOR 2

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		WB-1		WB-2		R-1	R-2	RPM N3411, SPEC CODE 94, POINT NO 2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	U-1	U-2	U-1	U-2			M-1	M-1	FT/SEC	FT/SEC
1	0.713	3.95E	509.3	832.3	455.9	670.4	97.5	402.1	11.0	35.1	0.4309	0.7135	308.1	647.4	0.6150	0.5987	716.6	608.3				
2	6.567	4.604	630.5	828.0	622.0	699.3	98.4	463.3	9.0	32.2	0.5490	0.7110	661.1	609.4	0.7318	0.6376	839.3	741.3				
3	5.110	3.548	648.0	796.1	641.9	690.7	98.9	395.8	7.9	29.7	0.5695	0.6951	710.3	731.1	0.7024	0.6608	895.4	767.8				
4	7.754	2.478	639.9	750.0	634.3	659.5	96.5	350.4	7.6	26.5	0.5615	0.6455	763.2	736.9	0.6151	0.6714	929.0	780.9				
5	1.150	0.353	612.1	665.1	606.4	595.5	83.5	315.4	7.0	20.3	0.5371	0.5609	883.1	806.9	0.6905	0.6908	1003.7	818.2				
6	3.588	0.354	600.3	629.2	602.3	562.7	84.8	231.6	8.0	26.6	0.5330	0.5376	925.5	926.5	0.9062	0.7312	1236.2	856.6				
7	0.221	-0.161	602.4	619.1	556.8	559.1	81.5	265.9	7.0	25.4	0.5270	0.5284	966.9	968.9	0.9302	0.7652	1637.7	896.6				
8	-0.223	-0.516	603.7	626.3	597.0	566.8	89.9	270.6	8.6	25.4	0.5275	0.5336	1023.6	1019.8	0.9682	0.7994	1108.2	930.3				
9	-0.284	-0.636	602.1	615.8	591.4	566.6	112.0	296.9	10.7	28.6	0.5249	0.5259	1042.5	1040.1	0.9760	0.7952	1119.6	937.2				
10	-0.234	-0.351	569.5	583.6	556.7	608.3	119.9	303.8	12.2	31.4	0.4938	0.4920	1101.5	1100.1	0.9706	0.7919	1129.5	939.3				

SL	INCS	INCP	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	W*-1	W*-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-0.57	0.39	16.09	31.85	40.67	56.75	0.1668	0.0036	0.0700	1.2753	99.64	95.62	65.42	13.53	-510.4	-165.4	1.6770
2	-9.41	3.16	13.98	22.72	51.29	60.50	0.2308	0.3790	0.0197	1.2336	87.80	89.50	41.99	19.27	-562.6	-246.1	1.7225
3	-8.19	-2.51	9.29	18.21	52.09	61.12	0.2399	0.0544	0.0137	1.2251	71.00	91.56	64.02	25.00	-621.4	-335.1	1.7171
4	-0.60	-1.52	7.77	14.59	52.21	59.17	0.2494	0.0464	0.0106	1.2149	92.17	91.95	66.92	32.33	-678.7	-418.1	1.6801
5	-3.23	0.67	5.65	8.53	49.94	53.04	0.2649	0.0822	0.0199	1.1852	82.59	87.19	52.82	44.30	-799.4	-571.5	1.6188
6	-2.25	1.06	6.55	5.49	49.58	51.04	0.2613	0.0701	0.0163	1.1634	83.73	83.38	54.38	68.98	-840.7	-644.9	1.5878
7	-0.93	1.46	6.06	4.55	49.10	50.73	0.2249	0.0625	0.0143	1.1609	84.50	84.10	56.02	51.42	-895.4	-701.0	1.5813
8	-1.92	1.20	4.22	4.42	49.12	51.21	0.2164	0.0657	0.0153	1.1644	53.45	87.09	57.39	52.98	-933.6	-749.2	1.5913
9	-1.06	1.16	3.87	3.50	48.57	49.02	0.2290	0.1935	0.0210	1.1599	77.23	76.76	58.10	54.51	-950.5	-763.2	1.5842
10	0.47	2.70	6.37	2.47	45.31	44.44	0.2353	0.1070	0.0236	1.1583	74.49	73.95	60.44	57.96	-981.6	-796.3	1.5599

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	%	%	LBM/SEC	%	%	ROTOR	ROTOR
1.1766	1.6319	84.94	85.94	36.25	1.0597	1.1922	86.21	86.54

STATOR 2

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		WB-1		WB-2		R-1	R-2	RPM N3411, SPEC CODE 94, POINT NO 2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	U-1	U-2	U-1	U-2			M-1	M-1	FT/SEC	FT/SEC
1	0.577	0.660	750.9	607.9	502.9	687.8	473.4	13.5	38.9	1.1	0.6378	0.5805	1.6290	1.2050	1.2762	1.0721						
2	5.185	5.665	787.8	729.9	653.0	729.9	433.5	3.9	33.5	0.3	0.6704	0.6207	1.6978	1.1954	1.2155	1.0688						
3	3.924	4.113	775.2	713.6	671.5	713.6	347.4	-4.0	29.9	-0.3	0.6656	0.6087	1.6828	1.1849	1.2003	1.0649						
4	2.955	2.930	745.7	676.8	657.2	676.8	32.3	-5.5	26.2	-0.5	0.6608	0.5775	1.6587	1.1760	1.1953	1.0618						
5	1.520	1.324	670.8	598.3	554.3	598.3	311.1	-2.8	27.6	-0.3	0.5741	0.5387	1.5879	1.1680	1.1589	1.0595						
6	1.179	0.993	635.1	572.5	571.4	572.4	277.3	-13.4	25.9	-1.3	0.5430	0.4888	1.5602	1.1627	1.1432	1.0525						
7	1.917	0.854	625.5	557.2	567.0	557.2	264.1	-3.1	25.0	-0.3	0.5341	0.4730	1.5466	1.1635	1.1355	1.0517						
8	0.883	0.774	632.8	567.3	572.0	567.2	270.7	7.9	25.3	0.8	0.5394	0.4809	1.5559	1.1687	1.1305	1.0535						
9	0.682	0.625	626.1	559.2	591.5	598.4	296.4	22.2	28.3	2.3	0.5314	0.4721	1.5492	1.1765	1.1323	1.0563						
10	0.311	0.301	591.2	528.5	507.3	520.1	303.4	29.2	30.9	3.2	0.4987	0.4440	1.5240	1.1838	1.1357	1.0579						

SL	INCS	INCP	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	W*-1	W*-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-11.58	9.43	37.76	51.11	60.50	0.2110	0.1203	0.0254	0.9712	73.65	75.38	87.17	87.55				
2	-10.2	8.35	33.18	58.00	65.85	0.1909	0.0552	0.0174	0.9856	83.58	84.75	83.27	83.72				
3	-17.12	7.97	30.26	60.13	65.20	0.1962	0.0513	0.0122	0.9889	87.74	88.61	85.44	85.82				
4	-13.49	8.07	28.64	59.12	62.11	0.2122	0.0638	0.0161	0.9647	88.35	89.15	84.62	84.81				
5	-13.76	8.80	27.51	53.64	54.86	0.2422	0.1045	0.0301	0.9791	83.48	84.50	72.25	72.82				
6	-15.49	7.96	27.22	51.67	52.94	0.2362	0.0918	0.0276	0.9833	83.28	84.29	74.10	74.59				
7	-16.44	9.24	25.29	51.70	50.77	0.2429	0.1242	0.0399	0.9781	81.15	82.26	71.41	71.92				
8	-16.91	10.94	24.53	51.70	51.98	0.2400	0.1242	0.0410	0.9777	79.00	81.01	70.51	71.05				
9	-16.53	13.54	25.58	49.52	50.45	0.2584	0.1352	0.0464	0.9762	75.49	76.95	64.12	64.75				
10	-17.53	15.89	27.72	45.10	47.20	0.2715	0.1246	0.0443	0.9804	69.58	71.32	63.86	64.50				

NCORR	W CORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	%	%	STAGE	%
7830	20600	1.1766	1.5993	81.31	82.50	1.0597	0.9806	76.39	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		N-1		N-2		PC/PO		TO/TI		PO/PO		TO/TO		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	11.811	9.740	628.7	901.8	628.7	559.2	0.0	707.5	0.0	51.6	0.5817	0.8116	488.8	534.5	0.7368	0.5268	796.3	585.3															
2	10.957	8.086	817.1	876.5	835.1	596.6	0.0	642.2	0.0	47.0	0.5881	0.7862	547.2	585.8	0.7762	0.5375	838.3	599.3															
3	5.465	6.516	845.1	824.1	845.1	631.3	0.0	563.5	0.0	43.1	0.5980	0.7756	612.4	642.5	0.8245	0.5414	889.5	606.5															
4	7.914	5.409	853.1	775.4	853.1	592.1	0.0	501.4	0.0	40.2	0.6059	0.6848	672.5	696.1	0.8697	0.5542	937.4	623.3															
5	4.835	1.802	864.2	690.1	864.2	561.7	0.0	480.9	0.0	35.5	0.6170	0.6094	807.8	819.7	0.9715	0.6187	1045.8	700.7															
6	3.643	2.437	867.1	673.2	867.1	555.4	0.0	380.3	0.0	34.4	0.6199	0.5927	875.0	881.2	1.0210	0.6585	1098.7	747.9															
7	2.921	2.364	869.2	669.8	869.2	556.7	0.0	373.5	0.0	33.9	0.6220	0.5888	914.7	919.5	1.0534	0.6850	1133.3	779.2															
8	2.264	1.842	871.2	664.4	871.2	556.6	0.0	362.8	0.0	33.1	0.6246	0.5833	955.7	959.1	1.0857	0.7162	1167.8	815.7															
9	1.4.7	1.246	872.2	660.6	872.2	557.0	0.0	353.9	0.0	32.4	0.6250	0.5792	1000.1	1000.1	1.1204	0.7405	1205.0	853.4															
10	0.594	0.487	872.1	659.6	872.1	558.1	0.0	351.6	0.0	32.2	0.6249	0.5769	1050.3	1050.3	1.1.94	0.7821	1266.9	894.2															
11	0.094	0.669	871.1	652.4	871.1	522.1	0.0	356.8	0.0	34.3	0.6239	0.5499	1092.6	1092.3	1.1921	0.7.74	1282.3	902.0															

SL	INCS	IACH	DEV	TURN	RHOV-1	RHOV-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-0.79	4.76	13.69	55.08	40.82	38.30	0.4807	0.2837	0.0637	1.3688	78.30	77.2	37.95	-17.13	-488.8	173.0	1.3688
2	0.22	5.43	12.68	44.28	41.09	43.24	0.4836	0.1449	0.0368	1.4218	88.24	87.64	40.90	-5.38	-547.2	54.4	1.4218
3	0.67	5.75	13.13	36.20	41.51	45.47	0.4919	0.0813	0.0223	1.4281	92.64	92.28	43.67	7.47	-612.4	-78.9	1.4281
4	0.53	5.45	12.63	27.77	41.83	46.03	0.4915	0.0555	0.0156	1.4197	94.33	94.04	45.96	18.19	-672.5	-194.7	1.4197
5	-0.31	4.25	8.90	13.91	42.28	45.35	0.4581	0.0381	0.0103	1.3563	95.13	94.81	50.63	36.72	-807.8	-418.8	1.3563
6	-0.24	3.73	6.88	10.59	42.39	45.32	0.4416	0.0430	0.0114	1.4084	94.19	93.91	52.65	42.06	-873.0	-500.9	1.4084
7	0.65	3.48	5.00	9.34	42.48	45.61	0.4321	0.0468	0.0123	1.4082	93.56	93.1	53.84	44.50	-914.7	-548.0	1.4082
8	1.23	3.51	5.37	7.96	42.55	45.91	0.4182	0.0463	0.0120	1.4136	93.44	93.11	54.94	46.98	-955.7	-594.3	1.4136
9	1.42	3.66	4.99	6.90	42.59	46.21	0.4069	0.0486	0.0124	1.4189	92.94	92.58	56.10	47.20	-1000.1	-644.2	1.4189
10	1.65	3.87	5.06	6.00	42.59	46.32	0.3988	0.0441	0.0162	1.4262	90.59	90.10	57.39	51.38	-1052.3	-698.7	1.4262
11	1.55	3.77	6.41	3.81	42.55	43.04	0.4123	0.1197	0.0288	1.4047	82.43	81.56	58.44	54.63	-1092.6	-735.5	1.4047

TO/TI	PO/PO	EFF-AD	EFF-P	WC/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SOFT	%	%	%	%
1.1140	1.4096	90.41	90.86	40.63	1.1140	1.4096	90.41	90.86

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		N-1		N-2		PC/PO		TO/TI		PO/PO		TO/TO		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE		
1	11.184	7.9.7	811.3	504.5	459.5	500.0	663.6	98.3	55.4	11.2	0.7211	0.4383	1.3113	1.1214	1.3113	1.1214																	
2	7.337	5.492	820.7	578.9	546.0	567.8	612.8	112.6	48.3	11.2	0.7305	0.5020	1.3807	1.1208	1.3807	1.1208																	
3	4.662	2.652	794.9	592.8	582.8	586.4	540.6	87.2	42.8	8.4	0.7049	0.5159	1.4045	1.1161	1.4045	1.1161																	
4	3.041	2.547	764.2	564.0	541.3	579.0	484.1	76.7	39.3	7.5	0.6784	0.5088	1.4011	1.1118	1.4011	1.1118																	
5	1.254	1.305	699.4	559.8	578.6	556.8	392.9	74.8	34.2	7.7	0.6181	0.4882	1.3799	1.1054	1.3799	1.1054																	
6	0.846	0.978	687.3	564.8	576.4	559.1	374.4	74.8	33.0	8.1	0.6061	0.4922	1.3820	1.1078	1.3820	1.1078																	
7	0.649	0.781	686.4	568.1	579.0	562.1	368.7	82.8	32.5	8.4	0.6044	0.4946	1.3835	1.1105	1.3835	1.1105																	
8	0.511	0.633	683.3	564.9	581.3	563.7	359.2	85.8	31.7	8.5	0.6011	0.4959	1.3841	1.1118	1.3841	1.1118																	
9	0.388	0.494	680.9	575.6	583.4	568.4	351.1	90.8	31.0	9.1	0.5982	0.5006	1.3943	1.1138	1.3943	1.1138																	
10	0.242	0.327	680.6	582.6	583.7	572.4	350.1	108.7	31.0	10.7	0.5966	0.5059	1.3935	1.1187	1.3935	1.1187																	
11	0.090	0.136	653.8	573.4	548.2	541.5	356.3	114.2	33.0	11.9	0.5697	0.4779	1.3686	1.1253	1.3686	1.1253																	

SL	INCS	IACH	DEV	TURN	RHOV-1	RHOV-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	2.76	7.47	16.37	44.46	33.47	40.67	0.5165	0.1420	0.0294	0.9583	66.33	67.59	79.95	80.84	79.95	82.84	
2	0.94	6.06	13.81	37.10	41.06	47.30	0.4294	0.0943	0.0239	0.9718	79.95	80.84	79.95	82.84	82.84	88.42	
3	-2.33	3.44	9.80	34.18	44.90	49.56	0.3907	0.0579	0.0139	0.9835	87.86	88.42	87.86	88.42	90.48	90.92	
4	-4.18	1.80	8.34	31.75	46.30	49.18	0.3710	0.0480	0.0123	0.9873	90.48	90.92	90.48	90.92	91.51	91.89	
5	-8.06	-1.61	7.81	28.49	46.48	47.15	0.3305	0.0504	0.0146	0.9896	91.51	91.89	91.51	91.89	92.08	92.35	
6	-9.15	-2.97	7.52	24.87	46.88	47.39	0.3111	0.0616	0.0189	0.9865	89.87	90.35	89.87	90.35	88.55	88.55	
7	-9.71	-2.73	8.22	24.11	47.08	47.52	0.3058	0.0818	0.0280	0.9821	88.55	88.55	88.55	88.55	87.07	87.07	
8	-10.74	-3.55	8.02	23.25	47.48	47.59	0.2995	0.0975	0.0320	0.9789	87.07	87.07	87.07	87.07	86.41	86.41	
9	-12.33	-4.84	8.64	21.96	47.82	47.94	0.2857	0.1018	0.0345	0.9781	86.41	86.41	86.41	8			

ROTOR 2

RUN NO411, SPEED CODE 94, POINT NO 3																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	8.560	5.877	467.5	791.7	457.6	602.0	95.6	516.2	11.7	40.1	0.4018	0.6737	600.0	647.2	0.5904	0.5244	607.0	616.6	
2	4.379	4.634	590.1	777.1	581.1	616.9	102.8	472.6	10.0	37.3	0.5123	0.6621	660.9	609.3	0.6994	0.5570	805.7	653.9	
3	5.104	3.758	616.9	754.5	611.6	627.5	80.6	418.9	7.5	33.6	0.5393	0.6436	710.1	730.9	0.7658	0.5978	877.6	730.8	
4	2.876	2.752	611.9	721.2	607.5	611.1	73.4	383.1	6.9	32.0	0.5348	0.6149	763.0	776.7	0.8033	0.6198	919.1	726.9	
5	1.415	0.762	594.5	655.4	589.5	555.9	76.7	347.1	7.4	32.0	0.5197	0.5562	882.9	886.7	0.8732	0.6575	998.7	774.7	
6	0.834	0.347	595.5	626.8	589.9	539.7	81.4	318.7	7.9	30.6	0.5200	0.5314	925.3	926.3	0.8990	0.6890	1029.6	812.7	
7	0.475	0.123	594.5	616.0	589.7	531.6	82.7	311.2	8.0	30.6	0.5185	0.5212	966.6	966.6	0.9262	0.7140	1062.0	843.9	
8	0.030	-0.210	598.3	629.8	591.0	542.2	93.3	320.5	9.0	30.6	0.5213	0.5470	1023.3	1019.5	0.9600	0.7472	1101.9	884.7	
9	-0.141	-0.339	595.8	623.8	589.7	521.2	104.8	342.7	10.5	29.3	0.5215	0.5244	1062.2	1058.8	0.9738	0.7452	1120.2	886.5	
10	-0.056	-0.129	568.7	558.0	557.2	490.3	113.8	342.4	11.5	24.9	0.4916	0.4999	1101.2	1099.8	0.9801	0.7543	1133.7	902.3	

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-3.95	3.01	16.47	35.73	37.80	52.88	0.2637	0.0405	-0.0096	1.3131	103.17	103.29	48.04	12.31	-512.4	-133.0	1.7257
2	-7.47	-1.40	10.94	24.50	48.55	55.74	0.3166	0.0688	0.0170	1.2599	92.32	92.04	43.73	19.23	-558.1	-216.7	1.7542
3	-8.44	-0.76	9.84	19.42	51.20	57.98	0.3124	0.0558	0.0139	1.2517	92.61	92.37	45.77	28.35	-629.5	-312.0	1.7610
4	-4.91	0.17	8.19	15.86	50.87	57.29	0.3108	0.0360	0.0090	1.2507	94.73	94.55	48.61	32.74	-689.6	-395.6	1.7472
5	-2.20	1.67	5.50	9.65	49.33	52.82	0.3172	0.0564	0.0137	1.2372	90.47	90.18	51.83	44.14	-806.2	-536.6	1.7086
6	-1.58	1.73	6.04	6.66	49.30	51.43	0.2927	0.0421	0.0099	1.2194	92.00	91.77	55.05	48.39	-843.9	-607.4	1.6865
7	-0.61	1.78	5.59	5.38	49.17	50.63	0.2848	0.0508	0.0118	1.2146	89.88	89.60	56.33	50.95	-883.9	-655.4	1.6807
8	-0.86	1.36	3.44	5.76	49.36	51.70	0.2765	0.0537	0.0128	1.2247	89.30	88.99	57.55	52.19	-930.0	-699.0	1.7012
9	-0.93	1.30	3.34	4.24	49.12	49.41	0.2920	0.0884	0.0209	1.2194	82.83	82.34	58.23	53.99	-952.4	-717.1	1.6982
10	0.59	2.82	5.49	3.48	45.96	46.14	0.2877	0.0807	0.0183	1.2269	84.41	83.95	60.56	57.08	-987.4	-757.4	1.6784

TO/TU	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
%	%	%	%	SOFT	%	%	%	%
1.1916	1.7136	86.78	87.74	35.39	1.0697	1.2198	90.79	91.06

STATOR 2

RUN NO411, SPEED CODE 94, POINT NO 3																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	7.068	8.101	722.5	583.7	516.8	583.7	504.8	7.4	44.1	0.7	0.6102	0.4888	1.6781	1.2091	1.2773	1.0782	1.0782		
2	5.105	5.467	736.6	627.4	573.3	627.2	462.5	14.4	38.8	1.3	0.6248	0.5266	1.7373	1.2027	1.2472	1.0739	1.0739		
3	3.783	3.881	733.7	628.0	608.2	628.0	410.3	1.4	34.0	0.1	0.6245	0.5291	1.7496	1.1941	1.2444	1.0715	1.0715		
4	2.864	2.767	714.3	606.4	607.2	606.4	376.3	-6.7	31.8	-0.6	0.6086	0.5115	1.7344	1.1876	1.2419	1.0697	1.0697		
5	1.507	1.298	660.5	556.1	584.8	556.1	342.4	-9.9	31.2	-1.0	0.5608	0.4680	1.6921	1.1833	1.2252	1.0693	1.0693		
6	1.227	1.030	623.9	524.6	541.9	524.5	309.2	-9.2	29.7	-1.0	0.5282	0.4406	1.6661	1.1823	1.2096	1.0636	1.0636		
7	1.082	0.910	623.9	524.6	541.9	524.5	309.2	-9.2	29.7	-1.0	0.5282	0.4406	1.6661	1.1823	1.2096	1.0636	1.0636		
8	0.848	0.736	638.6	541.8	522.9	541.8	319.9	1.8	30.1	0.2	0.5399	0.4543	1.6821	1.1888	1.2109	1.0649	1.0649		
9	0.547	0.484	633.2	538.4	533.0	538.0	341.8	21.6	32.7	2.1	0.5327	0.4495	1.6790	1.1982	1.2052	1.0707	1.0707		
10	0.176	0.153	608.6	504.8	503.2	503.8	341.9	32.7	34.2	3.7	0.5091	0.4190	1.6500	1.2060	1.2075	1.0715	1.0715		

SL	INCP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P
	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-6.72	9.23	43.41	47.14	55.18	0.3347	0.1238	0.0261	0.9725	76.19	77.85	92.43	92.69
2	-5.01	9.36	37.48	52.57	60.54	0.2836	0.0424	0.0095	0.9902	84.34	85.50	88.00	88.37
3	-8.10	8.42	33.62	56.83	61.40	0.2752	0.0267	0.0064	0.9938	89.26	90.07	89.87	89.70
4	-9.90	7.91	32.39	57.13	59.62	0.2853	0.0318	0.0080	0.9930	90.80	91.48	91.49	91.75
5	-10.20	8.04	32.25	53.51	54.63	0.3114	0.0471	0.0136	0.9910	88.43	89.25	86.11	86.50
6	-11.59	7.70	31.39	52.20	52.37	0.3149	0.0439	0.0132	0.9922	88.11	88.94	86.15	86.47
7	-11.71	8.55	30.71	51.43	51.39	0.3187	0.0502	0.0157	0.9913	86.09	87.05	85.49	85.87
8	-12.19	10.34	25.86	52.51	52.98	0.3157	0.0624	0.0206	0.9888	84.91	85.88	83.88	84.30
9	-12.11	13.56	30.38	50.30	52.21	0.3238	0.0655	0.0225	0.7885	80.48	81.84	77.38	77.97
10	-14.22	16.44	30.48	47.14	48.35	0.3514	0.0973	0.0345	0.9642	74.64	76.35	77.24	77.84

NCORR	WCORR	TO/TU	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RPM	LBM/SEC	%	%	%	%	%	%	%	%
7828	201.50	1.1916	1.6950	84.88	85.95	1.0697	0.9891	86.03	86.03

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	11.044	5.729	618.1	902.0	618.1	554.4	0.0	711.5	0.0	52.0	0.5712	0.8112	491.6	537.6	0.7299	0.5225	789.7	581.0
2	11.044	8.049	624.9	874.8	624.9	582.7	0.0	652.5	0.0	48.1	0.5780	0.7834	550.4	589.2	0.7702	0.5249	832.7	586.1
3	5.595	4.530	635.7	820.0	635.7	587.8	0.0	571.7	0.0	44	0.5886	0.7338	616.0	646.2	0.8197	0.5280	885.2	592.5
4	8.043	5.459	644.6	772.6	644.6	582.6	0.0	507.5	0.0	41.0	0.5975	0.6859	676.4	700.1	0.8661	0.5447	934.4	613.6
5	4.512	3.641	657.2	691.2	657.2	554.7	0.0	412.4	0.0	36.6	0.6120	0.6393	742.5	764.5	0.9100	0.6091	1045.0	691.0
6	3.668	2.862	660.2	676.3	660.2	550.5	0.0	382.8	0.0	35.5	0.6150	0.5945	818.1	836.3	1.0201	0.6499	1098.6	739.3
7	2.922	2.372	662.1	671.4	662.1	548.7	0.0	387.0	0.0	35.2	0.6150	0.5890	920.0	924.8	1.0527	0.6740	1133.5	768.3
8	2.242	1.852	663.0	665.4	663.0	548.0	0.0	377.5	0.0	34.6	0.6166	0.5828	961.2	964.7	1.0851	0.7035	1168.1	807.2
9	1.474	1.256	664.3	662.2	664.3	549.8	0.0	369.1	0.0	33.9	0.6173	0.5792	1005.9	1005.9	1.1200	0.7350	1205.6	841.3
10	0.579	0.481	664.1	662.7	664.1	551.8	0.0	367.1	0.0	33.6	0.6170	0.5782	1056.4	1056.4	1.1592	0.7703	1247.8	882.9
11	0.072	0.052	663.0	633.3	663.0	514.0	0.0	369.9	0.0	35.7	0.6158	0.5494	1099.0	1099.0	1.1921	0.7736	1283.5	891.8

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.15	5.40	13.47	55.95	40.36	38.23	0.4430	0.2774	0.0622	1.3794	79.37	78.41	38.59	-17.36	-491.6	173.9	1.3794
2	0.66	4.06	11.88	47.72	40.65	42.45	0.4991	0.1554	0.0394	1.4296	87.78	87.15	41.53	-6.19	-550.4	63.4	1.4296
3	1.06	6.34	12.87	37.06	41.12	44.68	0.5071	0.0914	0.0251	1.4341	91.99	91.57	44.27	7.21	-616.0	-74.5	1.4341
4	1.08	6.20	12.72	28.23	41.99	45.57	0.5019	0.0583	0.0164	1.4276	94.21	93.91	46.51	18.28	-676.4	-192.6	1.4276
5	0.16	4.72	8.80	14.47	42.00	43.08	0.4705	0.0421	0.0114	1.4101	94.80	94.54	51.09	36.62	-812.5	-412.1	1.4101
6	0.19	4.17	6.71	11.21	42.12	45.24	0.4533	0.0459	0.0122	1.4171	94.04	93.74	53.10	41.89	-878.1	-493.5	1.4171
7	1.09	3.93	5.75	9.84	42.20	45.31	0.4462	0.0540	0.0142	1.4237	92.84	92.48	54.28	44.44	-920.0	-537.8	1.4237
8	1.65	3.96	5.38	8.40	42.26	45.49	0.4377	0.0569	0.0147	1.4288	92.27	91.87	55.39	46.99	-961.2	-587.2	1.4288
9	1.88	4.12	4.99	7.38	42.29	45.84	0.4205	0.0596	0.0152	1.4352	91.71	91.28	56.58	49.20	-1005.9	-636.7	1.4352
10	2.11	4.33	5.00	6.52	42.28	46.11	0.4113	0.0738	0.0187	1.4448	89.64	89.08	57.84	51.32	-1056.4	-689.3	1.4448
11	2.00	4.22	6.59	4.10	42.23	42.69	0.4251	0.1272	0.0305	1.4216	82.01	81.09	58.70	56.80	-1099.0	-728.7	1.4216

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AI	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	STAGE
1.1180	1.4230	89.89	90.39	40.31	1.1180	1.4230	89.89	90.39

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	INLET	STAGE	T01
1	11.397	8.134	810.7	491.4	452.8	481.5	672.4	98.1	56.0	11.4	0.7200	0.4228	1.3163	1.1228	1.3163	1.1228	1.1228	1.1228
2	7.574	5.753	817.6	561.9	530.5	551.8	622.1	105.9	49.5	10.8	0.7265	0.4860	1.3819	1.1233	1.3819	1.1233	1.1233	1.1233
3	4.841	3.858	788.6	577.7	566.6	570.3	548.8	92.2	44.1	9.2	0.7301	0.5015	1.4069	1.1196	1.4069	1.1196	1.1196	1.1196
4	3.218	2.738	755.2	571.9	579.6	565.7	490.3	83.8	40.2	8.4	0.6729	0.4377	1.4067	1.1140	1.4067	1.1140	1.1140	1.1140
5	1.429	1.458	699.9	554.8	571.4	548.7	404.2	82.2	35.3	8.5	0.6174	0.4828	1.3931	1.1091	1.3931	1.1091	1.1091	1.1091
6	1.015	1.111	690.4	559.3	572.0	552.2	388.5	86.7	34.0	9.1	0.6078	0.4862	1.3953	1.1119	1.3953	1.1119	1.1119	1.1119
7	0.808	0.908	688.4	564.1	572.8	557.0	381.9	89.6	33.7	9.1	0.6050	0.4899	1.3984	1.1151	1.3984	1.1151	1.1151	1.1151
8	0.615	0.708	684.9	566.3	574.1	559.8	373.6	85.1	33.1	8.6	0.6011	0.4914	1.3995	1.1170	1.3995	1.1170	1.1170	1.1170
9	0.443	0.521	683.3	570.9	576.8	564.0	366.2	88.7	32.4	8.9	0.5989	0.4951	1.4028	1.1194	1.4028	1.1194	1.1194	1.1194
10	0.279	0.344	684.4	576.9	578.7	565.5	365.5	114.0	32.3	11.4	0.5985	0.4993	1.4070	1.1246	1.4070	1.1246	1.1246	1.1246
11	0.124	0.160	655.7	549.2	541.8	536.2	369.3	118.5	34.3	12.5	0.5700	0.4729	1.3837	1.1306	1.3837	1.1306	1.1306	1.1306

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	3.32	8.03	18.76	44.62	33.22	39.48	0.5398	0.1590	0.0329	0.9534	66.14	67.42	66.14	67.42
2	2.20	7.32	13.20	38.71	40.13	46.25	0.4527	0.1091	0.0242	0.9676	78.52	79.47	78.52	79.47
3	-0.79	4.68	10.53	34.90	43.93	48.52	0.4066	0.0673	0.0161	0.9810	86.47	87.10	86.47	87.10
4	-3.26	2.52	9.22	31.79	45.71	48.42	0.3832	0.0554	0.0141	0.9855	89.89	90.37	89.89	90.37
5	-6.96	-0.51	8.65	26.75	46.22	47.03	0.3405	0.0529	0.0154	0.9880	91.09	91.49	91.09	91.49
6	-8.10	-1.32	8.92	24.92	46.66	47.22	0.3235	0.0702	0.0215	0.9845	89.31	89.80	89.31	89.80
7	-8.51	-1.52	8.78	24.55	46.88	47.51	0.3166	0.0821	0.0260	0.9820	87.42	88.00	87.42	88.00
8	-9.39	-2.20	8.21	24.41	47.17	47.68	0.3128	0.0955	0.0313	0.9793	86.20	86.84	86.20	86.84
9	-10.66	-3.27	8.49	23.48	47.57	47.95	0.3038	0.1066	0.0362	0.9770	85.09	85.78	85.09	85.78
10	-12.81	-5.22	11.40	20.88	47.82	47.91	0.2882	0.1219	0.0426	0.9738	82.30	83.14	82.30	83.14
11	-13.98	-6.26	14.74	21.82	44.50	44.98	0.1023	0.1329	0.0476	0.9737	74.48	75.62	74.48	75.62

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
7873.	199.90	1.1180	1.3930	84.20	84.92	1.1180	0.9789	84.20	84.92

ROTOR 2

RUN N0411, SPEED CODE 96, POINT NO 24

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	V ^o -1	V ^o -2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.483	5.801	448.7	769.3	438.4	568.2	95.3	518.6	12.2	42.0	0.3849	0.6521	611.5	651.0	0.5810	0.4946	677.3	583.5
2	6.186	4.542	570.9	753.6	561.9	589.3	101.0	470.1	10.1	38.4	0.4941	0.6396	664.8	693.3	0.6889	0.5346	796.0	630.1
3	4.953	3.713	601.4	734.7	595.1	594.8	86.8	431.2	8.3	35.8	0.5235	0.6242	714.2	735.2	0.7527	0.5675	864.8	668.0
4	3.759	2.821	558.3	709.6	592.8	587.0	80.4	398.8	7.7	34.1	0.5217	0.6030	767.5	781.2	0.7913	0.5953	907.5	700.6
5	1.462	0.883	587.6	650.1	581.4	539.1	85.3	363.4	8.3	34.0	0.5124	0.5499	888.1	891.8	0.8644	0.6385	991.2	754.9
6	0.924	0.499	593.3	621.7	583.5	526.1	89.2	331.3	8.7	32.2	0.5141	0.5254	930.7	931.7	0.8919	0.6746	1024.0	798.3
7	0.583	0.270	591.2	611.5	565.0	521.4	85.6	319.5	8.3	31.5	0.5142	0.5155	972.2	972.2	0.9239	0.7042	1062.2	835.4
8	0.148	-0.046	594.3	623.0	587.2	531.7	91.5	324.7	8.9	31.4	0.5162	0.5240	1029.3	1025.5	0.9610	0.7398	1106.4	879.6
9	-0.040	-0.221	595.9	623.3	584.6	512.5	115.5	354.8	11.2	34.7	0.5164	0.5220	1068.4	1066.0	0.9689	0.7342	1117.9	876.6
10	-0.022	-0.091	566.3	598.5	553.9	482.7	118.1	353.8	12.0	36.2	0.4883	0.4985	1107.6	1106.2	0.9777	0.7446	1134.0	893.9

SL	INCS	INCM	DEV	TURN	R-CVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B ^o -1	B ^o -2	VO ^o -1	VO ^o -2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL		P01	TOT	TOT	DEGREE	DFGREE	FT/SEC	FT/SEC	INLET
1	-2.53	4.43	17.52	36.50	36.48	51.10	0.3044	-0.0727	-0.0172	1.3270	105.43	105.65	49.46	12.96	-516.2	-132.4	1.7482
2	-6.42	-0.16	12.32	24.37	47.23	54.42	0.3383	0.3327	0.0080	1.2727	96.43	96.31	44.97	20.61	-563.8	-223.1	1.7733
3	-5.75	-0.08	10.47	19.47	50.32	56.12	0.3424	0.0424	0.0105	1.2642	94.67	94.48	44.45	26.98	-627.4	-304.0	1.7839
4	-4.32	0.76	8.49	16.15	50.12	56.25	0.3339	0.0165	0.0041	1.2686	97.72	97.64	49.19	33.06	-687.1	-382.4	1.7812
5	-1.94	1.93	5.78	9.67	49.10	52.41	0.3341	0.0352	0.0085	1.2589	94.35	94.16	54.09	44.42	-802.8	-528.5	1.7520
6	-1.36	1.95	6.43	6.45	49.22	51.34	0.3043	0.0154	0.0036	1.2390	97.25	97.17	55.26	48.78	-841.5	-600.4	1.7312
7	-0.36	2.03	6.02	5.21	49.27	50.84	0.2945	0.0268	0.0062	1.2339	94.85	94.69	56.59	51.38	-886.6	-652.7	1.7264
8	-0.48	1.74	4.04	5.14	48.42	51.86	0.2868	0.0355	0.0083	1.2436	93.15	92.93	57.93	52.80	-937.7	-700.7	1.7451
9	-0.69	1.53	3.57	4.25	49.05	49.76	0.3015	0.0608	0.0143	1.2437	88.66	88.30	58.47	54.22	-952.9	-711.2	1.7496
10	0.79	3.02	5.73	3.44	46.05	46.55	0.2578	0.0552	0.0124	1.2514	89.76	89.43	60.76	57.32	-989.5	-752.4	1.7290

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
%	%	%	%	SOFT			%	%
1.1578	1.7527	87.86	88.77	34.90	1.0714	1.2582	94.82	94.99

STATOR 2

RUN N7411, SPEED CODE 96, POINT NO 24

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	7.022	6.051	703.8	546.6	486.0	546.4	509.1	13.4	46.1	1.4	0.5925	0.4539	1.7017	1.2121	1.2922	1.0795
2	5.134	5.455	714.8	586.7	546.9	588.6	460.3	9.2	40.0	0.9	0.6040	0.4917	1.7555	1.2061	1.2595	1.0739
3	3.629	3.667	714.3	595.2	575.9	595.2	422.5	4.8	36.2	0.5	0.6056	0.4992	1.7733	1.1584	1.2569	1.0732
4	2.877	2.746	702.4	580.9	58.0	580.9	391.7	-1.7	33.9	-0.2	0.5964	0.4879	1.7665	1.1925	1.2584	1.0719
5	1.494	1.271	654.8	540.6	548.0	540.5	358.5	-10.9	33.2	-1.2	0.5541	0.4530	1.7356	1.1899	1.2450	1.0714
6	1.196	0.590	628.0	518.4	536.3	518.1	326.9	-17.5	31.4	-1.9	0.5311	0.4345	1.7176	1.1858	1.2292	1.0648
7	1.076	0.899	619.4	511.7	532.0	511.6	317.3	-6.5	30.8	-0.7	0.5225	0.4280	1.7123	1.1895	1.2238	1.0652
8	0.884	0.774	632.5	528.1	543.1	528.1	324.3	-0.5	30.8	-0.1	0.5324	0.4408	1.7278	1.1970	1.2312	1.0690
9	0.585	0.517	633.8	531.4	525.8	531.0	353.8	19.9	33.9	2.1	0.5313	0.4419	1.7309	1.2066	1.2300	1.0726
10	0.192	0.171	610.2	498.7	457.5	498.2	353.4	23.6	35.4	2.7	0.5088	0.4123	1.7027	1.2143	1.2323	1.0734

SL	INCM	DEV	TURN	R-CVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL		P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
										%	%	%	%
1	-4.72	9.91	44.74	44.23	53.03	0.3694	0.1254	0.0264	0.9735	77.30	78.92	95.36	95.53
2	-2.82	8.93	39.10	51.55	58.22	0.3169	0.0467	0.0103	0.9898	84.60	85.76	92.03	92.28
3	-5.84	8.74	35.76	54.91	59.84	0.3046	0.0277	0.0064	0.9941	89.58	90.39	92.11	92.36
4	-7.79	8.37	34.04	56.08	58.59	0.3174	0.0378	0.0096	0.9919	91.67	92.31	94.21	94.46
5	-8.22	7.91	34.35	53.13	54.51	0.3349	0.0474	0.0137	0.9911	89.79	90.55	90.28	90.57
6	-10.01	7.36	33.30	52.18	52.31	0.3399	0.0462	0.0133	0.9923	89.93	90.66	93.70	93.89
7	-10.60	8.63	31.55	51.69	51.47	0.3373	0.0478	0.0150	0.9919	87.62	88.52	90.97	91.23
8	-11.40	10.09	30.50	52.75	52.99	0.3337	0.0565	0.0187	0.9901	85.79	86.83	88.59	88.92
9	-10.85	13.41	31.79	50.81	52.94	0.3428	0.0621	0.0213	0.9891	82.12	83.44	83.74	84.21
10	-13.03	15.44	32.67	47.75	49.13	0.3754	0.0942	0.0235	0.9847	76.60	78.27	83.10	83.59

NCCRM	WCCRM	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
RPM	LBM/SEC			%	%			%	%
7873	199.90	1.1978	1.7340	86.05	87.08	1.0714	0.9894	90.27	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		W-1		W-2		V0-1		V0-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	11.324	9.373	548.3	821.2	548.3	522.2	0.0	633.8	0.0	50.4	0.5033	0.7412	417.9	457.0	0.4328	0.4496	689.4	551.3																			
2	9.839	7.512	551.5	792.7	551.5	559.8	0.0	561.3	0.0	45.0	0.5064	0.7139	467.8	500.8	0.6640	0.5070	723.2	563.1																			
3	7.920	6.053	554.6	741.5	554.6	564.9	0.0	400.4	0.0	40.3	0.5044	0.6454	523.6	549.3	0.7005	0.5106	762.7	569.1																			
4	6.314	4.630	555.6	685.0	555.6	548.3	0.0	410.6	0.0	34.8	0.5103	0.6126	573.0	595.1	0.7344	0.5173	799.6	578.5																			
5	3.110	2.912	553.9	600.7	553.9	505.0	0.0	325.3	0.0	32.8	0.5087	0.5340	690.6	708.8	0.8131	0.5594	885.3	629.3																			
6	3.000	2.200	553.2	591.5	553.2	505.2	0.0	307.7	0.0	31.3	0.5080	0.5250	746.4	753.4	0.8531	0.5979	929.0	673.7																			
7	2.465	1.740	553.3	584.0	553.3	504.5	0.0	302.1	0.0	30.9	0.5081	0.5213	782.0	786.1	0.8797	0.6197	957.9	699.1																			
8	1.934	1.257	553.7	584.0	553.7	503.8	0.0	295.3	0.0	30.4	0.5085	0.5172	817.0	820.0	0.9064	0.6441	987.0	727.4																			
9	1.246	0.763	553.8	582.3	553.8	503.5	0.0	289.2	0.0	29.8	0.5086	0.5152	855.0	855.0	0.9355	0.6712	1018.7	758.7																			
10	0.451	0.155	552.8	581.2	552.8	505.6	0.0	286.7	0.0	29.6	0.5077	0.5133	897.9	897.9	0.9683	0.7006	1054.5	793.3																			
11	0.005	-0.092	551.5	550.5	551.5	488.7	0.0	288.7	0.0	31.6	0.5064	0.4840	934.1	933.8	0.9960	0.7011	1084.8	797.5																			

SL	INCS DEGREE	INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/PO1	EFF-P	EFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO	TOT		TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET															
																		TOT	TOT																					
1	-1.39	4.16	12.20	55.98	37.06	36.16	0.4248	0.2539	0.0565	1.2847	80.53	79.93	37.35	-18.63	-417.9	176.8	1.2847	1.2847	80.53	79.93	37.35	-18.63	-417.9	176.8	1.2847	1.2847	80.53	79.93	37.35	-18.63	-417.9	176.8	1.2847	1.2847	80.53	79.93	37.35	-18.63	-417.9	176.8
2	-0.52	4.88	11.93	46.50	37.22	40.60	0.4240	0.1030	0.0262	1.3182	91.40	91.06	40.36	-6.14	-467.8	60.5	1.3182	1.3182	91.40	91.06	40.36	-6.14	-467.8	60.5	1.3182	1.3182	91.40	91.06	40.36	-6.14	-467.8	60.5	1.3182	1.3182	91.40	91.06	40.36	-6.14	-467.8	60.5
3	0.19	5.47	12.60	36.45	37.37	42.37	0.4302	0.0372	0.0102	1.3156	96.45	96.31	43.39	6.94	-523.6	-68.9	1.3156	1.3156	96.45	96.31	43.39	6.94	-523.6	-68.9	1.3156	1.3156	96.45	96.31	43.39	6.94	-523.6	-68.9	1.3156	1.3156	96.45	96.31	43.39	6.94	-523.6	-68.9
4	0.57	5.09	13.01	27.43	37.42	41.89	0.4297	0.0272	0.0076	1.2919	96.93	96.82	46.00	18.57	-575.0	-184.5	1.2919	1.2919	96.93	96.82	46.00	18.57	-575.0	-184.5	1.2919	1.2919	96.93	96.82	46.00	18.57	-575.0	-184.5	1.2919	1.2919	96.93	96.82	46.00	18.57	-575.0	-184.5
5	0.35	4.91	8.81	14.66	37.34	39.38	0.4145	0.0513	0.0139	1.2573	92.66	92.42	51.28	36.62	-690.6	-375.5	1.2573	1.2573	92.66	92.42	51.28	36.62	-690.6	-375.5	1.2573	1.2573	92.66	92.42	51.28	36.62	-690.6	-375.5	1.2573	1.2573	92.66	92.42	51.28	36.62	-690.6	-375.5
6	0.57	4.55	6.24	12.05	37.30	39.67	0.3938	0.0486	0.0130	1.2619	92.63	92.38	53.47	41.42	-746.4	-445.7	1.2619	1.2619	92.63	92.38	53.47	41.42	-746.4	-445.7	1.2619	1.2619	92.63	92.38	53.47	41.42	-746.4	-445.7	1.2619	1.2619	92.63	92.38	53.47	41.42	-746.4	-445.7
7	1.54	4.38	5.12	10.92	37.31	39.74	0.3864	0.0544	0.0145	1.2654	91.57	91.28	54.74	43.81	-782.0	-484.0	1.2654	1.2654	91.57	91.28	54.74	43.81	-782.0	-484.0	1.2654	1.2654	91.57	91.28	54.74	43.81	-782.0	-484.0	1.2654	1.2654	91.57	91.28	54.74	43.81	-782.0	-484.0
8	2.15	4.45	4.56	9.72	37.33	39.80	0.3769	0.0585	0.0130	1.2681	90.67	90.36	55.88	44.16	-817.0	-524.7	1.2681	1.2681	90.67	90.36	55.88	44.16	-817.0	-524.7	1.2681	1.2681	90.67	90.36	55.88	44.16	-817.0	-524.7	1.2681	1.2681	90.67	90.36	55.88	44.16	-817.0	-524.7
9	2.39	4.63	4.02	8.85	37.33	40.02	0.3658	0.0613	0.0130	1.2710	89.99	89.64	57.08	44.23	-855.0	-565.8	1.2710	1.2710	89.99	89.64	57.08	44.23	-855.0	-565.8	1.2710	1.2710	89.99	89.64	57.08	44.23	-855.0	-565.8	1.2710	1.2710	89.99	89.64	57.08	44.23	-855.0	-565.8
10	2.65	4.87	4.08	7.98	37.29	40.07	0.3583	0.0745	0.0130	1.2754	87.63	87.20	58.38	50.40	-897.9	-611.3	1.2754	1.2754	87.63	87.20	58.38	50.40	-897.9	-611.3	1.2754	1.2754	87.63	87.20	58.38	50.40	-897.9	-611.3	1.2754	1.2754	87.63	87.20	58.38	50.40	-897.9	-611.3
11	2.55	4.76	7.79	5.44	37.22	36.91	0.3760	0.1308	0.0320	1.2546	78.13	77.41	59.44	54.00	-934.1	-645.2	1.2546	1.2546	78.13	77.41	59.44	54.00	-934.1	-645.2	1.2546	1.2546	78.13	77.41	59.44	54.00	-934.1	-645.2	1.2546	1.2546	78.13	77.41	59.44	54.00	-934.1	-645.2

TOT/INLET	PO/PO	EFF-AD	EFF-P	WCI/AI	TOT/TOT1	PO2/PO1	EFF-AD	EFF-P
1.0004	1.2758	89.64	90.00	36.06	1.0004	1.2758	89.64	90.00

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		W-1		W-2		V0-1		V0-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE			
1	10.982	7.574	749.7	537.0	450.8	528.3	599.0	95.9	53.0	10.2	0.6705	0.4701	1.2376	1.0930	1.2376	1.0930																						
2	7.978	5.053	752.1	587.3	527.7	580.1	535.9	91.8	45.4	8.9	0.6738	0.5171	1.2919	1.0902	1.2919	1.0902																						
3	4.406	3.307	723.8	574.0	558.8	568.8	460.1	76.9	39.4	7.7	0.6482	0.5062	1.2914	1.0843	1.2914	1.0843																						
4	2.985	2.486	679.8	552.0	552.7	547.2	395.8	72.4	35.6	7.5	0.6076	0.4874	1.2774	1.0779	1.2774	1.0779																						
5	1.366	1.462	609.5	517.7	519.5	513.3	318.7	67.5	31.5	7.5	0.5422	0.4569	1.2517	1.0733	1.2517	1.0733																						
6	0.995	1.177	602.9	515.2	521.2	510.4	303.0	70.1	30.2	7.8	0.5357	0.4542	1.2488	1.0746	1.2488	1.0746																						
7	0.838	1.037	600.9	516.5	521.6	511.9	298.4	66.7	29.8	7.6	0.5333	0.4550	1.2493																									

ROTOR 2

SL	EPSI-1		EPSI-2		V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	RUN NO411, SPEED CODE 00, POINT NO 11				V'-1	V'-2
	DEGREE	DEGREE	FT/SEC	FT/SEC											FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	8.891	6.089	491.5	785.2	482.4	676.5	93.2	397.7	10.9	30.2	0.4288	0.6867	519.8	593.4	0.5619	0.6069	644.1	693.9		
2	6.834	4.782	587.4	775.8	581.1	689.8	86.1	355.1	8.4	27.1	0.5175	0.6803	565.0	589.3	0.6634	0.6388	753.0	728.4		
3	5.411	3.778	589.4	737.7	584.8	668.3	73.9	312.6	7.2	25.0	0.5210	0.6470	607.1	624.9	0.6994	0.6469	791.4	737.6		
4	3.998	2.895	576.7	701.9	572.4	641.7	70.0	284.5	7.0	23.9	0.5106	0.6156	652.3	664.0	0.7230	0.6538	816.5	745.5		
5	1.035	0.230	547.0	619.1	542.7	574.5	68.4	230.6	7.2	21.9	0.4838	0.5408	754.8	758.0	0.7739	0.6813	871.1	774.9		
6	0.222	-0.387	534.5	584.3	539.1	553.7	69.1	186.7	7.3	18.6	0.4801	0.5105	791.0	791.9	0.7959	0.7167	901.1	820.3		
7	-0.367	-0.847	539.4	567.6	535.3	543.5	66.4	163.5	7.1	16.7	0.4758	0.4958	826.4	826.4	0.8200	0.7488	929.5	857.2		
8	-0.978	-1.380	537.8	557.6	532.6	545.4	74.5	167.5	8.0	17.1	0.4737	0.4979	874.9	871.6	0.8469	0.7772	961.4	890.7		
9	-1.258	-1.624	533.1	557.5	526.2	526.5	85.5	183.3	9.2	14.2	0.4687	0.4847	908.1	906.1	0.8587	0.7774	976.5	894.2		
10	-1.912	-1.063	502.3	486.9	493.4	444.9	94.1	197.9	10.8	24.0	0.4399	0.4197	941.4	940.3	0.8587	0.7460	980.6	865.4		

SL	INCS DEGREE	INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	TEFF-P	TEFF-A	B'-1	B'-2	V0'-1	V0'-2	PO/PO	INLET
1	-10.6P	-3.73	17.29	28.58	38.19	51.69	0.0507	0.1298	0.0308	1.1585	89.27	84.96	41.30	12.73	-426.6	-154.7	1.4370	
2	-11.99	-5.72	10.35	20.77	46.39	54.32	0.1306	0.1491	0.0369	1.1316	76.28	79.86	39.41	18.64	-478.9	-234.2	1.4653	
3	-9.89	-4.22	8.46	17.35	46.81	53.57	0.1545	0.1214	0.0306	1.1259	77.64	77.28	42.31	24.97	-533.2	-312.3	1.4493	
4	-8.04	-2.49	6.00	14.92	45.57	52.12	0.1687	0.0955	0.0244	1.1252	80.65	80.32	45.48	30.56	-582.3	-379.5	1.4313	
5	-4.36	-0.49	3.91	9.12	43.68	46.98	0.1740	0.0964	0.0240	1.0984	74.44	74.09	51.67	42.55	-684.5	-527.5	1.3722	
6	-3.38	-0.07	3.20	7.70	42.78	45.36	0.1387	0.0631	0.0151	1.0768	77.15	76.89	53.25	47.55	-722.0	-605.2	1.3452	
7	-2.10	0.29	5.29	6.19	42.47	44.50	0.1185	0.0496	0.0116	1.0662	78.06	77.86	54.84	50.65	-759.9	-662.9	1.3318	
8	-2.06	0.16	3.48	4.12	42.31	44.52	0.1113	0.0545	0.0130	1.0638	74.91	74.68	56.35	52.24	-800.4	-704.1	1.3325	
9	-1.76	0.46	3.29	3.46	41.79	42.63	0.1236	0.0906	0.0215	1.0556	61.14	60.84	57.40	53.94	-822.6	-722.8	1.3208	
10	-0.10	2.05	7.48	0.72	38.98	35.40	0.1617	0.1788	0.0383	1.0287	28.41	28.13	59.79	59.07	-847.4	-742.3	1.2691	

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
%	%	%	%	SQFT			%	%
1.1184	1.3757	80.60	81.46	33.99	1.0351	1.0938	73.82	74.16

STATOR 2

SL	EPSI-1		EPSI-2		V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	RUN NO411, SPEED CODE 00, POINT NO 11				TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC											FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	7.094	8.200	698.4	720.8	578.4	720.8	391.4	-1.2	33.9	-0.1	0.6048	0.6257	1.3575	1.1401	1.0949	1.0505			
2	5.337	5.878	729.3	767.0	641.4	786.9	347.1	-14.7	28.3	-1.1	0.6361	0.6720	1.4285	1.1398	1.1033	1.0473			
3	4.038	4.259	716.6	736.7	647.9	736.7	306.1	-10.5	25.3	-0.8	0.6270	0.6461	1.4083	1.1303	1.0946	1.0445			
4	2.992	2.989	697.4	705.7	639.0	705.7	279.3	-3.9	23.6	-0.3	0.6113	0.6192	1.3836	1.1221	1.0882	1.0425			
5	1.716	1.528	625.4	609.0	583.0	609.0	226.3	3.9	21.2	0.4	0.5467	0.5315	1.2979	1.1128	1.0390	1.0363			
6	1.410	1.218	591.6	603.1	562.5	603.1	183.5	0.7	18.1	0.1	0.5174	0.5279	1.2956	1.1056	1.0370	1.0276			
7	1.228	1.041	574.8	567.9	551.4	567.9	162.4	1.8	16.4	0.2	0.5024	0.4961	1.2686	1.1032	1.0156	1.0237			
8	1.190	1.048	577.2	567.4	552.4	567.3	167.2	10.4	16.8	1.0	0.5039	0.4950	1.2702	1.1060	1.0142	1.0238			
9	1.079	1.010	564.2	559.8	533.7	559.1	183.0	27.8	18.9	2.8	0.4908	0.4869	1.2688	1.1110	1.0114	1.0256			
10	0.607	0.628	496.2	515.3	455.1	513.6	197.7	41.9	23.5	4.7	0.4280	0.4451	1.2367	1.1180	1.0019	1.0288			

SL	INCM DEGREE	DEV DEGREE	TURN DEGREE	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	TEFF-A	TEFF-P	TEFF-A	TEFF-P
1	-16.95	8.41	34.01	46.40	53.98	0.0841	0.2522	0.0532	0.9449	81.62	63.23	51.95	52.57
2	-15.46	6.95	29.44	51.87	59.21	0.0591	0.1040	0.0234	0.9752	76.73	77.87	60.19	60.73
3	-16.80	7.47	26.07	52.56	57.44	0.0762	0.1200	0.0286	0.9721	78.94	79.94	58.73	59.26
4	-18.07	8.22	23.91	52.02	55.31	0.0890	0.1471	0.0372	0.9674	79.58	80.48	57.36	57.87
5	-20.21	9.44	20.85	47.50	47.34	0.1285	0.2883	0.0831	0.9469	68.59	69.72	30.33	30.71
6	-23.31	9.36	18.00	45.92	47.19	0.0745	0.2193	0.0660	0.9634	72.74	73.72	37.72	38.04
7	-25.00	9.74	16.23	45.01	44.29	0.0994	0.2997	0.0939	0.9525	68.17	69.22	18.64	18.81
8	-25.40	11.19	15.79	44.96	44.21	0.1058	0.2936	0.0970	0.9533	66.77	67.88	16.88	17.05
9	-25.86	14.11	16.08	43.07	43.42	0.1091	0.2794	0.0958	0.9566	63.07	64.28	12.86	13.01
10	-24.94	17.39	18.82	36.09	39.42	0.0815	0.2256	0.0800	0.9722	53.04	54.43	1.85	1.88

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBM/SEC			%	%			%
6692	178.80	1.1184	1.3208	69.88	71.05	1.0351	0.9600	40.02

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.176	5.484	534.5	788.8	534.5	487.0	0.0	620.5	0.0	51.8	0.4900	0.7097	417.2	456.3	0.6216	0.4624	678.0	513.9
2	4.590	7.771	535.5	765.8	535.5	529.6	0.0	553.2	0.0	46.1	0.4910	0.6878	447.0	500.0	0.6515	0.4780	710.6	532.2
3	7.770	6.494	535.3	713.3	535.3	531.7	0.0	495.5	0.0	41.8	0.4908	0.6387	522.7	548.4	0.6860	0.4802	748.2	496.7
4	6.596	5.288	535.5	666.8	535.5	521.8	0.0	415.1	0.0	38.5	0.4890	0.5949	574.0	594.1	0.7184	0.4922	783.7	551.7
5	4.480	3.247	531.0	646.8	531.0	486.2	0.0	328.8	0.0	34.1	0.4866	0.5209	609.5	699.7	0.7975	0.5427	875.2	511.5
6	3.792	2.486	532.6	575.6	532.6	486.4	0.0	311.0	0.0	32.7	0.4882	0.5100	745.2	752.2	0.8766	0.5805	916.0	645.2
7	3.254	2.017	534.9	572.5	534.9	484.9	0.0	304.4	0.0	32.1	0.4904	0.5067	780.7	784.8	0.8676	0.6041	946.4	682.6
8	2.665	1.499	537.5	569.1	537.5	486.5	0.0	295.4	0.0	31.3	0.4929	0.5033	815.7	818.6	0.8958	0.6318	976.9	714.4
9	1.836	0.947	539.6	568.5	539.6	489.3	0.0	289.3	0.0	30.6	0.4949	0.5023	855.6	855.6	0.9262	0.6600	1009.9	766.9
10	0.854	0.330	540.4	566.3	540.4	487.0	0.0	289.0	0.0	30.7	0.4958	0.4994	896.5	896.5	0.9602	0.6865	1044.8	788.6
11	0.222	0.022	540.4	542.8	540.4	457.4	0.0	292.2	0.0	32.6	0.4957	0.4767	932.6	932.6	0.9887	0.6413	1077.9	786.8

SL	INCS	INCP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.74	4.81	12.24	56.56	36.35	34.28	0.4450	0.2597	0.0579	1.2768	80.28	79.58	38.00	-18.56	-417.2	164.2	1.2768
2	0.25	5.65	12.35	46.84	36.41	38.97	0.4539	0.1014	0.0257	1.3137	91.49	91.36	41.12	-5.72	-467.0	53.3	1.3137
3	1.15	6.43	13.45	36.56	36.39	40.39	0.4596	0.0427	0.0117	1.3099	96.02	95.86	44.35	7.79	-522.7	-72.9	1.3099
4	1.69	6.81	13.36	28.20	36.30	40.40	0.4533	0.0231	0.0065	1.2969	97.54	97.44	47.12	16.92	-574.0	-179.1	1.2969
5	1.51	6.07	9.51	15.11	36.17	38.52	0.4253	0.0312	0.0086	1.2696	95.73	95.58	52.44	37.73	-689.5	-370.8	1.2696
6	1.58	5.56	7.15	12.15	36.26	38.65	0.4058	0.0316	0.0083	1.2733	95.39	95.23	56.48	42.33	-745.2	-441.2	1.2733
7	2.43	5.27	6.05	10.87	36.37	38.83	0.3964	0.0345	0.0090	1.2778	95.83	94.65	55.62	44.74	-780.7	-480.4	1.2778
8	2.91	5.21	5.48	9.55	36.51	39.11	0.3831	0.0327	0.0085	1.2818	94.91	94.71	56.44	47.09	-815.7	-523.2	1.2818
9	3.03	5.27	4.86	8.64	36.62	39.46	0.3714	0.0341	0.0087	1.2871	94.55	94.35	57.71	49.07	-853.6	-564.3	1.2871
10	3.18	5.40	4.95	7.63	36.66	39.29	0.3681	0.0539	0.0137	1.2907	91.27	90.95	58.91	51.28	-896.5	-607.4	1.2907
11	3.22	5.23	8.23	5.46	36.65	36.73	0.3890	0.1099	0.0291	1.2760	83.10	82.51	59.91	54.45	-932.6	-640.1	1.2760

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/AI	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	%			%	%
1.0806	1.2852	92.24	92.52	35.17	1.0806	1.2852	92.24	92.52

STATOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	TO/TO	TO/TO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T1	T02/
1	10.925	7.581	717.8	493.5	414.0	485.4	586.4	89.4	54.7	10.3	0.6403	0.4310	1.2346	1.0909	1.2346	1.0909	1.0909
2	7.053	5.097	724.2	550.0	495.3	542.8	528.4	89.1	46.8	9.3	0.6172	0.4830	1.2877	1.0888	1.2877	1.0888	1.0888
3	4.408	3.345	694.2	542.4	523.5	536.9	456.0	77.0	41.0	8.1	0.6199	0.4773	1.2908	1.0834	1.2908	1.0834	1.0834
4	2.953	2.474	680.4	525.3	525.1	520.3	600.8	72.0	37.3	7.9	0.5890	0.4625	1.2807	1.0789	1.2807	1.0789	1.0789
5	1.344	1.444	595.5	497.2	500.8	492.3	322.2	69.8	32.8	8.1	0.5289	0.4379	1.2604	1.0739	1.2604	1.0739	1.0739
6	0.937	1.100	587.5	499.9	501.5	494.9	306.1	70.5	31.4	8.1	0.5211	0.4401	1.2612	1.0752	1.2612	1.0752	1.0752
7	0.740	0.907	586.4	501.2	503.6	496.6	300.4	67.9	30.8	7.8	0.5197	0.4409	1.2615	1.0768	1.2615	1.0768	1.0768
8	0.593	0.748	585.1	502.4	506.7	497.9	292.5	66.5	30.0	7.6	0.5182	0.4418	1.2619	1.0778	1.2619	1.0778	1.0778
9	0.453	0.585	585.8	506.1	510.7	503.5	287.1	66.5	29.3	7.7	0.5184	0.4467	1.2656	1.0794	1.2656	1.0794	1.0794
10	0.265	0.373	584.5	513.2	508.8	506.1	287.8	65.0	29.5	9.5	0.5163	0.4505	1.2688	1.0833	1.2688	1.0833	1.0833
11	0.083	0.145	561.4	485.8	479.7	476.1	291.7	97.1	31.3	11.5	0.4938	0.4247	1.2591	1.0876	1.2591	1.0876	1.0876

SL	INCS	INCP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	2.01	6.72	15.69	44.38	30.42	38.34	0.4542	0.1373	0.0285	0.9669	68.32	69.25	68.32	69.25
2	-0.52	4.59	11.72	37.52	37.34	43.80	0.3745	0.0807	0.0180	0.9802	84.44	84.99	84.44	84.99
3	-3.82	1.65	9.51	32.89	40.14	47.76	0.3477	0.0628	0.0151	0.9857	90.74	91.07	90.74	91.07
4	-6.14	-0.36	8.48	29.46	40.79	42.53	0.3297	0.0566	0.0145	0.9882	92.90	93.15	92.90	93.15
5	-9.47	-3.03	8.20	24.65	39.52	40.21	0.2875	0.0415	0.0120	0.9528	92.58	92.82	92.58	92.82
6	-10.75	-3.97	7.90	23.29	39.80	40.37	0.2733	0.0376	0.0117	0.9903	91.21	91.49	91.21	91.49
7	-11.38	-4.40	7.43	23.03	40.07	40.44	0.2725	0.0775	0.0247	0.9870	89.36	89.71	89.36	89.71
8	-12.45	-5.26	7.17	22.39	40.44	40.52	0.2695	0.0943	0.0310	0.9842	88.44	88.82	88.44	88.82
9	-13.73	-6.34	7.30	21.59	40.86	40.93	0.2608	0.1015	0.0345	0.9830	87.69	88.10	87.69	88.10
10	-15.60	-8.00	9.54	19.96	40.72	41.04	0.2457	0.1019	0.0358	0.9831	84.57	85.08	84.57	85.08
11	-16.95	-9.23	13.80	19.78	38.29	38.29	0.2612	0.1300	0.0467	0.9801	75.21	75.98	75.21	75.98

NCURR	NCORA	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBM/SEC			%	%			%
6682	174.40	1.0806	1.2859	86.46	86.91	1.0806	0.9849	86.46

ROTOR 2

RUN N1411, SPEED CODE 80, POINT NO 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M1-1	M1-2	V1-1	V1-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	0.820	0.040	453.1	730.0	444.7	603.0	86.9	411.4	11.0	34.0	0.3966	0.6341	518.9	552.5	0.5399	0.5379	620.0	619.7
2	2.742	4.746	554.5	727.1	548.0	621.6	84.4	377.1	8.7	31.1	0.4874	0.6330	564.1	588.3	0.6402	0.5715	728.4	656.5
3	5.307	3.710	559.1	699.4	554.2	611.5	73.6	339.5	7.6	28.9	0.4929	0.6094	606.1	625.9	0.6776	0.5876	768.5	674.4
4	3.916	2.635	546.1	660.0	544.6	581.8	69.9	311.6	7.3	28.1	0.4847	0.5745	651.3	663.0	0.7032	0.5916	796.6	679.7
5	1.216	0.475	526.7	587.6	522.1	522.1	69.8	269.6	7.6	27.3	0.4649	0.5094	753.6	756.8	0.7593	0.6192	864.3	714.2
6	0.590	0.064	525.1	555.7	520.6	503.7	68.7	234.7	7.5	25.0	0.4630	0.4815	789.8	790.6	0.7842	0.6500	889.4	750.2
7	0.170	-0.214	522.4	547.0	518.2	500.5	66.0	220.8	7.3	23.8	0.4602	0.4737	825.0	825.0	0.8097	0.6794	919.1	784.7
8	-0.298	-0.577	525.7	551.8	520.9	505.8	71.0	220.5	7.8	23.5	0.4627	0.4772	873.4	876.2	0.8419	0.7121	956.7	823.4
9	-0.441	-0.669	524.4	540.3	517.2	486.0	86.5	236.1	9.5	25.9	0.4606	0.4657	904.7	904.6	0.8518	0.7124	969.6	826.5
10	-0.246	-0.349	495.2	507.4	485.6	445.2	96.8	243.4	11.3	28.7	0.4332	0.4353	939.9	938.7	0.8511	0.7083	972.9	825.6

SL	INCS	IACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PC2/	EFF-P	EFF-A	B1-1	B1-2	VO1-1	VO1-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.99	-1.04	17.57	30.99	35.65	48.94	0.1406	0.0169	0.0040	1.1945	98.28	98.23	43.99	13.01	-432.0	-141.1	1.4797
2	-10.79	-4.03	10.37	22.46	44.34	51.83	0.2089	0.0789	0.0195	1.1697	89.25	89.01	41.11	18.65	-479.8	-211.2	1.5118
3	-8.44	-2.72	9.35	18.95	44.82	51.89	0.2218	0.0452	0.0114	1.1705	92.93	92.78	43.81	24.86	-532.5	-284.4	1.5077
4	-6.66	1.58	6.53	15.77	43.99	49.89	0.2387	0.0422	0.0107	1.1640	92.74	32.58	46.86	31.08	-581.4	-351.4	1.4856
5	-3.39	0.48	4.37	4.72	42.15	45.13	0.2506	0.0458	0.0163	1.1425	86.23	35.96	52.64	43.02	-683.8	-487.3	1.4407
6	-2.45	0.84	5.47	6.35	42.01	43.60	0.2241	0.0518	0.0123	1.1241	87.04	86.81	54.18	47.82	-721.1	-556.0	1.4179
7	-1.27	1.12	5.00	5.31	41.83	43.33	0.2094	0.0480	0.0113	1.1202	86.95	86.74	55.67	50.37	-759.0	-604.3	1.4130
8	-1.41	0.81	3.33	4.91	42.06	43.76	0.1996	0.0520	0.0124	1.1201	85.31	85.07	57.00	52.09	-802.4	-649.7	1.4185
9	-1.40	0.83	3.33	3.78	41.68	41.80	0.2094	0.0795	0.0188	1.1127	77.76	77.42	57.76	53.98	-820.2	-668.5	1.4099
10	0.09	2.32	5.78	2.69	38.86	37.99	0.2139	0.0896	0.0201	1.1105	75.28	74.91	60.06	57.37	-843.1	-695.3	1.3861

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	SOFT			%	%
1.1285	1.4464	86.58	87.26	32.94	1.0443	1.1427	87.66	87.90

STATOR 2

RUN N1411, SPEED CODE 80, POINT NO 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	6.970	8.061	656.5	616.7	517.6	616.5	403.9	14.8	37.8	1.4	0.5659	0.5296	1.4446	1.1492	1.1681	1.0575
2	5.183	5.677	687.7	653.8	580.3	653.7	368.9	4.2	32.4	0.4	0.5963	0.5650	1.4948	1.1431	1.1566	1.0514
3	3.944	4.116	681.6	635.6	595.0	635.6	332.5	-6.9	29.2	-0.6	0.5928	0.5503	1.4875	1.1353	1.1552	1.0495
4	2.980	2.923	656.7	605.0	581.1	605.0	306.0	-9.5	27.8	-0.9	0.5714	0.5279	1.4652	1.1290	1.1483	1.0478
5	1.504	1.269	594.7	540.3	532.0	540.2	265.7	-8.3	26.5	-0.9	0.5159	0.4666	1.4149	1.1220	1.1220	1.0449
6	1.140	0.915	563.0	519.5	513.5	519.3	230.9	-11.9	24.2	-1.3	0.4882	0.4488	1.3997	1.1181	1.1096	1.0380
7	0.942	0.745	554.2	505.2	508.9	505.1	219.3	-8.4	23.3	-1.0	0.4801	0.4360	1.3890	1.1185	1.1011	1.0380
8	0.785	0.651	558.0	510.8	512.7	510.8	220.2	0.9	23.2	0.1	0.4828	0.4403	1.3933	1.1219	1.1002	1.0387
9	0.605	0.533	545.9	499.0	492.4	498.9	235.7	13.1	25.6	1.5	0.4707	0.4287	1.3850	1.1271	1.0928	1.0400
10	0.277	0.258	513.8	471.5	452.6	471.1	243.1	18.5	28.2	2.2	0.4409	0.4034	1.3661	1.1318	1.0943	1.0405

SL	INCS	IACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PC2/	EFF-A	EFF-P	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-13.08	9.88	36.40	43.63	51.71	0.1836	0.1213	0.0256	0.9763	74.28	75.57	84.80	85.14	
2	-11.45	8.41	31.95	49.42	56.00	0.1676	0.0528	0.0119	0.9887	85.10	85.92	82.60	82.95	
3	-12.90	7.66	29.79	50.96	54.97	0.1848	0.0607	0.0145	0.9877	88.78	89.39	86.99	85.29	
4	-13.91	7.64	28.65	49.91	52.52	0.1989	0.0676	0.0171	0.9866	89.38	89.94	86.20	84.51	
5	-14.89	8.19	27.41	45.82	46.80	0.2235	0.1027	0.0296	0.9830	84.90	85.62	74.76	74.78	
6	-17.16	7.98	25.53	44.30	45.04	0.2069	0.0224	0.0248	0.9876	85.39	86.07	77.66	77.99	
7	-18.11	8.60	24.26	43.93	43.70	0.2170	0.1166	0.0365	0.9830	83.08	83.85	73.35	73.72	
8	-18.99	10.24	23.15	44.23	44.11	0.2143	0.1206	0.0399	0.9822	81.54	82.39	71.76	71.75	
9	-19.21	12.77	24.07	42.24	42.83	0.2270	0.1266	0.0434	0.9821	76.77	77.81	64.18	64.63	
10	-20.17	14.97	25.99	38.53	40.14	0.2388	0.1160	0.0412	0.9855	70.75	72.01	64.31	64.77	

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
RPM	LBM/SEC			%	%			%	%
6682	13440	1.1285	1.4236	82.67	83.51	1.0443	0.9843	77.07	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	11.375	9.398	496.2	756.5	496.2	495.9	0.0	469.8	0.0	52.8	0.4534	0.4788	417.3	458.4	0.9925	0.4298	648.4	479.1
2	10.146	7.507	496.6	736.6	496.6	491.9	0.0	548.1	0.0	48.0	0.4537	0.4593	467.2	500.2	0.6230	0.4424	681.9	494.2
3	8.534	5.941	496.6	689.2	496.6	482.8	0.0	481.8	0.0	44.3	0.4538	0.4167	522.9	549.8	0.6599	0.4436	721.2	497.3
4	7.055	4.721	495.8	647.5	495.8	485.1	0.0	428.9	0.0	41.4	0.4538	0.5758	576.2	594.4	0.6932	0.4558	758.7	512.5
5	4.374	2.824	494.0	577.8	494.0	449.7	0.0	394.7	0.0	38.3	0.4515	0.5062	609.7	609.9	0.7750	0.5011	848.4	564.9
6	3.363	2.132	494.5	470.7	494.5	454.1	0.0	345.7	0.0	37.3	0.4517	0.5033	745.4	745.4	0.8172	0.5377	894.5	609.6
7	2.454	1.693	495.4	371.3	495.4	455.6	0.0	344.8	0.0	37.1	0.4526	0.5031	781.0	781.0	0.8650	0.5579	924.9	633.6
8	1.998	1.224	496.4	267.5	496.4	453.8	0.0	340.8	0.0	36.9	0.4534	0.4989	816.0	816.0	0.8728	0.5795	955.1	689.2
9	1.291	0.758	497.0	163.1	497.0	449.8	0.0	338.7	0.0	37.0	0.4541	0.4961	853.9	853.9	0.9028	0.6001	998.0	875.9
10	0.954	0.260	496.7	59.3	496.7	443.2	0.0	341.2	0.0	37.6	0.4539	0.4894	896.8	896.8	0.9568	0.6218	1025.2	710.7
11	0.140	0.026	496.2	541.9	496.2	419.9	0.0	342.5	0.0	39.2	0.4534	0.4725	933.0	932.7	0.9655	0.6315	1036.7	724.3

SL	INCS	INCN	DEV	TURN	RHOVH-1	RHOVH-2	O-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.37	6.92	12.98	57.95	34.31	32.95	0.4890	0.2251	0.0503	1.2825	83.90	83.32	46.11	-17.84	-417.3	147.4	1.2825
2	2.46	7.06	12.33	48.88	34.33	36.99	0.4861	0.0836	0.0212	1.3100	92.57	93.31	43.74	-5.34	-447.2	47.9	1.3100
3	3.34	6.64	13.35	36.87	34.33	38.14	0.4978	0.0371	0.0102	1.3175	96.78	96.65	44.36	7.69	-522.9	-44.7	1.3175
4	3.83	6.95	13.24	30.46	34.29	38.22	0.4931	0.0214	0.0060	1.3092	97.90	97.82	49.26	18.80	-574.2	-165.5	1.3092
5	3.50	6.05	9.68	16.93	34.19	36.21	0.4736	0.0458	0.0123	1.2883	94.41	94.20	54.43	37.50	-689.7	-345.2	1.2883
6	3.54	7.34	6.67	14.62	34.21	36.82	0.4566	0.0506	0.0134	1.3003	93.98	93.34	56.47	41.85	-745.4	-406.7	1.3003
7	4.44	7.28	5.33	13.60	34.27	37.06	0.4518	0.0609	0.0187	1.3082	92.17	91.84	57.63	44.03	-781.0	-440.3	1.3082
8	4.96	7.27	4.90	12.20	34.32	37.01	0.4452	0.0716	0.0187	1.3124	90.57	90.19	58.70	46.50	-816.0	-478.1	1.3124
9	5.13	7.34	4.67	10.93	34.35	36.75	0.4411	0.0876	0.0226	1.3154	88.25	87.78	59.81	48.88	-853.9	-513.2	1.3154
10	5.29	7.51	5.09	9.60	34.34	36.22	0.4415	0.1147	0.0290	1.3191	84.49	83.87	61.02	51.42	-896.8	-555.6	1.3191
11	5.10	7.32	6.35	7.43	34.31	34.23	0.4494	0.1517	0.0366	1.3109	79.27	78.46	61.99	54.37	-933.0	-590.2	1.3109

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR
		%	%	SOPT			%	%
1.0884	1.3066	89.87	90.25	33.11	1.0884	1.3066	89.87	90.25

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	TO1
1	11.394	8.188	682.7	423.9	374.7	415.3	570.6	84.9	56.7	11.4	0.6073	0.3689	1.2382	1.0885	1.2382	1.0885
2	7.977	6.078	689.2	486.5	448.9	477.8	523.0	91.5	49.4	10.8	0.6138	0.4253	1.2879	1.0881	1.2879	1.0881
3	5.458	4.458	663.6	489.2	475.9	483.5	462.4	73.9	44.2	8.7	0.5902	0.4283	1.2985	1.0850	1.2985	1.0850
4	3.988	3.555	635.2	474.6	481.3	469.8	414.5	67.3	40.7	8.1	0.5641	0.4157	1.2924	1.0820	1.2924	1.0820
5	2.709	2.507	577.9	449.1	461.7	444.0	347.4	67.5	37.0	8.6	0.5110	0.3930	1.2783	1.0798	1.2783	1.0798
6	1.686	2.148	580.5	459.7	470.8	454.5	339.7	68.9	35.8	8.6	0.5125	0.4020	1.2854	1.0832	1.2854	1.0832
7	1.638	1.893	584.8	470.1	476.0	464.5	339.8	72.3	35.5	8.9	0.5157	0.4107	1.2926	1.0866	1.2926	1.0866
8	1.343	1.569	584.3	478.0	477.3	472.1	337.0	74.7	35.2	9.0	0.5145	0.4173	1.2985	1.0894	1.2985	1.0894
9	0.976	1.158	582.3	483.7	475.6	477.1	336.0	79.8	35.2	9.5	0.5118	0.4218	1.3028	1.0928	1.3028	1.0928
10	0.528	0.656	580.3	486.6	470.6	476.9	339.5	96.8	35.8	11.5	0.5087	0.4233	1.3049	1.0981	1.3049	1.0981
11	0.169	0.236	543.7	458.7	448.3	449.2	341.8	92.9	37.3	11.7	0.4924	0.3974	1.2866	1.0826	1.2866	1.0826

SL	INCS	INCN	DEV	TURN	RHOVH-1	RHOVH-2	O-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	PO1	TOT-INLET	TOT-INLET	TOT-57C	TOT-57C
1	3.98	8.70	16.81	45.24	28.23	33.78	0.5254	0.1548	0.0320	0.9658	71.18	72.04	71.18	72.04
2	2.04	7.16	13.25	38.58	34.84	39.57	0.4329	0.0958	0.0212	0.9785	85.18	85.88	85.18	85.88
3	-0.67	4.80	10.04	35.51	37.34	40.44	0.4039	0.0688	0.0165	0.9855	91.22	91.54	91.22	91.54
4	-2.72	3.06	8.95	32.60	38.16	39.42	0.3935	0.0674	0.0172	0.9869	92.81	93.07	92.81	93.07
5	-5.25	1.20	8.78	28.33	37.10	37.25	0.3649	0.0497	0.0144	0.9919	91.16	91.46	91.16	91.46
6	-6.32	0.45	8.42	27.20	38.00	38.09	0.3519	0.0654	0.0201	0.9893	89.45	89.82	89.45	89.82
7	-6.67	0.32	8.50	26.48	38.49	38.89	0.3424	0.0705	0.0224	0.9883	87.88	88.31	87.88	88.31
8	-7.22	-0.45	8.56	24.23	38.44	39.51	0.3304	0.0630	0.0207	0.9896	86.75	87.24	86.75	87.24
9	-7.84	-0.44	9.05	25.74	38.53	39.86	0.3200	0.0580	0.0196	0.9905	84.63	85.20	84.63	85.20
10	-9.29	-1.70	11.48	24.32	38.11	39.48	0.3102	0.0644	0.0232	0.9893	80.56	81.28	80.56	81.28
11	-10.93	-3.21	13.96	25.64	36.20	37.08	0.3481	0.1207	0.0433	0.9816	72.81	73.76	72.81	73.76

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	STAGE	STAGE
RPM	LN/SEC			%	%			%	%
6684	164.20	1.0884	1.2866	85.03	85.56	1.0884	0.9862	85.03	85.56

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	8.601	5.940	380.0	668.1	370.9	502.8	82.4	439.9	12.4	40.8	0.3298	0.5756	519.1	552.7	0.4493	0.4440
2	6.540	4.747	488.4	655.5	480.6	515.0	47.0	405.6	10.2	38.0	0.4270	0.5652	564.3	598.5	0.5922	0.4712
3	5.185	3.837	502.4	638.4	457.6	523.3	49.3	362.7	7.9	34.5	0.4405	0.5508	606.1	624.1	0.6418	0.5063
4	3.858	2.816	493.4	612.5	489.3	509.5	65.0	339.9	7.6	33.7	0.4330	0.5280	651.5	663.2	0.6702	0.5202
5	1.242	0.653	478.6	556.2	473.9	465.5	67.2	304.5	8.1	33.2	0.4194	0.4774	753.9	757.1	0.7312	0.5572
6	0.612	0.180	487.3	534.3	482.2	459.1	69.9	273.4	8.2	30.8	0.4266	0.4584	790.1	790.9	0.7588	0.5934
7	0.253	-0.056	495.7	525.6	490.2	454.3	73.5	264.2	8.5	30.2	0.4335	0.4500	825.3	825.3	0.7849	0.6181
8	0.038	-0.137	502.1	529.5	495.4	458.6	81.4	264.7	9.3	30.0	0.4382	0.4523	873.8	870.5	0.8154	0.6491
9	0.024	-0.078	502.0	531.3	492.4	450.6	97.6	281.5	11.2	32.0	0.4371	0.4525	907.0	905.0	0.8250	0.6552
10	0.026	-0.006	472.1	510.8	463.0	432.0	92.3	272.5	11.3	32.2	0.4094	0.4333	940.2	939.1	0.8378	0.6738

SL	INCS	IACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VM*-1	VM*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DFGPEE	DFGPEE	FT/SEC	FT/SEC	INLET
1	-2.52	4.44	17.05	36.98	30.57	43.35	0.2648	-0.0474	-0.0113	1.2311	103.64	103.74	49.47	12.49	-436.8	-112.8	1.5257
2	-6.70	-0.43	11.15	25.27	39.97	45.33	0.3222	0.0690	0.0170	1.1929	92.41	92.22	44.70	19.44	-477.5	-182.9	1.5418
3	-5.08	0.60	9.86	20.76	41.43	47.00	0.3129	0.0363	0.0091	1.1939	95.30	95.17	47.13	26.37	-537.0	-281.4	1.5500
4	-3.36	1.72	7.80	17.80	40.70	46.05	0.3182	0.0214	0.0054	1.1967	97.00	96.92	50.15	32.36	-586.5	-323.3	1.5433
5	-0.44	3.23	5.55	11.20	39.39	42.43	0.3198	0.0421	0.0102	1.1842	92.96	92.79	55.39	44.19	-686.7	-452.6	1.5180
6	-0.44	2.87	6.07	7.77	40.07	41.94	0.2858	0.0249	0.0058	1.1673	95.21	95.09	56.19	48.42	-720.1	-517.5	1.5052
7	-0.05	2.34	5.64	5.89	40.72	41.46	0.2744	0.0369	0.0086	1.1574	92.15	91.99	56.90	51.00	-751.9	-561.1	1.5011
8	-0.44	1.78	4.11	5.11	41.10	41.78	0.2626	0.0438	0.0103	1.1567	90.31	90.11	57.97	52.86	-792.4	-605.8	1.5077
9	-0.48	1.75	3.49	4.54	40.71	40.91	0.2655	0.0529	0.0125	1.1584	88.44	88.19	58.68	54.14	-809.4	-623.5	1.5116
10	1.39	3.62	5.46	4.31	37.99	39.01	0.2549	0.0398	0.0090	1.1658	91.22	91.03	61.36	57.05	-848.0	-666.5	1.4984

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	POTDR
%	%	%	%	%	%	%	%	%
1.1445	1.5201	87.98	88.66	30.58	1.0515	1.1797	93.75	93.89

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	TOT
1	7.015	8.141	611.2	494.8	432.4	494.5	431.9	15.2	44.8	1.8	0.5238	0.4201	1.4932	1.1526	1.2051	1.0587
2	5.201	5.699	623.1	532.5	480.4	532.4	396.9	9.1	39.5	1.0	0.5357	0.4543	1.5330	1.1484	1.1845	1.0560
3	3.916	4.056	623.6	534.4	512.5	534.4	355.4	0.5	34.7	0.1	0.5374	0.4570	1.5426	1.1433	1.1884	1.0545
4	2.964	2.848	610.3	516.9	510.9	516.9	333.8	-3.0	33.1	-0.3	0.5261	0.4421	1.5338	1.1399	1.1845	1.0543
5	1.396	1.059	563.5	476.4	476.9	476.3	300.2	-8.1	32.2	-1.0	0.4839	0.4064	1.5080	1.1392	1.1762	1.0532
6	1.062	0.734	541.7	458.6	469.7	458.4	270.0	-12.8	29.9	-1.6	0.4650	0.3913	1.4967	1.1365	1.1601	1.0473
7	0.877	0.594	532.3	453.4	463.2	453.3	262.4	-10.0	29.5	-1.3	0.4560	0.3962	1.4926	1.1392	1.1508	1.0464
8	0.604	0.416	535.1	461.6	465.5	461.5	263.9	-3.8	29.5	-0.5	0.4573	0.3923	1.4982	1.1450	1.1494	1.0471
9	0.322	0.206	536.4	465.7	457.0	465.6	280.9	12.9	31.6	1.6	0.4570	0.3948	1.5006	1.1518	1.1500	1.0486
10	0.067	0.019	515.6	434.8	437.8	434.5	272.2	16.3	31.9	2.1	0.4375	0.3669	1.4791	1.1570	1.1510	1.0492

SL	IACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
%	%	%	%	%	%	%	%	%	%	%	%	%	%
1	-6.05	10.27	43.01	38.30	44.92	0.3317	0.1246	0.0263	0.9788	79.51	80.63	92.81	93.07
2	-4.34	9.02	38.49	42.94	49.12	0.2842	0.0397	0.0389	0.9930	87.49	88.21	88.49	88.77
3	-7.37	8.34	34.64	46.17	49.78	0.2776	0.0262	0.0062	0.9953	92.04	92.51	92.65	92.83
4	-8.52	8.20	33.47	44.23	48.32	0.2916	0.0350	0.0089	0.9940	92.93	93.34	93.58	93.74
5	-9.23	8.10	33.16	43.33	44.45	0.3118	0.0418	0.0120	0.9938	89.47	90.07	89.18	89.47
6	-11.48	7.69	31.45	42.78	42.80	0.3103	0.0426	0.0128	0.9941	89.40	89.99	91.61	91.78
7	-11.89	8.30	30.79	42.15	42.20	0.3084	0.0428	0.0134	0.9943	87.09	87.80	88.28	88.52
8	-12.69	9.67	30.02	42.32	42.81	0.3027	0.0478	0.0138	0.9936	84.47	85.33	86.02	86.30
9	-13.21	12.85	29.99	41.40	42.96	0.3031	0.0549	0.0188	0.9927	80.98	82.03	83.68	84.00
10	-16.55	14.87	29.72	39.47	39.74	0.3334	0.1038	0.0369	0.9872	75.36	76.68	83.26	83.59

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
RPM	LBM/SEC	%	%	%	%	%	%	%	%
6684	1644.20	1.1445	1.5082	86.22	86.99	1.0515	0.9921	89.16	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA

UNIFORM INLET FLOW

Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

RUN N1411, SPEED CODE 80, POINT NO. 4																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	10.947	9.472	528.8	774.8	528.8	478.6	0.0	608.1	0.0	51.7	0.4846	0.8996	416.7	455.8	0.6169	0.4515	673.3	502.2	
2	9.258	7.678	526.1	752.8	526.1	517.5	0.0	546.7	0.0	46.5	0.4820	0.6754	446.5	499.4	0.6442	0.4663	703.2	519.7	
3	7.505	6.214	520.7	704.6	520.7	517.8	0.0	477.9	0.0	42.6	0.4768	0.6298	522.2	547.8	0.6752	0.4670	777.4	527.5	
4	6.204	4.981	514.9	661.7	514.9	509.6	0.0	422.2	0.0	39.6	0.4713	0.5897	573.4	593.5	0.7053	0.4790	770.7	537.5	
5	4.332	2.847	508.6	589.2	508.6	480.2	0.0	334.5	0.0	34.9	0.4652	0.5189	688.7	698.9	0.7831	0.5346	856.1	602.8	
6	3.671	2.043	510.4	568.3	510.4	472.1	0.0	316.5	0.0	33.8	0.4669	0.5029	746.4	751.4	0.8257	0.5685	902.5	641.8	
7	3.133	1.591	513.1	547.0	513.1	469.3	0.0	311.0	0.0	33.5	0.4698	0.4975	779.9	784.0	0.8543	0.5888	939.8	666.3	
8	2.958	1.443	516.4	556.4	516.4	466.0	0.0	304.1	0.0	33.1	0.4726	0.4910	814.8	817.7	0.8830	0.6121	966.7	693.6	
9	1.811	0.733	519.4	557.9	519.4	465.3	0.0	299.8	0.0	32.8	0.4755	0.4878	852.7	852.7	0.9141	0.6369	988.4	722.7	
10	0.913	0.251	521.4	556.4	521.4	468.0	0.0	300.9	0.0	32.7	0.4774	0.4894	895.5	895.5	0.9489	0.6658	1036.2	756.7	
11	0.269	0.003	521.9	536.9	521.9	462.1	0.0	304.7	0.0	34.6	0.4780	0.4705	931.6	931.6	0.9779	0.6720	1067.9	766.9	

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	M-1	M-2	VM-1	VM-2	PC/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.49	5.06	13.24	59.83	36.06	34.02	0.4746	0.2409	0.0940	1.2754	81.59	80.94	38.24	-17.58	-416.7	152.3	1.2754
2	0.69	4.10	12.87	46.77	35.92	38.36	0.4644	0.0942	0.0240	1.3117	92.30	92.00	41.57	-5.20	-466.5	47.2	1.3117
3	1.89	7.17	13.33	37.42	35.63	39.54	0.4729	0.0462	0.0127	1.3109	95.78	95.61	45.09	7.67	-922.2	-69.5	1.3109
4	2.84	7.18	13.00	29.53	35.33	39.63	0.4659	0.0280	0.0079	1.3007	97.13	97.02	48.09	18.56	-573.4	-171.3	1.3007
5	2.84	7.22	9.37	16.40	34.98	38.25	0.4289	0.0268	0.0072	1.2767	96.48	96.35	53.59	37.19	-688.7	-364.5	1.2767
6	2.49	6.47	7.47	12.95	35.04	37.82	0.4147	0.0383	0.0101	1.2757	94.61	94.41	55.60	42.65	-744.4	-434.5	1.2757
7	3.50	6.33	6.53	11.46	35.23	37.70	0.4089	0.0486	0.0126	1.2781	93.06	92.81	56.69	49.22	-779.9	-473.0	1.2781
8	1.92	6.23	6.18	9.87	35.43	37.53	0.4008	0.0558	0.0142	1.2793	91.67	91.37	57.64	47.79	-814.8	-513.7	1.2793
9	3.99	6.22	5.71	8.75	35.56	37.55	0.3929	0.0638	0.0161	1.2827	90.23	89.88	58.67	49.92	-852.7	-552.4	1.2827
10	4.06	6.28	5.47	8.00	35.67	37.62	0.3874	0.0786	0.0197	1.2906	87.88	87.43	59.79	51.79	-895.5	-594.6	1.2906
11	3.85	6.06	6.58	5.95	35.70	35.58	0.4006	0.1235	0.0296	1.2798	80.89	80.21	60.74	54.79	-931.6	-626.6	1.2798

TD/TD	PO/PO	EFF-AD	EFF-P	MCI/AI	T02/T01	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LB/SEC			ROTOR	ROTOR
S	S	S	S	SOFT			S	S
1.0822	1.2866	90.91	91.23	34.24	1.0822	1.2866	90.91	91.23

STATOR 1

RUN N1411, SPEED CODE 80, POINT NO. 4																		
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	VM-1	VM-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.220	7.955	700.5	463.3	400.5	454.7	574.7	89.3	55.1	11.0	0.6242	0.4041	1.2706	1.0890	1.0890	1.2706	1.0890	
2	7.601	5.621	708.0	523.2	478.4	515.3	522.0	92.4	47.5	9.9	0.6319	0.4587	1.2831	1.0878	1.0878	1.2831	1.0878	
3	4.997	3.968	682.2	523.2	505.2	517.6	458.4	76.5	42.2	8.4	0.6082	0.4595	1.2424	1.0840	1.0840	1.2424	1.0840	
4	3.486	3.014	652.6	510.2	509.4	505.1	407.8	71.4	38.7	8.1	0.5810	0.4464	1.2874	1.0804	1.0804	1.2874	1.0804	
5	1.825	1.947	591.7	481.9	492.7	476.5	327.7	71.8	33.6	8.6	0.5251	0.4237	1.2681	1.0751	1.0751	1.2681	1.0751	
6	1.432	1.614	579.1	481.8	488.3	476.3	311.4	72.6	32.5	8.7	0.5130	0.4234	1.2679	1.0763	1.0763	1.2679	1.0763	
7	1.207	1.382	572.4	483.8	487.9	478.4	306.9	72.4	32.2	8.6	0.5099	0.4248	1.2692	1.0783	1.0783	1.2692	1.0783	
8	0.974	1.123	572.4	485.6	486.9	480.5	300.9	69.9	31.7	8.3	0.5059	0.4261	1.2704	1.0798	1.0798	1.2704	1.0798	
9	0.697	0.813	571.5	491.0	488.0	485.5	297.4	73.3	31.4	8.6	0.5044	0.4305	1.2741	1.0827	1.0827	1.2741	1.0827	
10	0.377	0.461	575.4	496.9	491.3	488.7	299.5	89.9	31.4	10.6	0.5070	0.4349	1.2777	1.0865	1.0865	1.2777	1.0865	
11	0.128	0.174	556.9	471.8	466.5	462.8	304.2	92.0	33.1	11.2	0.4888	0.4113	1.2609	1.0912	1.0912	1.2609	1.0912	

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	M-1	M-2	VM-1	VM-2	PC/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	2.38	7.10	16.34	64.04	29.73	36.26	0.4809	0.1512	0.0313	0.9650	68.68	69.59	68.68	69.59	68.68	69.59	1.0890
2	0.13	5.27	12.35	37.57	36.37	41.93	0.3561	0.0891	0.0198	0.9790	84.19	84.74	84.19	84.74	84.19	84.74	1.0878
3	-2.64	2.83	9.76	35.82	39.06	42.55	0.3670	0.0620	0.0149	0.9863	90.54	90.90	90.54	90.90	90.54	90.90	1.0840
4	-4.80	0.98	8.90	30.57	39.82	41.67	0.3493	0.0531	0.0136	0.9891	92.86	93.11	92.86	93.11	92.86	93.11	1.0804
5	-8.61	-2.16	8.70	25.05	39.13	39.35	0.3113	0.0395	0.0115	0.9932	93.59	93.80	93.59	93.80	93.59	93.80	1.0751
6	-9.62	-2.84	8.46	23.86	38.93	39.29	0.2956	0.0371	0.0114	0.9939	91.99	92.25	91.99	92.25	91.99	92.25	1.0763
7	-10.03	-3.05	8.26	23.55	38.96	39.41	0.2909	0.0428	0.0136	0.9930	90.67	90.41	90.67	90.41	90.67	90.41	1.0783
8	-10.73	-3.54	7.84	23.44	38.96	39.34	0.2855	0.0430	0.0141	0.9931	88.71	89.09	88.71	89.09	88.71	89.09	1.0798
9	-11.71	-4.32	8.15	22.77	39.07	39.91	0.2794	0.0428	0.0145	0.9932	87.25	87.68	87.25	87.68	87.25	87.68	1.0827
10	-13.72	-6.13	10.43	20.95	39.37	40.05	0.2666	0.0620	0.0217	0.9900	83.86	84.41	83.86	84.41	83.86	84.41	1.0865
11	-15.13	-7.42	13.52	21.87	37.22	37.62	0.2922	0.0967	0.0348	0.9854	75.11	75.92	75.11	75.92	75.11	75.92	1.0912

MCI/AL	TO2/T01	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET
S	S	S	S	S
6674.	169.80	1.0822	1.2718	86.60
		1.0822	0.9885	86.60

ROTOR 2

SL		EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		N-1		N-2		U-1		U-2		M-1		M-2		V-1		V-2	
DEGREE		DEGREE		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		DEGREE		DEGREE		N-1		N-2		FT/SEC		FT/SEC		M-1		M-2		FT/SEC		FT/SEC	
1	8.996	5.980	419.2	703.5	410.2	598.4	86.7	428.0	11.9	37.1	0.3666	0.6090	518.4	551.9	0.9179	0.4951	595.5	572.0																			
2	6.598	4.706	523.7	894.0	518.7	573.4	85.8	390.9	9.3	34.1	0.4611	0.6016	563.5	587.7	0.6187	0.5255	715.3	676.2																			
3	5.229	3.754	537.5	670.4	327.5	572.6	72.9	348.6	7.8	31.2	0.4728	0.5815	605.6	623.2	0.6825	0.5509	753.1	635.1																			
4	3.936	2.772	530.5	637.5	525.9	549.6	70.0	323.0	7.6	30.4	0.4672	0.5526	650.6	667.2	0.6899	0.5599	783.4	645.9																			
5	1.523	0.900	507.0	572.7	501.6	491.1	71.4	296.6	8.1	31.0	0.4465	0.4963	752.5	756.0	0.7453	0.5817	846.3	675.9																			
6	0.971	0.545	506.3	547.8	501.1	479.1	72.2	265.6	8.2	29.0	0.4455	0.4724	788.9	789.8	0.7695	0.6126	874.5	710.1																			
7	0.573	0.273	506.3	540.9	501.5	479.7	69.7	249.9	7.9	27.5	0.4451	0.4663	824.2	824.2	0.7964	0.6459	916.0	748.2																			
8	0.135	0.066	511.2	542.7	505.6	481.9	75.4	249.5	8.5	27.4	0.4468	0.4669	872.5	869.3	0.8287	0.6755	937.9	785.1																			
9	0.026	0.017	512.8	538.0	504.8	466.6	90.5	267.8	10.2	29.8	0.4494	0.4612	905.7	903.7	0.8402	0.6762	958.8	788.7																			
10	0.036	0.006	486.5	520.6	477.8	447.9	91.6	265.3	10.9	30.5	0.4426	0.4446	938.9	937.7	0.8489	0.6501	972.7	814.0																			

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VM-1	VM-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	TOTAL	TOT	TOT	DEGREE	DEGREE	FT/SFC	FT/SFC	INLET	
1	-5.71	1.25	16.92	33.92	33.19	46.51	0.1917	-0.0241	-0.0057	1.2161	102.67	102.12	46.28	12.36	-431.7	-123.4	1.4983
2	-8.84	-2.58	10.53	23.74	42.39	48.90	0.2597	0.0780	0.0193	1.1797	90.35	90.12	42.56	18.82	-477.9	-196.7	1.4211
3	-7.26	-1.57	9.03	19.41	43.54	49.66	0.2617	0.0457	0.0117	1.1775	93.36	93.20	44.95	25.54	-532.5	-274.6	1.5200
4	-5.70	-0.57	7.08	14.18	42.98	48.17	0.2729	0.0386	0.0097	1.1739	93.83	93.69	47.82	31.64	-580.6	-339.2	1.5064
5	-2.40	1.7	4.57	10.42	41.03	43.42	0.2939	0.0727	0.0179	1.1610	86.77	86.48	53.63	43.21	-681.6	-461.4	1.4718
6	-1.59	1.72	5.23	7.47	40.94	42.47	0.2665	0.0540	0.0129	1.1482	88.76	88.53	55.04	47.57	-716.7	-524.2	1.4565
7	-0.55	1.83	4.76	6.26	40.94	42.57	0.2474	0.0449	0.0106	1.1455	89.78	89.58	56.39	50.12	-754.5	-574.2	1.4546
8	-0.81	1.41	3.76	5.47	41.24	42.73	0.2392	0.0524	0.0125	1.1450	87.61	87.37	57.60	52.17	-797.1	-619.8	1.4494
9	-0.93	1.29	3.08	4.50	41.07	41.17	0.2513	0.0798	0.0190	1.1409	81.47	81.12	58.23	53.72	-815.2	-635.5	1.4576
10	0.61	2.84	4.74	4.25	38.59	39.32	0.2430	0.0665	0.0153	1.1483	86.55	84.24	60.58	56.33	-847.3	-672.5	1.4464

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	BN/SEC			ROTOR	ROTOR
		%	%	%			%	%
1.1352	1.4783	87.43	88.11	31.94	1.0490	1.1624	89.62	89.85

STATOR 2

SL		EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		N-1		N-2		U-1		U-2		M-1		M-2		V-1		V-2		
DEGREE		DEGREE		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		DEGREE		DEGREE		N-1		N-2		FT/SEC		FT/SEC		M-1		M-2		FT/SEC		FT/SEC		
1	8.976	8.248	638.3	501.8	480.5	561.6	420.2	15.0	41.0	1.5	0.5490	0.4800	1.4679	1.1502	1.1915	1.0562																						
2	5.150	5.642	657.8	596.0	535.2	595.9	382.5	4.3	35.5	0.4	0.5682	0.5118	1.5101	1.1650	1.1711	1.0535																						
3	3.885	4.044	653.6	586.3	557.3	586.3	341.5	-4.5	31.5	-0.4	0.5661	0.5046	1.5174	1.1383	1.1697	1.0512																						
4	2.938	2.881	634.2	560.2	549.1	560.1	317.3	-9.9	30.0	-1.0	0.5495	0.4821	1.4974	1.1331	1.1640	1.0500																						
5	1.365	1.102	579.6	508.5	501.5	508.3	290.6	-12.1	30.1	-1.4	0.5006	0.4367	1.4563	1.1297	1.1488	1.0502																						
6	0.977	0.727	555.3	488.5	489.6	488.3	262.0	-14.1	28.2	-1.7	0.4794	0.4196	1.4419	1.1261	1.1366	1.0457																						
7	0.783	0.573	546.0	480.2	498.6	480.0	248.1	-11.7	26.9	-1.4	0.4726	0.4120	1.4355	1.1271	1.1304	1.0442																						
8	0.433	0.496	579.0	483.0	489.2	483.0	249.1	-0.9	27.0	-0.1	0.4725	0.4136	1.4371	1.1317	1.1274	1.0452																						
9	0.443	0.365	544.1	481.8	474.1	481.7	267.1	10.7	27.4	1.3	0.4667	0.4113	1.4359	1.1382	1.1239	1.0473																						
10	0.158	0.132	527.3	464.3	455.9	464.0	264.9	18.8	26.2	2.3	0.4506	0.3950	1.4275	1.1435	1.1302	1.0478																						

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	TOTAL	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-9.88	10.03	39.45	41.35	48.97	0.2514	0.1096	0.0231	0.9797	77.15	78.35	91.20	91.41
2	-8.35	8.46	35.04	46.48	52.90	0.2222	0.0370	0.0083	0.9927	86.23	87.01	86.15	86.46
3	-10.61	7.85	31.85	48.73	52.54	0.2278	0.0333	0.0079	0.9935	90.42	90.96	89.43	89.66
4	-11.66	7.52	31.01	48.20	50.38	0.2459	0.0453	0.0114	0.9916	91.19	91.67	88.63	88.88
5	-11.33	7.70	31.46	44.19	45.64	0.2724	0.0627	0.0181	0.9902	87.45	88.10	80.39	80.78
6	-13.22	7.64	29.81	43.27	43.85	0.2693	0.0677	0.0203	0.9902	87.42	88.06	82.46	82.78
7	-14.50	8.16	28.32	43.23	43.01	0.2722	0.0927	0.0290	0.9869	85.62	86.34	80.64	80.98
8	-15.26	10.04	27.09	43.26	43.12	0.2707	0.1080	0.0357	0.9847	82.95	83.80	77.10	77.48
9	-15.39	12.54	28.12	41.72	42.73	0.2765	0.1071	0.0367	0.9851	78.81	79.86	71.75	72.21
10	-18.26	15.04	27.85	39.92	40.90	0.2857	0.1216	0.0432	0.9842	73.96	75.22	74.37	74.81

NCORR	W CORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	%
RPM	LBM/SEC			%	%			%	%
6674	169.80	1.1352	1.4608	84.62	85.42	1.0490	0.9882	87.39	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.337	9.477	474.2	738.5	474.2	428.9	0.0	401.3	0.0	54.4	0.4325	0.4614	416.3	499.3	0.5754	0.4057	431.0	493.0
2	10.372	7.678	473.6	724.8	473.6	463.4	0.0	397.3	0.0	50.1	0.4320	0.4676	406.1	498.9	0.6061	0.4173	464.5	467.1
3	8.478	6.170	472.5	693.0	472.5	477.5	0.0	409.3	0.0	45.6	0.4309	0.4691	521.6	547.2	0.6419	0.4285	703.8	481.0
4	7.051	4.903	470.9	642.7	470.9	471.1	0.0	437.2	0.0	42.8	0.4294	0.4709	572.8	592.9	0.6762	0.4408	741.5	496.2
5	4.353	2.784	468.6	568.2	468.6	443.6	0.0	399.1	0.0	38.7	0.4272	0.4620	608.0	604.2	0.7509	0.4555	832.4	560.9
6	3.323	2.013	468.9	531.4	468.9	436.0	0.0	337.6	0.0	37.7	0.4276	0.4660	743.6	750.4	0.8013	0.5293	874.1	600.5
7	2.699	1.583	469.9	547.3	469.9	432.9	0.0	334.8	0.0	37.7	0.4284	0.4615	779.1	783.2	0.8296	0.5464	904.8	623.2
8	2.029	1.190	471.1	544.7	471.1	432.1	0.0	331.7	0.0	37.5	0.4296	0.4786	814.0	816.9	0.8577	0.5708	940.5	644.7
9	1.347	0.724	472.0	540.7	472.0	429.0	0.0	329.1	0.0	37.5	0.4305	0.4742	851.8	851.8	0.8881	0.5971	973.9	676.2
10	0.622	0.264	472.3	539.3	472.3	424.6	0.0	332.5	0.0	38.1	0.4307	0.4717	894.6	894.6	0.9226	0.6161	1011.6	704.4
11	0.183	0.042	472.1	528.8	472.1	404.6	0.0	340.4	0.0	40.1	0.4305	0.4667	930.7	930.4	0.9517	0.6233	1043.6	719.4

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B ² -1	B ² -2	VO ² -1	VO ² -2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	2.58	8.13	12.11	60.04	33.08	30.86	0.517	0.3038	0.7676	1.2624	79.48	78.37	41.32	-18.72	-418.3	145.4	1.2624
2	3.73	9.14	10.92	51.76	33.05	34.66	0.5156	0.1580	0.0400	1.3030	88.47	88.03	44.61	-7.14	-466.1	98.7	1.3030
3	4.71	9.98	12.57	41.00	32.99	36.82	0.5107	0.0770	0.0212	1.3102	93.69	93.44	47.91	6.91	-521.6	-58.0	1.3102
4	5.21	10.33	12.70	32.38	32.89	37.02	0.5062	0.0555	0.0156	1.3037	94.82	94.63	51.64	8.26	-572.8	-193.7	1.3037
5	4.85	9.41	9.89	18.07	32.76	35.70	0.4711	0.0551	0.0147	1.2846	93.47	93.23	55.78	37.71	-608.0	-343.2	1.2846
6	4.88	8.86	8.27	14.34	32.78	35.29	0.4545	0.0666	0.0172	1.2846	91.54	91.24	57.79	43.45	-743.6	-413.0	1.2846
7	5.73	8.57	7.31	12.92	32.84	35.12	0.4503	0.0803	0.0205	1.2882	89.58	89.20	58.93	46.01	-779.1	-446.4	1.2882
8	6.22	8.52	6.71	11.64	32.91	35.14	0.4451	0.0902	0.0228	1.2979	88.03	87.59	59.93	48.32	-814.0	-488.2	1.2979
9	6.33	8.57	6.41	10.39	32.96	34.95	0.4371	0.1034	0.0257	1.2979	85.99	85.46	61.01	50.62	-851.8	-522.7	1.2959
10	6.44	8.66	6.61	9.24	32.97	34.59	0.4367	0.1282	0.0313	1.3012	82.91	81.85	62.17	52.93	-894.6	-562.1	1.3012
11	6.21	8.43	9.34	7.54	32.96	32.86	0.4301	0.1693	0.0399	1.2982	77.25	76.19	63.10	55.56	-930.7	-602.0	1.2982

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			ROTOR	ROTOR
		%	%	SOFT			%	%
1.0875	1.2937	87.31	87.77	31.78	1.0875	1.2937	87.31	87.77

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.354	8.223	66.0	346.9	379.5	568.2	78.6	58.6	11.6	0.5914	0.3366	1.2220	1.0879	1.2220	1.0879	1.2220	1.0879	
2	8.018	6.228	37.0	449.3	421.1	439.9	530.8	91.3	51.4	11.7	0.4022	0.3915	1.2853	1.0891	1.2653	1.0891	1.2853	
3	5.960	4.689	65.0	473.2	461.0	469.1	469.9	76.3	45.6	9.2	0.5849	0.4194	1.2898	1.0874	1.2898	1.0874	1.2898	
4	4.059	3.633	631.7	469.3	469.3	466.4	422.6	67.5	42.0	8.3	0.5605	0.4106	1.2897	1.0874	1.2897	1.0874	1.2897	
5	2.237	2.405	574.5	443.9	457.1	438.6	348.0	68.2	37.3	8.8	0.5078	0.3884	1.2759	1.0797	1.2759	1.0797	1.2759	
6	1.806	2.048	581.9	442.0	453.4	437.0	331.9	66.5	36.2	8.7	0.4957	0.3864	1.2752	1.0812	1.2752	1.0812	1.2752	
7	1.566	1.803	560.4	446.7	453.0	441.2	330.0	69.7	36.1	9.0	0.4937	0.4001	1.2783	1.0874	1.2783	1.0874	1.2783	
8	1.293	1.500	560.7	454.0	454.7	447.8	328.0	74.5	35.8	9.5	0.4933	0.3962	1.2832	1.0868	1.2832	1.0868	1.2832	
9	0.955	1.123	558.9	459.0	453.6	452.4	326.4	78.0	35.7	9.8	0.4909	0.4001	1.2868	1.0900	1.2868	1.0900	1.2868	
10	0.548	0.666	559.0	462.4	450.7	452.8	330.7	95.9	36.3	11.7	0.4647	0.4021	1.2890	1.0953	1.2890	1.0953	1.2890	
11	0.194	0.258	545.5	443.6	431.8	434.3	330.8	90.4	36.2	11.8	0.4796	0.3841	1.2772	1.1017	1.2772	1.1017	1.2772	

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	5.86	10.58	16.96	46.98	25.98	30.83	0.5692	0.1489	0.0308	0.9685	67.12	68.04	67.12	68.04
2	4.24	9.38	14.13	39.90	32.29	36.24	0.4804	0.1238	0.0273	0.9731	78.11	78.83	78.11	78.83
3	0.71	6.18	10.59	36.33	36.03	34.13	0.4226	0.0736	0.0176	0.9846	87.57	88.01	87.57	88.01
4	-1.47	4.31	9.08	33.73	37.10	34.92	0.4019	0.0572	0.0146	0.9890	90.49	90.83	90.49	90.83
5	-4.94	1.51	7.93	28.44	36.68	36.00	0.3698	0.0436	0.0126	0.9950	90.56	90.88	90.56	90.88
6	-5.93	0.85	8.45	27.56	36.53	36.62	0.3596	0.0465	0.0143	0.9928	88.62	89.01	88.62	89.01
7	-6.12	0.86	8.62	27.10	36.96	36.92	0.3514	0.0486	0.0154	0.9925	86.62	87.18	86.62	87.18
8	-6.64	0.55	9.02	26.35	36.73	37.43	0.3399	0.0478	0.0157	0.9927	85.13	85.44	85.13	85.44
9	-7.33	0.06	9.34	25.96	36.66	37.75	0.3309	0.0463	0.0157	0.9930	83.07	83.46	83.07	83.46
10	-8.82	-1.23	11.67	24.61	36.41	37.64	0.3238	0.0610	0.0213	0.9908	78.96	79.71	78.96	79.71
11	-10.07	-2.34	14.04	26.43	36.77	35.80	0.3589	0.1106	0.0397	0.9839	71.24	72.22	71.24	72.22

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
RPM	LB/SEC			%	%			%	%
6668	157.60	1.0875	1.2781	83.06	83.64	1.0875	0.9880	83.06	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	W-1	W-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	0.434	5.746	356.1	625.4	341.7	681.2	76.2	459.6	12.5	43.3	0.3034	0.5722	517.9	551.3	0.4439	0.4213	550.4	489.9
2	0.174	4.404	456.6	649.0	448.0	692.6	80.4	422.6	11.1	42.4	0.3900	0.5501	562.9	587.1	0.5480	0.4446	652.6	519.3
3	4.066	3.516	493.3	632.0	488.1	591.9	71.2	386.1	0.3	37.3	0.4320	0.5438	604.0	622.4	0.6333	0.4782	723.2	555.7
4	3.485	2.630	487.7	609.5	483.4	453.8	64.7	357.4	7.6	35.8	0.4275	0.5262	649.9	661.6	0.6653	0.4987	759.1	579.9
5	1.400	0.067	465.0	560.3	460.2	450.5	66.1	333.2	0.2	36.5	0.4073	0.4708	752.1	755.3	0.7234	0.5286	826.1	617.1
6	0.787	0.332	465.0	541.7	460.2	443.9	67.1	310.4	0.3	35.7	0.4070	0.4434	788.1	789.0	0.7486	0.5504	855.4	652.9
7	0.355	0.085	471.1	533.0	465.4	438.7	72.7	304.2	0.9	34.7	0.4117	0.4557	823.3	823.3	0.7719	0.5802	883.2	679.7
8	-0.022	-0.255	476.5	538.6	469.9	443.7	79.3	305.3	9.6	34.5	0.4157	0.4586	871.6	868.4	0.8036	0.6104	921.2	716.9
9	-0.120	-0.280	477.1	535.3	467.7	420.5	94.3	320.7	11.4	36.8	0.4152	0.4541	904.0	907.8	0.8144	0.6131	935.0	722.8
10	-0.063	-0.120	456.3	512.6	447.4	410.9	89.9	306.6	11.4	36.7	0.3954	0.4330	938.0	936.8	0.8308	0.6355	958.8	752.3

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	Q-FAC	OMEGA-B	LOSS-P	PO2/P01	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	0.09	7.04	15.21	41.42	28.03	41.41	0.3040-0.0430	-0.0103	1.2442	102.97	103.06	52.07	10.65	-441.6	-91.7	1.5244
2	-4.88	1.39	11.66	28.18	37.02	43.20	0.3481-0.0562	0.0139	1.2009	94.32	94.16	46.52	18.35	-474.5	-164.5	1.5382
3	-4.72	0.95	8.82	22.16	48.5	44.72	0.3563-0.0833	0.0209	1.1943	89.98	89.72	47.68	25.32	-533.7	-238.5	1.5444
4	-3.09	1.99	7.03	18.83	40.20	44.47	0.3521-0.0826	0.0158	1.1970	91.76	91.55	50.42	31.59	-585.2	-304.2	1.5412
5	0.11	3.90	4.49	13.01	38.28	40.99	0.3431-0.0834	0.0206	1.1960	87.79	87.48	54.14	43.13	-686.0	-422.1	1.5248
6	0.93	4.14	4.00	10.30	38.25	40.58	0.3378-0.0897	0.0188	1.1875	88.73	88.45	57.66	47.15	-721.1	-478.6	1.5159
7	1.26	3.64	4.44	8.40	38.65	40.00	0.3272-0.0782	0.0181	1.1812	86.88	86.56	58.20	49.00	-758.6	-519.2	1.5141
8	0.91	3.13	3.80	7.57	38.96	40.42	0.3165-0.0827	0.0199	1.1833	85.28	84.92	59.32	51.76	-792.3	-543.1	1.5233
9	0.89	3.08	2.98	6.38	38.64	38.88	0.3244-0.1081	0.0239	1.1824	82.31	81.89	60.01	53.63	-810.5	-582.1	1.5242
10	2.22	4.45	5.31	5.29	36.88	37.08	0.3089-0.0882	0.0201	1.1833	83.77	83.37	62.18	56.90	-848.0	-630.2	1.5191

TO/TO	PO/PO	EFF-AD	EFF-P	WCL/A1	PO2/P01	SEFF-P	SEFF-A	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC				ROTOR	ROTOR
1.1513	1.5261	84.87	85.75	29.58	1.0587	1.1941	88.55	88.84	

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	W-1	W-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	7.061	8.183	610.4	662.2	481.0	662.0	451.2	14.3	47.5	1.8	0.5222	0.3910	1.4924	1.1563	1.2202	1.0629		
2	5.380	5.777	615.3	694.0	455.4	693.9	413.7	12.5	42.2	1.4	0.5274	0.4194	1.5246	1.1529	1.1962	1.0586		
3	4.058	4.157	614.2	582.1	485.4	582.1	376.4	-0.2	37.8	-0.0	0.5274	0.4274	1.5384	1.1482	1.1897	1.0580		
4	3.136	2.987	603.5	488.4	491.0	488.4	350.8	-3.2	35.5	-0.4	0.5187	0.4160	1.5340	1.1448	1.1813	1.0575		
5	1.644	1.286	585.7	455.4	468.4	457.4	328.7	-8.4	35.5	-1.1	0.4846	0.3870	1.5178	1.1451	1.1905	1.0599		
6	1.361	0.955	548.4	440.7	454.2	430.5	307.1	-13.4	34.1	-1.8	0.4693	0.3742	1.5003	1.1460	1.1825	1.0570		
7	1.097	0.793	540.9	436.1	449.0	436.0	301.6	-10.4	33.9	-1.4	0.4620	0.3688	1.5071	1.1470	1.1761	1.0562		
8	0.796	0.590	546.1	445.0	453.7	444.9	303.9	-3.5	33.8	-0.4	0.4652	0.3764	1.5142	1.1536	1.1763	1.0579		
9	0.472	0.347	543.2	446.9	439.1	446.7	319.7	10.9	36.1	1.4	0.4611	0.3768	1.5156	1.1611	1.1757	1.0598		
10	0.134	0.081	520.8	418.7	421.3	418.4	306.2	15.1	36.0	2.1	0.4402	0.3515	1.4971	1.1671	1.1730	1.0590		

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	Q-FAC	OMEGA-B	LOSS-P	PO2/P01	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-3.38	10.27	45.71	36.29	42.29	0.3911	0.1241	0.0261	0.9790	77.53	78.76	93.13	
2	-1.64	9.49	40.72	40.57	45.81	0.3423	0.0910	0.0115	0.9912	83.74	84.68	89.63	
3	-4.30	8.27	37.77	43.60	47.03	0.3277	0.0223	0.0057	0.9961	88.37	89.06	87.71	
4	-6.13	8.16	35.90	44.35	45.96	0.3383	0.0284	0.0072	0.9952	89.79	90.39	89.06	
5	-5.89	7.98	36.42	41.79	42.87	0.3670	0.0309	0.0089	0.9954	87.26	87.99	85.18	
6	-7.31	7.22	35.83	41.33	41.47	0.3729	0.0316	0.0095	0.9956	86.68	87.43	86.00	
7	-7.52	8.17	35.28	40.83	40.96	0.3741	0.0319	0.0100	0.9957	84.65	85.52	84.36	
8	-8.42	9.70	34.26	41.20	41.65	0.3707	0.0432	0.0143	0.9940	81.93	82.96	81.88	
9	-8.73	12.66	34.67	39.72	41.58	0.3722	0.0421	0.0144	0.9943	78.29	79.52	79.55	
10	-12.41	14.79	33.95	37.91	38.62	0.3952	0.0693	0.0246	0.9914	73.14	74.61	78.98	

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
RPM	LBW/SEC								
6400	157.60	1.1513	1.5161	83.46	84.41	1.0587	0.9934	85.18	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	-----		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		V*-1		V*-2	
	EPSI-1	EPSI-2	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	11.103	9.381	518.3	780.7	518.3	499.0	0.0	600.4	0.0	600.4	0.0	600.4	0.0	600.4	0.0	30.1	0.4765	0.7042	396.5	433.7	0.5974	0.4746	652.6	526.1	684.1	540.6	684.1	540.6	684.1	540.6
2	5.420	7.532	520.5	755.2	520.5	537.7	0.0	531.0	0.0	44.5	0.4786	0.6805	443.9	475.2	0.6264	0.4868	684.1	540.6	684.1	540.6	684.1	540.6	684.1	540.6	684.1	540.6	684.1	540.6	684.1	540.6
3	7.495	6.091	522.2	705.2	522.2	537.1	0.0	457.1	0.0	40.3	0.4783	0.4327	496.8	521.2	0.6601	0.4853	720.8	540.9	720.8	540.9	720.8	540.9	720.8	540.9	720.8	540.9	720.8	540.9	720.8	540.9
4	6.015	4.884	522.1	659.4	522.1	526.9	0.0	396.4	0.0	36.9	0.4781	0.5900	545.6	564.7	0.6915	0.4950	755.2	553.2	755.2	553.2	755.2	553.2	755.2	553.2	755.2	553.2	755.2	553.2	755.2	553.2
5	3.900	2.813	519.9	579.9	519.9	482.2	0.0	306.7	0.0	31.9	0.4760	0.5165	655.3	665.0	0.7659	0.5422	836.5	608.9	836.5	608.9	836.5	608.9	836.5	608.9	836.5	608.9	836.5	608.9	836.5	608.9
6	2.227	2.015	519.8	564.4	519.8	487.3	0.0	284.9	0.0	30.3	0.4756	0.5020	708.2	714.9	0.8042	0.5780	878.3	649.9	878.3	649.9	878.3	649.9	878.3	649.9	878.3	649.9	878.3	649.9	878.3	649.9
7	2.499	1.946	519.9	555.6	519.9	482.3	0.0	275.9	0.0	29.8	0.4760	0.4936	742.1	745.9	0.8295	0.5982	906.0	673.4	906.0	673.4	906.0	673.4	906.0	673.4	906.0	673.4	906.0	673.4	906.0	673.4
8	2.160	1.077	520.4	547.4	520.4	478.6	0.0	265.6	0.0	29.0	0.4765	0.4858	775.3	778.1	0.8550	0.6224	933.8	701.2	933.8	701.2	933.8	701.2	933.8	701.2	933.8	701.2	933.8	701.2	933.8	701.2
9	1.454	0.547	520.7	544.2	520.7	479.5	0.0	257.4	0.0	28.2	0.4767	0.4827	811.3	811.3	0.8827	0.6499	964.0	732.6	964.0	732.6	964.0	732.6	964.0	732.6	964.0	732.6	964.0	732.6	964.0	732.6
10	0.555	0.182	520.1	541.6	520.1	478.1	0.0	256.6	0.0	28.0	0.4762	0.4797	852.1	852.1	0.9140	0.6777	998.3	765.2	998.3	765.2	998.3	765.2	998.3	765.2	998.3	765.2	998.3	765.2	998.3	765.2
11	0.167	-0.039	519.4	521.0	519.4	453.6	0.0	256.3	0.0	29.5	0.4755	0.4599	886.4	886.1	0.9408	0.6951	1027.4	776.1	1027.4	776.1	1027.4	776.1	1027.4	776.1	1027.4	776.1	1027.4	776.1	1027.4	776.1

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-1.30	4.25	12.43	55.83	35.50	34.70	0.4184	0.2729	0.0608	1.2482	78.96	78.28	37.44	-18.39	-394.5	164.7	1.2482
2	-0.43	5.00	12.17	46.37	35.62	39.00	0.4125	0.1133	0.0288	1.2795	90.44	90.13	40.47	-5.90	-643.9	55.8	1.2795
3	0.38	5.66	12.45	36.79	35.71	40.10	0.4272	0.0603	0.0166	1.2747	94.14	93.95	43.58	6.79	-496.8	-44.1	1.2747
4	0.84	5.96	12.12	28.58	35.70	60.06	0.4262	0.0399	0.0112	1.2611	95.56	95.41	46.27	17.69	-545.6	-168.3	1.2611
5	0.64	5.22	8.23	15.55	35.59	38.20	0.3976	0.0423	0.0115	1.2315	93.85	93.66	51.59	36.06	-655.3	-358.4	1.2315
6	0.86	4.84	6.25	12.34	35.57	38.04	0.3774	0.0416	0.0111	1.2300	93.44	93.24	53.76	41.42	-708.2	-430.0	1.2300
7	1.82	4.65	5.57	10.75	35.59	37.74	0.3697	0.0490	0.0129	1.2287	91.98	91.74	55.01	44.26	-742.1	-470.0	1.2287
8	2.41	4.71	5.35	9.18	35.62	37.54	0.3580	0.0510	0.0134	1.2273	91.15	90.89	56.14	46.96	-775.3	-512.5	1.2273
9	2.64	4.87	4.91	8.20	35.63	37.69	0.3644	0.0514	0.0132	1.2292	90.90	90.63	57.32	49.12	-811.3	-553.9	1.2292
10	2.87	5.09	5.01	7.27	35.60	37.60	0.3373	0.0652	0.0165	1.2311	88.24	87.91	58.60	51.34	-852.1	-597.5	1.2311
11	2.74	4.96	8.02	5.39	35.56	35.52	0.3487	0.1085	0.0264	1.2188	80.35	79.79	59.63	54.24	-886.4	-629.8	1.2188

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	LBM/SEC	%	%	%	%
1.0706	1.2402	89.55	90.25	34.42	1.0706	1.2402	89.95	90.25

STATOR 1

SL	-----		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		V*-1		V*-2	
	EPSI-1	EPSI-2	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	10.991	7.597	713.3	517.3	432.3	509.5	567.4	89.7	52.6	9.9	0.6392	0.4542	1.2069	1.0836	1.2069	1.0836	1.2069	1.0836	1.2069	1.0836	1.2069	1.0836	1.2069	1.0836	1.2069	1.0836	1.2069	1.0836	1.2069	
2	7.107	5.056	718.0	567.8	508.3	561.2	507.1	86.0	44.9	8.7	0.6436	0.5013	1.2579	1.0810	1.2579	1.0810	1.2579	1.0810	1.2579	1.0810	1.2579	1.0810	1.2579	1.0810	1.2579	1.0810	1.2579	1.0810	1.2579	
3	4.379	3.281	689.5	556.3	532.6	551.5	437.9	72.6	39.4	7.5	0.6175	0.4918	1.2584	1.0762	1.2584	1.0762	1.2584	1.0762	1.2584	1.0762	1.2584	1.0762	1.2584	1.0762	1.2584	1.0762	1.2584	1.0762	1.2584	
4	2.884	2.372	655.9	538.6	533.0	534.3	382.2	67.9	35.6	7.2	0.5867	0.4765	1.2477	1.0714	1.2477	1.0714	1.2477	1.0714	1.2477	1.0714	1.2477	1.0714	1.2477	1.0714	1.2477	1.0714	1.2477	1.0714	1.2477	
5	1.296	1.360	589.3	505.4	504.9	501.3	300.4	64.0	30.6	7.3	0.5252	0.4472	1.2233	1.0654	1.2233	1.0654	1.2233	1.0654	1.2233	1.0654	1.2233	1.0654	1.2233	1.0654	1.2233	1.0654	1.2233	1.0654	1.2233	
6	0.932	1.068	575.9	501.7	503.0	497.5	280.5	65.0	29.1	7.4	0.5127	0.4438	1.2199	1.0655	1.2199	1.0655	1.2199	1.0655	1.2199	1.0655	1.2199	1.0655	1.2199	1.0655	1.2199	1.0655	1.2199	1.0655	1.2199	
7	0.741	0.890	568.2	497.7	498.6	493.5	272.4	64.2	28.6	7.4	0.5053	0.4400	1.2168	1.0662	1.2168	1.0662	1.2168	1.0662	1.2168	1.0662	1.2168	1.0662	1.2168	1.0662	1.2168	1.0662	1.2168	1.0662	1.2168	
8	0.579	0.728	561.1	494.2	495.6	490.1	263.0	63.0	27.9	7.3	0.4986	0.4367	1.2142	1.0664	1.2142	1.0664	1.2142	1.0664	1.2142	1.0664	1.2142	1.0664	1.2142	1.0664	1.2142	1.0664	1.2142	1.0664	1.2142	
9	0.418	0.561	558.4	486.3	486.6	481.5	255.4	68.6	27.2	7.9	0.4959	0.4385	1.2155	1.0672	1.2155	1.0672	1.2155	1.0672	1.2155	1.0672	1.2155	1.0672	1.2155	1.0672	1.2155	1.0672	1.2155	1.0672	1.2155	
10	0.211	0.347	555.8	499.0	494.5	491.7	253.7	85.3	27.2	9.8	0.4929	0.4404	1.2173	1.0698	1.2173	1.0698	1.2173	1.0698	1.2173	1.0698	1.2173	1.0698	1.2173	1.0698	1.2173	1.0698	1.2173	1.0698	1.2173	
11	0.043	0.1	534.7	471.7	469.5	461.7	256.0	96.3	28.6	11.8	0.4726	0.4148	1.1998	1.0731	1.1998	1.0731	1.1998	1.0731	1.1998	1.0731	1.1998	1.0731	1.1998	1.0731	1.1998	1.0731	1.1998	1.0731	1.1998	

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	C-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	
1	-0.07	4.64	15.24	42.76	31.31	39.22	0.4118	0.1385	0.0288	0.9668	66.08	66.97	66.97	
2	-2.44	2.67	11.11	36.22	37.68	44.18	0.3388	0.0705	0.0157	0.9820	83.75	84.27	83.75	
3	-5.46	0.01	8.85	21.91	40.13	43.83	0.3180	0.0547	0.0132	0.9876	89.19	89.54	89.19	
4	-7.85	-2.07	8.04	28.38	40.59	42.58	0.2983	0.0463	0.0118	0.9904	91.44	91.70	91.44	
5	-11.59	-5.14	7.41	23.37	39.18	39.90	0.2582	0.0385	0.0112	0.9934	90.64	90.90	90.64	
6	-13.00	-6.23	7.23	21.70	39.07	39.55	0.2441	0.0497	0.0153	0.9918	89.29	89.59	89.29	
7	-13.55	-6.57	7.05	21.24	38.80	39.17	0.2407	0.0596	0.0190	0.9905	87.19	87.55	87.19	
8	-14.50	-7.31	6.88	20.63	38.64	38.86	0.2371	0.0693	0.0228	0.9892	85.91	86.29	85.91	
9	-15.86	-8.47	7.50	19.27	38.80	38.96	0.2258	0.0732	0.0249	0.9887	85.46	85.86	85.46	
10	-17.94	-10.35	9.85	17.31	38.66	38.90								

ROTOR 2

RUN N1411, SPEED CODE 76, POINT NO 1																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	6.069	6.084	474.9	754.3	446.8	651.9	87.2	379.4	10.5	29.9	0.4156	0.6618	493.2	525.1	0.5415	0.5061	618.7	648.0	
2	6.706	4.743	549.7	749.6	543.9	671.0	80.7	336.2	8.1	26.3	0.5033	0.6599	536.2	559.2	0.6404	0.6230	724.9	707.7	
3	5.321	3.637	573.4	715.4	549.1	655.5	69.7	286.4	7.0	23.5	0.5079	0.6702	576.1	593.0	0.6748	0.6374	761.8	723.7	
4	3.894	2.527	533.1	674.1	559.3	623.3	65.8	256.7	6.7	22.3	0.4996	0.5933	619.0	630.1	0.6979	0.6395	786.6	726.6	
5	1.073	0.229	525.3	594.4	528.7	553.5	64.0	216.7	6.9	21.4	0.4724	0.5212	716.3	719.3	0.7448	0.6556	839.7	747.7	
6	0.351	-0.205	525.3	560.1	521.3	531.9	64.3	175.6	7.0	18.3	0.4655	0.4914	750.6	751.5	0.7637	0.6877	861.9	783.9	
7	-0.211	-0.732	515.6	546.7	512.0	523.1	61.4	158.8	6.8	16.9	0.4565	0.4795	784.2	784.2	0.7861	0.7152	885.7	815.3	
8	-0.874	-1.317	512.9	548.9	507.8	522.6	72.2	167.8	8.1	17.8	0.4536	0.4811	830.2	827.1	0.8089	0.7374	912.3	841.4	
9	-1.186	-1.590	504.7	533.1	499.2	500.0	86.7	184.8	9.9	20.3	0.4474	0.4657	861.8	859.8	0.8148	0.7338	921.9	840.6	
10	-0.878	-1.048	476.3	464.9	466.6	420.5	95.7	198.1	11.6	25.2	0.4198	0.4630	893.3	892.2	0.8129	0.7036	924.1	811.6	

SL	INCS	INCH	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-11.14	-4.18	17.01	28.40	36.53	49.57	0.0482	0.1031	0.0245	1.1494	88.03	87.78	40.85	12.45	-406.1	-145.7	1.3904
2	-12.56	-6.30	10.14	20.42	44.51	52.55	0.1200	0.1123	0.0278	1.1268	81.63	81.92	38.84	18.42	-455.5	-225.0	1.4208
3	-10.59	-4.52	8.47	16.64	44.83	52.24	0.1322	0.0871	0.0169	1.1222	86.88	86.46	41.62	24.98	-506.4	-306.5	1.4084
4	-8.84	-3.36	6.32	13.79	43.99	50.16	0.1503	0.0617	0.0157	1.1136	86.14	85.92	44.67	30.88	-553.2	-373.4	1.3834
5	-5.05	-1.18	3.59	8.74	41.56	44.76	0.1737	0.0368	0.0237	1.0877	73.82	73.50	50.98	42.23	-652.3	-502.6	1.3280
6	-3.85	-0.54	4.93	5.51	40.98	43.10	0.1382	0.0596	0.0143	1.0699	77.80	77.58	52.78	47.27	-686.3	-575.9	1.3030
7	-2.25	0.13	4.73	4.60	40.25	42.38	0.1215	0.0468	0.0111	1.0650	79.92	79.71	54.69	50.09	-722.8	-625.4	1.2939
8	-2.24	-0.02	2.84	4.5E	39.98	42.25	0.1184	0.0554	0.0133	1.0638	79.97	79.76	54.17	51.59	-757.9	-659.3	1.2931
9	-1.94	0.28	2.83	3.74	39.28	40.13	0.1304	0.0888	0.0213	1.0558	63.52	63.24	57.22	53.48	-775.0	-675.0	1.2813
10	-0.29	1.54	7.20	0.88	36.54	33.24	0.1679	0.1736	0.0374	1.0314	32.69	32.40	59.68	58.79	-797.6	-694.1	1.2649

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC	%	%	ROTOR	ROTOR
%	%	%	%	%	%	%	%	%
1.104E	1.3340	81.93	82.65	33.16	1.0319	1.0088	77.02	77.30

STATOR 2

RUN N0411, SPEED CODE 76, POINT NO 1																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	7.049	8.148	648.6	654.3	555.2	606.3	372.5	5.9	33.7	0.5	0.5812	0.6070	1.3193	1.3336	1.0910	1.0910	1.0462		
2	5.255	5.786	703.2	744.2	622.7	746.1	326.7	-7.7	27.6	-0.6	0.6158	0.6566	1.3894	1.4254	1.1021	1.0426	1.0426		
3	3.994	4.215	693.0	713.3	633.7	713.2	280.5	-7.7	23.8	-0.6	0.6090	0.6282	1.3669	1.4159	1.0895	1.0386	1.0386		
4	3.067	3.067	667.5	671.6	614.1	671.6	252.1	-5.3	22.2	-0.5	0.5871	0.5910	1.3328	1.4084	1.0730	1.0362	1.0362		
5	1.869	1.663	600.0	589.2	561.0	589.2	212.9	4.1	20.8	0.4	0.5264	0.5164	1.2680	1.4002	1.0386	1.0329	1.0329		
6	1.516	1.304	567.4	577.4	540.4	577.4	173.0	2.8	17.8	0.3	0.4982	0.5073	1.2619	1.4028	1.0361	1.0252	1.0252		
7	1.312	1.106	554.2	544.7	531.3	544.7	157.6	0.8	16.5	0.1	0.4864	0.4777	1.2388	1.4006	1.0204	1.0228	1.0228		
8	1.269	1.094	556.7	542.2	509.9	542.1	167.2	11.6	17.5	1.2	0.4882	0.4749	1.2394	1.4028	1.0193	1.0235	1.0235		
9	1.116	1.039	542.1	533.5	509.8	532.7	164.3	27.6	19.9	3.0	0.4739	0.4661	1.2357	1.4067	1.0170	1.0247	1.0247		
10	0.616	0.637	476.7	489.1	433.7	487.5	197.9	39.1	24.5	4.6	0.4136	0.4247	1.2079	1.4024	1.0087	1.0273	1.0273		

SL	INCH	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-17.18	8.99	33.19	44.22	51.87	0.0720	0.2497	0.0526	0.9490	61.67	63.14	54.52	55.09
2	-16.20	7.46	28.19	30.05	57.28	0.0452	0.0968	0.0218	0.9781	78.64	79.61	66.13	66.60
3	-18.22	7.67	24.45	51.11	55.24	0.0685	0.1306	0.0711	0.9712	80.58	81.42	64.11	64.54
4	-19.49	8.09	22.63	49.91	52.15	0.0900	0.1741	0.0440	0.9640	78.77	79.62	58.07	58.51
5	-20.64	9.47	20.38	45.22	45.60	0.1193	0.2594	0.0768	0.9552	70.13	71.11	33.06	33.43
6	-23.62	9.57	17.49	43.65	44.97	0.0741	0.2025	0.0409	0.9684	74.05	74.89	40.36	40.65
7	-24.89	9.44	16.44	42.91	42.32	0.1054	0.2806	0.0879	0.9581	69.68	70.59	25.41	25.63
8	-24.75	11.37	16.27	42.78	42.10	0.1173	0.2790	0.0922	0.9581	69.19	69.14	23.23	23.44
9	-24.91	14.23	16.91	40.77	41.27	0.1224	0.2628	0.0901	0.9616	64.63	65.67	19.74	19.93
10	-23.89	17.31	19.94	34.14	37.38	0.1008	0.2085	0.0740	0.9758	54.16	55.37	8.50	8.61

MCRR	MCOR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	%	%
RPM	LBW/SEC	%	%	%	%	%	%	%	%
6351	170.70	1.104E	1.2850	70.91	71.92	1.0319	0.9633	42.92	42.92

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPISI-1	EPISI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.481	5.281	409.2	653.8	409.2	412.3	0.0	507.4	0.0	50.8	0.3714	0.5886	328.2	359.0	0.4762	0.3945	524.5	438.2
2	10.150	7.337	412.2	632.8	412.2	448.8	0.0	446.0	0.0	44.7	0.3773	0.5490	367.5	393.4	0.5214	0.4063	552.2	451.9
3	8.272	5.832	415.8	587.4	415.8	446.8	0.0	381.3	0.0	40.4	0.3776	0.5268	411.3	431.4	0.5711	0.4032	584.8	449.4
4	6.587	4.629	417.9	548.0	417.9	439.7	0.0	327.1	0.0	36.6	0.3796	0.4906	451.4	467.5	0.5589	0.4132	615.3	461.6
5	3.995	2.485	419.0	481.9	419.0	410.1	0.0	253.0	0.0	31.7	0.3806	0.4390	542.5	550.5	0.6226	0.4521	685.4	504.6
6	2.580	1.947	418.8	474.1	418.8	411.2	0.0	236.0	0.0	29.9	0.3804	0.4228	586.3	591.8	0.6545	0.4848	720.5	543.7
7	1.947	1.483	418.8	449.0	418.8	408.7	0.0	230.0	0.0	29.4	0.3804	0.4179	614.3	617.5	0.6753	0.5418	743.4	563.2
8	1.360	1.008	418.7	443.5	418.7	406.7	0.0	222.4	0.0	28.7	0.3803	0.4127	641.8	644.1	0.6961	0.5217	765.3	585.8
9	0.751	0.536	418.1	459.4	418.1	406.1	0.0	215.1	0.0	27.9	0.3798	0.4091	671.6	671.6	0.7186	0.5438	791.1	611.0
10	0.106	0.005	416.9	455.0	416.9	402.4	0.0	212.5	0.0	27.8	0.3786	0.4045	705.3	705.3	0.7461	0.5656	819.3	636.2
11	-0.139	-0.152	415.6	430.8	415.6	373.2	0.0	215.3	0.0	30.0	0.3774	0.3819	733.8	733.8	0.7658	0.5660	843.3	658.4

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-M	LOSS-P	PO2/	REFF-P	REFF-A	M-1	M-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	0.05	5.60	11.11	58.50	29.23	29.49	0.4012	0.2865	0.0634	1.1703	79.11	78.63	38.79	-19.71	-328.2	148.4	1.1703
2	0.92	4.32	11.41	48.46	29.42	33.06	0.3934	0.1114	0.0282	1.1904	90.93	90.70	41.79	-6.66	-767.5	52.7	1.1904
3	1.55	6.03	12.05	38.36	29.64	33.57	0.4149	0.0640	0.0178	1.1840	93.83	93.68	44.75	6.39	-411.3	-50.2	1.1840
4	1.83	6.55	12.11	29.59	29.76	33.44	0.4096	0.0389	0.0110	1.1738	95.60	95.50	47.26	17.67	-451.6	-140.4	1.1738
5	1.40	5.96	8.12	16.39	29.83	31.85	0.3874	0.0640	0.0120	1.1536	97.36	97.22	52.33	35.94	-542.5	-297.5	1.1536
6	1.56	5.55	5.60	13.61	29.82	31.85	0.3838	0.0350	0.0094	1.1557	94.27	94.16	54.47	40.86	-586.3	-355.7	1.1557
7	2.53	5.37	4.78	12.25	29.82	31.71	0.3572	0.0416	0.0111	1.1540	92.94	92.79	55.72	43.47	-614.3	-387.5	1.1540
8	3.15	5.45	4.44	10.84	29.81	31.60	0.3467	0.0448	0.0118	1.1558	92.05	91.89	56.88	46.04	-641.8	-421.7	1.1558
9	3.41	5.65	4.13	9.74	29.78	31.60	0.3342	0.0463	0.0121	1.1561	91.43	91.24	58.10	48.34	-671.6	-456.5	1.1561
10	3.48	5.90	4.44	8.64	29.70	31.30	0.3293	0.0635	0.0163	1.1556	87.96	87.70	59.42	50.77	-795.3	-492.4	1.1556
11	3.58	5.80	8.02	6.22	29.62	28.90	0.3495	0.1186	0.0289	1.1434	77.45	77.01	60.48	54.24	-733.8	-518.7	1.1434

TOT/TOT	PO/PO	EFF-AD	EFF-P	MCI/A1	TOT/TOT	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBP/SEC	%	%	ROTOR	ROTOR
1.0487	1.1616	89.84	90.06	28.72	1.0487	1.1616	89.84	90.06

STATOR 1

SL	EPISI-1	EPISI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	TO/TO	TO/TO	TO/TO
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TOT	TOT
1	16.874	7.433	600.2	447.1	361.0	440.7	479.5	75.3	52.9	9.6	0.5374	0.3955	1.1449	1.0585	1.1440	1.0585	
2	6.993	4.916	602.8	485.1	426.3	479.9	426.2	70.9	44.9	8.3	0.5404	0.4305	1.1762	1.0563	1.1762	1.0563	
3	4.262	3.202	574.6	468.2	443.5	464.6	365.3	58.0	39.4	7.1	0.5146	0.4157	1.1715	1.0525	1.1715	1.0525	
4	2.880	2.402	544.7	451.5	444.1	448.0	315.4	56.1	35.4	7.1	0.4875	0.4012	1.1631	1.0488	1.1631	1.0488	
5	1.440	1.506	489.3	425.7	421.9	422.7	247.8	50.7	30.4	6.8	0.4368	0.3783	1.1484	1.0447	1.1484	1.0447	
6	1.085	1.221	483.7	425.1	424.2	422.2	232.4	49.9	28.7	6.7	0.4316	0.3777	1.1478	1.0449	1.1478	1.0449	
7	0.901	1.048	479.5	424.2	422.3	421.1	227.1	51.8	28.3	7.0	0.4276	0.3768	1.1472	1.0457	1.1472	1.0457	
8	0.733	0.877	474.8	421.8	420.7	418.5	220.2	52.7	27.6	7.2	0.4232	0.3745	1.1460	1.0460	1.1460	1.0460	
9	0.569	0.705	471.2	420.3	420.1	416.9	213.4	53.0	26.9	7.2	0.4198	0.3731	1.1454	1.0465	1.1454	1.0465	
10	0.372	0.493	466.5	418.4	415.7	413.5	211.7	64.1	27.0	8.8	0.4151	0.3710	1.1446	1.0482	1.1446	1.0482	
11	0.152	0.229	441.9	393.3	386.1	386.8	215.0	71.0	29.1	10.4	0.3920	0.3478	1.1320	1.0508	1.1320	1.0508	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-M	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET
1	0.25	4.97	14.95	43.37	26.52	33.73	0.3926	0.1269	0.0264	0.9774	67.05	67.66	67.05	67.54		
2	-2.39	2.72	10.80	36.50	31.86	37.31	0.3250	0.0677	0.0151	0.9878	84.45	84.80	84.45	84.80		
3	-5.41	0.06	8.46	32.34	33.52	36.32	0.3102	0.0608	0.0146	0.9900	88.12	88.39	88.12	88.39		
4	-8.11	-2.33	7.93	28.23	33.83	35.10	0.2895	0.0556	0.0142	0.9917	90.57	90.76	90.57	90.76		
5	-11.80	-5.36	6.98	23.58	32.44	33.11	0.2470	0.0378	0.0110	0.9954	92.26	92.45	92.26	92.45		
6	-13.42	-6.65	6.53	21.98	32.74	33.05	0.2377	0.0576	0.0178	0.9931	89.48	89.48	89.48	89.48		
7	-13.93	-6.94	6.66	21.26	32.64	32.94	0.2320	0.0643	0.0205	0.9924	87.67	87.90	87.67	87.90		
8	-14.83	-7.64	6.74	20.44	32.56	32.72	0.2283	0.0733	0.0242	0.9915	86.33	86.59	86.33	86.59		
9	-16.15	-8.75	6.80	19.69	32.55	32.58	0.2245	0.0814	0.0277	0.9907	85.20	85.47	85.20	85.47		
10	-18.11	-10.51	6.82	18.17	32.20	32.26	0.2146	0.0821	0.0289	0.9908	81.73	82.06	81.73	82.06		
11	-19.15	-11.42	12.68	18.71	29.78	30.02	0.2290	0.0959	0.0346	0.9934	71.06	71.57	71.06	71.57		

MCHP	MCHP	TO/TO	PO/PO	EFF-AD	EFF-P	TOT/TOT	PO2/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
RPM	LBP/SEC							
5257	142.40	1.0487	1.1509	84.21	84.51	1.0487	0.9908	84.21

ROTOR 2

RUN NJ411, SPEED CODE 63, POINT NO. 1																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V-1	V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	0.920	6.132	411.4	631.4	404.9	554.9	73.1	301.3	10.2	28.2	0.3628	0.5581	406.3	434.7	0.4635	0.5045	525.6	570.7	
2	0.813	4.760	403.6	633.1	479.1	573.2	66.0	268.9	7.8	25.0	0.4293	0.5611	443.8	462.9	0.5617	0.5303	611.2	635.1	
3	3.275	3.611	481.2	604.0	477.9	556.9	56.1	239.8	6.7	22.7	0.4279	0.5354	476.8	490.9	0.5662	0.5437	676.7	673.3	
4	3.755	2.418	471.2	569.3	468.1	528.5	54.0	211.6	6.6	21.8	0.4195	0.5043	512.4	521.6	0.5832	0.5428	652.2	612.7	
5	0.761	-0.033	448.4	503.4	445.6	474.5	49.7	168.2	6.4	19.5	0.3981	0.4450	592.9	595.4	0.6256	0.5645	702.4	678.5	
6	0.020	-0.565	444.4	471.2	441.7	452.4	50.7	131.3	6.6	16.2	0.3955	0.4167	621.4	622.1	0.6420	0.5904	721.6	667.6	
7	-0.402	-0.913	438.5	458.2	435.3	442.5	52.5	119.1	6.9	15.1	0.3898	0.4052	649.1	649.1	0.6564	0.6105	738.4	691.5	
8	-0.886	-1.241	431.7	452.9	428.2	436.2	55.4	121.9	7.4	15.6	0.3835	0.4000	687.2	684.7	0.6776	0.6288	745.2	712.0	
9	-1.032	-1.340	425.8	439.9	418.8	420.0	65.0	130.8	8.8	17.3	0.3759	0.3878	713.3	711.7	0.6865	0.6319	771.8	716.3	
10	-0.713	-0.858	367.2	387.7	390.9	362.3	70.5	138.1	10.2	20.9	0.3513	0.3401	739.5	738.6	0.6852	0.6152	776.8	741.3	

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VM-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	POI	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-12.54	-5.58	17.92	26.10	31.36	42.11	0.0221	0.0837	0.0190	1.0905	88.97	88.82	39.45	13.36	-335.1	-133.4	1.2589
2	-13.22	-6.96	10.30	19.59	37.31	44.44	0.0998	0.0756	0.0187	1.0903	86.53	86.37	38.18	18.58	-377.8	-194.0	1.2825
3	-10.89	-5.22	8.18	16.62	37.15	43.68	0.1172	0.0371	0.0094	1.0892	92.15	92.06	41.31	24.65	-420.7	-257.0	1.2730
4	-9.14	-4.06	5.79	14.63	36.36	41.73	0.1385	0.0381	0.0097	1.0828	90.97	90.87	44.38	30.35	-458.4	-310.3	1.2559
5	-5.39	-1.52	3.35	8.64	34.62	37.59	0.1519	0.0654	0.0165	1.0614	79.40	79.20	50.63	41.99	-543.2	-427.3	1.2183
6	-4.37	-1.06	4.97	4.94	34.33	35.89	0.1167	0.0387	0.0093	1.0446	82.55	82.42	52.26	47.32	-570.6	-490.8	1.1986
7	-3.05	-0.67	4.79	3.74	33.85	35.06	0.1008	0.0313	0.0076	1.0387	82.46	82.56	53.89	50.15	-596.7	-530.1	1.1904
8	-2.55	-0.33	3.44	3.45	33.32	34.45	0.1009	0.0490	0.0116	1.0356	72.76	72.67	55.87	52.22	-631.6	-562.8	1.1860
9	-2.02	0.20	3.49	3.00	32.56	33.03	0.1067	0.0675	0.0159	1.0314	63.17	63.01	57.14	54.14	-648.3	-580.5	1.1781
10	-0.27	1.94	7.31	0.81	30.26	28.20	0.1312	0.1291	0.0278	1.0175	32.73	32.59	59.70	58.90	-669.0	-600.5	1.1502

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AI
INLET	INLET	INLET	INLET	LBM/SEC
		%	%	SOFT
1.0703	1.2199	83.12	83.59	29.14

TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	ROTOR	ROTOR
		%	%
1.0204	1.0599	81.26	81.43

STATOR 2

RUN NJ411, SPEED CODE 63, POINT NO. 1																			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V-1	V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	0.963	0.034	561.6	592.8	477.3	592.8	295.8	2.5	31.6	0.2	0.4932	0.5221	1.2209	1.0908	1.0653	1.0706	1.0706	1.0706	
2	5.180	5.658	557.4	626.5	536.4	626.5	263.0	-6.4	26.0	-0.6	0.5276	0.5550	1.2601	1.0856	1.0715	1.0289	1.0289	1.0289	
3	3.961	4.115	508.6	599.6	542.2	599.5	229.0	-11.5	22.9	-1.1	0.5210	0.5314	1.2456	1.0793	1.0661	1.0268	1.0268	1.0268	
4	3.015	2.947	567.0	549.2	527.5	569.1	207.8	-10.7	21.5	-1.1	0.5022	0.5044	1.2267	1.0740	1.0580	1.0252	1.0252	1.0252	
5	1.758	1.527	508.7	496.5	481.3	496.5	164.8	1.3	18.9	0.1	0.4500	0.4387	1.1805	1.0671	1.0284	1.0215	1.0215	1.0215	
6	1.942	1.220	477.5	462.7	459.8	482.7	128.7	1.0	15.6	0.1	0.4225	0.4273	1.1735	1.0614	1.0227	1.0152	1.0152	1.0152	
7	1.252	1.051	464.1	454.5	448.8	454.5	118.3	-0.5	14.8	-0.1	0.4105	0.4017	1.1574	1.0598	1.0099	1.0132	1.0132	1.0132	
8	1.148	1.004	458.1	448.6	441.7	448.6	121.4	3.8	15.4	0.5	0.4046	0.3961	1.1555	1.0613	1.0069	1.0138	1.0138	1.0138	
9	0.978	0.904	445.3	440.3	425.7	439.9	130.6	19.2	17.1	2.5	0.3927	0.3882	1.1523	1.0634	1.0083	1.0141	1.0141	1.0141	
10	0.526	0.532	395.0	405.9	370.1	404.8	137.9	30.3	20.4	4.7	0.3467	0.3565	1.1352	1.0668	1.0039	1.0152	1.0152	1.0152	

SL	INCS	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	POI	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-19.25	8.75	31.37	37.41	44.43	0.0531	0.1974	0.0416	0.9698	64.62	65.61	59.57	59.94
2	-17.76	7.46	26.63	42.30	47.89	0.0519	0.1001	0.0225	0.9827	79.88	80.53	68.93	69.23
3	-19.19	7.19	23.96	42.83	46.12	0.0772	0.1246	0.0297	0.9790	81.72	82.29	68.86	69.15
4	-20.18	7.46	22.56	41.70	43.90	0.0920	0.1445	0.0365	0.9773	81.21	81.75	64.20	64.48
5	-22.52	9.21	18.76	38.02	38.22	0.1169	0.2329	0.0671	0.9697	72.44	73.08	62.02	62.74
6	-25.73	9.41	15.53	36.37	37.31	0.0708	0.1807	0.0544	0.9791	76.25	76.78	42.02	42.74
7	-26.65	9.49	14.83	35.48	35.06	0.1011	0.2524	0.0791	0.9723	71.39	71.98	21.42	21.53
8	-26.85	10.62	14.91	34.82	34.57	0.1057	0.2416	0.0799	0.9742	68.79	69.42	18.35	18.44
9	-27.73	13.76	14.56	33.40	33.84	0.1030	0.2241	0.0768	0.9769	65.41	66.09	16.83	16.89
10	-27.98	17.00	16.16	28.75	30.94	0.0755	0.1699	0.0603	0.9859	55.29	56.08	7.34	7.39

NCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET
RPP	LBM/SEC			%	%
5257.	142.40	1.0703	1.1908	72.78	73.45

TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	STAGE	STAGE
		%	%
1.0206	0.9762	47.43	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

RUN NO 411, SPEED CODE 63, POINT NO. 2																		
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SFC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	11.303	9.283	307.0	631.3	307.0	301.1	0.0	503.3	0.0	52.7	0.3500	0.5471	320.1	350.0	0.4599	0.3661	507.3	407.6
2	9.458	7.375	300.9	606.9	300.9	412.2	0.0	445.5	0.0	47.1	0.3526	0.5443	307.3	393.2	0.4050	0.3720	535.0	415.4
3	8.092	5.908	391.2	565.2	391.2	414.5	0.0	384.2	0.0	42.7	0.3547	0.5050	411.1	431.3	0.5166	0.3733	567.5	417.2
4	6.401	4.724	392.2	529.1	392.2	409.2	0.0	335.3	0.0	39.3	0.3557	0.4726	451.5	467.3	0.5423	0.3841	596.0	430.0
5	3.863	2.812	392.2	466.0	392.2	381.2	0.0	268.0	0.0	35.1	0.3557	0.4147	542.3	550.3	0.6069	0.4222	669.2	474.3
6	2.915	2.082	392.1	461.4	392.1	384.9	0.0	254.5	0.0	33.5	0.3555	0.4104	506.0	591.6	0.6394	0.4550	705.1	511.6
7	2.274	1.559	392.1	459.1	392.1	384.9	0.0	250.1	0.0	33.0	0.3556	0.4079	614.0	617.2	0.6606	0.4727	720.4	531.9
8	1.653	1.072	392.1	455.5	392.1	385.2	0.0	243.1	0.0	32.3	0.3556	0.4045	641.5	643.8	0.6818	0.4936	751.9	555.8
9	0.923	0.545	391.6	451.0	391.6	383.8	0.0	237.0	0.0	31.7	0.3551	0.4003	671.3	671.3	0.7046	0.5144	777.2	579.6
10	0.194	-0.060	390.2	444.5	390.2	375.7	0.0	237.6	0.0	32.3	0.3530	0.3930	705.0	705.0	0.7304	0.5313	805.8	599.7
11	-0.092	-0.149	388.9	423.7	388.9	348.3	0.0	241.2	0.0	34.7	0.3526	0.3743	733.5	733.2	0.7527	0.5325	830.2	602.8

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.60	7.15	10.16	61.00	27.85	27.69	0.4393	0.2672	0.0508	1.1746	81.61	81.20	40.34	-20.66	-328.1	144.4	1.1746
2	2.55	7.95	10.80	55.62	27.57	30.76	0.4414	0.1150	0.0293	1.1905	91.11	90.88	43.45	-7.19	-367.3	52.2	1.1905
3	3.27	8.55	12.12	40.82	28.12	31.54	0.4549	0.0590	0.0164	1.1872	94.62	94.49	46.47	6.46	-411.1	-47.0	1.1872
4	3.62	8.74	12.28	31.21	28.18	31.51	0.4488	0.0355	0.0100	1.1790	96.31	96.21	49.05	17.84	-451.5	-132.0	1.1790
5	3.21	7.77	8.69	17.63	28.18	27.75	0.4279	0.0472	0.0128	1.1635	93.56	93.42	54.16	36.51	-542.3	-282.3	1.1635
6	3.33	7.31	6.03	15.03	28.17	30.19	0.4063	0.0401	0.0100	1.1682	94.14	94.01	54.23	41.20	-586.8	-337.0	1.1682
7	4.24	7.10	4.95	13.80	28.17	30.25	0.3967	0.0455	0.0121	1.1707	93.15	93.00	57.45	43.65	-614.0	-367.1	1.1707
8	4.04	7.14	4.53	12.44	28.17	30.33	0.3843	0.0449	0.0123	1.1722	92.63	92.47	58.57	46.13	-641.5	-400.7	1.1722
9	5.06	7.30	4.33	11.20	28.14	30.26	0.3736	0.0527	0.0137	1.1726	91.40	91.21	59.75	48.34	-671.3	-434.4	1.1726
10	5.30	7.52	4.88	9.83	28.05	29.60	0.3761	0.0819	0.0208	1.1716	86.43	86.13	61.04	51.21	-705.0	-467.4	1.1716
11	5.17	7.39	8.69	7.36	27.97	27.33	0.3953	0.1341	0.0323	1.1620	77.73	77.26	62.07	54.71	-733.5	-492.0	1.1620

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC	%	%	%	%
1.0518	1.1727	90.05	90.26	27.16	1.0518	1.1727	90.05	90.26

STATOR 1

RUN NO 411, SPEED CODE 63, POINT NO. 2																
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SFC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	INLET	STAGE
1	11.072	7.726	578.7	350.1	329.7	391.8	475.6	70.5	55.2	10.1	0.5172	0.3509	1.1445	1.0580	1.1445	1.0580
2	7.224	5.287	575.6	438.7	387.4	433.3	425.7	64.5	47.7	8.9	0.5140	0.3800	1.1762	1.0563	1.1762	1.0563
3	4.572	3.559	550.2	430.0	408.5	424.2	368.0	57.2	42.0	7.6	0.4917	0.3807	1.1765	1.0531	1.1765	1.0531
4	7.190	2.750	523.5	415.6	411.3	412.1	323.9	56.0	38.2	7.5	0.4674	0.3681	1.1702	1.0502	1.1702	1.0502
5	1.715	1.806	471.3	393.1	391.4	389.6	262.5	52.9	33.8	7.7	0.4196	0.3482	1.1588	1.0474	1.1588	1.0474
6	1.359	1.499	449.6	396.4	357.2	392.8	250.5	52.7	32.2	7.6	0.4179	0.3510	1.1604	1.0484	1.1604	1.0484
7	1.175	1.314	448.5	398.9	398.7	395.3	266.8	52.9	31.8	7.6	0.4170	0.3530	1.1617	1.0496	1.1617	1.0496
8	0.998	1.122	444.7	399.2	399.9	395.1	265.7	53.0	31.0	7.6	0.4140	0.3532	1.1622	1.0503	1.1622	1.0503
9	0.803	0.910	443.1	399.6	395.0	396.0	235.1	53.5	30.5	7.7	0.4113	0.3534	1.1627	1.0511	1.1627	1.0511
10	0.525	0.612	457.3	398.8	391.3	393.2	236.5	66.5	31.1	9.6	0.4055	0.3523	1.1626	1.0530	1.1626	1.0530
11	0.210	0.261	436.4	374.4	363.9	368.1	245.8	68.2	33.5	10.5	0.3850	0.3297	1.1508	1.0569	1.1508	1.0569

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	2.51	7.22	15.45	45.12	24.57	30.55	0.4556	0.1434	0.0298	0.9761	68.72	69.33	68.72	69.33
2	0.33	5.45	11.38	38.72	29.33	34.26	0.3750	0.0718	0.0160	0.9881	84.41	84.75	84.41	84.75
3	-2.82	2.65	8.99	34.41	31.29	33.90	0.3525	0.0582	0.0140	0.9912	89.59	89.82	89.59	89.82
4	-5.26	0.51	8.26	30.75	31.74	32.84	0.3363	0.0570	0.0146	0.9921	91.56	91.56	91.56	91.56
5	-8.39	-1.94	7.87	26.11	30.49	31.04	0.2955	0.0359	0.0104	0.9959	90.86	91.05	90.86	91.05
6	-9.91	-3.14	7.43	24.59	31.07	31.29	0.2864	0.0594	0.0183	0.9933	89.83	90.04	89.83	90.04
7	-10.44	-3.45	7.27	24.14	31.22	31.46	0.2818	0.0685	0.0218	0.9923	88.29	88.53	88.29	88.53
8	-11.40	-4.22	7.20	23.41	31.36	31.48	0.2777	0.0767	0.0252	0.9914	87.34	87.34	87.34	87.34
9	-12.57	-5.18	7.25	22.81	31.32	31.49	0.2714	0.0772	0.0263	0.9915	86.15	86.15	86.15	86.15
10	-13.94	-6.35	6.60	21.95	30.69	31.21	0.2600	0.0720	0.0253	0.9923	81.85	82.23	81.85	82.23
11	-14.76	-7.64	12.76	23.01	28.43	29.05	0.2869	0.0975	0.0391	0.9905	72.10	72.65	72.10	72.65

NCORR	WCDRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
5255	134.70	1.0518	1.1624	84.94	85.26	1.0518	0.9912	84.94	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N°-1	N°-2	V°-1	V°-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	8.803	6.038	363.7	581.1	357.2	487.1	68.4	317.0	10.8	32.7	0.3199	0.5107	408.1	434.3	0.4336	0.4403	492.9	501.1
2	6.460	4.702	439.0	579.4	434.3	501.8	64.4	289.6	8.4	29.8	0.3885	0.5100	443.7	482.7	0.5102	0.4673	576.6	530.8
3	5.174	3.642	440.9	557.2	437.4	493.9	54.8	257.9	7.1	27.5	0.3907	0.4907	476.7	490.7	0.5386	0.4808	607.7	546.0
4	3.738	2.536	432.1	527.9	428.9	471.6	52.6	237.2	7.0	26.7	0.3833	0.4644	512.2	521.4	0.5577	0.4866	679.3	591.6
5	C.956	0.298	414.8	469.9	411.5	425.5	52.3	199.3	7.2	25.1	0.3478	0.4124	592.7	595.2	0.6024	0.5104	679.3	591.6
6	C.310	-0.145	415.4	444.4	412.1	411.7	52.5	167.4	7.3	22.1	0.3482	0.3983	621.1	621.8	0.6224	0.5385	702.3	613.2
7	-0.098	-0.427	414.2	436.0	410.8	406.4	52.7	158.0	7.3	21.3	0.3468	0.3827	648.9	648.9	0.6413	0.5593	724.0	637.2
8	-C.400	-0.616	411.8	432.3	408.0	401.7	55.7	159.6	7.8	21.7	0.3444	0.3789	686.9	684.4	0.6651	0.5792	751.4	640.9
9	-0.455	-0.628	406.6	427.2	401.4	392.3	66.7	149.1	9.4	23.3	0.3595	0.3737	713.1	711.5	0.6723	0.5854	740.9	649.4
10	-G.290	-0.381	382.2	393.7	376.2	356.7	67.7	166.6	10.2	25.0	0.3368	0.3432	739.2	738.3	0.6781	0.5875	749.7	673.9

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B°-1	B°-2	VO°-1	VO°-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.41	-1.45	17.96	29.98	28.14	38.57	0.1190	0.0103	0.0024	1.1199	98.83	98.80	43.38	13.40	-339.7	-117.5	1.2855
2	-10.36	-4.10	10.63	22.12	34.42	40.44	0.1870	0.0601	0.0149	1.1042	91.26	91.13	41.04	18.92	-379.3	-173.1	1.2032
3	-8.30	-2.62	8.64	18.76	34.65	40.23	0.1978	0.0253	0.0064	1.1063	95.70	95.64	43.91	25.15	-421.8	-232.8	1.2995
4	-6.55	-1.47	6.47	15.93	33.55	38.67	0.2135	0.0214	0.0054	1.1028	96.00	95.94	44.96	31.03	-459.7	-284.2	1.2877
5	-3.32	0.55	4.29	9.78	32.58	35.04	0.2205	0.0443	0.0110	1.0863	89.42	89.29	52.71	42.93	-540.4	-396.0	1.2598
6	-2.56	0.75	5.48	6.75	32.63	33.95	0.1868	0.0228	0.0054	1.0728	93.10	93.01	54.07	47.82	-568.6	-454.4	1.2460
7	-1.51	0.88	5.02	5.05	32.53	33.48	0.1750	0.0249	0.0059	1.0684	91.59	91.51	55.43	50.38	-596.2	-490.8	1.2416
8	-1.39	0.92	3.80	4.55	32.31	33.03	0.1741	0.0432	0.0102	1.0662	85.17	85.04	57.11	52.56	-631.2	-524.8	1.2397
9	-1.00	1.22	3.47	4.04	31.72	32.15	0.1741	0.0508	0.0120	1.0653	82.53	82.36	58.16	54.12	-644.4	-542.4	1.2371
10	0.77	3.00	6.45	2.70	29.59	29.05	0.1777	0.0662	0.0146	1.0607	76.87	76.66	60.74	58.04	-671.5	-571.7	1.2195

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBH/SEC	%	%	ROTOR	ROTOR
1.0792	1.7417	86.77	87.20	27.34	1.0261	1.0854	90.88	91.00

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	T01
1	6.96	8.023	524.9	506.5	422.7	506.5	311.2	5.8	36.2	0.7	0.4591	0.4424	1.2629	1.0932	1.1002	1.0333
2	5.134	5.579	550.7	539.2	472.2	539.2	283.3	-2.1	30.9	-0.2	0.4836	0.4730	1.2948	1.0891	1.0991	1.0320
3	3.883	3.982	545.5	521.3	483.5	521.3	252.6	-7.6	27.5	-0.8	0.4799	0.4578	1.2877	1.0842	1.0966	1.0306
4	2.891	2.791	527.3	497.3	473.1	497.2	232.9	-10.3	26.2	-1.2	0.4641	0.4367	1.2746	1.0803	1.0919	1.0295
5	1.454	1.208	475.8	441.5	433.5	441.5	196.2	-8.1	24.3	-1.0	0.4180	0.3870	1.2419	1.0758	1.0708	1.0266
6	1.113	C.889	449.9	426.5	418.9	426.4	164.1	-9.8	21.4	-1.3	0.3953	0.3742	1.2337	1.0718	1.0622	1.0215
7	0.942	C.750	441.0	410.4	412.1	410.3	157.0	-11.0	20.9	-1.5	0.3872	0.3596	1.2248	1.0721	1.0540	1.0209
8	0.811	C.687	436.2	406.2	406.0	406.2	159.5	-8.3	21.4	-0.9	0.3824	0.3554	1.2228	1.0745	1.0546	1.0218
9	0.625	0.561	430.4	404.5	396.0	404.5	168.6	7.0	23.1	1.0	0.3766	0.3534	1.2224	1.0775	1.0529	1.0221
10	0.288	0.272	397.7	377.1	361.2	376.9	166.4	12.6	24.7	1.9	0.3468	0.3284	1.2087	1.0803	1.0512	1.0221

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-14.69	9.16	35.52	34.28	40.65	0.1559	0.1308	0.0276	0.9824	74.06	74.91	83.12	83.36
2	-12.93	7.82	31.10	38.53	43.94	0.1365	0.0434	0.0098	0.9936	86.06	86.56	85.42	85.62
3	-14.51	7.45	28.38	39.58	42.72	0.1566	0.0595	0.0142	0.9913	89.02	89.40	87.30	87.47
4	-15.47	7.35	27.38	38.80	40.85	0.1719	0.0713	0.0180	0.9903	89.44	89.79	86.20	86.36
5	-17.08	8.02	25.39	35.61	36.20	0.1947	0.1189	0.0343	0.9865	84.32	84.79	74.11	74.36
6	-15.98	7.98	22.71	34.47	35.03	0.1679	0.0915	0.0275	0.9907	86.20	86.61	80.92	81.10
7	-20.56	8.01	22.40	33.90	33.63	0.1888	0.1372	0.0430	0.9865	82.78	83.27	72.46	72.66
8	-20.79	9.26	22.34	33.33	33.21	0.1942	0.1419	0.0469	0.9864	79.47	80.06	66.62	66.87
9	-21.72	12.25	22.08	32.40	32.99	0.1911	0.1287	0.0442	0.9879	76.29	76.96	66.46	66.72
10	-23.69	14.65	22.81	29.38	30.57	0.1910	0.1120	0.0398	0.9910	69.35	70.16	64.89	65.16

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
5:55	134.70	1.0792	1.7473	82.35	82.90	1.0261	0.9886	78.04	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

															RUN NO411, SPEED CODE 63, POINT NO 4									
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2						
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC						
1	11.454	9.309	347.4	578.2	347.4	327.9	0.0	476.3	0.0	55.3	0.3163	0.5175	329.3	360.2	0.4330	0.3113	478.8	347.9						
2	10.211	7.341	348.5	567.4	348.5	362.5	0.0	436.4	0.0	50.2	0.3152	0.5073	368.7	394.7	0.4588	0.3263	507.3	364.9						
3	8.304	5.685	349.6	533.5	349.6	374.2	0.0	380.2	0.0	45.4	0.3162	0.4761	412.7	432.9	0.4892	0.3373	540.8	377.9						
4	6.871	4.382	349.8	502.2	349.8	371.1	0.0	338.3	0.0	42.3	0.3164	0.4474	453.2	464.1	0.5178	0.3506	572.5	393.5						
5	3.833	2.252	348.1	444.4	348.1	346.2	0.0	278.6	0.0	38.8	0.3168	0.3945	544.3	552.4	0.5863	0.3918	646.1	441.3						
6	2.718	1.530	346.7	431.6	346.7	339.0	0.0	267.0	0.0	38.2	0.3135	0.3825	588.3	593.8	0.6175	0.4174	682.8	470.9						
7	2.068	1.135	346.0	430.1	346.0	337.4	0.0	266.8	0.0	38.3	0.3129	0.3808	616.3	619.6	0.6392	0.4322	706.8	488.2						
8	1.487	0.721	345.5	430.3	345.5	338.3	0.0	265.9	0.0	38.2	0.3124	0.3804	644.3	646.3	0.6608	0.4503	730.8	509.1						
9	0.843	0.316	344.8	426.7	344.8	333.9	0.0	265.7	0.0	38.5	0.3116	0.3769	673.9	673.9	0.6845	0.4658	757.0	527.3						
10	0.240	-0.049	343.5	422.0	343.5	329.9	0.0	269.3	0.0	39.6	0.3106	0.3720	707.7	707.7	0.7113	0.4810	784.7	545.7						
11	-0.001	-0.109	342.6	412.4	342.6	306.1	0.0	276.4	0.0	42.1	0.3097	0.3625	736.3	736.3	0.7362	0.4854	812.1	552.2						

SL	INCS	TACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-8	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	4.77	10.32	11.42	62.92	25.31	24.30	0.5168	0.2882	0.0639	1.1448	81.35	80.93	43.51	-19.41	-329.3	116.1	1.1648
2	5.83	11.23	11.53	53.24	25.37	27.52	0.5064	0.1223	0.0310	1.0877	91.34	91.13	46.70	-6.54	-368.7	41.7	1.1877
3	6.61	11.89	13.66	41.82	25.44	28.94	0.4988	0.0429	0.0118	1.1898	96.49	96.40	49.81	8.00	-412.7	-52.7	1.1898
4	6.96	12.08	13.80	33.02	25.46	29.03	0.4980	0.0203	0.0057	1.1899	98.08	98.02	52.39	19.37	-453.2	-130.8	1.1899
5	6.49	11.05	10.49	19.11	25.34	27.43	0.4846	0.0409	0.0108	1.1737	94.96	94.84	57.42	38.31	-544.3	-273.8	1.1737
6	6.59	10.57	8.75	15.56	25.25	26.94	0.4917	0.0597	0.0151	1.1735	92.13	91.95	59.49	43.93	-588.3	-326.8	1.1735
7	7.51	10.34	7.58	14.43	25.21	26.84	0.4493	0.0757	0.0143	1.1764	89.84	89.61	60.70	46.27	-616.3	-352.8	1.1764
8	8.05	10.36	6.74	13.44	25.18	26.94	0.4424	0.0862	0.0218	1.1801	88.18	87.89	61.79	48.35	-644.3	-380.4	1.1801
9	8.22	10.44	6.51	12.19	25.13	26.60	0.4408	0.1052	0.0261	1.1815	85.30	84.94	62.91	50.72	-673.9	-408.2	1.1815
10	8.37	10.59	7.13	10.65	25.05	25.86	0.4455	0.1368	0.0330	1.1826	80.71	80.26	64.11	53.46	-707.7	-438.4	1.1826
11	8.15	10.37	10.12	8.71	24.98	24.30	0.4819	0.1787	0.0413	1.1804	74.93	74.33	65.05	56.34	-736.3	-459.6	1.1804

TO/TO	PO/PO	EFF-AD	EFF-P	M*/M1	PO2/PO1	SEFF-A	SEFF-P
INLET	INLET	INLET	INLET	SOFT			
1.0549	1.1797	88.17	88.16	24.40	1.0549	1.1797	88.17

STATOR 1

															RUN NO411, SPEED CODE 63, POINT NO 4									
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2						
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC						
1	11.164	7.991	525.7	324.7	271.5	316.9	450.1	67.3	58.8	11.9	0.4683	0.2948	1.1432	1.1432	1.1432	1.1432	1.1432	1.0591						
2	7.706	5.864	533.5	374.0	333.8	366.4	416.1	73.8	51.3	11.3	0.4755	0.3296	1.1709	1.0553	1.1709	1.0553	1.1709	1.0553						
3	5.333	4.381	515.3	377.2	383.6	371.6	365.2	58.8	45.1	9.0	0.4592	0.3319	1.1763	1.0530	1.1763	1.0530	1.1763	1.0530						
4	4.067	3.647	493.8	377.6	389.9	363.7	327.1	53.7	41.5	8.4	0.4587	0.3246	1.1741	1.0511	1.1741	1.0511	1.1741	1.0511						
5	2.613	2.750	448.1	379.9	355.7	346.1	272.5	51.4	37.5	8.5	0.3980	0.3088	1.1676	1.0493	1.1676	1.0493	1.1676	1.0493						
6	2.194	2.425	438.9	349.6	351.8	345.7	262.4	52.5	36.7	8.6	0.3892	0.3084	1.1682	1.0507	1.1682	1.0507	1.1682	1.0507						
7	1.917	2.136	439.3	354.2	352.1	350.0	262.8	54.0	36.7	8.8	0.3892	0.3122	1.1717	1.0528	1.1717	1.0528	1.1717	1.0528						
8	1.593	1.780	441.6	360.5	354.9	356.0	262.8	57.1	36.5	9.1	0.3909	0.3176	1.1742	1.0549	1.1742	1.0549	1.1742	1.0549						
9	1.193	1.344	439.4	362.9	351.7	358.1	263.5	56.6	36.8	9.3	0.3885	0.3193	1.1758	1.0574	1.1758	1.0574	1.1758	1.0574						
10	0.679	0.780	435.9	361.0	344.0	355.3	267.7	63.4	37.9	10.1	0.3866	0.3170	1.1752	1.0610	1.1752	1.0610	1.1752	1.0610						
11	0.232	0.285	426.6	339.1	325.4	332.9	275.9	64.5	40.3	11.0	0.3753	0.2968	1.1655	1.0654	1.1655	1.0654	1.1655	1.0654						

SL	INCS	TACH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-8	LOSS-P	PO2/	SEFF-A	SEFF-P	EFF-A	EFF-P	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG		
1	6.15	10.87	17.24	46.99	20.59	25.23	0.5331	0.1316	0.0272	0.9816	70.78	71.34	70.78	71.34	70.78	71.34
2	3.93	9.05	17.78	39.92	25.70	29.48	0.4410	0.0922	0.0204	0.9868	83.44	83.80	83.44	83.80	83.44	83.80
3	0.28	5.75	13.34	36.15	28.33	30.06	0.4131	0.0838	0.0201	0.9887	89.75	89.97	89.75	89.97	89.75	89.97
4	-1.97	3.80	9.21	33.09	29.03	29.49	0.3980	0.0814	0.0208	0.9898	91.97	92.14	91.97	92.14	91.97	92.14
5	-4.76	1.89	8.59	29.01	28.15	28.09	0.3640	0.0523	0.0152	0.9946	91.80	91.97	91.80	91.97	91.80	91.97
6	-5.41	1.37	8.43	28.10	27.88	28.04	0.3515	0.0444	0.0137	0.9956	89.82	89.82	89.82	89.82	89.82	89.82
7	-5.46	1.57	8.42	27.97	27.92	28.37	0.3451	0.0448	0.0142	0.9956	87.34	87.62	87.34	87.62	87.34	87.62
8	-5.92	1.77	8.68	27.41	28.15	28.42	0.3376	0.0489	0.0160	0.9951	85.52	85.85	85.52	85.85	85.52	85.85
9	-6.23	1.76	8.85	27.54	27.90	28.95	0.3338	0.0483	0.0164	0.9952	82.55	82.95	82.55	82.95	82.55	82.95
10	-7.19	1.40	10.13	27.77	27.25	28.64	0.3386	0.0641	0.0225	0.9938	77.39	77.90	77.39	77.90	77.39	77.90
11	-7.97	1.24	13.25	29.32	25.72	26.66	0.3867	0.1361	0.0490	0.9874	68.51	69.18	68.51	69.18	68.51	69.18

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			INLET
5275	121.00	1.0549	1.1698	83.59	83.96	1.0549	0.9916	83.59

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	U-3	U-4	U-5	U-6	U-7	U-8	U-9	U-10	U-11	U-12	U-13	U-14	U-15	U-16	U-17	U-18	U-19	U-20		
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC																				
1	0.590	5.876	290.2	535.1	282.8	396.6	65.3	399.3	12.9	41.8	0.2547	0.4676	409.7	436.1	0.3911	0.3533	445.6	404.0																
2	0.489	4.650	374.2	522.4	367.6	405.7	70.3	329.1	10.8	38.9	0.3298	0.4566	445.3	464.4	0.4628	0.3738	525.1	427.7																
3	5.119	3.742	384.0	507.6	380.0	412.1	55.2	296.3	8.2	35.6	0.3391	0.4438	475.5	492.5	0.5023	0.3991	568.9	456.4																
4	7.816	2.777	379.9	488.2	376.4	401.9	51.8	277.1	7.8	34.5	0.3357	0.4267	514.2	523.4	0.5268	0.4119	596.2	471.3																
5	1.346	0.825	366.0	446.0	362.4	367.8	51.3	252.3	8.0	34.4	0.3232	0.3887	594.9	597.5	0.5771	0.4395	653.4	504.4																
6	0.722	0.347	367.5	428.8	363.7	363.0	52.6	228.3	8.2	32.2	0.3243	0.3776	623.5	624.2	0.5974	0.4679	676.9	537.1																
7	0.319	0.050	373.7	421.1	369.5	357.2	55.8	223.1	8.6	32.0	0.3295	0.3662	651.3	651.3	0.6180	0.4850	700.9	557.6																
8	0.107	-0.037	376.7	421.1	372.0	357.2	59.0	223.1	9.0	32.0	0.3316	0.3654	689.5	687.0	0.6445	0.5081	732.1	587.6																
9	0.068	-0.007	373.0	420.4	367.5	353.5	63.5	227.6	9.6	32.6	0.3277	0.3640	715.8	714.2	0.6678	0.5207	768.7	611.6																
10	0.025	0.002	350.8	400.3	344.8	334.7	64.2	219.7	10.6	33.3	0.3072	0.3456	742.0	741.1	0.6661	0.5349	760.5	611.6																

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B-1	B-2	VO-1	VO-2	PO/PO	TO/TO	PO/PO	TO/TO	EFF-AD	EFF-P	EFF-AD	EFF-P	EFF-AD	EFF-P	EFF-AD	EFF-P	EFF-AD	EFF-P	EFF-AD	EFF-P		
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	INLET	INLET	INLET	%	%	%	%	%	%	%	%	%	%	%	%		
1	-1.57	5.39	15.40	39.58	22.69	32.59	0.2671	-0.0155	-0.0037	1.1468	101.15	101.17	50.42	10.84	-344.4	-76.9	1.3117																	
2	-5.93	0.34	10.05	27.14	24.84	33.78	0.3214	0.0772	0.0191	1.1235	91.1	91.58	45.47	18.35	-375.1	-135.3	1.3198																	
3	-4.18	1.50	8.87	22.65	30.69	34.68	0.3189	0.0526	0.0132	1.1241	93.3	93.25	48.03	25.37	-423.3	-196.2	1.3222																	
4	-2.68	2.40	6.90	19.38	30.39	34.06	0.3232	0.0396	0.0100	1.1247	94.50	94.40	50.86	31.45	-462.4	-266.2	1.3192																	
5	0.29	4.16	4.54	13.14	29.26	31.35	0.3331	0.0654	0.0162	1.1195	89.42	89.24	56.31	47.18	-543.7	-345.2	1.3071																	
6	0.88	4.19	5.13	10.02	29.35	31.00	0.2990	0.0621	0.0101	1.1121	92.23	92.10	57.50	47.48	-570.9	-395.6	1.3003																	
7	1.24	3.62	4.81	8.01	29.80	30.46	0.2924	0.0574	0.0135	1.1062	88.48	88.31	58.19	50.17	-595.5	-428.3	1.2979																	
8	1.03	3.26	3.64	7.05	29.95	30.40	0.2861	0.0707	0.0167	1.1059	85.31	85.10	59.45	52.40	-630.5	-463.5	1.3004																	
9	1.44	3.66	3.35	6.60	29.49	30.00	0.2841	0.0764	0.0181	1.1079	84.06	83.82	60.60	54.00	-652.2	-486.6	1.3119																	
10	3.06	5.29	5.72	5.73	27.31	28.29	0.2696	0.0584	0.0131	1.1098	87.32	87.13	63.03	57.31	-677.8	-521.4	1.2927																	

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	INLET	INLET	INLET	INLET	INLET
1.0925	1.3072	86.04	86.56	24.43	1.0357	1.1174	90.37	90.52

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	U-3	U-4	U-5	U-6	U-7	U-8	U-9	U-10	U-11	U-12	U-13	U-14	U-15	U-16	U-17	U-18	U-19	U-20		
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC																				
1	7.022	8.137	490.9	394.3	341.5	394.1	352.7	10.1	45.7	1.5	0.4275	0.3412	1.2930	1.0967	1.1306	1.0395																		
2	5.194	5.686	496.6	423.1	377.9	423.0	322.2	8.2	40.4	1.1	0.4332	0.3672	1.3148	1.0941	1.1197	1.0371																		
3	3.912	4.043	495.3	421.9	401.2	421.9	290.4	-1.0	35.8	-0.1	0.4327	0.3667	1.3185	1.0908	1.1210	1.0364																		
4	2.987	2.862	485.4	409.0	402.0	409.0	272.2	-4.9	34.1	-0.7	0.4242	0.3556	1.3142	1.0886	1.1204	1.0362																		
5	1.485	1.157	451.3	379.9	376.5	379.8	248.9	-7.8	33.5	-1.2	0.3934	0.3297	1.3020	1.0886	1.1152	1.0367																		
6	1.138	0.817	434.7	366.9	371.6	365.8	225.6	-9.7	31.3	-1.5	0.3788	0.3184	1.2961	1.0869	1.1084	1.0334																		
7	0.936	0.658	426.8	360.4	364.9	360.3	221.4	-9.9	31.2	-1.6	0.3713	0.3123	1.2931	1.0892	1.1021	1.0331																		
8	0.630	0.443	426.4	364.4	363.9	364.3	222.2	-6.1	31.4	-1.0	0.3701	0.3151	1.2953	1.0941	1.1015	1.0343																		
9	0.340	0.225	425.5	367.0	359.9	367.0	226.9	3.8	32.2	0.6	0.3685	0.3167	1.2965	1.0988	1.1033	1.0354																		
10	0.066	0.038	405.4	340.6	341.0	340.5	219.4	7.7	32.8	1.3	0.3501	0.2930	1.2837	1.1024	1.1021	1.0347																		

SL	INCP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P	REFF-A	REFF-P	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	TOT-STG	TOT-STG
1	-5.13	9.57	44.27	28.55	33.55	0.3415	0.1205	0.0254	0.9858	78.80	79.56	90.47	90.64		
2	-3.45	9.16	39.24	31.79	36.37	0.2891	0.0311	0.0070	0.9962	86.48	86.99	89.60	89.77		
3	-6.21	8.15	35.98	33.93	36.50	0.2872	0.0231	0.0055	0.9972	90.61	90.97	91.02	91.16		
4	-7.58	7.86	34.76	34.10	35.47	0.3008	0.0324	0.0082	0.9962	91.69	92.01	91.32	91.45		
5	-7.95	7.89	34.65	32.03	32.92	0.3220	0.0371	0.0107	0.9962	88.45	88.88	86.18	86.39		
6	-10.11	7.77	32.78	31.67	31.81	0.3191	0.0346	0.0104	0.9967	88.80	89.01	89.28	89.44		
7	-10.17	7.97	32.82	31.07	31.16	0.3253	0.0411	0.0129	0.9963	85.45	85.07	85.07	85.28		
8	-10.84	9.18	32.37	30.92	31.40	0.3222	0.0443	0.0146	0.9960	81.61	82.28	81.62	81.88		
9	-12.56	11.86	31.63	30.50	31.51	0.3174	0.0466	0.0160	0.9958	77.97	78.76	80.35	80.63		
10	-15.66	14.02	31.46	28.78	29.05	0.3459	0.0850	0.0302	0.9931	72.25	73.21	81.25	81.51		

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	INLET	INLET	%	%
5275	121.00	1.0925	1.3009	84.44	85.01	1.0357	0.9952	86.41	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPISI-1 DEGREE	EPISI-2 DEGREE	V-1 FT/SEC	V-2 FT/SEC	VM-1 FT/SEC	VM-2 FT/SEC	VO-1 FT/SEC	VO-2 FT/SEC	B-1 DEGREE	B-2 DEGREE	M-1	M-2	U-1 FT/SEC	U-2 FT/SEC	M ² -1	M ² -2	V ² -1 FT/SEC	V ² -2 FT/SEC
1	11.483	9.196	365.2	600.8	365.2	360.4	0.0	480.7	0.0	53.0	0.3306	0.5308	328.1	358.8	0.4444	0.3412	490.9	380.5
2	10.194	7.151	367.0	582.2	367.0	390.4	0.0	431.9	0.0	47.7	0.3323	0.5214	367.3	393.2	0.4701	0.3513	519.3	392.3
3	8.356	5.542	369.0	543.2	369.0	390.6	0.0	377.5	0.0	41.9	0.3341	0.4853	411.1	431.3	0.5002	0.3523	552.5	394.3
4	6.656	4.323	369.7	509.3	369.7	384.6	0.0	333.8	0.0	40.9	0.3348	0.4542	451.5	467.3	0.5284	0.3631	583.5	407.1
5	3.614	2.402	368.4	451.4	368.4	360.2	0.0	272.1	0.0	37.0	0.3336	0.4012	542.3	550.3	0.5936	0.4046	655.6	455.2
6	2.536	1.717	367.2	444.3	367.2	359.1	0.0	261.7	0.0	36.1	0.3324	0.3944	586.1	591.6	0.6262	0.4328	691.6	487.6
7	1.888	1.297	366.6	443.4	366.6	358.9	0.0	260.3	0.0	36.0	0.3319	0.3932	614.1	617.3	0.6474	0.4489	715.1	506.2
8	1.312	0.845	366.0	440.5	366.0	358.7	0.0	255.8	0.0	35.5	0.3313	0.3903	641.6	643.9	0.6687	0.4682	738.6	528.5
9	0.688	0.397	365.1	436.2	365.1	356.0	0.0	252.1	0.0	35.3	0.3305	0.3861	671.4	671.4	0.6918	0.4868	764.2	550.0
10	0.104	-0.039	363.6	430.5	363.6	346.8	0.0	255.0	0.0	36.3	0.3291	0.3803	705.1	705.1	0.7181	0.5019	793.3	568.2
11	-0.081	-0.125	362.4	416.9	362.4	325.4	0.0	260.6	0.0	38.7	0.3280	0.3673	733.5	733.3	0.7405	0.5296	818.2	573.8

SL	INCS DEGREE	IACH DEGREE	DEV DEGREE	TURN DEGREE	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1	SEFF-P TOT	SEFF-A TOT	B ² -1 DEGREE	B ² -2 DEGREE	VM ² -1 FT/SEC	VM ² -2 FT/SEC	PO/PO INLET	TO2/ TO1	PD/PO STAGF	TO2/ TO1
1	3.26	8.81	12.24	60.58	26.46	26.40	0.651	0.2294	0.0511	1.1728	84.52	84.18	42.00	-18.58	-328.1	121.8	1.1729	1.1729	1.1729	1.1729
2	4.23	9.44	12.44	50.74	26.57	29.52	0.795	0.2811	0.0206	1.1906	93.92	93.78	45.11	-5.63	-367.3	38.7	1.1906	1.1906	1.1906	1.1906
3	4.96	10.24	13.48	40.34	26.70	30.06	0.795	0.3372	0.0102	1.1882	96.75	96.66	48.16	7.82	-411.1	-53.6	1.1882	1.1882	1.1882	1.1882
4	5.30	10.42	13.54	31.63	26.75	29.92	0.4748	0.0217	0.0061	1.1820	97.83	97.78	50.73	19.10	-451.5	-133.5	1.1820	1.1820	1.1820	1.1820
5	4.89	9.45	9.84	18.16	26.66	28.39	0.4477	0.0375	0.0100	1.1691	95.14	95.03	57.94	42.56	-386.1	-329.9	1.1691	1.1691	1.1691	1.1691
6	5.03	1.02	7.38	15.37	26.59	28.40	0.4315	0.0469	0.0123	1.1720	93.54	93.39	57.94	42.56	-386.1	-329.9	1.1720	1.1720	1.1720	1.1720
7	5.98	8.82	6.15	14.33	26.55	28.43	0.4269	0.0586	0.0153	1.1752	91.77	91.58	59.17	44.84	-388.1	-357.0	1.1752	1.1752	1.1752	1.1752
8	6.57	8.87	5.65	13.05	26.51	28.45	0.4169	0.0654	0.0169	1.1772	90.50	90.27	60.30	47.25	-414.4	-388.1	1.1772	1.1772	1.1772	1.1772
9	6.78	9.02	5.46	11.80	26.45	28.26	0.4095	0.0773	0.0196	1.1779	88.43	88.15	61.47	49.67	-471.4	-419.2	1.1779	1.1779	1.1779	1.1779
10	6.99	9.21	6.06	10.34	26.35	27.50	0.4146	0.1102	0.0273	1.1778	83.36	82.96	62.72	52.38	-705.1	-450.1	1.1778	1.1778	1.1778	1.1778
11	6.81	9.03	9.24	8.25	26.28	25.73	0.4315	0.1557	0.0367	1.1729	76.58	76.04	63.71	55.45	-733.5	-472.7	1.1729	1.1729	1.1729	1.1729

TO/TO INLET	PO/PO INLET	EFF-AD INLET	EFF-P INLET	WCL/AL LBM/SEC	TO2/TO1	PO2/PO1	EFF-AD POTOR	EFF-P POTOR
1.0531	1.1770	89.83	90.07	25.67	1.0531	1.1770	89.83	90.07

STATOR 1

SL	EPISI-1 DEGREE	EPISI-2 DEGREE	V-1 FT/SEC	V-2 FT/SEC	VM-1 FT/SEC	VM-2 FT/SEC	VO-1 FT/SEC	VO-2 FT/SEC	B-1 DEGREE	B-2 DEGREE	M-1	M-2	PO/PO INLET	TO2/ TO1	PD/PO STAGF	TO2/ TO1
1	11.353	8.088	547.3	360.7	305.4	352.8	454.2	75.0	56.1	11.9	0.4884	0.3176	1.1454	1.0554	1.1454	1.0554
2	7.833	5.931	548.9	404.2	362.1	396.3	412.1	79.9	48.7	11.4	0.4901	0.3570	1.1738	1.0546	1.1738	1.0546
3	5.308	4.326	526.1	400.9	381.4	396.1	362.4	62.2	43.5	8.9	0.4693	0.3544	1.1775	1.0524	1.1775	1.0524
4	3.916	3.482	501.8	388.6	384.2	384.4	322.8	56.7	40.0	8.4	0.4472	0.3436	1.1732	1.0502	1.1732	1.0502
5	2.442	2.561	455.3	364.8	369.4	360.8	266.2	53.6	35.8	8.5	0.4048	0.3225	1.1633	1.0480	1.1633	1.0480
6	2.056	2.228	451.8	370.1	371.4	365.9	257.3	55.6	34.7	8.6	0.4013	0.3270	1.1666	1.0496	1.1666	1.0496
7	1.792	1.957	453.0	375.9	373.4	371.5	258.6	57.3	34.5	8.8	0.4020	0.3319	1.1698	1.0514	1.1698	1.0514
8	1.484	1.625	452.1	380.0	374.7	375.3	253.0	60.1	34.0	9.1	0.4009	0.3355	1.1725	1.0528	1.1725	1.0528
9	1.126	1.237	449.0	380.2	373.0	373.3	250.1	61.3	33.8	9.3	0.3978	0.3354	1.1752	1.0543	1.1752	1.0543
10	0.672	0.747	444.2	376.7	364.7	372.4	253.6	66.4	34.8	10.1	0.3928	0.3331	1.1726	1.0576	1.1726	1.0576
11	0.245	0.286	430.8	358.1	343.4	349.6	260.2	67.8	37.2	11.0	0.3799	0.3126	1.1623	1.0614	1.1623	1.0614

SL	INCS DEGREE	INCH DEGREE	DEV DEGREE	TURN DEGREE	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B TOTAL	LOSS-P TOTAL	PO2/ PO1	SEFF-A TOT-INLET	SEFF-P TOT-INLET	SEFF-A TOT-STG	SEFF-P TOT-STG
1	3.26	8.07	17.25	44.18	23.09	27.86	0.4833	0.1539	0.0318	0.9768	71.46	71.46	71.46	71.46
2	1.40	6.51	13.80	37.36	27.78	31.67	0.3978	0.0883	0.0195	0.9866	85.85	86.16	85.85	86.16
3	-1.31	4.16	10.28	34.67	29.56	31.85	0.3747	0.0650	0.0156	0.9909	91.34	91.34	91.34	91.34
4	-3.43	2.35	9.20	31.65	29.98	30.98	0.3616	0.0592	0.0151	0.9724	93.10	93.32	93.10	93.32
5	-6.44	0.00	8.59	27.33	29.07	29.09	0.3350	0.0450	0.0131	0.9152	92.12	92.28	92.12	92.28
6	-7.43	-0.65	8.43	26.08	29.30	29.50	0.3188	0.0422	0.0130	0.9056	90.86	91.06	90.86	91.06
7	-7.69	-0.71	8.42	25.73	29.47	29.43	0.3109	0.0419	0.0133	0.9096	89.19	89.44	89.19	89.44
8	-8.42	-1.23	8.66	24.93	29.60	30.23	0.3008	0.0374	0.0123	0.9461	88.21	88.46	88.21	88.46
9	-9.23	-1.84	8.84	24.56	29.47	30.20	0.2973	0.0385	0.0130	0.9460	86.00	86.70	86.00	86.30
10	-10.27	-2.88	10.12	24.70	28.79	29.89	0.2983	0.0442	0.0155	0.9955	80.81	81.24	80.81	81.24
11	-11.11	-3.39	13.25	26.10	27.02	27.89	0.3371	0.0958	0.0345	0.9909	71.55	72.15	71.55	72.15

WCL/AL RPM	WCL/AL LBM/SEC	TO/TO INLET	PO/PO INLET	EFF-AD INLET	EFF-P INLET	TO2/TO1	PO2/PO1	EFF-AD STAGF
5255.	127.30.	1.0531	1.1683	85.65	85.97	1.0531	0.9926	85.66

ROTOR 2

RUN N1411, SPEED CODE 63, POINT NO 3

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-1	V-1	V-2
	CLG	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.688	5.974	323.8	552.9	315.5	430.8	72.8	346.6	12.9	38.5	0.2866	0.4865	408.1	434.5	0.4067	0.3852	460.5	439.7
2	6.541	4.714	402.6	547.1	395.5	443.2	75.6	320.8	10.8	35.7	0.3556	0.4799	443.7	462.7	0.4772	0.4482	547.3	465.4
3	5.116	3.732	408.9	529.1	404.7	447.7	58.7	282.0	8.2	32.1	0.3618	0.4662	476.7	490.7	0.5147	0.4734	581.8	494.0
4	3.737	2.678	401.6	504.4	397.8	431.1	54.7	261.8	7.8	31.2	0.3555	0.4422	512.2	521.4	0.5367	0.4412	606.3	503.2
5	1.060	0.519	385.6	453.8	381.8	390.5	54.0	231.2	8.1	30.6	0.3411	0.3968	592.7	595.3	0.5882	0.4668	667.3	533.9
6	0.425	0.051	389.8	434.9	385.8	384.5	55.9	203.3	8.2	27.9	0.3447	0.3803	621.2	621.9	0.6051	0.4970	684.4	569.4
7	0.056	-0.202	394.4	425.9	389.9	377.1	59.1	197.9	8.6	27.7	0.3485	0.3719	648.9	648.9	0.6248	0.5133	707.1	587.9
8	-0.075	-0.211	393.7	422.9	388.8	373.7	61.9	190.1	9.0	27.9	0.3474	0.3687	687.0	684.5	0.6497	0.5346	736.2	613.3
9	-0.038	-0.109	389.7	420.8	383.9	368.7	66.6	202.8	9.8	28.8	0.3433	0.3660	713.1	711.5	0.6625	0.5464	752.0	628.7
10	-0.001	-0.020	367.4	403.3	361.2	350.8	67.5	199.0	10.6	29.6	0.3227	0.3498	739.3	738.3	0.6699	0.5581	762.7	643.5

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	V0-1	V0-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-5.43	1.53	15.95	35.17	25.15	34.97	0.2025	-0.0157	-0.0038	1.1363	101.31	101.33	46.56	11.39	-335.4	-87.9	1.3024
2	-8.55	-2.29	9.36	25.20	31.71	36.53	0.2640	0.0597	0.0148	1.1187	92.94	92.82	42.85	17.65	-368.1	-141.4	1.3164
3	-6.33	-0.46	8.40	20.97	32.46	37.30	0.2612	0.0233	0.0059	1.1187	96.69	96.64	45.87	24.91	-418.0	-208.7	1.3163
4	-4.54	0.34	6.46	17.96	31.90	36.15	0.2733	0.0181	0.0046	1.1173	97.17	97.13	48.98	31.01	-457.6	-259.6	1.3088
5	-1.35	2.52	4.34	11.69	30.62	32.90	0.2841	0.0479	0.0119	1.1067	90.96	90.82	54.67	42.99	-538.7	-366.1	1.2890
6	-0.94	2.37	5.08	8.26	30.94	32.46	0.2471	0.0237	0.0057	1.0956	94.73	94.66	55.69	47.43	-565.3	-418.6	1.2802
7	-0.41	1.98	4.74	6.43	31.27	31.79	0.2417	0.0406	0.0096	1.0889	90.01	89.89	56.53	50.10	-589.9	-451.0	1.2763
8	-0.30	1.92	3.69	5.66	31.15	31.44	0.2377	0.0564	0.0133	1.0878	85.72	85.55	58.11	52.45	-625.1	-486.3	1.2762
9	0.14	2.36	3.41	5.23	30.68	30.93	0.2370	0.0645	0.0152	1.0886	83.66	83.46	59.29	54.06	-646.6	-508.7	1.2761
10	1.77	4.00	5.37	4.78	28.70	29.31	0.2275	0.0520	0.0118	1.0915	86.58	86.40	61.73	56.96	-671.8	-539.4	1.2678

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	STAGE	STAGE	STAGE	STAGE
1.0861	1.2905	87.87	88.31	25.72	1.0313	1.1046	92.13	92.24

STATOR 2

RUN N1411, SPEED CODE 63, POINT NO 3

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO	EFF-AD	EFF-P
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	INLET	INLET	STAGE	STAGE
1	8.947	8.027	505.5	440.4	373.8	440.3	340.3	11.2	42.1	1.5	0.4412	0.3826	1.2832	1.0941	1.1197	1.0367		
2	5.066	5.526	521.5	476.7	416.4	470.6	313.4	8.8	36.9	1.1	0.4564	0.4104	1.3086	1.0910	1.1120	1.0354		
3	3.801	3.924	518.0	462.4	438.2	462.4	276.3	-0.7	32.2	-0.1	0.4541	0.4037	1.3080	1.0871	1.1118	1.0337		
4	2.893	2.784	503.2	444.3	422.5	444.1	257.2	-5.2	30.7	-0.7	0.4412	0.3879	1.2998	1.0844	1.1098	1.0332		
5	1.406	1.123	459.6	405.8	349.1	405.7	227.9	-8.2	29.7	-1.2	0.4020	0.3537	1.2804	1.0826	1.0989	1.0327		
6	1.071	0.805	440.6	390.3	392.6	390.2	200.1	-10.5	27.0	-1.5	0.3854	0.3403	1.2725	1.0798	1.0888	1.0277		
7	0.890	0.486	431.0	381.4	383.4	381.3	196.8	-10.7	27.2	-1.6	0.3765	0.3322	1.2679	1.0814	1.0817	1.0275		
8	0.633	0.486	427.1	379.1	378.7	379.1	197.5	-6.0	27.6	-0.9	0.3724	0.3296	1.2668	1.0848	1.0794	1.0275		
9	0.406	0.319	424.4	377.8	373.1	377.8	202.3	3.8	28.5	0.4	0.3692	0.3278	1.2660	1.0890	1.0801	1.0294		
10	0.149	0.120	407.2	360.8	355.5	360.7	198.7	8.1	29.2	1.3	0.3533	0.3121	1.2575	1.0926	1.0827	1.0293		

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-8.75	9.46	40.65	30.93	36.74	0.2637	0.1177	0.0248	0.9893	78.48	79.22	89.44	89.61
2	-6.89	9.11	35.84	34.69	39.74	0.2278	0.0444	0.0100	0.9941	87.86	88.31	87.98	88.16
3	-9.87	8.20	32.27	36.67	39.26	0.2353	0.0467	0.0111	0.9939	91.58	91.90	91.26	91.41
4	-10.95	7.87	31.38	36.28	37.81	0.2475	0.0539	0.0136	0.9933	97.23	92.51	91.10	91.24
5	-11.69	7.91	30.85	33.55	34.50	0.2644	0.0571	0.0170	0.9938	61	99.01	84.90	85.10
6	-14.37	7.76	28.54	33.07	33.20	0.2578	0.0602	0.0181	0.9941	89.34	89.70	88.88	89.01
7	-14.24	7.94	28.79	32.27	32.37	0.2658	0.0704	0.0220	0.9934	86.22	86.67	82.61	82.81
8	-14.69	9.24	28.45	31.81	32.08	0.2697	0.0808	0.0267	0.9926	82.48	83.06	77.84	78.09
9	-16.32	11.84	27.89	31.25	31.85	0.2706	0.0876	0.0301	0.9921	78.39	79.10	75.63	75.89
10	-19.21	14.01	27.92	29.65	30.25	0.2805	0.0983	0.0350	0.9919	73.07	73.94	78.27	78.51

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	STAGE	STAGE	STAGE
5255.	127.30	1.0861	1.2810	85.25	85.77	1.0313	0.9927	85.23

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.518	9.129	318.9	514.4	318.4	329.5	0.0	395.0	0.0	50.0	0.2880	0.4621	261.7	286.2	0.3725	0.3117	412.5	347.0
2	10.148	7.078	321.4	497.0	321.4	359.4	0.0	343.3	0.0	43.5	0.2922	0.4463	292.9	313.6	0.3927	0.3238	434.9	360.6
3	8.133	5.506	324.1	480.9	324.1	356.1	0.0	292.5	0.0	39.3	0.2922	0.4191	327.9	343.9	0.4164	0.3228	461.0	359.8
4	6.341	4.304	325.5	450.8	325.5	351.7	0.0	248.9	0.0	35.2	0.2940	0.3859	340.0	372.7	0.4364	0.3339	485.4	372.8
5	3.255	2.352	325.7	381.2	325.7	329.4	0.0	191.8	0.0	30.2	0.2942	0.3408	432.4	438.8	0.4890	0.3601	541.4	411.8
6	2.227	1.624	325.2	375.6	325.2	329.0	0.0	181.3	0.0	28.4	0.2937	0.3356	467.4	471.8	0.5143	0.3921	569.4	478.8
7	1.982	1.180	324.9	372.1	324.9	327.2	0.0	177.2	0.0	28.4	0.2935	0.3323	489.7	492.2	0.5308	0.4058	587.7	456.2
8	1.033	0.718	324.6	368.1	324.6	325.6	0.0	171.5	0.0	27.8	0.2932	0.3286	511.6	513.5	0.5472	0.4215	605.9	472.2
9	0.436	0.268	323.8	365.0	323.8	324.7	0.0	166.8	0.0	27.2	0.2925	0.3257	535.4	535.4	0.5651	0.4383	625.7	491.2
10	-0.139	-0.201	322.5	360.2	322.5	319.3	0.0	166.8	0.0	27.6	0.2912	0.3211	562.3	562.3	0.5854	0.4531	646.7	508.3
11	-0.269	-0.265	321.2	340.1	321.2	293.9	0.0	171.3	0.0	30.2	0.2900	0.3026	584.9	584.8	0.6026	0.4513	667.3	507.3

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DFGREE	DFGREE	FT/SEC	FT/SEC	INLET
1	0.89	6.24	12.64	57.81	23.41	24.29	0.3938	0.2306	0.0515	1.1191	83.05	82.79	39.43	-18.18	-261.7	108.8	1.1091
2	1.55	6.56	13.36	47.13	23.57	26.97	0.3788	0.0595	0.0151	1.1196	95.02	94.93	42.43	-4.70	-292.9	25.7	1.1196
3	2.18	7.46	13.85	37.20	23.76	27.04	0.4000	0.0242	0.0086	1.1166	97.56	97.51	45.38	8.19	-327.9	-51.4	1.1166
4	2.48	7.80	13.78	28.56	23.85	26.90	0.3875	0.0018	0.0005	1.1084	100.25	100.25	47.91	19.35	-360.0	-123.8	1.1084
5	2.09	6.64	9.03	18.17	23.86	25.39	0.3619	0.0089	0.0024	1.0963	98.56	98.56	53.02	36.85	-432.4	-267.0	1.0963
6	2.27	6.25	6.25	13.74	23.82	25.41	0.3452	0.0114	0.0031	1.0973	97.99	97.99	55.17	41.63	-467.4	-290.4	1.0973
7	3.25	6.08	5.21	12.53	23.81	25.30	0.3397	0.0201	0.0053	1.0976	96.35	96.31	56.44	43.91	-499.7	-315.0	1.0976
8	3.87	6.18	4.79	11.21	23.79	25.19	0.3298	0.0250	0.0065	1.0973	95.23	95.17	57.61	46.39	-511.6	-341.9	1.0973
9	4.15	6.39	4.42	10.20	23.74	25.13	0.3199	0.0307	0.0079	1.0973	93.92	93.85	58.83	48.63	-535.4	-368.6	1.0973
10	4.43	6.45	4.76	9.08	23.64	24.89	0.3213	0.0564	0.0144	1.0963	88.63	88.47	60.17	51.09	-562.3	-495.5	1.0963
11	4.33	6.55	8.38	6.63	23.56	22.65	0.3474	0.1170	0.0282	1.0885	76.63	76.35	61.23	54.60	-584.9	-413.5	1.0885

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/41	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			ROTOR	ROTOR
		\$	\$	\$			\$	\$
1.0300	1.1010	93.06	93.16	22.95	1.0900	1.1010	93.08	93.16

IA

STATOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	TO/TO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TOT
1	10.924	7.485	473.2	711.5	473.2	290.9	761.0	373.3	59.5	52.0	9.2	0.4237	0.3253	1.0925	1.0363	1.0363
2	7.004	4.989	473.9	393.6	441.8	389.7	328.3	55.3	43.8	8.0	0.4248	0.3509	1.1115	1.0345	1.1115	1.0345
3	4.356	3.366	451.0	377.3	353.2	374.3	280.4	47.3	38.4	7.2	0.4040	0.3363	1.1072	1.0321	1.1072	1.0321
4	3.069	2.623	428.0	362.4	354.4	359.6	240.1	45.0	34.1	7.1	0.3833	0.3232	1.1014	1.0296	1.1014	1.0296
5	1.776	1.831	386.6	342.8	337.9	340.2	187.9	41.6	29.1	7.0	0.3657	0.3057	1.0934	1.0270	1.0934	1.0270
6	1.403	1.514	382.9	342.4	338.7	340.1	178.6	39.9	27.8	6.7	0.3423	0.3053	1.0933	1.0275	1.0933	1.0275
7	1.191	1.305	380.3	341.1	337.7	338.8	175.0	39.7	27.4	6.7	0.3398	0.3041	1.0929	1.0281	1.0929	1.0281
8	0.997	1.112	376.0	338.0	336.4	336.5	169.8	39.4	26.8	6.7	0.3366	0.3019	1.0922	1.0283	1.0922	1.0283
9	0.801	0.907	374.0	336.9	335.4	334.6	165.5	39.3	26.3	6.7	0.3339	0.3002	1.0917	1.0287	1.0917	1.0287
10	0.547	0.641	369.4	334.3	330.0	331.1	166.1	46.4	26.7	6.0	0.3295	0.2976	1.0910	1.0301	1.0910	1.0301
11	0.239	0.300	348.8	313.2	304.0	308.8	171.0	52.3	29.4	6.6	0.3105	0.2743	1.0830	1.0322	1.0830	1.0322

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG	TOT-STG	TOT-STG
1	-0.70	4.01	14.62	42.75	21.80	27.62	0.3623	0.1299	0.0270	0.9849	73.60	70.97	70.60	70.60	70.60	70.60
2	-3.54	1.57	10.48	35.75	25.88	30.13	0.2962	0.0625	0.0139	0.9927	88.91	85.08	88.91	88.91	88.91	88.91
3	-6.44	-0.97	8.55	21.22	26.91	29.04	0.2860	0.0589	0.0142	0.9938	91.87	87.09	91.87	91.87	91.87	91.87
4	-9.37	-3.59	7.93	26.97	27.13	27.93	0.2671	0.0369	0.0156	0.9962	94.62	94.69	94.62	94.62	94.62	94.62
5	-13.15	-6.71	7.11	22.10	26.00	26.44	0.2235	0.0369	0.0100	0.9973	95.61	95.67	95.61	95.61	95.61	95.61
6	-14.35	-7.57	6.41	21.11	26.11	26.42	0.2179	0.0470	0.0145	0.9963	93.94	94.03	93.94	93.94	93.94	93.94
7	-14.81	-7.82	6.32	20.72	26.04	26.31	0.2169	0.0551	0.0176	0.9958	91.77	91.88	91.77	91.77	91.77	91.77
8	-15.66	-8.47	6.23	20.11	25.96	26.12	0.2156	0.0619	0.0204	0.9953	90.26	90.19	90.26	90.26	90.26	90.26
9	-16.81	-9.42	6.26	19.56	25.89	25.97	0.2146	0.0681	0.0232	0.9949	88.47	88.43	88.47	88.43	88.43	88.43
10	-18.38	-10.79	7.48	18.74	25.44	25.44	0.2095	0.0659	0.0233	0.9952	83.70	83.90	83.70	83.70	83.70	83.90
11	-18.90	-11.18	11.89	19.74	23.38	23.84	0.2265	0.0775	0.0280	0.9950	71.60	71.92	71.60	71.60	71.60	71.92

WCI/41	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
							\$	\$
4191.	113.80	1.0300	1.0950	87.69	87.86	1.0900	0.9945	87.70

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.907	0.112	336.1	515.0	331.1	451.6	57.8	243.3	9.8	28.0	0.2983	0.4560	325.5	346.9	0.3779	0.4118	425.8	463.3
2	6.738	4.094	390.0	515.1	386.6	465.1	51.7	221.4	7.6	25.3	0.3476	0.4587	353.8	369.0	0.4372	0.4345	490.4	488.0
3	5.144	3.498	386.0	492.3	383.3	451.7	45.6	195.9	6.8	23.4	0.3444	0.4595	360.2	391.3	0.4519	0.4487	508.7	492.1
4	3.958	2.257	376.8	464.2	374.3	428.4	43.6	178.7	6.6	22.6	0.3364	0.4132	408.5	419.8	0.4667	0.4358	522.8	489.6
5	C.565	-0.101	359.6	406.6	357.3	381.1	40.3	141.8	6.4	20.4	0.3210	0.3413	472.7	474.7	0.5038	0.4446	560.9	506.1
6	-0.084	-0.562	356.5	382.0	354.3	366.3	39.5	108.3	6.4	16.5	0.3181	0.3395	495.4	495.0	0.5152	0.4740	577.4	533.3
7	-0.523	-0.886	351.6	371.7	349.4	358.4	39.2	98.2	6.4	15.3	0.3136	0.3303	517.5	517.5	0.5282	0.4561	592.3	541.6
8	-0.875	-1.157	346.0	364.9	343.6	351.5	40.8	97.9	6.8	15.6	0.3094	0.3240	547.8	545.8	0.5459	0.5055	612.5	569.4
9	-C.964	-1.216	339.1	353.9	335.8	339.0	47.1	101.7	8.0	16.7	0.3019	0.3138	568.7	567.4	0.5523	0.5108	620.3	576.1
10	-0.644	-0.773	317.3	313.6	313.0	295.0	52.0	106.5	9.4	19.9	0.2819	0.2772	589.5	588.8	0.5527	0.4997	622.0	565.3

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VM-1	VM-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-13.20	-6.24	17.28	26.07	25.55	34.29	0.0305	0.0976	0.0232	1.0628	86.73	86.60	38.79	12.72	-267.7	-173.2	1.1625
2	-13.50	-7.23	9.21	20.41	29.92	35.82	0.1002	0.0843	0.0210	1.0596	84.98	84.84	37.90	17.50	-101.9	-147.6	1.1770
3	-11.14	-5.47	6.80	17.75	29.63	35.05	0.1180	0.0448	0.0114	1.0598	90.72	90.64	41.06	23.31	-339.5	-195.4	1.1714
4	-9.27	-4.19	4.35	15.34	28.93	31.38	0.1428	0.0517	0.0134	1.0553	88.08	87.97	44.25	28.91	-364.9	-237.1	1.1604
5	-5.60	-1.73	2.49	9.29	27.64	29.73	0.1631	0.0983	0.0246	1.0376	70.43	70.30	50.43	41.13	-432.4	-332.5	1.1344
6	-4.49	-1.18	4.27	5.52	27.41	28.60	0.1211	0.0610	0.0148	1.0271	72.82	72.87	52.14	46.62	-455.8	-367.6	1.1227
7	-3.10	-0.71	4.11	4.37	27.04	27.96	0.1079	0.0577	0.0138	1.0232	69.41	69.28	53.85	49.47	-478.2	-419.2	1.1176
8	-2.54	-0.32	3.11	4.00	26.97	27.36	0.1066	0.0720	0.0174	1.0204	80.06	79.94	55.87	51.87	-507.0	-447.9	1.1139
9	-1.94	0.29	3.30	3.27	25.96	26.31	0.1060	0.0832	0.0197	1.0177	53.00	52.93	57.22	53.95	-521.5	-465.7	1.1189
10	-0.18	2.05	6.56	1.24	24.12	22.75	0.1277	0.1328	0.0288	1.0095	27.25	27.14	59.79	58.55	-537.6	-482.2	1.0923

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AI	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SOFT		%	%
1.0446	1.1366	83.60	83.88	24.25	1.0142	1.0380	75.42

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	PO/PO	TO/TO	TO/TO
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	INLET	INLET	STAGE	STAGE
1	6.569	8.014	459.2	475.9	392.2	475.9	238.8	-0.2	31.2	-0.0	0.4365	0.4219	1.1397	1.0577	1.7421	1.7421	1.0209	
2	5.187	5.606	488.8	503.8	438.2	503.8	216.7	-6.1	26.2	-0.7	0.4344	0.4483	1.1641	1.0541	1.7081	1.7081	1.0194	
3	3.953	4.051	482.3	483.5	442.5	483.4	191.9	-9.0	23.4	-1.1	0.4252	0.4303	1.1561	1.0502	1.6463	1.6463	1.0184	
4	2.989	2.871	494.4	459.2	429.9	459.1	175.5	-8.9	22.2	-1.1	0.4134	0.4386	1.1447	1.0469	1.6013	1.6013	1.0176	
5	1.571	1.337	411.2	398.1	387.2	398.1	138.5	-2.7	19.7	-0.3	0.3655	0.3936	1.1144	1.0425	1.0193	1.0193	1.0168	
6	1.246	1.031	386.8	383.4	372.2	383.6	105.3	-0.6	15.8	-0.1	0.3439	0.3410	1.1079	1.0386	1.0136	1.0136	1.0163	
7	1.082	C.899	375.6	363.8	362.7	363.8	97.6	-0.8	15.1	-0.1	0.3339	0.3231	1.0990	1.0281	1.0062	1.0062	1.0087	
8	C.897	0.872	367.7	355.2	354.5	355.2	97.6	1.8	15.4	0.3	0.3265	0.3152	1.0951	1.0380	1.0039	1.0039	1.0084	
9	0.875	0.813	356.2	347.5	341.4	347.3	101.6	11.3	16.6	1.9	0.3159	0.3086	1.0932	1.0403	1.0007	1.0007	1.0084	
10	C.482	C.491	317.2	322.0	268.8	321.5	106.4	16.7	19.6	3.0	0.2804	0.2847	1.0895	1.0425	1.0000	1.0000	1.0120	

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG
1	-19.69	8.49	31.18	30.40	35.95	0.0719	0.1818	0.0383	0.9805	66.54	67.16	82.56	69.71
2	-17.58	7.35	26.92	34.10	38.56	0.0711	0.0895	0.0201	0.9891	82.17	82.56	84.84	69.09
3	-18.65	7.22	24.48	34.47	37.16	0.0956	0.1084	0.0254	0.9874	84.43	84.74	70.56	70.76
4	-14.47	7.43	23.25	33.50	35.36	0.1094	0.1183	0.0299	0.9859	83.99	84.29	66.07	66.29
5	-21.73	8.74	20.01	30.14	36.80	0.1293	0.1892	0.0545	0.9833	74.07	74.46	74.46	73.06
6	-25.58	9.20	15.89	29.01	29.54	0.0908	0.1846	0.0486	0.9811	77.04	77.38	47.14	37.23
7	-26.35	9.44	15.18	28.26	27.97	0.1137	0.2232	0.0700	0.9834	71.90	72.28	18.66	18.63
8	-26.84	10.44	15.10	27.57	27.27	0.1204	0.2285	0.0755	0.9837	67.90	68.37	11.17	11.19
9	-28.21	11.17	14.72	26.47	26.63	0.1162	0.2133	0.0732	0.9854	64.20	64.65	9.42	9.47
10	-28.87	12.70	16.43	23.02	24.55	0.0708	0.1544	0.0549	0.9915	54.59	55.10	3.41	3.63

NOCDR	WLCRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%			%	%
41.1	113.80	1.0446	1.1204	74.05	74.48	1.0142	0.9857	46.70	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	11.498	9.034	311.1	457.8	311.1	317.5	0.0	183.4	0.0	50.2	0.2808	0.4469	260.0	286.4	0.3659	0.2986	405.4	332.6																		
2	10.161	6.906	312.3	478.8	312.3	337.2	0.0	339.9	0.0	45.1	0.2819	0.4294	291.1	311.6	0.3854	0.3035	426.9	338.4																		
3	8.231	5.309	313.2	442.1	313.2	333.2	0.0	290.5	0.0	41.0	0.2827	0.3958	325.8	341.8	0.4080	0.3019	451.9	337.2																		
4	6.464	4.120	312.9	412.2	312.9	330.3	0.0	246.6	0.0	36.7	0.2824	0.3688	357.8	370.3	0.4290	0.3155	475.3	352.7																		
5	3.368	2.227	309.3	367.3	309.3	310.0	0.0	197.0	0.0	32.4	0.2792	0.3280	429.7	436.1	0.4778	0.3196	529.4	391.5																		
6	2.315	1.594	307.2	305.2	307.2	311.0	0.0	191.5	0.0	31.6	0.2792	0.3259	464.4	468.8	0.5025	0.3178	556.8	416.7																		
7	1.455	1.101	306.1	363.3	306.1	310.8	0.0	188.0	0.0	31.2	0.2762	0.3240	486.6	489.1	0.5177	0.3060	574.9	432.7																		
8	1.055	0.639	305.1	359.8	305.1	310.4	0.0	181.9	0.0	30.4	0.2753	0.3208	508.4	510.2	0.5350	0.3028	592.9	451.8																		
9	0.419	0.175	303.8	356.6	303.8	309.6	0.0	176.9	0.0	29.7	0.2741	0.3178	532.0	532.0	0.5527	0.3019	612.6	471.2																		
10	-0.163	-0.275	301.8	350.9	301.8	301.3	0.0	179.9	0.0	30.8	0.2723	0.3124	558.7	558.7	0.5729	0.3019	635.0	484.1																		
11	-0.280	-0.292	300.3	333.6	300.3	276.9	0.0	185.7	0.0	33.9	0.2709	0.2963	581.2	581.2	0.5729	0.3019	654.3	482.5																		

SL	INCS	INCN	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B*-1	B*-2	VR*-1	VR*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE
1	1.21	6.76	13.58	57.19	22.88	23.65	0.4123	0.1596	0.0358	1.1121	88.26	88.08	39.95	-17.24	-260.0	99.1	1.1121
2	2.19	7.59	13.31	47.83	22.96	25.52	0.4181	0.0338	0.0086	1.1204	97.21	97.15	65.07	-4.76	-291.1	28.2	1.1204
3	2.99	8.27	14.38	37.48	23.02	25.49	0.4375	0.0083	0.0023	1.1150	99.18	99.17	64.19	6.71	-325.8	-51.3	1.1150
4	3.43	4.55	14.92	28.38	23.00	25.44	0.4157	-0.0190	-0.0053	1.1089	102.27	102.30	48.86	20.48	-357.8	-123.7	1.1089
5	3.33	7.89	9.75	16.65	22.75	24.05	0.3891	0.0036	0.0010	1.0993	99.44	99.43	54.26	37.81	-429.7	-239.0	1.0993
6	3.61	7.59	6.53	14.80	22.61	24.17	0.3766	0.0148	0.0039	1.1019	97.63	97.62	56.52	41.71	-464.4	-277.3	1.1019
7	4.64	7.47	5.39	13.74	22.54	24.17	0.3891	0.0228	0.0060	1.1029	96.23	96.18	57.83	44.09	-486.6	-301.1	1.1029
8	5.30	7.40	4.99	12.43	22.47	24.17	0.3861	0.0258	0.0067	1.1031	95.52	95.45	59.03	46.60	-508.4	-328.3	1.1031
9	5.59	7.83	4.71	11.36	22.38	24.12	0.3666	0.0318	0.0082	1.1031	94.24	94.16	60.28	48.92	-532.0	-355.1	1.1031
10	5.89	8.11	5.17	10.12	22.25	23.44	0.3537	0.0695	0.0174	1.1019	87.37	87.19	61.62	51.50	-556.7	-378.9	1.1019
11	5.78	8.00	6.76	7.70	22.15	21.47	0.3816	0.1308	0.0313	1.0956	76.57	76.26	62.67	54.98	-581.2	-395.1	1.0956

TO/TC	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	ROTOR	ROTOR	ROTOR	ROTOR
1.0308	1.1048	93.87	93.97	21.88	1.0308	1.1048	93.87	93.97

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	11.297	7.908	457.4	337.9	279.1	333.1	362.4	56.8	52.4	9.6	0.4094	0.3001	1.0919	1.0350	1.0919	1.0350	1.0350																			
2	7.542	5.555	455.8	368.4	319.8	363.9	324.8	57.1	45.4	8.9	0.4081	0.3279	1.1109	1.0341	1.1109	1.0341	1.0341																			
3	4.853	3.838	431.9	352.9	325.8	349.8	278.8	47.1	40.2	7.7	0.3984	0.3143	1.1077	1.0519	1.1077	1.0519	1.0519																			
4	3.569	3.125	408.9	337.3	322.2	336.7	258.4	42.4	35.7	7.2	0.3658	0.3005	1.1023	1.0293	1.1023	1.0293	1.0293																			
5	2.303	2.361	372.1	320.8	318.2	318.8	192.8	36.4	31.2	6.5	0.3324	0.2858	1.0967	1.0276	1.0967	1.0276	1.0276																			
6	1.874	1.985	372.4	324.7	321.2	322.7	188.3	36.2	30.4	6.4	0.3324	0.2891	1.0987	1.0288	1.0987	1.0288	1.0288																			
7	1.599	1.706	371.6	326.3	322.0	324.2	185.5	36.5	30.0	6.4	0.3316	0.2904	1.0996	1.0295	1.0996	1.0295	1.0295																			
8	1.330	1.426	369.0	325.7	322.1	323.5	180.1	37.6	29.2	6.6	0.3292	0.2898	1.0998	1.0298	1.0998	1.0298	1.0298																			
9	1.059	1.133	366.2	324.3	321.4	321.8	175.4	40.0	27.6	7.1	0.3266	0.2885	1.0996	1.0302	1.0996	1.0302	1.0302																			
10	0.713	0.766	361.1	321.0	313.7	317.7	178.9	46.2	24.7	8.3	0.3216	0.2853	1.0986	1.0322	1.0986	1.0322	1.0322																			
11	0.336	0.337	343.2	300.0	288.7	294.4	185.6	46.5	32.7	8.9	0.3050	0.2660	1.0989	1.0347	1.0989	1.0347	1.0347																			

SL	INCS	INCN	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B*-1	B*-2	VR*-1	VR*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE
1	-0.34	4.38	14.94	42.79	21.12	25.70	0.3983	0.1654	0.0344	0.9820	72.72	73.07	72.72	73.07			1.0308
2	-1.90	3.21	11.32	36.54	24.41	28.35	0.3218	0.0768	0.0171	0.9917	89.67	89.67	89.67	89.67			1.0950
3	-6.86	0.81	9.02	28.44	25.32	27.35	0.4097	0.0663	0.0159	0.9935	93.20	93.31	93.20	93.31			1.0308
4	-7.81	-2.04	8.02	24.44	25.62	26.21	0.2985	0.0670	0.0172	0.9941	96.39	96.45	96.39	96.45			1.0950
5	-11.31	-4.56	6.66	24.70	24.65	24.98	0.2605	0.0316	0.0092	0.9977	96.78	97.00	96.78	97.00			1.0308
6	-12.76	-4.98	6.20	23.58	24.51	25.28	0.2543	0.0390	0.0120	0.9971	94.78	94.85	94.78	94.85			1.0950
7	-12.24	-5.26	6.06	23.54	24.98	25.40	0.2505	0.0406	0.0130	0.9970	93.22	93.32	93.22	93.32			1.0308
8	-13.24	-6.25	6.22	22.57	25.01	25.34	0.2454	0.0419	0.0138	0.9970	92.49	92.59	92.49	92.59			1.0950
9	-14.65	-7.06	6.45	21.34	24.97	25.20	0.2413	0.0450	0.0153	0.9968	91.01	91.13	91.01	91.13			1.0308
10	-15.39	-7.80	6.27	21.43	24.33	24.83	0.2416	0.0447	0.0158	0.9969	84.61	84.61	84.61	84.61			1.0950
11	-15.62	-7.79	11.20	23.82	22.32	23.07	0.2364	0.0689	0.0249	0.9957	72.52	72.86	72.52	72.86			1.0308

TO/TC	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	STAGE	STAGE	STAGE	STAGE
1.0308	1.0950	89.09	89.25	1.03				

ROTOR 2

RUN N3411, SPEED CODE 50, POINT NO 2																		
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2		
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	6.772	6.015	306.5	400.6	301.5	413.8	55.1	246.4	10.3	30.3	0.2718	0.4266	323.4	344.3	0.3577	0.3777	403.6	425.7
2	6.570	4.618	366.1	479.3	360.1	423.3	53.6	226.8	8.4	27.8	0.3261	0.4257	351.6	366.7	0.4190	0.3965	467.4	446.5
3	5.014	3.483	359.3	460.5	356.4	413.1	44.8	203.6	7.2	26.1	0.3201	0.4090	377.7	388.8	0.4345	0.4321	487.7	452.7
4	3.469	2.288	349.6	435.9	347.3	392.8	40.4	188.9	6.6	25.6	0.3117	0.3869	405.7	413.2	0.4495	0.4015	506.2	452.3
5	0.587	-0.577	338.6	386.0	334.7	355.4	35.9	156.6	6.1	23.0	0.3018	0.3621	469.7	471.7	0.4694	0.4264	549.1	479.0
6	0.003	-0.372	339.6	362.2	337.6	341.8	36.0	129.7	6.1	19.4	0.3025	0.3209	492.2	492.8	0.5058	0.4477	567.5	505.2
7	-0.349	-0.616	337.9	359.0	335.9	340.7	36.9	117.7	6.3	18.4	0.3010	0.3181	514.7	514.2	0.5198	0.4463	583.7	526.2
8	-0.490	-0.662	333.8	347.6	331.2	327.3	41.2	117.2	7.1	19.7	0.2970	0.3076	544.4	542.4	0.5361	0.4768	602.4	538.6
9	-0.309	-0.512	327.7	343.9	324.5	323.2	46.1	117.7	7.1	20.0	0.2913	0.3060	565.1	565.8	0.5640	0.4870	612.0	550.8
10	-0.231	-0.295	327.2	318.9	303.7	297.6	46.2	114.0	7.6	21.0	0.2725	0.2813	585.8	585.1	0.5492	0.4915	619.2	557.3

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VP*-1	VP*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-10.50	-3.56	17.57	28.08	23.45	32.11	0.0732	0.0205	0.0049	1.0717	97.46	97.36	41.49	13.41	-268.3	-99.9	1.1716
2	-11.09	-5.63	10.13	21.10	28.10	33.22	0.1460	0.3562	0.0139	1.0663	90.91	90.83	39.51	18.41	-298.0	-141.9	1.1823
3	-9.22	-1.55	7.56	18.91	27.80	32.63	0.1659	0.0267	0.0068	1.0660	95.12	95.07	42.98	24.07	-332.9	-165.3	1.1790
4	-7.08	-2.00	5.11	16.76	27.09	31.15	0.1933	0.0422	0.0104	1.0631	92.08	91.99	46.43	29.67	-365.5	-224.3	1.1706
5	-3.85	0.02	3.44	10.09	26.28	28.23	0.2024	0.0774	0.0194	1.0478	79.70	79.59	52.18	42.08	-433.8	-321.1	1.1535
6	-3.14	0.17	5.11	6.03	26.34	27.14	0.1651	0.0547	0.0131	1.0368	80.32	80.20	53.49	47.46	-456.2	-372.3	1.1400
7	-2.08	0.31	4.29	5.21	26.23	27.07	0.1481	0.0452	0.0103	1.0353	81.90	81.78	54.86	49.65	-477.3	-401.0	1.1386
8	-1.78	0.44	3.65	4.23	25.86	25.93	0.1578	0.0790	0.0187	1.0309	68.27	68.14	56.63	52.41	-503.2	-425.2	1.1335
9	-1.18	1.05	3.43	3.90	25.29	25.56	0.1468	0.0773	0.0166	1.0311	70.35	70.27	57.98	54.08	-518.9	-446.1	1.1319
10	0.65	2.88	6.11	2.93	23.59	23.45	0.1453	0.0757	0.0169	1.0290	66.90	66.79	60.62	57.70	-539.6	-471.0	1.1218

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AI	PO2/PO1	EFF-AD	EFF-P	
INLET	INLET	%	%	SQFT		%	%	
1.0473	1.1519	87.28	87.52	23.05	1.0150	1.0479	84.14	84.21

STATOR 2

RUN N3411, SPEED CODE 50, POINT NO 2																
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	STAGE
1	6.518	7.972	434.5	438.0	362.2	437.9	239.9	3.8	33.3	0.5	0.3862	0.3874	1.1561	1.0562	1.0574	1.0205
2	5.146	5.986	456.7	452.4	400.2	452.4	219.9	-1.9	28.7	-0.2	0.4049	0.4010	1.1699	1.0538	1.0533	1.0198
3	3.938	4.040	452.3	460.3	405.9	440.2	152.4	-6.4	26.1	-0.6	0.4015	0.3905	1.1670	1.0509	1.0554	1.0194
4	2.941	2.827	436.9	421.5	375.5	421.5	185.5	-8.1	25.1	-1.1	0.3878	0.3738	1.1593	1.0485	1.0532	1.0192
5	1.417	1.183	390.5	371.2	361.7	371.1	147.1	-5.7	22.1	-0.9	0.3461	0.3286	1.1359	1.0454	1.0343	1.0165
6	1.042	0.835	367.4	358.2	348.2	358.2	117.9	-6.4	18.7	-0.7	0.3257	0.3174	1.1301	1.0425	1.0278	1.0127
7	0.878	0.712	362.2	341.9	344.2	341.9	112.7	-4.3	18.1	-0.7	0.3210	0.3027	1.1229	1.0424	1.0210	1.0127
8	0.758	0.655	349.4	332.7	329.3	332.7	116.8	-1.9	19.5	-0.3	0.3092	0.2942	1.1191	1.0419	1.0179	1.0128
9	0.566	0.515	345.1	331.2	324.6	331.2	117.4	6.0	19.9	1.0	0.3051	0.2926	1.1188	1.0455	1.0192	1.0125
10	0.267	0.257	320.7	312.2	295.8	311.9	113.9	13.5	20.8	2.5	0.2828	0.2753	1.1115	1.0475	1.0195	1.0123

SL	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-17.52	9.00	32.84	28.57	34.04	0.1052	0.1375	0.0290	0.9867	75.29	75.79	78.29	78.47
2	-15.10	7.80	23.95	31.67	35.48	0.1178	0.2977	0.0220	0.9896	85.31	85.64	75.65	75.84
3	-15.97	7.46	21.45	22.16	34.60	0.1337	0.0941	0.0224	0.9901	88.68	88.91	80.05	80.20
4	-16.56	7.45	25.20	21.35	33.26	0.1455	0.0551	0.0241	0.9907	89.10	89.32	77.66	77.82
5	-19.29	8.18	23.02	28.67	29.23	0.1600	0.467	0.0423	0.9883	81.81	82.13	58.50	58.72
6	-22.65	8.59	19.47	27.61	28.25	0.1250	0.1217	0.0366	0.9914	83.76	84.03	61.99	62.11
7	-23.28	8.83	18.86	27.31	26.91	0.1571	0.156	0.0616	0.9864	79.60	79.93	48.86	49.05
8	-22.71	9.82	19.85	26.08	26.13	0.1604	0.1996	0.0643	0.9875	74.46	74.96	39.70	39.84
9	-24.91	12.30	13.85	25.65	25.97	0.1526	0.1842	0.0632	0.9884	71.79	72.23	43.45	43.61
10	-27.61	15.21	18.52	23.59	24.38	0.1390	0.1710	0.0608	0.9937	64.65	65.18	44.92	45.38

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%			%	%
414.4	108.50	1.0473	1.1393	80.33	80.67	1.0160	0.9890	84.10	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA UNIFORM INLET FLOW Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*1	M*2	V*1	V*2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.460	9.076	281.1	475.3	281.1	288.2	0.0	378.2	0.0	52.5	0.2533	0.4262	261.1	285.6	0.3458	0.2713	383.7	302.7
2	16.047	6.959	283.8	461.3	283.8	214.4	0.0	337.4	0.0	44.7	0.2591	0.4132	292.3	313.0	0.3647	0.2825	406.9	315.4
3	6.653	5.341	285.8	429.6	285.8	318.3	0.0	297.8	0.0	43.6	0.2549	0.3841	327.2	343.3	0.3911	0.2866	433.9	317.8
4	6.282	4.137	285.9	401.9	285.9	306.9	0.0	259.5	0.0	40.1	0.2577	0.3590	359.3	371.9	0.4139	0.2919	459.2	324.6
5	2.239	3.195	285.6	357.1	285.6	289.5	0.0	208.1	0.0	35.8	0.2575	0.3184	431.6	438.6	0.4465	0.3290	517.5	349.0
6	2.864	1.478	285.0	352.9	285.0	287.5	0.0	204.7	0.0	35.4	0.2569	0.3144	446.4	470.8	0.4627	0.3490	546.6	391.8
7	1.542	1.053	284.6	352.0	284.6	286.9	0.0	203.8	0.0	35.4	0.2561	0.3133	488.7	491.3	0.5098	0.3615	565.5	406.1
8	0.982	0.595	284.2	350.3	284.2	287.0	0.0	200.9	0.0	35.0	0.2562	0.3117	518.4	512.4	0.5247	0.3759	584.4	423.4
9	0.373	0.146	283.4	346.8	283.4	284.4	0.0	198.4	0.0	34.9	0.2554	0.3083	534.3	534.3	0.5452	0.3914	604.8	440.2
10	-0.143	-0.241	282.0	341.7	282.0	275.0	0.0	203.0	0.0	34.6	0.2542	0.3034	561.1	561.1	0.5661	0.4009	629.0	451.6
11	-0.211	-0.232	281.0	336.9	281.0	256.6	0.0	208.8	0.0	34.1	0.2532	0.2932	583.8	583.8	0.5839	0.4025	647.9	454.2

SL	INCS	INCH	DEV	TURN	ANOVN-1	ANOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	R*-1	R*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	4.21	9.76	13.10	68.68	26.82	21.60	0.4532	0.1982	0.0444	1.1091	86.79	86.59	42.95	-17.77	-261.1	92.4	1.1091
2	5.13	10.53	13.62	50.45	20.95	23.94	0.4439	0.0470	0.0109	1.1195	96.76	96.73	46.00	-6.45	-292.3	24.4	1.1195
3	5.79	11.07	14.11	40.55	21.09	23.87	0.4717	0.0190	0.0054	1.1171	98.24	98.22	49.00	8.45	-327.2	-44.3	1.1171
4	6.08	11.20	14.50	31.45	21.15	23.76	0.4996	0.0004	0.0001	1.1126	99.98	99.98	51.51	20.07	-359.3	-112.4	1.1126
5	5.57	10.13	10.49	18.20	21.13	22.59	0.4261	0.0131	0.0035	1.1047	98.19	98.15	56.50	38.31	-431.6	-220.9	1.1047
6	5.67	9.65	7.59	15.80	21.09	22.40	0.4191	0.0333	0.0087	1.1048	95.18	95.12	58.58	42.77	-446.4	-266.1	1.1048
7	6.59	9.43	6.35	14.74	21.06	22.45	0.4160	0.0468	0.0122	1.1085	93.06	92.99	59.79	45.04	-468.7	-287.4	1.1085
8	7.17	9.47	5.74	13.55	21.03	22.47	0.4072	0.0544	0.0141	1.1098	91.64	91.50	60.90	47.35	-510.6	-311.6	1.1098
9	7.38	9.62	5.54	12.31	20.98	22.28	0.4012	0.0681	0.0172	1.1101	89.26	89.09	62.06	49.75	-536.3	-336.0	1.1101
10	7.58	9.80	6.16	10.83	20.89	21.51	0.4130	0.1079	0.0266	1.1094	82.96	82.70	63.32	52.49	-561.1	-358.2	1.1094
11	7.40	9.62	9.38	8.70	20.81	20.03	0.4337	0.1558	0.0364	1.1049	75.62	75.28	64.30	55.60	-583.8	-374.7	1.1049

TO/T0	PO/PO	EFF-AD	EFF-P	WCI/AI	PO2/P01	SEFF-A	SEFF-P
INLET	INLET	INLET	INLET	LBM/SEC		TOT-ROTOR	ROTOR
%	%	%	%	%		%	%
1.0331	1.1098	91.30	91.43	20.33		1.0331	1.1098
						91.30	91.43

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/T0	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	11.330	8.005	434.8	257.9	247.5	293.0	357.4	34.1	55.3	10.3	0.3886	0.2641	1.0921	1.0347	1.0921	1.0347
2	7.690	5.608	436.2	321.4	293.6	326.4	322.6	37.0	47.7	9.9	0.3900	0.2944	1.1095	1.0340	1.1095	1.0340
3	5.119	4.210	416.9	324.1	304.2	320.7	285.1	46.6	43.1	8.3	0.3725	0.2440	1.1097	1.0328	1.1097	1.0328
4	3.865	3.449	394.3	313.1	308.6	300.9	251.1	44.8	39.3	8.2	0.3579	0.2781	1.1069	1.0311	1.1069	1.0311
5	2.593	2.643	359.7	296.0	296.0	292.9	204.4	42.3	34.6	8.2	0.3208	0.2521	1.1014	1.0293	1.1014	1.0293
6	2.210	2.303	358.4	299.4	296.7	296.2	201.0	43.1	34.1	8.3	0.3194	0.2659	1.1033	1.0308	1.1033	1.0308
7	1.931	2.019	359.0	302.0	297.5	298.9	200.9	43.6	34.0	8.3	0.3197	0.2682	1.1047	1.0311	1.1047	1.0321
8	1.636	1.707	358.7	303.1	296.7	299.9	196.7	44.2	33.6	8.4	0.3193	0.2690	1.1055	1.0330	1.1055	1.0330
9	1.309	1.356	356.1	302.8	296.9	299.5	196.7	44.7	33.5	8.5	0.3188	0.2686	1.1059	1.0340	1.1059	1.0340
10	0.836	0.889	352.0	300.8	288.5	297.1	201.7	46.8	35.0	8.9	0.3127	0.2645	1.1055	1.0365	1.1055	1.0365
11	0.330	0.347	341.0	282.9	265.9	279.2	206.5	45.7	37.7	9.3	0.3023	0.2501	1.1093	1.0392	1.0993	1.0392

SL	INCS	INCH	DEV	TURN	ANOVN-1	ANOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	2.56	7.27	15.72	44.91	16.83	22.84	0.4581	0.1539	0.0319	0.9848	73.51	73.85	73.51	73.85
2	0.36	5.47	12.31	37.31	22.55	25.86	0.3752	0.0855	0.0190	0.9915	88.74	88.91	88.74	88.91
3	-1.71	3.76	9.62	34.89	23.50	25.29	0.3597	0.0725	0.0174	0.9934	92.20	92.31	92.20	92.31
4	-4.15	1.63	9.02	31.11	23.78	24.47	0.3432	0.0665	0.0170	0.9965	94.66	94.74	94.66	94.74
5	-7.56	-1.16	8.35	26.43	23.00	23.16	0.3088	0.0405	0.0117	0.9972	95.49	95.56	95.49	95.56
6	-8.01	-1.24	8.08	25.84	23.16	23.41	0.3007	0.0452	0.0136	0.9970	92.55	92.67	92.55	92.67
7	-6.16	-1.17	7.95	25.74	23.23	23.40	0.2988	0.0490	0.0156	0.9966	90.07	90.21	90.07	90.21
8	-5.81	-1.62	7.94	25.25	23.33	22.87	0.2578	0.0567	0.0186	0.9961	88.26	88.41	88.26	88.41
9	-5.54	-2.15	8.05	25.04	23.19	23.83	0.2460	0.0567	0.0193	0.9962	86.05	86.05	86.05	86.05
10	-10.12	-2.93	8.55	26.02	22.51	23.40	0.3021	0.0606	0.0213	0.9960	79.83	80.11	79.83	80.11
11	-10.58	-2.85	11.57	28.39	21.71	21.89	0.3454	0.1111	0.0402	0.9932	70.11	70.51	70.11	70.51

NCORR	WCORR	TO/T0	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/P01	SEFF-A	SEFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
RPM	LBM/SEC			%	%			%	%
4182	100.80	1.0331	1.1099	86.57	86.72	1.0331	0.9946	86.57	86.72

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	RUN NO411, SPEED CODE 50, POINT NO 3		M-1	M-2	V'-1	V'-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE		U-1	U-2	M'-1	M'-2	FT/SEC	FT/SEC	
1	0.046	5.005	200.0	456.5	243.4	347.1	52.5	271.3	11.2	36.1	0.2378	0.4037	329.8	345.0	0.3355	0.3313	378.9	376.6
2	0.391	4.504	379.0	451.1	324.5	374.5	54.0	251.4	9.4	33.7	0.2923	0.3991	353.1	348.3	0.3921	0.3471	441.4	392.3
3	4.084	3.439	329.5	435.5	324.4	373.3	44.7	226.3	7.8	30.9	0.2929	0.3853	379.4	390.5	0.4154	0.3416	467.5	408.4
4	3.435	2.329	322.6	413.4	319.7	355.2	43.4	212.0	7.7	30.8	0.2870	0.3650	407.7	415.0	0.4311	0.3618	484.7	409.1
5	0.028	0.342	311.0	372.8	308.1	319.9	42.3	187.4	7.0	30.3	0.2765	0.3272	471.7	473.7	0.4700	0.3789	528.5	429.4
6	0.279	-0.019	313.2	354.5	310.2	314.7	43.0	161.2	7.9	27.1	0.2783	0.3128	494.4	494.9	0.4887	0.4054	547.7	459.4
7	-0.061	-0.253	314.4	347.1	311.3	311.2	43.7	152.0	8.0	26.3	0.2792	0.3061	516.4	516.4	0.5027	0.4216	566.0	478.1
8	-0.198	-0.293	313.7	342.5	310.0	306.5	44.9	132.8	8.2	26.5	0.2779	0.3016	546.7	544.7	0.5234	0.4382	589.8	497.6
9	-0.172	-0.229	309.5	339.7	306.0	303.6	46.6	150.2	8.7	26.5	0.2743	0.2979	567.5	566.3	0.5354	0.4530	604.2	515.0
10	-0.097	-0.127	292.1	318.5	286.5	286.6	45.4	143.0	8.9	26.7	0.2583	0.2796	588.3	587.6	0.5438	0.4634	614.8	527.9

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-6.24	0.74	15.89	31.44	20.67	28.95	0.1064	0.0337	0.0080	1.0626	96.79	96.74	45.77	11.33	-272.4	-74.5	1.1836
2	-6.84	-2.58	8.93	25.24	25.50	24.83	0.2353	0.0917	0.0228	1.0725	88.47	48.35	42.56	17.22	-299.2	-116.9	1.1913
3	-6.55	-0.86	7.41	21.73	25.70	29.53	0.2365	0.0462	0.0117	1.0733	93.12	93.05	45.65	23.92	-334.7	-164.3	1.1901
4	-4.81	0.27	5.14	19.00	25.13	26.59	0.2610	0.0579	0.0119	1.0711	90.72	90.65	48.70	29.70	-364.3	-203.0	1.1840
5	-1.69	2.15	3.19	12.52	24.28	25.81	0.2830	0.1017	0.0256	1.0614	80.45	80.29	54.34	41.83	-429.4	-284.4	1.1703
6	-1.13	2.18	4.24	8.91	24.44	25.49	0.2393	0.0508	0.0162	1.0544	84.12	84.02	55.50	46.59	-451.3	-333.7	1.1643
7	-0.11	3.07	4.02	7.35	24.55	25.12	0.2280	0.0709	0.0170	1.0510	81.44	81.34	56.63	49.38	-472.7	-362.9	1.1618
8	-0.13	2.09	3.20	6.33	24.39	24.70	0.2262	0.0871	0.0208	1.0495	76.42	76.24	58.29	51.96	-501.8	-391.9	1.1607
9	0.11	2.63	3.23	5.68	24.03	24.41	0.2160	0.0827	0.0196	1.0494	74.55	74.39	59.56	53.88	-520.9	-416.1	1.1597
10	4.04	4.27	5.78	4.64	22.57	22.81	0.2070	0.0768	0.0172	1.0485	77.06	75.92	62.01	57.37	-542.9	-444.6	1.1521

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A*	TOT/TOT	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SOFT	ROTOR	%	%	
1.0541	1.1714	85.63	85.96	21.35	1.0207	1.0612	84.59	84.73

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	RUN NO411, SPEED CODE 50, POINT NO 3		M-1	M-2	TOT/	TOT/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE		INLET	INLET	STAGE	STAGE	TOT	TOT
1	7.004	0.444	417.4	376.4	321.3	376.4	266.3	1.8	39.5	0.3	0.3681	0.3311	1.1714	1.0593	1.0719	1.0238	
2	5.152	5.555	430.7	400.4	353.5	400.4	246.0	-0.4	34.7	-0.1	0.3806	0.3532	1.1879	1.0573	1.0696	1.0229	
3	2.894	3.548	427.3	389.1	366.4	389.1	219.7	-3.9	30.9	-0.6	0.3779	0.3433	1.1854	1.0549	1.0691	1.0219	
4	2.966	2.829	413.4	371.8	357.2	371.7	208.2	-6.7	30.2	-1.0	0.3656	0.3279	1.1791	1.0531	1.0667	1.0219	
5	1.351	1.089	375.3	336.3	326.0	336.2	186.5	-8.6	29.5	-1.5	0.3313	0.2963	1.1649	1.0521	1.0565	1.0213	
6	0.964	0.737	350.5	323.6	321.9	323.5	158.0	-8.2	26.1	-1.5	0.3165	0.2851	1.1597	1.0501	1.0501	1.0179	
7	0.761	0.608	350.5	317.9	315.4	313.8	152.9	-8.0	25.9	-1.5	0.3091	0.2763	1.1556	1.0511	1.0454	1.0177	
8	0.580	0.466	344.6	310.2	309.4	310.1	152.2	-7.0	26.2	-1.3	0.3037	0.2727	1.1541	1.0533	1.0436	1.0182	
9	0.384	0.321	340.1	305.9	305.4	308.9	149.7	-1.0	26.1	-0.2	0.2991	0.2713	1.1535	1.0555	1.0439	1.0181	
10	0.150	0.122	320.3	290.7	286.7	290.7	142.8	1.3	26.5	0.3	0.2812	0.2549	1.1467	1.0576	1.0436	1.0177	

SL	INCM	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-11.40	8.79	39.18	25.68	30.15	0.2296	0.1146	0.0042	0.9898	78.07	78.55	84.29	84.45
2	-9.06	7.99	34.80	28.36	32.35	0.1981	0.0297	0.0367	0.9972	88.17	88.45	84.94	85.07
3	-11.15	7.72	31.48	29.46	31.54	0.2128	0.0405	0.0097	0.9962	90.85	91.06	87.92	88.05
4	-11.44	7.51	31.25	28.75	30.17	0.2310	0.0459	0.0116	0.9960	90.82	91.03	95.12	85.27
5	-11.57	7.41	30.91	28.32	27.26	0.2510	0.0559	0.0161	0.9959	85.58	85.89	74.30	74.50
6	-15.23	7.84	27.59	25.56	26.24	0.2360	0.0543	0.0163	0.9964	86.30	86.59	78.82	78.99
7	-15.15	8.10	27.32	25.42	25.40	0.2480	0.0817	0.0256	0.9948	82.65	82.99	72.23	72.36
8	-18.06	8.85	27.46	24.91	25.04	0.2529	0.0912	0.0301	0.9943	78.45	78.89	67.22	67.42
9	-18.68	11.08	26.25	24.54	24.89	0.2441	0.0855	0.0293	0.9948	75.09	75.58	68.20	68.36
10	-21.94	12.98	26.22	22.56	23.34	0.2499	0.0865	0.0309	0.9954	69.32	69.90	69.34	69.49

NCORR	WLCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TOT/TOT	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%	ROTOR	%	STAGE
4182	103.80	1.0541	1.1658	83.00	83.36	1.0202	0.9952	77.71

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	11.092	9.196	260.5	460.4	200.5	258.1	0.0	301.2	0.0	55.8	0.2366	0.4121	262.1	200.6	0.3328	0.2461	369.5	276.9																			
2	9.403	7.102	261.2	453.2	201.2	286.5	0.0	351.2	0.0	50.7	0.2352	0.4054	293.4	314.1	0.3537	0.2506	392.0	288.0																			
3	7.471	5.366	261.7	425.9	201.7	290.9	0.0	311.1	0.0	46.8	0.2356	0.3806	320.4	344.5	0.3781	0.2615	419.9	292.7																			
4	5.061	4.044	261.5	399.9	201.5	290.9	0.0	274.4	0.0	43.2	0.2355	0.3569	360.6	373.2	0.4021	0.2742	465.4	307.3																			
5	3.160	1.789	260.0	354.7	200.0	271.7	0.0	228.1	0.0	40.0	0.2341	0.3158	433.1	439.5	0.4549	0.3065	505.2	344.2																			
6	2.206	1.009	259.1	344.5	199.1	263.2	0.0	225.3	0.0	40.5	0.2333	0.3080	460.1	472.5	0.4817	0.3213	535.0	361.1																			
7	1.638	0.660	258.6	344.0	198.6	261.5	0.0	226.6	0.0	40.9	0.2328	0.3074	490.5	493.0	0.4992	0.3316	554.4	373.3																			
8	1.112	0.192	258.1	344.2	198.1	260.0	0.0	227.7	0.0	41.1	0.2324	0.3073	512.4	514.3	0.5166	0.3430	573.6	387.4																			
9	0.485	-0.178	257.4	343.4	197.4	254.2	0.0	228.6	0.0	41.7	0.2318	0.3044	536.2	536.2	0.5358	0.3549	594.8	400.3																			
10	-0.030	-0.398	256.1	336.2	196.1	244.4	0.0	233.8	0.0	43.7	0.2304	0.2993	563.2	563.2	0.5570	0.3630	618.7	418.1																			
11	-0.128	-0.268	255.2	331.3	195.2	229.5	0.0	238.9	0.0	44.2	0.2298	0.2928	585.9	585.7	0.5753	0.3674	639.0	415.8																			

SL	INCS	INCH	DEV	TURN	AHCV-1	AHCV-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VM*-1	VM*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	4.45	12.00	10.79	65.22	19.39	19.35	0.5089	0.3035	0.0670	1.1031	81.37	81.11	45.19	-20.03	-262.1	94.6	1.1031
2	7.46	12.86	13.72	55.48	19.43	21.81	0.5000	0.1280	0.0724	1.1176	91.52	91.18	48.34	-7.35	-293.4	37.1	1.1176
3	8.26	13.54	12.19	44.94	19.47	22.39	0.5127	0.0606	0.0180	1.1184	94.58	94.49	51.46	6.52	-328.4	-33.4	1.1184
4	8.62	13.74	13.16	35.32	19.45	22.56	0.4963	0.0360	0.0101	1.1196	96.68	96.64	54.05	18.73	-360.6	-98.9	1.1196
5	6.09	12.65	10.04	21.16	19.35	21.24	0.4743	0.0578	0.0154	1.1085	93.06	92.88	59.02	37.06	-433.1	-211.4	1.1085
6	8.13	12.11	8.01	17.85	19.28	20.60	0.4784	0.0927	0.0244	1.1093	88.24	88.05	61.04	43.19	-468.1	-247.2	1.1093
7	9.01	11.85	6.83	16.48	19.25	20.48	0.4794	0.1104	0.0285	1.1115	85.75	85.54	62.23	45.52	-490.5	-266.4	1.1115
8	9.53	11.83	6.08	15.58	19.22	20.43	0.4774	0.1249	0.0319	1.1139	83.59	83.35	63.26	47.69	-512.4	-286.5	1.1139
9	9.60	11.91	6.00	14.15	19.17	20.07	0.4786	0.1451	0.0364	1.1190	80.60	80.30	64.36	50.21	-536.2	-307.6	1.1190
10	9.81	12.03	7.10	12.12	19.08	19.13	0.4913	0.1830	0.0442	1.1194	75.43	75.06	65.54	53.43	-563.2	-329.4	1.1194
11	9.57	11.79	10.20	9.96	19.01	17.95	0.5054	0.2186	0.0502	1.1148	70.70	70.26	66.46	56.50	-585.9	-346.7	1.1148

TO2/TO1	PO2/PO1	EFF-AD	EFF-P	WCI/P1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.0365	1.1130	85.17	85.79	10.65	1.0365	1.1130	85.17	85.79

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2				
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC				
1	11.413	8.285	417.0	243.3	211.2	243.6	360.3	47.8	59.6	11.0	0.3727	0.2196	1.0874	1.0351	1.0874	1.0351	1.0351	1.0351																					
2	8.209	6.448	424.7	284.8	281.5	280.3	334.4	61.0	52.0	12.3	0.3791	0.2541	1.1036	1.0354	1.1036	1.0354	1.0354	1.0354																					
3	5.922	5.063	410.0	297.8	280.7	293.2	298.9	52.4	46.8	10.1	0.3659	0.2641	1.1104	1.0345	1.1104	1.0345	1.0345	1.0345																					
4	4.613	4.253	391.9	291.2	288.0	287.6	265.8	45.9	42.7	9.1	0.3495	0.2583	1.1094	1.0331	1.1094	1.0331	1.0331	1.0331																					
5	3.760	3.475	355.9	271.5	277.8	266.2	222.5	42.5	38.7	9.0	0.3169	0.2408	1.1043	1.0320	1.1043	1.0320	1.0320	1.0320																					
6	3.019	2.183	350.9	271.9	272.9	268.4	220.7	43.3	39.0	9.2	0.3121	0.2409	1.1054	1.0338	1.1054	1.0338	1.0338	1.0338																					
7	2.899	2.852	352.2	277.5	272.9	273.9	222.7	44.3	39.2	9.2	0.3130	0.2457	1.1079	1.0355	1.1079	1.0355	1.0355	1.0355																					
8	2.262	2.388	354.6	284.5	274.3	280.7	224.7	46.0	39.3	9.3	0.3148	0.2518	1.1110	1.0373	1.1110	1.0373	1.0373	1.0373																					
9	1.733	1.814	353.2	284.8	271.1	286.7	226.4	46.2	39.9	9.8	0.3133	0.2518	1.1118	1.0392	1.1118	1.0392	1.0392	1.0392																					
10	1.046	1.093	349.3	280.3	261.0	275.3	232.1	52.7	41.6	10.8	0.3094	0.2474	1.1107	1.0420	1.1107	1.0420	1.0420	1.0420																					
11	0.400	0.423	342.7	263.6	246.2	258.9	236.4	50.0	44.1	10.9	0.3030	0.2322	1.1053	1.0449	1.1053	1.0449	1.0449	1.0449																					

SL	INCS	INCH	DEV	TURN	AHCV-1	AHCV-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	SEFF-A	SEFF-P	SEFF-A	SEFF-P	TO2/TO1
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	TOT-INLET	INLET
1	6.89	11.60	16.37	48.39	16.07	19.11	0.5594	0.1504	0.0311	0.9862	69.29	69.65	69.29	69.65	69.29	69.65	
2	4.70	9.81	16.70	39.77	20.09	22.12	0.4671	0.1211	0.0267	0.9886	80.79	81.06	80.79	81.06	80.79	81.06	
3	1.98	7.45	11.50	36.89	21.72	23.24	0.4191	0.0807	0.0193	0.9920	88.01	88.17	88.01	88.17	88.01	88.17	
4	-0.73	5.05	9.88	33.66	22.39	22.85	0.4027	0.0710	0.0183	0.9941	91.13	91.26	91.13	91.26	91.13	91.26	
5	-3.51	2.94	9.15	29.71	21.71	21.32	0.3854										

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	6.788	5.457	220.0	426.0	215.1	316.8	46.3	204.7	12.1	41.6	0.1944	0.3754	326.0	347.1	0.3118	0.2844	352.0	322.9
2	4.027	4.267	286.4	414.9	280.0	316.2	59.9	266.2	12.0	39.7	0.2537	0.3657	354.4	369.4	0.3660	0.2949	406.4	334.5
3	4.438	3.346	303.4	493.5	299.3	325.4	49.3	230.6	9.3	36.1	0.2691	0.3557	380.8	391.9	0.3961	0.3171	446.6	359.7
4	3.303	2.449	297.9	388.9	294.7	316.9	53.7	225.6	8.4	35.4	0.2644	0.3428	409.1	416.5	0.4167	0.3260	469.5	369.9
5	1.005	0.637	282.6	356.5	279.4	290.4	42.3	206.9	8.6	35.5	0.2506	0.3135	473.4	475.4	0.4554	0.3678	513.0	395.5
6	0.403	0.173	285.9	344.3	282.6	290.1	43.3	188.3	8.7	32.6	0.2533	0.3024	496.1	496.7	0.4730	0.3741	533.7	425.6
7	0.064	-0.074	294.2	337.4	290.7	285.2	45.1	180.3	8.8	32.3	0.2405	0.2962	518.3	518.3	0.4918	0.3883	555.3	442.3
8	0.025	-0.009	294.2	336.5	292.2	284.7	48.7	178.4	9.5	32.2	0.2420	0.2949	548.7	548.7	0.5122	0.4073	579.1	464.7
9	0.070	0.047	291.3	334.3	286.5	282.1	52.6	180.2	10.4	32.6	0.2573	0.2930	568.6	568.6	0.5220	0.4199	591.1	479.8
10	0.042	0.042	275.1	320.0	270.6	271.4	49.7	169.6	10.4	32.0	0.2424	0.2796	590.4	599.7	0.5329	0.4369	604.7	500.1

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	SEFF-P	SEFF-A	M*-1	M*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	0.25	7.20	15.55	41.25	16.96	25.36	0.2646	-0.0194	-0.0044	1.0949	101.41	101.42	52.24	10.99	-279.7	-62.3	1.1916
2	-5.09	1.17	9.59	28.44	22.15	25.68	0.3205	0.3645	0.0160	1.0805	93.23	93.16	46.41	17.87	-294.5	-103.3	1.1954
3	-4.37	1.31	8.63	22.70	23.72	26.43	0.3177	0.0577	0.0145	1.0772	92.58	92.50	47.84	25.14	-331.4	-153.3	1.1946
4	-2.43	2.66	6.46	20.07	23.37	25.86	0.3293	0.0591	0.0150	1.0779	91.81	91.71	51.09	31.92	-365.5	-198.9	1.1949
5	1.02	4.87	4.12	14.29	22.15	23.75	0.3409	0.0630	0.0206	1.0757	86.78	86.64	57.05	42.76	-431.1	-268.4	1.1887
6	1.41	4.72	4.67	11.01	22.38	23.76	0.2876	0.0519	0.0125	1.0707	80.29	80.20	58.03	47.02	-452.8	-311.4	1.1848
7	1.49	3.88	4.48	8.59	23.02	23.32	0.2938	0.0751	0.0178	1.0655	84.61	84.45	58.46	49.84	-473.2	-338.0	1.1838
8	1.29	3.50	3.46	7.48	23.09	23.24	0.2840	0.0826	0.0186	1.0650	87.25	87.07	59.49	52.21	-500.0	-367.3	1.1841
9	1.84	4.06	3.33	7.02	22.59	22.99	0.2741	0.0750	0.0178	1.0646	83.47	83.31	61.00	53.98	-517.0	-388.1	1.1846
10	3.45	5.68	5.55	6.28	21.25	22.06	0.2548	0.0533	0.0125	1.0676	87.02	86.89	63.42	57.14	-540.8	-420.1	1.1797

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	INLET	INLET	%	%	
1.0405	1.1882	83.58	83.97	19.57	1.0231	1.0736	88.70	88.84

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	7.110	8.200	393.4	314.2	276.9	316.2	279.5	2.6	45.1	0.5	0.3461	0.2770	1.1799	1.9619	1.0264	1.0264	1.0259	1.0259
2	5.271	5.728	396.4	337.6	258.7	337.8	260.6	3.2	41.0	0.5	0.3490	0.2944	1.1924	1.0602	1.0777	1.0777	1.0240	1.0240
3	3.984	4.067	395.0	336.4	316.4	336.4	233.8	0.3	36.2	0.0	0.3481	0.2955	1.1945	1.0592	1.0754	1.0754	1.0232	1.0232
4	3.359	2.896	387.5	311.3	318.0	326.3	221.5	-3.6	34.8	-0.6	0.3415	0.2866	1.1922	1.0571	1.0754	1.0754	1.0236	1.0236
5	1.459	1.120	360.8	303.9	297.5	303.9	204.0	-5.6	34.4	-1.1	0.3173	0.2665	1.1855	1.0501	1.0732	1.0732	1.0243	1.0243
6	1.094	0.774	348.5	294.4	256.8	294.3	182.8	-5.6	31.6	-1.1	0.3065	0.2582	1.1822	1.0572	1.0683	1.0683	1.0218	1.0218
7	0.882	0.612	341.3	289.6	290.6	289.6	179.1	-5.5	31.6	-1.1	0.2997	0.2537	1.1805	1.0592	1.0632	1.0632	1.0217	1.0217
8	0.555	0.376	339.6	291.2	288.8	291.1	176.7	-5.3	31.7	-1.0	0.2977	0.2546	1.1812	1.0625	1.0624	1.0624	1.0221	1.0221
9	0.262	0.153	337.5	293.0	285.7	293.0	179.8	0.0	32.2	0.2	0.2954	0.2559	1.1818	1.0654	1.0641	1.0641	1.0223	1.0223
10	0.341	-0.003	322.6	272.5	274.5	272.5	169.4	1.8	31.7	0.4	0.2818	0.2376	1.1744	1.0677	1.0628	1.0628	1.0217	1.0217

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT-INLET	TOT-INLET	TOT-STG	TOT-STG
1	-5.77	8.98	44.62	22.39	25.87	0.3421	0.1229	0.0259	0.9902	78.25	78.76	90.54	90.66	
2	-2.79	8.58	40.47	24.25	27.82	0.2928	0.0309	0.0069	0.9975	85.80	86.14	90.12	90.22	
3	-5.81	8.33	36.20	25.93	27.81	0.2882	0.0215	0.0051	0.9983	89.59	89.84	90.32	90.42	
4	-6.82	7.90	35.47	25.95	27.02	0.3041	0.0298	0.0075	0.9977	90.24	90.48	88.85	88.97	
5	-6.58	8.01	35.50	24.31	25.13	0.3248	0.0329	0.0085	0.9978	85.89	86.72	83.54	84.12	
6	-9.75	8.21	32.71	24.27	24.35	0.3180	0.0338	0.0102	0.9979	85.65	85.99	87.52	87.64	
7	-9.77	8.48	32.72	23.74	23.90	0.3207	0.0350	0.0110	0.9979	82.04	82.46	81.53	81.71	
8	-10.50	9.10	32.78	23.55	23.98	0.3216	0.0423	0.0140	0.9975	78.03	78.54	78.77	78.96	
9	-12.41	11.42	32.02	23.24	24.05	0.3140	0.0412	0.0141	0.9976	74.03	74.55	80.19	80.38	
10	-16.73	13.11	31.30	22.30	22.29	0.3399	0.0839	0.0299	0.9955	69.48	70.16	80.84	81.02	

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%	INLET	INLET	STAGE
4197.	52.50	1.0605	1.1846	82.07	82.50	1.0231	0.9970	84.92

TIP RADIALLY DISTORTED INLET FLOW DATA – BASELINE CONFIGURATION

- **Overall Performance and Stall Summary**
- **Overall Performance and Blade-Element Data**

FAN OVERALL PERFORMANCE – TIP RADIALLY DISTORTED INLET FLOW

	N _{corr} (rpm)	W _{corr} ^a (kg/sec)	W _{corr} ^a (lbm/sec)	Local				Cumulative Fan Alone				
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	
430-10-1												
Rotor 1	8324	97.5	215.08	1.1278	1.4341	84.90	85.65	1.1278	1.4341	84.90	85.65	
Stator 1					0.9762				1.4000	78.94	79.92	
Rotor 2				1.0618	1.1926	83.32	83.74	1.1976	1.6695	79.79	81.19	
Stator 2					0.9589				1.6009	72.81	74.54	
430-10-2												
Rotor 1	8321	97.0	213.85	1.1335	1.4540	84.53	85.33	1.1335	1.4540	84.53	85.33	
Stator 1					0.9781				1.4221	79.28	80.28	
Rotor 2				1.0786	1.2924	96.48	96.62	1.2227	1.8379	85.24	86.44	
Stator 2					0.9878				1.8155	83.37	84.70	
430-10-3												
Rotor 1	8324	95.8	211.24	1.1419	1.4896	84.96	85.78	1.1419	1.4896	84.96	85.78	
Stator 1					0.9798				1.4000	80.37	81.38	
Rotor 2				1.0850	1.3243	98.07	98.14	1.2111	1.9177	86.59	87.77	
Stator 2					0.9898				1.9130	85.12	86.40	
430-90-1												
Rotor 1	7481	91.0	200.77	1.1053	1.3832	92.31	92.66	1.1053	1.3832	92.31	92.76	
Stator 1					0.9797				1.3551	86.21	86.80	
Rotor 2				1.0493	1.1443	79.46	79.85	1.1598	1.5507	83.56	84.54	
Stator 2					0.9635				1.4941	76.07	77.38	
430-90-2												
Rotor 1	7503	88.3	194.87	1.1130	1.3970	88.71	89.24	1.1130	1.3970	88.71	89.24	
Stator 1					0.9812				1.3707	83.44	84.17	
Rotor 2				1.0612	1.2245	97.16	97.24	1.1812	1.6784	88.00	88.84	
Stator 2					0.9895				1.6608	86.08	87.03	
430-90-3												
Rotor 1	7489	84.3	186.00	1.1190	1.4000	84.83	85.54	1.1190	1.4000	84.83	85.54	
Stator 1					0.9826				1.3756	80.20	81.07	
Rotor 2				1.0703	1.2628	97.94	98.01	1.1976	1.7372	86.45	87.46	
Stator 2					0.9909				1.7213	84.90	86.01	
430-63-1												
Rotor 1	5215	63.5	140.15	1.0519	1.1696	88.36	88.62	1.0519	1.1696	88.36	88.62	
Stator 1					0.9914				1.1596	83.41	83.75	
Rotor 2				1.0202	1.0709	97.84	97.85	1.0731	1.2418	87.37	87.75	
Stator 2					0.9818				1.2191	79.73	80.29	
430-63-2												
Rotor 1	5220	60.3	133.08	1.0537	1.1775	89.05	89.30	1.0537	1.1775	89.05	89.30	
Stator 1					0.9914				1.1674	84.24	84.58	
Rotor 2				1.0259	1.0922	98.52	98.54	1.0810	1.2750	88.78	89.17	
Stator 2					0.9912				1.2638	85.45	85.93	
430-63-3												
Rotor 1	5232	56.8	125.25	1.0556	1.1823	88.21	88.50	1.0556	1.1823	88.21	88.50	
Stator 1					0.9904				1.1709	83.01	83.38	
Rotor 2				1.0323	1.1128	95.85	95.91	1.0897	1.3029	87.56	88.02	
Stator 2					0.9946				1.2959	85.72	86.24	

*Airflows corrected to Rotor 2 inlet (station 5)

OVERALL STALL POINT DATA

	W _{corr} (kg/sec)	W _{corr} (lbm/sec)	P ₀ /P ₀
430-63	55.8	123.2	1.293
-90	83.5	184.1	1.722
-10	95.3	210.2	1.917

SPEED CODE	IDENTIFICATION (percent of design speed)
83	83
90	90
100	100

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL		EPI-1		EPI-2		V-1		V-2		VN-1		VN-2		VO-1		VO-2		O-1		O-2		N-1		N-2		U-1		U-2		M-1		M-2		V'-1		V'-2	
KADIAN		KADIAN		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		RADIANT		RADIANT		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.1932	0.1401	247.8	309.0	247.8	227.9	0.0	208.6	0.0	0.7396	0.7700	0.9212	177.3	189.9	0.9448	0.6818	364.7	228.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	0.1693	0.1167	251.7	285.1	251.7	229.1	0.0	173.7	0.0	0.6544	0.7838	0.8446	198.5	208.2	0.9981	0.6775	320.6	228.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.1450	0.0977	253.8	266.9	253.8	219.3	0.0	152.1	0.0	0.6062	0.7909	0.7860	218.0	225.6	1.0426	0.6812	334.5	231.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.1140	0.0717	266.9	229.6	266.9	194.8	0.0	121.5	0.0	0.5581	0.7671	0.6688	261.8	265.7	1.1179	0.7051	359.9	242.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	0.0899	0.0493	232.6	216.0	232.6	182.0	0.0	116.3	0.0	0.5693	0.7179	0.6241	282.9	285.6	1.1304	0.7182	366.3	248.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	0.0788	0.0381	222.8	210.7	222.8	175.6	0.0	116.4	0.0	0.5861	0.6847	0.6063	296.5	298.0	1.1396	0.7268	370.9	252.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0649	0.0248	216.1	209.4	216.1	173.8	0.0	116.9	0.0	0.5925	0.6621	0.6008	309.7	310.8	1.1572	0.7470	377.7	260.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0492	0.0189	209.4	209.4	209.4	170.2	0.0	121.9	0.0	0.6219	0.6398	0.5974	324.1	324.1	1.1792	0.7542	385.9	264.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	0.0255	0.0081	202.0	208.3	202.0	166.9	0.0	124.6	0.0	0.6415	0.6156	0.5914	340.4	340.4	1.2042	0.7745	395.8	272.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0002	0.0007	199.5	204.8	199.5	156.1	0.0	126.4	0.0	0.6811	0.6072	0.5864	354.1	354.0	1.2374	0.7785	406.4	275.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

SL		INCS		INCR		DEV		TURN		RHOVN-1		RHOVN-2		D-FAC		OMEGA-B		LOSS-P		POZ/		EFF-P		EFF-A		B'-1		B'-2		VO'-1		VO'-2		PO/PO			
KADIAN		KADIAN		KADIAN		KADIAN		KADIAN		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
2	0.0893	0.0408	0.7334	0.7054	44.22	46.54	0.4271	0.1679	0.0427	1.4554	89.42	82.73	0.9246	0.9819	-177.3	18.8	1.5384	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0833	0.0388	0.7252	0.5194	44.71	48.75	0.4373	0.1204	0.0329	1.4271	86.32	85.11	0.8707	0.1513	-198.5	-34.5	1.5160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0606	0.0088	0.4263	0.3889	44.93	48.75	0.4438	0.1116	0.0313	1.3999	85.81	85.11	0.8165	0.3375	-210.0	-73.5	1.4986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	0.0744	0.0072	0.1552	0.1791	43.65	44.71	0.4400	0.1224	0.0332	1.3536	81.80	81.01	0.7123	0.3234	-210.0	-73.5	1.4199	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	0.0351	0.0034	0.1359	0.1364	40.44	41.97	0.4340	0.0957	0.0250	1.3872	86.05	85.39	0.8042	0.7499	-282.9	-169.5	1.3890	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	0.0000	0.0000	0.1145	0.1273	36.91	40.29	0.4253	0.0544	0.0138	1.4670	92.63	92.22	0.9626	0.8407	-309.7	-194.0	1.3883	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	0.0045	0.0025	0.999	0.1263	35.50	39.42	0.4363	0.0639	0.0161	1.5081	91.74	91.24	0.9978	0.8715	-324.1	-282.2	1.4086	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	0.0026	0.0014	0.1039	0.1429	34.02	38.67	0.4367	0.0623	0.0154	1.5547	92.23	91.73	1.0354	0.9125	-340.4	-215.8	1.4088	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
11	0.0000	0.0000	0.1634	0.0678	33.52	35.95	0.4501	0.1053	0.0248	1.5484	86.89	86.06	1.0579	0.9700	-354.1	-227.6	1.3923	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

TU/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SR			%	%
1.1278	1.4341	84.9	85.65	211.04	1.1278	1.4341	84.90	85.65

STATOR 1

SL		EPI-1		EPI-2		V-1		V-2		VN-1		VN-2		VO-1		VO-2		O-1		O-2		N-1		N-2		U-1		U-2		M-1		M-2		V'-1		V'-2	
KADIAN		KADIAN		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		RADIANT		RADIANT		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1929	0.1325	279.9	196.8	174.5	193.4	218.8	36.6	0.8964	0.1846	0.8212	0.5587	1.3779	1.1386	1.3063	1.1386	1.1386	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2	0.1242	0.0877	286.3	220.9	205.7	217.8	199.1	36.9	0.7683	0.1670	0.8435	0.6329	1.4852	1.1368	1.4050	1.1368	1.1368	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0762	0.0561	274.0	214.4	215.8	212.5	166.6	28.0	0.6569	0.1308	0.8025	0.6162	1.4795	1.1244	1.3926	1.1244	1.1244	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0528	0.0415	26.1	2.7.7	216.6	206.1	146.9	26.0	0.5998	0.1251	0.7636	0.5974	1.4603	1.1183	1.3716	1.1183	1.1183	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0498	0.0345	229.7	186.4	196.4	184.8	119.1	24.8	0.5448	0.1336	0.6682	0.5344	1.3894	1.1116	1.3286	1.1116	1.1116	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0248	0.0301	218.6	177.7	184.4	175.8	114.2	26.3	0.5497	0.1488	0.6323	0.5073	1.3630	1.1145	1.3581	1.1145	1.1145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0291	0.0291	215.0	175.7	181.7	173.3	115.0	28.6	0.5642	0.1636	0.6195	0.5000	1.3571	1.1200	1.3919	1.1200	1.1200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0244	0.0266	215.6	177.7	182.4	175.2	115.0	29.6	0.5626	0.1672	0.6199	0.5049	1.3633	1.1244	1.4350	1.1244	1.1244	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0183	0.0224	217.5	181.2	181.0	178.4	120.6	30.3	0.5878	0.1681	0.6225	0.5126	1.37																								

ROTOR 2

RUN NO430, SPEED CODE 10, POINT NO 1																		
SL	EP1-1	EP1-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1545	0.1055	176.3	280.9	172.7	232.7	35.5	157.3	0.2016	0.5888	0.4974	0.7900	197.0	209.8	0.4472	0.6709	234.5	238.5
2	0.0219	0.0854	217.1	274.5	214.4	235.3	34.0	141.5	0.1569	0.5388	0.6218	0.7737	214.2	223.4	0.4022	0.7021	200.1	249.1
3	0.0131	0.0731	217.1	258.6	215.5	226.4	26.8	127.0	0.1238	0.5031	0.6253	0.7286	230.1	236.9	0.4531	0.7115	196.3	252.5
4	0.0086	0.0601	212.7	243.3	211.2	216.9	25.1	11.0	0.1105	0.4493	0.6135	0.6854	247.3	251.7	0.4841	0.7298	306.6	259.1
5	0.0067	0.0518	192.6	211.4	191.0	191.8	25.0	9.1	0.1303	0.4348	0.5532	0.5931	286.2	287.4	0.4290	0.7738	323.5	275.9
6	0.0049	0.0478	187.8	204.0	185.8	181.0	27.2	85.2	0.1454	0.4398	0.5371	0.5586	299.9	300.2	0.4437	0.7849	330.0	281.1
7	0.0035	0.0430	187.8	196.5	185.3	177.1	29.2	85.1	0.1565	0.4481	0.5354	0.5468	313.3	313.3	0.4600	0.8039	339.1	288.0
8	0.0027	0.0415	191.6	198.8	189.1	180.7	30.7	82.7	0.1621	0.4291	0.5431	0.5500	331.7	330.4	1.0071	0.8484	355.2	306.6
9	0.0019	0.0396	190.8	195.6	187.8	174.1	31.0	89.1	0.1793	0.4730	0.5386	0.5370	344.3	343.5	1.0236	0.8464	362.6	308.3
10	0.0014	0.0375	181.2	179.1	178.0	154.6	34.1	90.3	0.1894	0.5298	0.5083	0.4871	356.9	356.5	1.0339	0.8365	368.6	307.6

SL	INCS	INCN	LEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1583	0.0369	0.2987	0.2500	43.36	55.73	0.1309	0.0807	0.0192	1.2767	91.97	91.68	0.7491	0.2191	-161.5	-52.4	1.7669
2	0.1905	0.0902	0.1885	0.2865	52.14	58.49	0.2147	0.1725	0.0426	1.2096	75.88	75.22	0.6976	0.3331	-180.2	-81.9	1.7998
3	0.1551	0.0950	0.1896	0.2983	52.36	57.68	0.2409	0.1632	0.0407	1.1987	74.40	73.73	0.7561	0.4578	-203.3	-111.9	1.7687
4	0.1231	0.0963	0.1492	0.2332	51.73	56.36	0.2371	0.1150	0.0285	1.1965	79.63	79.11	0.8110	0.5778	-222.2	-141.6	1.7350
5	0.0934	0.0921	0.1277	0.1375	45.64	53.71	0.2146	0.0249	0.0063	1.2014	94.12	93.95	0.9394	0.8021	-261.1	-198.3	1.6501
6	0.0650	0.0922	0.1321	0.1016	43.78	47.64	0.2106	0.0259	0.0059	1.1878	93.83	93.67	0.9728	0.8712	-272.7	-215.0	1.6163
7	0.0411	0.0906	0.1191	0.0820	43.88	46.43	0.2103	0.0414	0.0092	1.1791	89.75	89.50	0.9928	0.9109	-284.1	-228.2	1.6050
8	0.0311	0.0287	0.0893	0.0691	44.18	46.94	0.1929	0.0364	0.0083	1.1730	90.15	89.92	1.0094	0.9403	-300.7	-247.7	1.6122
9	0.0259	0.0329	0.0886	0.0560	47.65	44.38	0.2109	0.0831	0.0189	1.1642	78.68	78.22	1.0265	0.9706	-310.2	-254.4	1.6081
10	0.0222	0.0392	0.1438	0.0227	40.99	38.89	0.2293	0.1319	0.0276	1.1470	67.05	66.41	1.0669	1.0442	-322.8	-265.9	1.5488

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SBM			%	%
1.1976	1.6695	79.79	81.16	103.13	1.0618	1.1926	83.32	83.74

STATOR 2

RUN NO430, SPEED CODE 10, POINT NO 1																
SL	EP1-1	EP1-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	T02/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01
1	0.1277	0.1401	248.4	243.3	194.5	245.2	154.5	-5.6	0.6676	0.0227	0.6895	0.6740	1.6774	1.2280	1.2104	1.0786
2	0.0993	0.0999	234.4	245.3	213.5	245.1	138.4	-10.5	0.5736	0.0426	0.7111	0.6833	1.7101	1.2174	1.1496	1.0741
3	0.0744	0.0762	246.5	232.3	214.0	232.2	122.4	-7.2	0.5190	0.0308	0.6913	0.6481	1.6713	1.2037	1.1331	1.0718
4	0.0556	0.0580	237.6	226.9	211.5	226.6	108.2	-5.9	0.4726	0.0267	0.6677	0.6354	1.6636	1.1911	1.1474	1.0644
5	0.0346	0.0331	214.4	200.4	194.5	200.1	87.8	-11.3	0.4242	0.0562	0.5990	0.5601	1.5820	1.1754	1.1515	1.0573
6	0.0289	0.0277	203.6	194.6	185.4	194.6	84.3	-1.6	0.4268	0.0081	0.5692	0.5427	1.5657	1.1768	1.1518	1.0540
7	0.0231	0.0217	188.8	182.1	188.7	184.5	3.3	0.4343	0.0175	0.5594	0.5243	1.5484	1.1815	1.1379	1.0539	
8	0.1800	0.0106	203.3	168.7	185.9	188.5	82.4	7.6	0.4174	0.0401	0.5633	0.5206	1.5480	1.1964	1.1265	1.0517
9	0.1419	0.0119	200.4	187.2	179.6	186.9	88.8	17.6	0.4593	0.0564	0.5510	0.5129	1.5433	1.2116	1.1218	1.0565
10	0.0272	0.0071	184.4	172.7	161.0	172.6	90.4	7.1	0.5118	0.0414	0.5028	0.4690	1.5016	1.2239	1.1114	1.0600

SL	INCR	LEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	0.0221	0.1258	0.6904	44.80	59.69	0.1549	0.1872	0.0395	0.9496	71.14	71.90
2	0.0191	0.0976	0.6182	55.34	61.47	0.1660	0.1726	0.0388	0.9500	56.69	55.56
3	0.0151	0.1138	0.5498	55.85	58.85	0.1816	0.1990	0.0474	0.9454	50.65	51.51
4	0.0245	0.1229	0.4488	55.55	58.26	0.1657	0.1590	0.0402	0.9589	60.30	61.06
5	0.0308	0.1020	0.4804	51.24	51.64	0.1966	0.1929	0.0355	0.9583	71.66	72.23
6	0.0354	0.1541	0.4349	48.51	50.11	0.1718	0.1543	0.0464	0.9695	76.23	76.71
7	0.0385	0.1842	0.4164	47.44	48.31	0.1860	0.1836	0.0573	0.9649	69.60	70.15
8	0.0319	0.2171	0.3773	47.93	47.73	0.1926	0.2052	0.0678	0.9603	66.94	67.50
9	0.0324	0.2530	0.4029	45.66	46.75	0.2033	0.1974	0.0676	0.9629	59.03	59.69
10	0.0332	0.2635	0.4704	40.19	42.40	0.2277	0.1972	0.0701	0.9684	50.93	51.66

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
871.71	97.48	1.1976	1.6695	72.81	74.54	1.0618	0.9589	83.08

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	ERS1-1	EPS1-2	V-1	V-2	W-1	W-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	N1-1	N1-2	V1-1	V1-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2034	0.1684	248.0	310.4	248.0	211.2	0.0	227.8	0.0	0.8213	0.7700	0.9270	158.3	173.2	0.9145	0.6510	294.3	210.1
2	0.1882	0.1388	249.4	305.1	249.4	224.9	0.0	209.3	0.0	0.7543	0.7757	0.9073	177.3	189.8	0.9517	0.6626	306.0	222.0
3	0.1641	0.1155	252.0	283.2	252.0	222.7	0.0	175.0	0.0	0.6455	0.7844	0.8377	198.4	208.1	0.9984	0.6658	328.7	225.1
4	0.1414	0.0966	252.9	265.6	252.9	215.9	0.0	154.7	0.0	0.6213	0.7877	0.7810	217.9	225.5	1.0398	0.6682	333.8	227.2
5	0.1139	0.0712	244.7	232.0	244.7	193.4	0.0	128.2	0.0	0.5857	0.7894	0.6737	241.7	245.4	1.1110	0.6888	358.3	237.2
6	0.0922	0.0520	229.4	218.4	229.4	179.9	0.0	124.2	0.0	0.6047	0.7875	0.6298	282.8	285.5	1.1220	0.6943	344.3	241.6
7	0.0432	0.0579	219.2	213.4	219.2	173.7	0.0	124.2	0.0	0.6215	0.6724	0.6127	296.3	297.9	1.1308	0.7047	348.4	245.8
8	0.0697	0.0492	212.4	212.2	212.4	172.1	0.0	124.1	0.0	0.6255	0.6498	0.6069	309.4	310.7	1.1408	0.7240	375.5	253.8
9	0.0534	0.0382	205.7	212.2	205.7	167.4	0.0	130.5	0.0	0.6425	0.6278	0.6034	324.0	324.0	1.1712	0.7275	343.8	255.9
10	0.0370	0.0210	198.3	211.1	198.3	163.6	0.0	133.4	0.0	0.6843	0.6042	0.5969	340.3	340.3	1.1987	0.7458	394.0	263.7
11	0.0113	0.0073	196.1	205.7	196.1	154.5	0.0	135.7	0.0	0.7207	0.5941	0.5782	354.0	353.9	1.2304	0.7515	404.7	267.3

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/P01	SEFF-P	SEFF-A	B1-1	B1-2	V01-1	V01-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	TOT	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1067	0.0099	0.2858	0.8216	44.51	40.79	0.4474	0.3000	0.0084	1.3757	71.00	69.68	0.5674	0.2522	-150.3	54.6	1.4503
2	0.0933	0.0010	0.2278	0.7677	44.70	46.12	0.4494	0.1719	0.0437	1.4539	83.15	82.24	0.6201	0.0875	-177.3	19.5	1.3373
3	0.0844	0.0077	0.2462	0.5222	45.03	48.85	0.4498	0.1131	0.0310	1.4364	87.27	86.61	0.4496	0.1474	-190.4	-33.1	1.3244
4	0.0794	0.0100	0.2199	0.3966	45.16	48.79	0.4565	0.1085	0.0305	1.4112	86.52	85.84	0.7135	0.3178	-217.9	-70.9	1.3007
5	0.0681	0.0114	0.1325	0.2327	43.61	45.09	0.4580	0.1292	0.0355	1.3752	81.86	81.02	0.8200	0.6100	-261.7	-137.4	1.4390
6	0.0327	0.0368	0.1177	0.1589	40.45	42.12	0.4575	0.1085	0.0288	1.4114	85.22	84.48	0.8906	0.7317	-282.8	-161.3	1.4136
7	0.0871	0.0567	0.1106	0.1496	38.24	40.76	0.4564	0.0892	0.0232	1.4504	86.31	87.69	0.9355	0.7868	-296.3	-173.7	1.4095
8	0.328	0.0730	0.1502	0.1442	36.80	40.35	0.4467	0.0615	0.0158	1.4968	92.20	91.74	0.9706	0.8264	-309.4	-186.6	1.4170
9	0.0513	0.0904	0.0865	0.1475	35.40	39.38	0.4440	0.0403	0.0206	1.5384	90.29	89.68	1.0057	0.8582	-324.0	-193.5	1.4286
10	0.171	0.1088	0.0933	0.1416	33.95	38.51	0.4461	0.0822	0.0286	1.5852	90.39	89.75	1.0428	0.9018	-340.3	-206.8	1.4378
11	0.0724	0.1137	0.1479	0.1105	33.45	36.25	0.4783	0.1261	0.0289	1.5876	86.02	85.09	1.0450	0.9545	-354.0	-218.2	1.4290

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/A1	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.1335	1.4540	84.53	85.33	210.43	1.1335	1.4540	84.53	85.33

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	W-1	W-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	INLET	INLET	STAGE
1	0.1959	0.1375	213.3	184.3	184.4	180.7	215.3	34.2	0.9062	0.1957	0.8003	0.5217	1.3762	1.1363	1.3035	1.1363	
2	0.1293	0.0926	201.3	209.1	198.3	205.9	199.8	36.9	0.7879	0.1763	0.8267	0.5969	1.4780	1.1372	1.3060	1.1372	
3	0.0823	0.0646	269.7	196.6	210.9	205.0	168.1	25.9	0.6727	0.1256	0.7924	0.5921	1.4878	1.1259	1.4019	1.1259	
4	0.0587	0.0499	257.8	200.8	210.1	199.2	149.4	25.3	0.6180	0.1263	0.7554	0.5757	1.4729	1.1205	1.3851	1.1205	
5	0.0369	0.0386	231.6	183.0	194.7	181.3	125.4	24.5	0.5724	0.1345	0.6723	0.5224	1.4167	1.1175	1.3502	1.1175	
6	0.0329	0.0366	220.9	175.0	184.3	173.0	121.7	26.7	0.5853	0.1533	0.6372	0.4977	1.3940	1.1217	1.3450	1.1217	
7	0.0300	0.0330	217.7	173.4	179.7	171.0	122.9	28.7	0.6000	0.1661	0.6254	0.4913	1.3894	1.1281	1.4227	1.1281	
8	0.0264	0.0302	218.2	175.2	181.0	172.5	121.8	30.4	0.5921	0.1742	0.6258	0.4958	1.3959	1.1311	1.4490	1.1311	
9	0.0216	0.0245	220.4	178.9	178.7	176.1	129.0	31.7	0.6250	0.1780	0.6286	0.5037	1.4056	1.1451	1.5104	1.1451	
10	0.0124	0.0144	221.4	181.3	177.5	177.7	132.4	35.9	0.6406	0.1993	0.6287	0.5081	1.4121	1.1560	1.5557	1.1560	
11	0.0043	0.0052	216.8	173.6	169.3	169.5	135.4	34.7	0.6748	0.2019	0.6117	0.4816	1.3885	1.1459	1.5426	1.1459	

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/P01	SEFF-P	SEFF-A	B1-1	B1-2	V01-1	V01-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	TOT	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0135	0.0088	0.2895	0.7165	35.76	43.13	0.4601	0.1470	0.0304	0.9493							57.74
2	0.0380	0.0512	0.2190	0.6116	43.71	50.69	0.3847	0.1020	0.0227	0.9631							73.23
3	0.1101	0.1146	0.1495	0.5470	47.81	51.46	0.3590	0.0709	0.0171	0.9760							80.51
4	0.1040	0.0398	0.1663	0.4917	48.35	50.15	0.3433	0.0592	0.0152	0.9814							80.96
5	0.1040	0.0521	0.1369	0.4379	45.49	45.29	0.3372	0.0644	0.0187	0.9832							76.23
6	0.1521	0.0338	0.1497	0.4301	43.02	42.87	0.3408	0.0616	0.0189	0.9852							80.18
7	0.1505	0.0146	0.1599	0.4339	41.63	42.14	0.3422	0.0589	0.0186	0.9863							82.77
8	0.1487	0.0232	0.1666	0.4179	42.23	42.49	0.3341	0.0615	0.0201	0.9857							88.65
9	0.1267	0.0223	0.1733	0.4470	41.45	42.98	0.3386	0.0655	0.0221	0.9847							86.17
10	0.1063	0.0138	0.1994	0.4413	41.10	43.06	0.3363	0.0790	0.0276	0.9816							86.30
11	0.1075	0.0327	0.2415	0.4729	38.98	40.55	0.3724	0.1272	0.0457	0.9716							79.47

MCI/R	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
M/SEC			%	%			%	%
871.34	1.1335	1.4221	79.28	80.28	1.1335	0.9781	79.28	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1524	0.1047	163.3	253.3	159.7	199.6	35.2	161.3	0.2154	0.6833	0.4603	0.7048	197.0	209.7	0.6399	0.5603	227.3	201.5
2	0.1186	0.0863	200.4	250.0	203.3	209.4	34.1	146.3	0.1654	0.5208	0.3885	0.6976	214.1	223.2	0.7749	0.6054	271.8	217.4
3	0.1013	0.0749	108.7	241.0	207.2	201.1	25.1	133.9	0.1207	0.3853	0.3987	0.6730	230.1	236.8	0.8360	0.6291	291.4	229.8
4	0.0974	0.0630	200.4	224.9	204.0	193.0	24.0	123.6	0.1199	0.3674	0.3902	0.6400	247.2	251.6	0.8674	0.6466	301.9	232.3
5	0.0956	0.0537	189.3	209.5	187.6	176.8	23.1	114.3	0.1331	0.3575	0.3812	0.5771	286.0	287.3	0.9189	0.6910	321.4	250.2
6	0.0819	0.0493	184.3	197.7	182.8	165.3	27.4	108.3	0.1488	0.3800	0.3265	0.5441	299.8	306.1	0.9341	0.6970	328.0	259.2
7	0.0808	0.0421	184.3	196.1	182.1	156.7	29.8	112.9	0.1621	0.4245	0.3247	0.5288	313.2	313.2	0.9578	0.6942	336.8	254.3
8	0.0823	0.0310	189.4	196.4	186.7	162.1	32.3	110.9	0.1715	0.5997	0.3345	0.5338	331.5	336.3	0.9949	0.7416	352.4	272.8
9	0.0804	0.0219	190.1	197.7	186.7	159.4	35.7	116.7	0.1887	0.6313	0.3341	0.5340	344.1	343.4	1.0130	0.7467	360.4	277.2
10	0.0802	0.0064	182.0	190.3	178.7	152.5	34.5	113.9	0.1905	0.6416	0.3080	0.5106	356.8	356.3	1.0286	0.7682	368.3	286.4

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
	RADIAN	RADIAN	RADIAN							P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1186	0.0828	0.3394	0.3490	39.23	52.34	0.2998	0.0872	-0.0204	1.3435	107.44	107.77	0.7088	0.2398	-161.8	-48.4	1.8316
2	0.1744	0.0621	0.2150	0.3031	50.71	56.15	0.3118	0.0584	0.0143	1.2735	92.70	92.44	0.7227	0.3596	-180.0	-77.0	1.8933
3	0.1317	0.0327	0.1834	0.3078	51.76	56.82	0.2300	0.0685	0.0170	1.2757	90.72	90.39	0.7796	0.4716	-204.9	-102.9	1.8944
4	0.1046	0.0159	0.1247	0.4461	50.72	55.74	0.3279	0.0356	0.0088	1.2803	94.81	94.62	0.8294	0.5833	-222.0	-128.0	1.8768
5	0.0803	0.0373	0.1114	0.4622	45.96	51.74	0.3112	0.0312	-0.0075	1.3082	105.06	105.27	0.9476	0.7854	-240.9	-176.9	1.8369
6	0.0884	0.0443	0.1202	0.4448	44.16	48.16	0.3153	0.0170	-0.0039	1.2963	102.88	102.99	0.9799	0.8593	-272.4	-191.8	1.8033
7	0.0859	0.0475	0.1151	0.4928	44.24	45.33	0.3362	0.0374	0.0085	1.2866	93.70	93.53	0.9997	0.9649	-283.4	-206.2	1.7924
8	0.0867	0.0321	0.0835	0.4783	44.85	46.48	0.3115	0.0273	0.0063	1.2861	95.14	94.96	1.0128	0.9345	-299.2	-219.5	1.8091
9	0.0861	0.0227	0.0733	0.4691	44.57	45.37	0.3207	0.0537	0.0124	1.2882	90.66	90.32	1.0264	0.9572	-308.5	-226.7	1.8175
10	0.0874	0.0068	0.1068	0.4553	42.16	42.97	0.3121	0.0469	0.0104	1.2953	91.78	91.47	1.0645	1.0092	-322.3	-242.4	1.7963

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	PO2/PO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			STAGE	STAGE
		\$	\$	SUM			\$	\$
1.2227	1.8379	85.24	86.44	179.69	1.0786	1.2924	96.46	96.62

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE
1	0.1225	0.1465	226.7	182.7	162.3	182.7	158.3	2.6	0.7695	0.0161	0.6240	0.4962	1.7912	1.2289	1.3006	1.0815
2	0.0913	0.0990	233.8	197.5	184.7	197.5	143.4	0.2	0.6384	0.0009	0.6469	0.5401	1.8625	1.2234	1.2527	1.0772
3	0.0684	0.0754	232.0	198.5	191.2	198.4	131.3	-2.9	0.6010	-0.0144	0.6439	0.5449	1.8815	1.2144	1.2668	1.0796
4	0.0516	0.0502	225.4	190.0	189.8	189.9	121.5	-5.6	0.5688	-0.0294	0.6264	0.5223	1.8605	1.2063	1.2490	1.0772
5	0.0326	0.0247	210.2	172.6	179.6	172.6	106.8	-4.6	0.5445	-0.0265	0.5820	0.4729	1.8128	1.2030	1.2903	1.0757
6	0.0291	0.0257	200.6	164.1	169.6	163.9	107.1	-6.9	0.5635	-0.0420	0.5528	0.4476	1.7886	1.2074	1.2852	1.0746
7	0.0451	0.0220	196.9	160.0	161.9	160.0	112.0	-2.3	0.6053	-0.0142	0.5398	0.4346	1.7788	1.2158	1.2775	1.0792
8	0.0167	0.0146	208.9	165.0	167.9	165.0	110.3	-1.4	0.5814	-0.0087	0.5468	0.4449	1.7941	1.2354	1.2757	1.0781
9	0.0099	0.0064	202.6	166.2	165.8	166.1	116.3	4.0	0.6118	0.0240	0.5478	0.4452	1.7966	1.2519	1.2727	1.0828
10	0.0052	0.0027	195.5	157.7	159.0	157.6	113.8	3.1	0.6210	0.0198	0.5253	0.4195	1.7708	1.2634	1.2767	1.0836

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN						P01	TOT-STG	TOT-STG
1	0.1381	0.1627	0.7554	45.60	53.13	0.3365	0.1402	0.0296	0.9676	95.48	95.64
2	0.1062	0.1413	0.6575	52.68	58.73	0.2916	0.0663	0.0149	0.9837	85.97	86.42
3	0.1330	0.1382	0.6155	55.00	59.89	0.2813	0.0285	0.0668	0.9931	87.69	88.10
4	0.1510	0.1196	0.5982	55.00	57.72	0.2986	0.0378	0.0095	0.9913	91.07	91.37
5	0.1700	0.1318	0.5709	52.44	52.45	0.3948	0.0659	0.0190	0.9865	99.59	99.61
6	0.1506	0.1202	0.6055	49.14	49.53	0.3548	0.0946	0.0149	0.9906	99.39	99.42
7	0.1176	0.1325	0.6195	48.59	48.82	0.3679	0.0412	0.0129	0.9926	91.32	91.62
8	0.1358	0.1683	0.5902	47.82	48.92	0.3612	0.0439	0.0145	0.9919	92.82	92.30
9	0.1699	0.2206	0.5877	46.81	48.88	0.3706	0.0643	0.0221	0.9881	85.87	86.35
10	0.2240	0.2419	0.6012	44.49	45.60	0.3955	0.0835	0.0297	0.9857	86.17	86.65

NCURP	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
KG/SEC	KG/SEC			\$	\$			\$	\$
871.36	97.0	1.2227	1.8155	83.37	84.70	1.0786	0.9878	91.71	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

RUN NO430, SPEED CODE 10, POINT NO 3

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V1-1	V1-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2043	0.1884	239.4	191.2	239.4	190.0	0.0	212.7	C.0	0.8166	0.7411	0.8643	198.4	173.2	0.8886	0.6020	287.1	202.9
2	0.1895	0.1358	241.6	240.8	241.6	207.4	0.0	213.9	C.C	0.3755	0.7684	0.8601	177.8	189.8	0.9285	0.6167	299.7	207.8
3	0.1652	0.1173	245.5	279.4	245.5	217.6	0.0	135.4	C.C	0.4378	0.7619	0.8249	194.9	208.2	0.9799	0.6495	315.7	220.0
4	0.1413	0.0570	247.7	263.6	247.7	212.2	0.0	136.3	C.C	0.4344	0.7658	0.7740	218.0	225.6	1.0259	0.6559	330.0	223.3
5	0.1231	0.0370	241.5	234.8	241.5	190.0	0.0	137.9	C.0	0.6284	0.7483	0.6794	261.8	265.7	1.1036	0.6625	356.2	278.9
6	0.0568	0.0606	225.6	273.8	225.6	177.5	0.0	136.5	C.C	0.6550	0.6949	0.6424	282.9	285.6	1.1139	0.6661	362.0	232.0
7	0.0804	0.0539	214.8	219.0	214.8	171.9	0.0	139.6	C.0	0.6685	0.6578	0.6261	296.4	298.0	1.1211	0.6761	366.1	236.9
8	0.0660	0.0431	202.5	217.2	202.5	148.7	0.0	136.8	C.C	0.6816	0.6335	0.6185	309.7	310.8	1.1364	0.6902	372.8	242.4
9	0.0494	0.0307	200.1	216.9	200.1	161.2	0.0	145.2	C.0	0.7335	0.6052	0.6131	324.1	324.1	1.1598	0.6806	380.9	240.8
10	0.0274	0.0150	192.1	215.3	192.1	155.0	0.0	149.5	C.C	0.7675	0.5823	0.6043	340.4	340.4	1.1868	0.6903	390.7	245.9
11	0.0056	0.0043	189.2	209.9	189.2	145.0	0.0	151.7	C.C	0.8275	0.5738	0.5857	354.1	354.0	1.2177	0.6945	401.5	248.9

SL	INCS	IACP	DEV	TLFA	PHCVN-1	PHCVN-2	D-FAC	MEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B'-1	B'-2	V0'-1	V0'-2	PC/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TCT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0903	0.0065	0.3632	0.7806	43.84	39.90	0.4734	0.2940	0.0678	1.3476	71.14	69.91	0.5858	-0.1948	-156.4	39.4	1.4122
2	0.0777	0.0166	0.2477	0.7033	44.16	44.30	0.4821	0.1825	0.0465	1.4360	82.35	81.42	0.6357	-0.0676	-177.3	14.1	1.5082
3	0.0714	0.0208	0.2485	0.5330	44.72	49.23	0.4959	0.0775	0.0213	1.4636	91.63	91.14	0.6827	0.1497	-198.5	-32.8	1.5463
4	0.0690	0.0204	0.2182	0.4086	45.05	49.46	0.4630	0.0759	0.0214	1.4419	90.95	90.47	0.7239	0.3153	-218.0	-69.3	1.5301
5	0.0614	0.0182	0.1068	0.2352	43.80	45.51	0.4876	0.1300	0.0364	1.4147	83.13	82.28	0.8275	0.5924	-261.8	-127.7	1.4045
6	0.0246	0.0449	0.0660	0.1587	40.50	42.73	0.4929	0.1116	0.0304	1.4631	86.20	85.44	0.8587	0.7000	-282.9	-149.4	1.4682
7	0.0164	0.0449	0.0819	0.1880	38.15	41.52	0.4896	0.0662	0.0231	1.5072	89.70	89.10	0.9452	0.7573	-296.4	-162.3	1.4658
8	0.0437	0.0839	0.0751	0.1803	36.63	40.87	0.4867	0.0692	0.0183	1.5540	92.10	91.50	0.9815	0.8012	-309.7	-174.0	1.4731
9	0.0640	0.1030	0.0661	0.1805	35.12	38.88	0.5154	0.1036	0.0272	1.5957	88.64	87.87	1.0183	0.8378	-324.1	-178.9	1.4825
10	0.0844	0.1232	0.0804	0.1682	33.55	37.35	0.5248	0.1186	0.0304	1.6413	87.45	86.55	1.0572	0.8890	-340.4	-190.9	1.4911
11	0.0812	0.1259	0.1421	0.1315	32.58	34.87	0.5370	0.1565	0.0380	1.6450	83.55	82.36	1.0802	0.9487	-354.1	-202.3	1.4835

IC/IC	FO/PC	EFF-AD	EFF-P	W1/A1	IC2/TO1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			INLET	INLET
S	S	S	S	SON			S	S
1.1419	1.4856	84.96	85.78	207.87	1.1419	1.4856	84.96	85.78

STATOR 1

RUN NO430, SPEED CODE 10, POINT NO 3

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	M-1	M-2	PC/PO	TO/TO	PO/PO	TQ2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TQ1
1	0.2633	0.1482	251.1	194.2	150.6	152.8	201.0	32.4	0.5275	0.7082	0.7315	0.4408	1.3555	1.1273	1.2935	1.1273
2	0.1435	0.1145	263.3	181.1	178.9	177.0	153.2	38.4	0.8241	0.2124	0.7689	0.9133	1.4390	1.1321	1.3714	1.1323
3	0.1011	0.0807	263.1	196.4	201.4	193.5	169.3	33.9	0.6596	0.1735	0.7705	0.5605	1.5043	1.1276	1.4251	1.1276
4	0.0774	0.0703	254.9	194.7	205.0	192.8	151.4	27.0	0.6367	0.1391	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
5	0.0523	0.0534	234.5	176.7	192.2	178.0	134.3	25.0	0.6102	0.1397	0.6789	0.5108	1.4662	1.1255	1.3864	1.1255
6	0.0460	0.0486	226.7	173.6	183.7	171.5	132.8	26.9	0.6263	0.1555	0.6519	0.4910	1.4501	1.1322	1.4300	1.1322
7	0.0418	0.0449	223.5	171.7	178.8	169.2	136.8	29.3	0.6465	0.1716	0.6410	0.4837	1.4459	1.1396	1.4715	1.1396
8	0.0374	0.0401	223.9	172.1	180.1	169.7	139.0	31.7	0.6366	0.1857	0.6357	0.4845	1.4497	1.1419	1.5202	1.1419
9	0.0308	0.0332	225.8	173.6	174.8	172.4	143.0	33.4	0.6857	0.1917	0.6406	0.4905	1.4550	1.1601	1.5633	1.1601
10	0.0188	0.0200	224.6	176.3	171.5	172.4	148.0	36.5	0.7121	0.2105	0.6389	0.4896	1.4614	1.1740	1.6065	1.1740
11	0.0074	0.0079	221.9	168.3	162.3	164.5	151.4	35.8	0.7506	0.2130	0.6218	0.4641	1.4493	1.1855	1.5960	1.1855

SL	INCS	IACP	DEV	TLFA	PHCVN-1	PHCVN-2	D-FAC	MEGA-B	LOSS-P	PO2/	REFF-A	REFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0678	0.0401	0.3020	0.7193	33.13	37.87	0.5159	0.1263	0.0281	0.9621	59.95	61.37
2	0.0518	0.0375	0.2955	0.6113	40.44	44.86	0.4405	0.1183	0.0261	0.9618	71.36	72.40
3	0.0437	0.0323	0.1673	0.5461	47.18	50.23	0.3784	0.0331	0.0175	0.9762	83.61	84.40
4	0.0320	0.0212	0.1532	0.4575	48.75	50.52	0.3830	0.0537	0.0137	0.9834	86.36	87.00
5	0.0276	0.0143	0.1421	0.4705	46.18	46.30	0.3707	0.0533	0.0160	0.9853	77.97	78.96
6	0.0196	0.0090	0.1519	0.4708	44.05	44.28	0.3790	0.0550	0.0169	0.9863	81.42	82.33
7	0.0400	0.0319	0.1655	0.4749	42.73	43.41	0.3837	0.0548	0.0173	0.9887	83.57	84.44
8	0.0467	0.0212	0.1716	0.4514	43.13	43.43	0.3771	0.0583	0.0190	0.9860	89.73	90.33
9	0.0461	0.0630	0.1640	0.4540	41.51	43.70	0.3866	0.0557	0.0201	0.9856	83.57	84.95
10	0.0348	0.0537	0.1510	0.5012	40.54	43.29	0.3940	0.0841	0.0300	0.9793	85.36	84.41
11	0.0047	0.0431	0.2527	0.5376	38.24	40.16	0.4332	0.1311	0.0465	0.9699	77.02	78.47

IC/IC	FL/FC	EFF-AD	EFF-P	TO2/TO1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET			STAGE	S
W1/SFC	S	S	S			S	S
0.7168	1.1419	1.4856	80.37	81.08	1.1419	0.9768	80.37

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	VB-1	VB-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RACIAN	RACIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1004	0.1703	136.3	238.2	132.0	165.5	31.0	171.3	0.2322	0.7543	0.3829	0.6583	197.0	209.8	0.5955	0.4695	212.0	168.9
2	0.1617	0.2768	180.1	296.4	176.0	216.8	37.2	156.9	0.2672	0.7223	0.5047	0.6533	214.2	223.4	0.7069	0.5221	249.7	188.9
3	0.0855	0.0679	200.5	231.6	158.0	177.7	32.0	148.5	0.1595	0.6945	0.5735	0.6406	230.1	236.9	0.8009	0.5489	280.1	198.4
4	0.0738	0.0618	192.0	224.2	156.4	180.1	25.2	133.4	0.1276	0.6775	0.5869	0.6201	247.3	251.7	0.8487	0.5951	296.5	215.3
5	0.0280	0.0254	186.0	207.3	184.3	171.4	25.5	116.5	0.1376	0.5571	0.5249	0.5897	286.2	287.4	0.9074	0.6651	319.2	242.0
6	0.0210	0.0113	182.0	145.8	180.5	163.0	27.6	115.6	0.1515	0.6171	0.5169	0.5461	299.5	300.2	0.9248	0.6729	326.6	246.2
7	0.0122	0.0085	181.0	155.1	179.0	151.9	30.8	122.5	0.1702	0.6787	0.5134	0.5249	313.3	313.3	0.9459	0.6624	334.4	243.9
8	0.0081	0.0075	186.0	158.2	183.5	157.5	33.9	126.4	0.1824	0.6924	0.5225	0.5338	331.6	330.4	0.9792	0.7069	349.8	262.3
9	0.0049	0.0056	186.5	159.5	183.2	155.7	36.7	124.8	0.1974	0.6755	0.5202	0.5334	344.3	343.5	0.9967	0.7175	358.0	268.4
10	0.0030	0.0034	175.6	194.1	176.1	151.4	35.4	121.5	0.1583	0.6765	0.4547	0.5154	356.9	356.4	1.0137	0.7419	366.6	279.4

SL	INCS	IACP	DEV	TLFA	PFCVM-1	PFCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	BEFF-P	BEFF-A	B'-1	B'-2	VB'-1	VB'-2	PC/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN						PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0154	0.1655	0.3650	0.6661	33.61	46.96	0.3724	0.1370	0.0325	1.3548	109.32	105.77	0.8915	0.2254	-165.4	-38.4	1.8946
2	0.1118	0.0025	0.2128	0.4275	45.05	51.53	0.3790	0.0228	0.0050	1.3217	102.30	102.40	0.7853	0.3574	-177.0	-66.5	1.9369
3	0.1265	0.0714	0.1720	0.2745	51.52	52.94	0.4102	0.0920	0.0227	1.2907	88.55	88.54	0.7847	0.4607	-198.1	-88.4	1.9557
4	0.0074	0.0017	0.1316	0.2684	51.65	54.86	0.3820	0.0544	0.0134	1.3018	92.93	92.66	0.8466	0.5802	-222.1	-118.1	1.9562
5	0.0223	0.0053	0.1053	0.1715	47.10	52.88	0.3377	0.0345	0.0083	1.3295	105.23	105.44	0.9556	0.7837	-260.6	-170.8	1.9391
6	0.0024	0.0049	0.1084	0.1380	45.80	50.03	0.3409	0.0241	0.0056	1.3254	103.72	103.87	0.9855	0.8475	-272.3	-184.6	1.9188
7	0.0173	0.0039	0.1069	0.1075	45.40	46.32	0.3713	0.0375	0.0087	1.3186	94.39	94.17	1.0061	0.8986	-282.5	-190.8	1.9079
8	0.0012	0.0075	0.0763	0.0510	45.77	47.55	0.3437	0.0205	0.0068	1.3207	96.73	96.60	1.0183	0.9273	-297.8	-210.0	1.9272
9	0.0013	0.0058	0.0861	0.0814	45.24	46.55	0.3478	0.0354	0.0083	1.3255	94.38	94.15	1.0335	0.9521	-307.6	-218.7	1.9374
10	0.0030	0.0019	0.0575	0.0713	42.92	44.92	0.3346	0.0194	0.0043	1.3375	96.93	96.79	1.0697	0.9986	-321.5	-234.9	1.9236

IC/IC	PC/PC	EFF-AC	EFF-P	WCI/A1	T02/T01	PC2/PC1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			INLET	INLET
1.2390	1.6327	86.55	87.77	173.61	1.0850	1.3243	98.06	98.14

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	VB-1	VB-2	B-1	B-2	M-1	M-2	PC/PO	TO/TO	PO/PO	TQ2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RACIAN	RACIAN			INLET	INLET	STAGE	T01
1	0.1216	0.1351	217.2	181.9	137.6	151.9	188.1	1.2	0.8814	0.0078	0.5961	0.4044	1.8381	1.2295	1.3544	1.0907
2	0.0612	0.0566	222.6	183.6	140.8	162.5	153.9	4.9	0.7817	0.0301	0.6122	0.4435	1.8885	1.2279	1.2453	1.0824
3	0.0447	0.0493	225.3	175.3	149.3	145.4	154.4	1.4	0.7094	0.0080	0.6159	0.4768	1.9372	1.2221	1.2799	1.0852
4	0.0504	0.0470	220.3	175.4	174.9	175.5	131.3	-3.3	0.4379	0.0180	0.6066	0.4388	1.9460	1.2166	1.2951	1.0843
5	0.0291	0.0249	208.0	165.5	174.3	165.5	115.0	-2.2	0.5835	0.0132	0.5742	0.4498	1.9278	1.2185	1.3212	1.0804
6	0.0260	0.0226	202.6	158.8	167.3	158.8	116.3	-3.3	0.5585	0.0204	0.5542	0.4246	1.9081	1.2254	1.3182	1.0805
7	0.0234	0.0203	198.7	154.0	157.7	153.9	121.0	-1.8	0.6545	0.0116	0.5405	0.4141	1.8963	1.2340	1.3108	1.0856
8	0.0145	0.0121	202.7	155.7	163.5	159.7	119.8	-1.2	0.6324	0.0076	0.5464	0.4260	1.9138	1.2592	1.3117	1.0852
9	0.0076	0.0061	204.4	161.8	162.1	161.7	124.4	6.3	0.6544	0.0385	0.5431	0.4285	1.9184	1.2778	1.3122	1.0887
10	0.0014	0.0013	155.3	154.3	158.0	154.3	121.4	2.4	0.6590	0.0187	0.5268	0.4058	1.8946	1.2912	1.3172	1.0892

SL	IACP	DEV	TLFA	PFCVM-1	PFCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	BEFF-A	BEFF-P
RADIAN	RADIAN	RADIAN	RADIAN						PO1	TOT-STG	TOT-STG
1	0.0061	0.1567	0.8736	40.48	47.41	0.4604	0.1382	0.0291	0.9705	99.63	99.65
2	0.0028	0.1704	0.7316	47.98	51.84	0.4123	0.1135	0.0250	0.9745	92.87	93.13
3	0.0024	0.1520	0.7014	51.15	56.39	0.3675	0.0406	0.0097	0.9908	85.40	86.09
4	0.0052	0.1305	0.6584	54.02	57.01	0.3566	0.0217	0.0095	0.9952	90.73	91.07
5	0.0035	0.1450	0.5964	53.62	53.77	0.3696	0.0305	0.0088	0.9939	102.88	102.77
6	0.0027	0.1410	0.6071	51.16	51.24	0.3913	0.0319	0.0096	0.9940	101.80	101.74
7	0.0084	0.1552	0.6680	47.85	49.23	0.4164	0.0321	0.0101	0.9942	93.88	94.11
8	0.0045	0.1664	0.6395	45.05	50.35	0.4081	0.0366	0.0121	0.9933	94.27	94.50
9	0.0021	0.2356	0.6159	48.18	50.29	0.4066	0.0535	0.0184	0.9901	90.68	91.04
10	0.0013	0.2318	0.6393	46.57	47.34	0.4382	0.0688	0.0309	0.9845	91.51	91.86

IC/IC	PC/PC	EFF-AC	EFF-P	T02/T01	PC2/PC1	EFF-AD
INLET	INLET	INLET	INLET			INLET
1.2390	1.9130	85.12	86.40	1.0850	0.9866	94.33

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2087	0.1877	218.9	274.4	215.9	188.0	0.0	199.8	0.0	0.8136	0.6616	0.8156	142.4	155.7	0.7925	0.5741	258.6	193.2
2	0.1944	0.1372	218.6	273.8	218.6	205.0	0.0	181.6	0.0	0.7231	0.6706	0.8139	159.4	170.6	0.8299	0.6102	270.9	205.9
3	0.1704	0.1131	222.9	256.9	222.9	206.7	0.0	157.6	0.0	0.6349	0.6848	0.7609	178.4	187.1	0.8772	0.6224	285.5	209.6
4	0.1471	0.0932	225.5	242.0	225.5	200.3	0.0	135.8	0.0	0.5494	0.6936	0.7132	195.9	202.7	0.9108	0.6224	298.7	211.2
5	0.1018	0.0649	220.4	213.9	220.4	185.1	0.0	110.5	0.0	0.5431	0.6766	0.6247	235.3	238.8	0.9896	0.6531	322.4	223.6
6	0.0728	0.0521	205.6	202.3	205.6	171.4	0.0	107.1	0.0	0.5583	0.6274	0.5874	254.3	256.7	0.9979	0.6609	327.0	227.0
7	0.0659	0.0435	194.7	197.1	194.7	165.3	0.0	107.4	0.0	0.5765	0.5918	0.5702	264.4	267.2	1.0029	0.6662	336.0	230.3
8	0.0477	0.0327	188.2	194.0	188.2	160.7	0.0	104.8	0.0	0.5952	0.5707	0.5592	278.4	279.4	1.0189	0.6754	336.0	234.4
9	0.0289	0.0211	182.2	191.8	182.2	154.4	0.0	113.8	0.0	0.6393	0.5514	0.5497	291.3	291.3	1.0397	0.6743	343.6	235.2
10	0.0113	0.0074	175.5	190.1	175.5	147.4	0.0	120.0	0.0	0.6835	0.5301	0.5414	305.9	305.9	1.0650	0.6757	352.7	237.2
11	0.0014	0.0007	172.8	185.6	172.8	137.0	0.0	124.8	0.0	0.7378	0.5214	0.5252	318.2	318.1	1.0925	0.6712	362.1	237.1

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B ² -1	B ² -2	VM ² -1	VM ² -2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TCT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0916	0.0043	0.3084	0.8140	42.77	39.13	0.4411	0.2650	0.0604	1.3045	76.42	73.44	0.5946	-0.2294	-142.4	44.1	1.3600
2	-0.0806	0.0137	0.2822	0.6866	42.68	45.38	0.4148	0.0885	0.0226	1.3831	91.14	90.72	0.6328	-0.0531	-159.4	30.9	1.4446
3	-0.0748	0.0147	0.2643	0.5127	43.29	47.82	0.4181	0.3267	0.0073	1.3756	96.87	96.73	0.6781	0.1655	-178.4	34.6	1.4426
4	-0.0748	0.0147	0.2284	0.3985	43.65	47.41	0.4277	0.3323	0.0091	1.3560	95.79	95.61	0.7181	0.3225	-195.9	47.0	1.4266
5	-0.0491	0.0104	0.1258	0.2085	42.35	44.85	0.4220	0.3352	0.0097	1.3550	96.66	96.43	0.8198	0.6114	-235.3	128.3	1.3836
6	-0.0312	0.0363	0.1031	0.1751	34.07	41.87	0.4207	0.0048	0.0018	1.3697	99.04	98.99	0.8921	0.7171	-254.3	149.5	1.3632
7	-0.0122	0.0417	0.0954	0.1698	36.73	40.33	0.4215	-0.1116	-0.0029	1.4003	101.55	101.62	0.9406	0.7707	-264.4	160.4	1.3540
8	-0.0589	0.0791	0.0843	0.1613	35.40	39.19	0.4243	-0.0076	-0.0020	1.4228	101.13	101.18	0.9767	0.8154	-278.4	170.6	1.3544
9	-0.0576	0.0947	0.0834	0.1569	34.22	37.50	0.4441	0.0307	0.0079	1.4391	96.60	95.79	1.0170	0.8551	-291.3	177.5	1.3538
10	-0.0771	0.1159	0.0919	0.1494	32.94	35.60	0.4648	0.0763	0.0192	1.4591	90.53	90.01	1.0439	0.9004	-305.9	185.9	1.3555
11	-0.0903	0.1190	0.1467	0.1700	32.45	32.95	0.4388	0.1351	0.0326	1.4563	83.54	82.64	1.0733	0.9533	-318.2	193.3	1.3479

TU/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
Σ	Σ	Σ	Σ	SOM			Σ	Σ
1.1053	1.3832	92.31	92.66	197.96	1.1053	1.3832	92.31	92.66

STATOR 1

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TU/TO	PO/PO	T02/T01	EFF-AD	EFF-P
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET	STAGE	STAGE
1	0.192	-0.1356	240.4	172.8	148.8	169.6	188.8	32.1	0.9072	0.1846	0.7038	0.4942	1.3040	1.1075	1.2508	1.1075		
2	0.1271	0.0682	252.2	192.1	183.3	195.4	173.3	22.8	0.7565	0.1653	0.7423	0.5770	1.3964	1.1071	1.3373	1.1071		
3	0.0736	0.0669	245.2	198.5	196.5	196.7	146.7	26.3	0.6407	0.1325	0.7225	0.5746	1.4138	1.0988	1.3475	1.0988		
4	0.0613	0.0532	235.8	193.9	195.9	192.2	131.3	25.2	0.5902	0.1301	0.6991	0.5673	1.4043	1.0952	1.3368	1.0952		
5	0.0407	0.0414	214.9	178.4	185.7	174.8	108.2	23.6	0.5774	0.1324	0.6291	0.5151	1.3609	1.0911	1.3090	1.0911		
6	0.0371	0.0393	206.1	172.1	177.4	170.3	104.9	24.6	0.5743	0.1434	0.5995	0.4452	1.3445	1.0943	1.3442	1.0943		
7	0.0343	0.0365	202.5	169.4	172.6	167.1	106.0	27.7	0.5509	0.1645	0.5809	0.4634	1.3382	1.0994	1.2751	1.0994		
8	0.0308	0.0327	200.9	167.5	170.1	165.0	106.8	28.6	0.5608	0.1714	0.5803	0.4792	1.3346	1.1035	1.2991	1.1035		
9	0.0261	0.0277	199.9	166.2	165.4	167.5	112.2	29.6	0.5940	0.1794	0.5747	0.4736	1.3318	1.1132	1.4137	1.1132		
10	0.0174	0.0186	196.5	164.8	160.3	161.5	118.8	33.1	0.6377	0.2023	0.5702	0.4665	1.3289	1.1256	1.4298	1.1256		
11	0.0075	0.0082	195.4	158.2	150.6	155.1	124.5	31.0	0.6910	0.1976	0.5549	0.4444	1.3126	1.1372	1.4811	1.1372		

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.0175	0.0648	0.2784	0.7176	23.39	41.10	0.4148	0.1443	0.0299	0.9593	61.45	62.64
2	-0.0694	0.0198	0.2090	0.5912	42.53	48.72	0.3382	0.1014	0.0274	0.9699	80.88	81.65
3	-0.1421	0.0466	0.1563	0.4087	46.65	49.96	0.3075	0.0709	0.0170	0.9792	90.11	90.52
4	-0.1664	0.0676	0.1441	0.4602	47.30	48.99	0.2921	0.0585	0.0150	0.9840	90.37	90.75
5	-0.2095	0.0971	0.1353	0.3965	45.16	44.88	0.2850	0.0758	0.0200	0.9823	87.81	88.26
6	-0.2312	0.0830	0.1398	0.3909	43.06	43.00	0.2863	0.0691	0.0217	0.9851	93.52	93.79
7	-0.1884	0.0634	0.1584	0.3864	41.74	41.97	0.2880	0.0652	0.0206	0.9864	95.88	96.04
8	-0.1800	0.0545	0.1638	0.3894	41.05	41.31	0.2944	0.0722	0.0236	0.9853	97.52	97.64
9	-0.1477	0.0267	0.1717	0.4167	39.66	40.60	0.3093	0.0810	0.0274	0.9837	91.96	92.34
10	-0.1492	0.0167	0.2024	0.4355	38.19	39.69	0.3263	0.1024	0.0357	0.9797	85.75	86.43
11	-0.1514	0.0165	0.2372	0.4934	35.60	37.63	0.3663	0.1398	0.0502	0.9736	76.51	77.64

NC/PC	TU/TO	PO/PO	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
WAD/SEC	Σ	Σ	Σ	Σ			Σ	Σ
783.78	1.1053	1.3551	86.71	86.80	1.1053	0.9797	86.21	

ROTOR 2

SL	FPSI-1	FPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	R-1	R-2	W-1	W-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1499	0.1006	174.7	259.7	151.5	216.5	31.2	143.4	0.2015	0.5796	0.4402	0.7396	177.1	189.5	0.5986	0.4299	210.3	221.2
2	0.1195	0.0784	197.1	255.9	194.7	221.0	30.8	129.0	0.1360	0.5253	0.5684	0.7301	192.5	200.8	0.7299	0.6629	253.1	232.4
3	0.0690	0.0442	201.7	246.0	199.4	217.0	25.4	115.9	0.1262	0.4489	0.5831	0.7024	206.8	212.9	0.7819	0.6787	269.7	237.7
4	0.0490	0.0349	198.5	232.0	197.0	209.0	24.4	100.7	0.1230	0.4484	0.5757	0.6620	222.2	226.2	0.8099	0.6956	279.2	243.8
5	0.0261	0.0156	183.7	200.7	182.2	185.5	23.5	76.8	0.1283	0.3924	0.5310	0.5705	257.2	258.3	0.8544	0.7374	296.3	259.5
6	0.0142	0.0067	179.5	190.0	177.7	175.2	25.9	73.4	0.1444	0.3975	0.5171	0.5378	269.5	269.8	0.8884	0.7645	301.5	263.1
7	0.0045	0.0014	176.7	186.2	174.4	170.2	25.2	77.0	0.1601	0.4267	0.5074	0.5264	281.5	281.5	0.8835	0.7498	307.4	266.1
8	0.0019	0.0007	174.9	184.5	172.2	170.0	25.2	78.4	0.1793	0.4227	0.4983	0.5220	298.1	297.0	0.9078	0.7792	318.5	278.4
9	0.0072	0.0024	173.0	184.6	169.8	167.3	32.8	78.0	0.1999	0.4364	0.4902	0.5134	309.4	308.7	0.9199	0.7928	324.4	284.9
10	0.0069	0.0051	166.2	162.5	163.3	151.2	30.9	76.2	0.1867	0.4543	0.4655	0.4644	320.7	320.3	0.9368	0.7966	332.7	288.5

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LCSS-P	PO2/	REFF-P	REFF-A	B-1	B-2	VO-1	VO-2	PO/PO	
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.1441	0.0277	0.2825	0.5604	37.56	53.23	0.0972	0.0476	0.0114	1.2411	95.23	95.00	0.7433	0.2029	-145.9	-45.1	1.4261
2	0.2059	0.0446	0.1674	0.3793	49.03	56.08	0.1912	0.1907	0.0397	1.1784	77.15	76.61	0.6912	0.3120	-161.7	-71.8	1.6581
3	0.1743	0.0757	0.1307	0.3181	50.41	54.29	0.2149	0.1503	0.0382	1.1700	75.64	75.10	0.7369	0.4188	-181.5	-97.0	1.6510
4	0.1445	0.0578	0.1115	0.2474	49.60	55.03	0.2089	0.1094	0.0278	1.1596	79.41	78.98	0.7875	0.5401	-197.9	-125.5	1.6197
5	0.0693	0.0417	0.1000	0.1342	45.53	49.41	0.1858	0.0571	0.0138	1.1358	85.30	85.03	0.9086	0.7744	-233.7	-181.5	1.5344
6	0.0478	0.0102	0.1027	0.0989	44.17	46.41	0.1836	0.0651	0.0153	1.1201	81.00	81.30	0.9408	0.8419	-243.6	-196.2	1.5028
7	0.0259	0.0158	0.0850	0.0613	42.21	44.79	0.1936	0.0892	0.0210	1.1181	75.53	75.14	0.9679	0.8787	-253.4	-204.6	1.4930
8	0.0201	0.0186	0.0625	0.0859	42.15	49.25	0.1816	0.0788	0.0187	1.1205	77.46	77.10	0.9994	0.9135	-267.9	-220.4	1.4919
9	0.0124	0.0264	0.0593	0.0782	41.19	43.08	0.1775	0.0782	0.0185	1.1195	77.61	76.64	1.0261	0.9433	-276.6	-230.7	1.4860
10	0.0111	0.0500	0.1199	0.0380	39.16	38.31	0.1858	0.1124	0.0244	1.0993	65.40	64.93	1.0577	1.0197	-289.9	-246.1	1.4410

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	KG/SEC	%	%	RTCA	RTCP
1.1598	1.5507	83.46	84.54	174.82	1.0493	1.1443	79.46	76.85

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	R-1	R-2	W-1	W-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1229	0.1416	232.7	227.6	184.8	227.5	140.8	-5.5	0.4478	-0.0258	0.6545	0.6481	1.5410	1.1815	1.1758	1.0668	1.0668	
2	0.0907	0.0908	245.0	238.5	204.2	239.4	126.2	-7.9	0.5919	-0.0332	0.6806	0.6759	1.6069	1.1740	1.1417	1.0628	1.0628	
3	0.0695	0.0727	237.5	230.6	208.7	230.4	113.3	-4.2	0.4969	-0.0397	0.6757	0.6545	1.5892	1.1642	1.1267	1.0607	1.0607	
4	0.0513	0.0525	228.5	222.5	206.0	222.4	98.8	-7.2	0.4467	-0.0324	0.6510	0.6329	1.5681	1.1537	1.1236	1.0544	1.0544	
5	0.0320	0.0368	201.7	189.8	187.1	189.8	75.5	-0.9	0.3836	-0.0046	0.5735	0.5376	1.4635	1.1393	1.0836	1.0434	1.0434	
6	0.0281	0.0268	192.4	186.4	179.1	186.4	72.9	-1.7	0.3886	-0.0090	0.5449	0.5270	1.4554	1.1411	1.0852	1.0405	1.0405	
7	0.0231	0.0216	189.9	180.5	173.9	180.5	76.4	-1.1	0.4143	-0.0060	0.5356	0.5078	1.4389	1.1481	1.0774	1.0431	1.0431	
8	0.0146	0.0144	190.1	180.8	174.1	180.8	76.2	2.9	0.4127	0.0161	0.5324	0.5052	1.4396	1.1487	1.0812	1.0428	1.0428	
9	0.0118	0.0111	189.2	179.0	171.4	178.9	77.8	5.6	0.4259	0.0282	0.5242	0.4972	1.4347	1.1744	1.0801	1.0427	1.0427	
10	0.0056	0.0046	172.7	165.4	156.0	165.3	74.1	5.8	0.4438	0.0353	0.4767	0.4559	1.3981	1.1851	1.0663	1.0421	1.0421	

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LCSS-P	PO2/	REFF-A	REFF-P
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-0.2390	0.1227	0.6736	47.96	56.43	0.1516	0.2099	0.0447	0.9476	70.76	71.41
2	-0.2126	0.1071	0.5852	53.50	60.72	0.1311	0.1157	0.0260	0.9691	61.55	62.25
3	-0.2372	0.1049	0.5366	55.03	59.21	0.1504	0.1381	0.0329	0.7635	57.15	57.86
4	-0.2204	0.1166	0.4792	54.59	57.73	0.1432	0.1244	0.0315	0.9693	62.23	62.84
5	-0.2394	0.1537	0.3781	49.69	49.07	0.1683	0.2287	0.0654	0.9545	53.53	54.06
6	-0.2336	0.1532	0.3976	46.97	48.10	0.1483	0.2703	0.0512	0.9688	58.25	58.73
7	-0.2005	0.1607	0.4204	45.52	46.20	0.1772	0.2046	0.0641	0.9637	49.95	50.48
8	-0.2245	0.1931	0.3966	45.36	45.77	0.1759	0.1995	0.0659	0.9650	52.65	53.16
9	-0.2257	0.2248	0.3077	43.88	44.83	0.1846	0.2072	0.0711	0.9644	52.04	52.56
10	-0.4012	0.2574	0.4084	39.28	40.80	0.1850	0.2088	0.0742	0.9696	43.88	44.39

NCOPR	MCOR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
793.78	91.8	1.1598	1.4941	76.07	71.38	1.0493	0.9635	57.25

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	M-1	M-2	U-1	U-2	N°-1	N°-2	V°-1	V°-2
RACIAN	RACIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RACIAN	RACIAN	RACIAN	RACIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2681	0.1660	208.4	209.3	208.4	182.8	0.0	158.1	C.C	0.0274	0.0366	0.7996	142.0	156.2	0.7717	0.5563	252.6	187.5
2	0.1665	0.1350	210.7	207.9	210.7	194.8	0.0	184.1	C.C	0.7358	0.6444	0.7934	159.8	171.1	0.8088	0.5776	244.5	195.1
3	0.1679	0.1105	214.2	212.5	214.2	158.5	0.0	156.8	C.C	0.0670	0.6560	0.7464	178.6	187.7	0.8546	0.5932	279.1	200.9
4	0.1431	0.0505	215.9	215.4	215.9	194.2	0.0	135.8	C.C	0.0232	0.6615	0.7037	194.5	203.4	0.8944	0.6009	291.9	204.4
5	0.0531	0.0000	205.3	183.4	205.3	177.5	0.0	118.5	C.C	0.5087	0.8396	0.6210	236.0	239.5	0.9636	0.6252	315.4	216.0
6	0.0743	0.0465	155.4	203.5	155.4	187.3	0.0	116.7	C.C	0.4097	0.5540	0.5895	255.0	257.4	0.9767	0.6324	321.3	218.0
7	0.0598	0.0355	185.7	200.2	185.7	162.3	0.0	117.2	C.C	0.6258	0.5626	0.5771	267.2	268.4	0.9859	0.6397	325.4	221.9
8	0.0437	0.0264	175.3	158.3	175.3	157.1	0.0	120.9	C.C	0.6562	0.5420	0.5688	275.2	280.2	1.0031	0.6418	331.8	224.7
9	0.0288	0.0164	173.0	156.2	173.0	145.0	0.0	128.3	C.C	0.7104	0.5220	0.5406	292.2	292.2	1.0244	0.6316	339.5	221.5
10	0.0117	0.0051	166.2	193.6	166.2	140.5	0.0	133.1	C.C	0.7584	0.5003	0.5483	306.8	306.8	1.0505	0.6329	348.9	223.4
11	0.0000	0.0000	163.6	189.2	163.6	130.7	0.0	136.7	C.C	0.8077	0.4520	0.5327	315.2	319.1	1.0790	0.6320	358.7	224.4

SL	INCS	IACP	CEV	ELSA	PCVW-1	PCVW-2	D-FAC	MEGA-B	LOSS-P	PO2/	BEFF-P	BEFF-A	B°-1	B°-2	V0°-1	V0°-2	PC/PG
RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	TOTAL	TOTAL	TOTAL	P01	TOT	TCT	RACIAN	RACIAN	M/SEC	M/SEC	INLET
1	0.0737	0.0732	C.3134	C.8236	41.76	38.55	C.4487	C.2530	0.0589	1.3105	76.11	75.18	0.6024	-0.2245	-142.8	41.9	1.3600
2	0.0616	0.0328	C.2465	C.7185	42.66	43.45	C.4438	C.1155	C.0294	1.3799	88.97	88.46	C.6519	-0.0664	-159.8	13.0	1.4342
3	0.0575	0.0368	C.2938	C.5434	42.65	46.72	C.4385	C.0444	C.0121	1.3798	95.12	94.85	0.6087	0.1550	-178.9	-31.1	1.4407
4	0.0512	0.0331	C.2817	C.4549	42.65	46.82	C.4402	C.0387	C.0109	1.3667	95.28	95.07	C.7407	0.3158	-196.5	-63.5	1.4203
5	0.0456	0.0261	C.2178	C.3181	38.35	41.45	C.4490	C.0430	C.0117	1.3509	91.61	91.56	C.8466	0.5986	-236.0	-121.0	1.3942
6	0.0358	0.0243	C.2155	C.2133	36.27	40.26	C.4502	C.0364	C.0082	1.4152	96.10	95.61	0.5642	0.7908	-267.2	-151.4	1.3780
7	0.0279	0.0187	C.2062	C.2060	34.54	38.91	C.4629	C.0462	C.0123	1.4402	94.51	94.22	1.0003	0.7823	-279.2	-159.2	1.3814
8	0.0214	0.0130	C.2034	C.2034	33.61	36.72	C.4548	C.0354	C.0251	1.4602	88.89	88.27	1.0363	0.8329	-252.2	-163.9	1.3830
9	0.0114	0.0064	C.2020	C.1838	32.22	34.45	C.4538	C.0345	C.0343	1.4793	84.86	84.00	1.0744	0.8906	-306.8	-173.7	1.3830
10	0.0043	0.0030	C.1652	C.1484	31.72	31.55	C.5331	C.1828	C.0443	1.4792	79.69	78.54	1.0573	0.5489	-319.2	-182.4	1.3776

IC/TC	FC/FC	EFF-AD	EFF-P	NC1/A1	T02/T01	PC2/P01	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	NG/SEC	S	S	ACTG	ACTG
1.1130	1.2510	83.44	84.17	191.75	1.1130	1.3970	88.71	89.24

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	M-1	M-2	U-1	U-2	N°-1	N°-2	V°-1	V°-2
RACIAN	RACIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RACIAN	RACIAN	RACIAN	RACIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2607	0.1438	235.7	157.7	143.1	154.5	187.2	31.7	C.9175	0.2003	0.6888	0.4494	1.3039	1.1049	1.2565	1.1069	1.2565	1.1069
2	0.1388	0.1068	245.5	181.9	132.0	176.0	175.2	32.3	C.7548	0.1777	0.7199	0.5213	1.3642	1.1086	1.3321	1.1086	1.3321	1.1086
3	0.0954	0.0783	246.2	181.1	166.5	185.1	150.9	26.7	C.6793	0.1433	0.7051	0.5387	1.4142	1.1022	1.3551	1.1022	1.3551	1.1022
4	0.0720	0.0635	232.4	183.6	169.1	181.5	135.2	24.9	C.6211	0.1360	0.6813	0.5291	1.4161	1.0985	1.3476	1.0985	1.3476	1.0985
5	0.0506	0.0510	213.7	170.8	175.7	189.1	115.7	23.6	C.5720	0.1370	0.6223	0.4904	1.3780	1.0976	1.3286	1.0976	1.3286	1.0976
6	0.0457	0.0425	206.5	165.8	132.8	163.8	113.9	25.7	C.5831	0.1526	0.5554	0.4743	1.3663	1.1023	1.3616	1.1023	1.3616	1.1023
7	0.0423	0.0435	214.1	183.7	181.7	161.3	116.8	27.9	C.6028	0.1714	0.5909	0.4667	1.3618	1.1093	1.3890	1.1093	1.3890	1.1093
8	0.0384	0.0356	204.3	182.4	168.8	158.8	117.9	28.6	C.6156	0.1773	0.5877	0.4618	1.3601	1.1136	1.4136	1.1136	1.4136	1.1136
9	0.0328	0.0237	164.2	181.8	180.4	159.2	126.4	29.2	C.6677	0.1817	0.5830	0.4572	1.3550	1.1276	1.4313	1.1276	1.4313	1.1276
10	0.0219	0.0210	162.7	180.2	154.1	157.2	131.7	31.2	C.7074	0.1958	0.5761	0.4500	1.3559	1.1394	1.4493	1.1394	1.4493	1.1394
11	0.0000	0.0000	158.8	153.5	146.7	150.3	136.4	33.0	C.7561	0.2160	0.5616	0.4293	1.3407	1.1507	1.4397	1.1507	1.4397	1.1507

SL	INCS	IACP	CEV	ELSA	PCVW-1	PCVW-2	D-FAC	MEGA-B	LOSS-P	PO2/	BEFF-A	BEFF-P
RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	TOTAL	TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	0.0627	0.0601	C.2541	C.7172	32.83	38.43	C.4663	C.1472	0.0304	0.9399	63.08	64.25
2	0.0431	0.0582	C.2304	C.6172	40.46	45.88	C.3875	C.1090	C.0233	0.9694	78.67	79.51
3	0.1039	0.0000	C.1671	C.5360	45.17	48.75	C.3449	C.0604	C.0154	0.9818	88.80	89.27
4	0.1326	0.0367	C.1501	C.4651	44.24	47.76	C.3322	C.0563	C.0146	0.9849	90.36	90.76
5	0.1449	0.0525	C.1416	C.4330	44.45	44.24	C.3276	C.0575	C.0167	0.9867	86.49	87.22
6	0.1526	0.0341	C.1490	C.4325	42.84	42.83	C.3316	C.0534	C.0164	0.9884	90.18	90.41
7	0.1337	0.0118	C.1693	C.4313	41.50	41.72	C.3390	C.0585	C.0179	0.9881	90.05	90.50
8	0.1252	0.0000	C.1657	C.4364	40.95	41.21	C.3471	C.0715	C.0233	0.9851	91.90	92.29
9	0.0841	0.0449	C.1140	C.4460	35.05	40.58	C.3691	C.0831	C.0281	0.9828	84.58	85.34
10	0.0766	0.0525	C.1555	C.5116	27.31	36.46	C.3855	C.1003	C.0350	0.9798	80.30	81.31
11	0.0000	0.0000	C.1557	C.5461	24.85	31.45	C.4172	C.1394	C.0500	0.9731	72.82	74.10

NC/PC	TC/TC	FC/FC	EFF-AD	EFF-P	T02/T01	PC2/P01	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	S	S	STAGE	S
1.1130	1.2700	83.44	84.17	1.1130	0.9812	83.44		

ROTOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	0-1	0-2	RUN MD430, SPEED CODE		90. POINT NO. 2		V*-1	V*-2		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	U-1	U-2	M/SEC	M/SEC		
1	0.1483	0.1016	136.2	232.6	134.0	136.0	30.7	152.0	C.2221	0.7062	0.3921	0.4537	177.6	189.1	0.5453	0.5055	199.3	179.0
2	0.1045	0.0805	180.0	231.2	137.7	160.9	30.5	136.1	C.1895	0.6262	0.5184	0.6505	183.1	201.4	0.6090	0.5573	260.8	198.0
3	0.0500	0.0460	181.7	225.1	167.0	166.5	25.4	125.5	C.1350	0.5088	0.5440	0.6345	207.4	213.5	0.7522	0.5821	261.0	206.6
4	0.0778	0.0560	187.6	215.2	165.5	162.7	24.1	113.8	C.1290	0.5545	0.5356	0.6063	221.4	226.9	0.7965	0.6053	271.9	214.9
5	0.0345	0.0250	176.0	191.0	134.3	166.1	23.9	94.2	C.1362	0.5158	0.5057	0.5355	251.6	259.0	0.8388	0.6562	261.0	236.0
6	0.0741	0.0482	172.5	181.7	171.0	157.0	26.1	94.6	C.1514	0.5283	0.4953	0.5073	270.3	270.4	0.8538	0.6646	260.1	238.1
7	0.0193	0.0164	171.2	178.0	160.0	149.3	28.2	94.5	C.1655	0.5757	0.4890	0.4942	282.4	282.4	0.8718	0.6612	305.1	238.1
8	0.0134	0.0102	171.0	175.1	149.0	153.5	25.3	91.5	C.1718	0.5364	0.4855	0.4638	298.9	297.0	0.9005	0.7098	318.2	257.4
9	0.0667	0.0419	170.6	181.2	167.7	155.1	31.2	93.8	C.1839	0.5438	0.4803	0.4545	310.3	309.6	0.9167	0.7287	325.6	265.8
10	0.0034	0.0037	165.1	174.7	161.8	148.0	32.8	92.6	C.2001	0.5595	0.4619	0.4755	321.7	321.3	0.9263	0.7417	331.1	272.3

SL	IACS	IACP	EFV	TLFA	RFCVM-1	RFCVM-2	D-FAC	(MEGA-E	LOSS-P	PO2/	REFF-P	REFF-A	0*-1	0*-2	W0*-1	W0*-2	PC/PG
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TCT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0025	0.0309	C.2844	C.62CC	34.4E	47.82	C.2602	C.0638	-0.0154	1.2936	105.00	105.18	0.8240	0.2048	-146.9	-37.0	1.6097
2	0.1502	0.0489	C.1851	0.4052	46.01	52.20	C.2495	C.0553	C.0136	1.2360	93.32	52.12	C.7389	0.3337	-162.5	-65.2	1.7275
3	0.1402	0.0413	C.1925	0.2322	46.78	53.29	C.3178	C.0788	0.0196	1.2268	89.37	55.06	C.7708	0.4387	-182.0	-88.0	1.7360
4	0.1139	0.0252	C.1252	C.2603	48.30	52.87	C.3082	C.0444	C.0112	1.2259	93.29	53.09	C.8201	0.5530	-198.9	-113.1	1.7237
5	0.0671	0.0204	C.1071	C.1493	45.61	48.73	C.2794	C.0064	-0.0015	1.2186	101.23	101.26	C.5308	0.7815	-234.0	-164.8	1.6720
6	0.0282	0.0256	C.1116	C.1052	43.85	45.85	C.2787	C.0034	C.0008	1.2073	59.31	55.29	C.9602	0.8511	-244.2	-179.0	1.6473
7	0.0692	0.0324	C.1035	C.0914	43.20	43.32	C.3013	C.0494	0.0194	1.2050	90.61	55.35	C.5846	0.8934	-254.2	-185.5	1.6395
8	0.0088	0.0255	C.0786	C.0811	42.47	44.27	C.2664	C.0098	0.0011	1.2123	99.05	55.02	C.0107	0.9290	-269.6	-206.3	1.6676
9	0.0028	0.0386	C.0633	C.0816	41.72	44.27	C.2602	C.0012	C.0003	1.2217	99.76	55.72	C.0256	0.5477	-279.1	-215.8	1.6572
10	0.0135	0.0525	C.0596	C.0642	39.78	41.85	C.2571	C.0126	-0.0029	1.2241	102.75	102.82	C.0602	0.9960	-288.9	-228.5	1.6404

IC/IC	FC/FC	EFF-AC	EFF-P	W0*/01	T02/T01	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	PG/SEC			RTGR	ROTOR
8	8	8	8	8	8	8	8	8
1.1812	1.2784	88.00	88.84	166.34	1.0612	1.2245	57.16	97.24

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	0-1	0-2	RUN MC430, SPEED CODE		90. POINT NO. 2		W0*-1	W0*-2	TC2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	PG/PO	TO/TO	INLET	STAGE	TO1
1	0.1207	0.1383	211.4	172.9	145.7	172.9	149.3	C.9	C.7804	0.0053	0.5858	0.4770	1.6455	1.1871	1.2599	1.0725	
2	0.0675	0.0540	216.6	188.1	173.5	188.1	133.3	0.6	C.6532	0.0083	0.6131	0.5223	1.7094	1.1824	1.2224	1.0672	
3	0.0643	0.0658	218.5	185.8	180.6	189.7	123.0	-3.1	C.5568	0.0161	0.6145	0.5287	1.7242	1.1751	1.2192	1.0673	
4	0.0400	0.0450	212.7	183.0	180.9	182.9	111.8	-4.2	C.5528	0.0231	0.5587	0.5104	1.7027	1.1685	1.2158	1.0642	
5	0.0250	0.0233	182.4	183.5	186.5	183.8	92.8	-2.5	C.5038	0.0174	0.5367	0.4561	1.6549	1.1619	1.2065	1.0572	
6	0.0222	0.0211	184.0	157.0	160.1	156.5	90.7	-4.8	C.5157	0.0307	0.5140	0.4355	1.6361	1.1658	1.1991	1.0558	
7	0.0170	0.0158	181.0	154.2	152.2	156.1	96.4	-3.5	C.5614	0.0226	0.5030	0.4298	1.6283	1.1751	1.1967	1.0604	
8	0.0094	0.0081	182.2	157.4	158.2	157.4	91.2	-1.0	C.5230	0.0061	0.5039	0.4318	1.6353	1.1923	1.2033	1.0571	
9	0.0044	0.0042	184.8	156.4	156.4	158.4	93.5	3.1	C.5307	0.0197	0.5071	0.4315	1.6359	1.2062	1.2062	1.0589	
10	0.0017	0.0015	178.6	151.4	152.6	151.4	92.7	3.8	C.5457	0.0246	0.4869	0.4102	1.6158	1.2171	1.2058	1.0577	

SL	IACP	EFV	TLFA	RFCVM-1	RFCVM-2	D-FAC	(MEGA-E	LOSS-P	PO2/	REFF-A	REFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TCT-STG
1	0.1072	C.1535	0.7751	42.16	50.25	C.3277	C.1244	0.0262	0.5739	54.05	94.24
2	0.1113	C.1437	0.6455	46.53	55.76	C.2751	C.0504	0.0113	0.5687	87.42	88.16
3	0.1372	0.1285	0.6130	52.81	58.56	C.2676	C.0278	0.0066	0.9538	86.43	86.81
4	0.1743	0.1295	0.5980	52.60	55.21	C.2750	C.0383	C.0047	0.9918	89.41	89.70
5	0.2154	C.1408	0.5510	49.30	49.35	C.2916	C.0542	0.0156	0.9903	96.25	96.36
6	0.2645	C.1315	0.5444	48.55	47.03	C.3034	C.0412	0.0124	0.9932	95.61	95.72
7	0.2645	C.1315	0.5444	48.55	47.03	C.3034	C.0412	0.0124	0.9932	97.19	87.51
8	0.2815	C.1341	0.5640	44.27	65.75	C.3204	C.0431	0.0135	0.9932	96.96	95.09
9	0.2812	C.1310	0.5551	45.27	46.17	C.3048	C.0480	0.0159	0.9924	93.20	93.38
10	0.2510	C.1269	0.5310	45.25	45.94	C.3105	0.0793	0.0272	0.9873	94.94	95.08

MC/EA	W0*/01	IC/IC	FC/FC	EFF-AC	EFF-P	T02/T01	PC2/PC1	EFF-AC
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
8	8	8	8	8	8	8	8	8
289.71	88.73	1.1012	1.2200	88.00	87.03	1.0612	0.9895	91.58

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADially DISTORTED INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	E-1	E-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	V ^o -1	V ^o -2	
RACIAR	RACIAR	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC
1	0.2055	0.1054	194.0	264.5	154.0	175.5	0.0	154.0	C.C	0.4423	0.5855	0.7843	162.5	155.9	0.7315	0.5356	240.7	180.9	
2	0.1855	0.1342	154.0	267.3	154.0	165.1	0.0	165.0	C.C	0.7852	0.5959	0.7744	155.6	170.8	0.7684	0.5484	252.7	185.7	
3	0.1625	0.1058	155.0	245.8	155.0	181.2	0.0	166.5	C.C	0.4974	0.4056	0.7350	178.4	187.3	0.8138	0.5884	247.3	193.1	
4	0.1340	0.0856	200.5	236.8	200.5	187.6	0.0	144.1	C.C	0.6544	0.4107	0.6538	194.1	203.0	0.8542	0.5766	260.5	196.6	
5	0.0889	0.0581	194.7	212.0	194.7	170.4	0.0	125.8	C.C	0.6357	0.5917	0.6145	235.6	239.0	0.9288	0.5938	305.6	204.7	
6	0.0702	0.0445	204.0	204.0	204.0	160.5	0.0	126.0	C.C	0.4455	0.5506	0.5800	254.6	257.0	0.9468	0.5968	312.9	207.1	
7	0.0562	0.0349	173.0	200.8	173.0	156.4	0.0	125.4	C.C	0.4767	0.5215	0.5762	264.7	268.1	0.9592	0.6079	317.9	211.6	
8	0.0347	0.0221	167.1	158.8	167.1	150.4	0.0	130.1	C.C	0.7131	0.5032	0.5602	276.7	279.7	0.9786	0.6063	324.9	212.1	
9	0.0223	0.0155	181.2	157.4	181.2	140.5	0.0	138.3	C.C	0.7760	0.4845	0.5603	291.6	291.6	1.0017	0.5911	333.2	208.3	
10	0.0083	0.0022	154.6	153.8	154.6	130.2	0.0	143.4	C.C	0.8346	0.4640	0.5464	306.2	306.2	1.0295	0.5872	343.1	208.3	
11	0.0013	0.0019	152.1	190.5	152.1	121.4	0.0	146.8	C.C	0.8796	0.4561	0.5341	316.6	316.6	1.0587	0.5897	353.1	210.3	

SL	INCS	IACP	CEV	TLFA	FPCV-1	RNCV-2	D-FAC	EPEGA-0	LOSS-P	P02/	SEFF-P	KEFF-A	0 ^o -1	0 ^o -2	VM ^o -1	VM ^o -2	PC/PC
RACIAR	RACIAR	PACIAR	PACIAR	PACIAR	PACIAR	PACIAR	PACIAR	PACIAR	TOTAL	TOTAL	TOT	TCT	RACIAR	RACIAR	M/SEC	M/SEC	INLET
1	0.0031	0.0598	0.3635	0.4494	40.28	38.12	0.4489	0.2511	0.0665	1.3050	75.05	74.09	0.6350	0.2344	-142.5	42.2	1.3508
2	0.0278	0.0687	0.2350	0.1683	40.61	42.26	0.4557	0.1603	0.0408	1.3672	85.89	85.26	0.6859	0.0804	-159.6	15.0	1.4169
3	0.0203	0.0721	0.2336	0.5950	41.21	45.56	0.4444	0.0713	0.0195	1.3785	92.67	92.54	0.7340	0.1391	-178.6	-26.0	1.4332
4	0.1106	0.0328	0.2005	0.4723	41.38	45.40	0.4511	0.0600	0.0170	1.3696	93.33	93.03	0.7763	0.3036	-196.1	-53.8	1.4256
5	0.0077	0.0316	0.1004	0.2553	39.85	42.65	0.4689	0.0504	0.0254	1.3597	88.78	88.28	0.8012	0.5860	-235.6	-113.2	1.3963
6	0.0277	0.0372	0.0705	0.2664	37.04	40.24	0.4617	0.0276	0.0242	1.3544	89.57	89.07	0.9510	0.6845	-254.6	-130.9	1.3891
7	0.0676	0.1172	0.0637	0.2530	35.62	39.32	0.4795	0.0223	0.0197	1.4229	91.41	91.18	0.5560	0.7391	-266.7	-142.5	1.3892
8	0.0931	0.1333	0.0568	0.2488	33.74	37.73	0.4975	0.0258	0.0250	1.4457	89.37	88.80	0.0310	0.7829	-278.7	-149.4	1.3925
9	0.1117	0.1508	0.0561	0.2384	32.47	35.16	0.5372	0.1524	0.0404	1.4667	83.43	82.73	1.0641	0.8277	-251.6	-153.3	1.3954
10	0.1306	0.1693	0.0473	0.2075	31.11	32.35	0.5623	0.1543	0.0502	1.4804	79.31	78.14	1.1033	0.8550	-306.3	-162.6	1.3954
11	0.1324	0.1741	0.0447	0.1701	30.61	30.11	0.5776	0.2380	0.0572	1.4845	75.39	73.95	1.1254	0.5553	-318.6	-171.7	1.3944

IC/IC	FC/FC	EFF-AC	EFF-P	PC1/PC1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR
3	3	3	3	3	3	3	3
1.1190	1.4000	84.63	85.54	183.05	1.1190	1.4000	84.63

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	E-1	E-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	PC/PC	TOT/TO	PC/PC	TOT/TO	
RACIAR	RACIAR	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	INLET	INLET	INLET	INLET
1	0.2034	0.1481	236.9	144.0	125.2	140.8	187.2	30.3	0.9650	0.2102	0.6738	0.4085	1.3007	1.1067	1.2588	1.1067	1.2588	1.1067	1.2588	1.1067	
2	0.1452	0.1157	236.1	164.6	160.7	161.3	176.5	33.3	0.8328	0.2029	0.6578	0.4695	1.3637	1.1090	1.3164	1.1090	1.3164	1.1090	1.3164	1.1090	
3	0.1040	0.0895	235.6	176.0	177.7	173.5	154.7	29.2	0.7170	0.1665	0.6896	0.5044	1.4075	1.1049	1.3547	1.1049	1.3547	1.1049	1.3547	1.1049	
4	0.0812	0.0742	226.6	174.1	181.2	172.4	139.4	24.2	0.6582	0.1395	0.6882	0.4592	1.4056	1.1015	1.3538	1.1015	1.3538	1.1015	1.3538	1.1015	
5	0.0608	0.0615	211.4	161.0	172.3	159.4	142.4	22.5	0.6184	0.1430	0.6132	0.4601	1.3797	1.1028	1.3350	1.1028	1.3350	1.1028	1.3350	1.1028	
6	0.0571	0.0552	206.3	156.5	168.0	155.0	122.4	24.0	0.6355	0.1531	0.5554	0.4444	1.3720	1.1090	1.3659	1.1090	1.3659	1.1090	1.3659	1.1090	
7	0.0535	0.0556	204.7	156.4	162.1	154.1	125.0	26.9	0.6577	0.1730	0.5885	0.4433	1.3726	1.1172	1.3646	1.1172	1.3646	1.1172	1.3646	1.1172	
8	0.0485	0.0503	204.4	156.2	160.9	153.6	126.1	28.7	0.6851	0.1852	0.5881	0.4423	1.3752	1.1200	1.4219	1.1200	1.4219	1.1200	1.4219	1.1200	
9	0.0410	0.0424	204.8	154.5	153.2	153.9	135.9	30.0	0.7261	0.1932	0.5830	0.4397	1.3788	1.1363	1.4407	1.1363	1.4407	1.1363	1.4407	1.1363	
10	0.0284	0.0265	202.8	153.1	144.8	149.3	142.0	33.6	0.7757	0.2226	0.5724	0.4272	1.3763	1.1496	1.4530	1.1496	1.4530	1.1496	1.4530	1.1496	
11	0.0108	0.0105	202.0	146.8	136.2	142.9	146.5	33.1	0.8215	0.2278	0.5624	0.4065	1.3560	1.1615	1.4436	1.1615	1.4436	1.1615	1.4436	1.1615	

SL	INCS	IACP	CEV	TLFA	FPCV-1	RNCV-2	D-FAC	EPEGA-0	LOSS-P	P02/	SEFF-A	SEFF-P
RACIAR	RACIAR	PACIAR	PACIAR	PACIAR	PACIAR	PACIAR	PACIAR	PACIAR	TOTAL	TOTAL	TOT-STG	TOT-STG
1	0.0254	0.1678	0.2640	0.7348	21.44	36.15	0.5163	0.1354	0.0280	0.9643	63.23	64.39
2	0.0665	0.0681	0.2458	0.3255	36.48	42.23	0.4421	0.1144	0.0253	0.9682	74.99	75.94
3	0.0658	0.0254	0.1403	0.2504	43.95	46.32	0.3825	0.0805	0.0146	0.9833	86.50	87.06
4	0.1079	0.0016	0.15.8	0.5100	44.57	46.33	0.3691	0.0494	0.0126	0.9872	89.13	89.59
5	0.1185	0.0060	0.1454	0.4755	43.88	47.65	0.3786	0.0594	0.0172	0.9866	83.72	84.37
6	0.0456	0.0187	0.1501	0.4822	41.34	41.27	0.3861	0.0401	0.0184	0.9871	85.51	86.14
7	0.0478	0.0432	0.1888	0.4848	40.41	40.78	0.3903	0.0313	0.0169	0.9888	85.07	85.76
8	0.0458	0.0497	0.1878	0.4755	40.06	40.64	0.3884	0.0358	0.0182	0.9884	88.52	89.08
9	0.0257	0.0433	0.1855	0.5325	37.80	40.15	0.4105	0.0420	0.0209	0.9872	80.71	81.48
10	0.0113	0.0212	0.2227	0.5531	35.51	38.60	0.4337	0.0891	0.0310	0.9822	75.34	76.40
11	0.0008	0.0141	0.2275	0.5537	33.25	34.48	0.4750	0.1421	0.0508	0.9725	68.48	70.07

IC/IC	FC/FC	EFF-AC	EFF-P	PC1/PC1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	STAGE	STAGE
3	3	3	3	3	3	3	3
1.1190	1.3356	80.20	81.07	1.1190	0.9826	80.20	81.07

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	N-1	N-2	U-1	U-2	M-1	M-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RACIAN	RACIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1664	0.1007	124.7	215.0	121.2	154.9	29.4	155.5	C.2362	0.7821	0.3527	0.6162	177.3	188.7	0.5408	0.4625	191.2	158.4
2	0.1654	0.0781	162.1	217.1	158.9	163.4	32.1	143.0	C.1881	0.7153	0.4619	0.6065	152.7	201.0	0.6439	0.4647	226.9	173.4
3	0.0676	0.0602	177.6	213.3	175.7	165.7	27.6	134.2	C.1554	0.6790	0.5103	0.5965	207.1	213.1	0.7296	0.5134	251.2	183.6
4	0.0736	0.0554	176.4	206.6	174.9	167.0	23.0	121.6	C.1305	0.6288	0.5065	0.5777	222.5	224.5	0.7620	0.5516	265.3	197.2
5	0.0355	0.0253	166.1	188.4	164.5	157.7	21.0	163.0	C.1390	0.5839	0.4768	0.5241	251.5	258.6	0.8186	0.6137	286.4	220.6
6	0.0216	0.0173	164.6	181.5	162.7	151.5	24.9	160.2	C.1521	0.5834	0.4687	0.5043	245.8	270.1	0.8372	0.6316	294.0	227.9
7	0.0135	0.0108	164.7	175.6	162.3	142.6	28.0	145.2	C.1709	0.6535	0.4685	0.4946	281.5	281.9	0.8569	0.6165	301.3	224.0
8	0.0100	0.0106	166.1	182.3	163.3	146.8	30.4	160.1	C.1842	0.6366	0.4675	0.4977	296.4	297.3	0.8632	0.6538	311.8	239.5
9	0.0098	0.0085	163.5	184.5	160.0	145.1	32.6	113.9	C.2071	0.6651	0.4577	0.5001	305.8	309.1	0.8926	0.6594	319.1	243.3
10	0.0016	0.0016	157.5	177.2	154.4	136.2	33.0	110.9	C.2103	0.6762	0.4388	0.4767	321.1	320.7	0.9085	0.6760	326.9	251.2

SL	IACS	IACP	EFV	ILFA	BPCVR-1	BPCVR-2	D-FAC	OMEGA-B	LOSS-P	PG2/	BEFF-P	BEFF-A	B*-1	B*-2	VM*-1	VM*-2	PC/PG
RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	TOTAL	TOTAL	TOTAL	RACIAN	RACIAN	M/SEC	M/SEC	INLET
1	0.0265	0.0545	C.2857	C.6743	31.72	44.13	C.3660	C.1126	-0.0268	1.3160	107.82	108.13	0.6088	0.2061	-147.9	-32.8	1.7139
2	0.1086	0.0008	C.1543	C.4494	42.04	47.85	C.1781	C.0070	0.0017	1.2640	99.24	55.21	C.7885	0.3389	-160.7	-58.0	1.7430
3	0.1161	0.0171	C.1549	C.3520	48.55	49.25	C.3901	C.0784	C.0197	1.2454	90.56	96.26	C.7950	0.4430	-170.5	-78.9	1.7595
4	0.0849	0.0058	C.1216	C.2503	46.75	50.38	C.3670	C.0427	C.0107	1.2520	94.35	94.16	C.8511	0.5605	-199.5	-104.9	1.7612
5	0.0188	0.0483	C.1033	C.1813	43.51	48.11	C.3267	C.0294	-0.0071	1.2618	104.72	104.87	C.8591	0.7777	-236.5	-154.7	1.7362
6	0.0024	0.0539	C.1024	C.1420	42.71	46.37	C.3149	C.0324	-0.0076	1.2551	105.48	105.45	C.8643	0.8415	-244.9	-169.9	1.7220
7	0.0080	0.0457	C.0950	C.1212	42.44	43.26	C.3552	C.0423	0.0099	1.2509	93.42	93.21	1.0019	0.8007	-253.8	-172.7	1.7190
8	0.0039	0.0426	C.0558	C.1126	42.16	43.66	C.3317	C.0234	0.0096	1.2587	96.11	95.97	1.0234	0.9108	-268.0	-189.2	1.7331
9	0.0131	0.0516	C.0434	C.1142	40.75	43.05	C.3374	C.0263	0.0066	1.2724	95.71	95.56	1.0453	0.9313	-276.1	-195.2	1.7440
10	0.0371	0.0711	C.0000	C.0503	38.85	40.57	C.3299	C.0225	0.0053	1.2731	94.20	94.04	1.0788	0.9884	-288.1	-209.8	1.7256

IC/IC	FC/FC	EFF-AD	EFF-P	DC1/P1	TC2/T01	PG2/PG1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	PG/SEC	R	R	R	R
1.1516	1.7332	86.45	87.46	160.55	1.0703	1.2628	97.94	98.01

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	N-1	N-2	PG/PG	TO/TO	PO/PO	TC2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RACIAN	RACIAN	M/SEC	M/SEC	INLET	INLET	STAGE	T01
1	0.1214	0.1357	203.0	165.1	130.2	145.1	153.0	1.3	C.8622	0.0086	0.5581	0.3972	1.6694	1.1901	1.2826	1.0754
2	0.0502	0.0555	205.1	157.5	145.5	157.5	140.0	2.8	C.7494	0.0181	0.5711	0.4339	1.7145	1.1876	1.2458	1.0701
3	0.0670	0.0665	206.4	166.7	158.9	166.7	151.7	-2.1	C.6510	0.0120	0.5759	0.4595	1.7502	1.1830	1.2387	1.0716
4	0.0480	0.0449	203.5	165.0	164.7	164.5	119.5	-4.6	C.6209	0.0278	0.5685	0.4560	1.7526	1.1786	1.2458	1.0703
5	0.0271	0.0232	185.5	152.8	155.5	152.7	102.4	-5.7	C.5710	0.0372	0.5276	0.4214	1.7258	1.1772	1.2541	1.0655
6	0.0290	0.0217	184.3	147.3	155.1	147.2	99.1	-6.5	C.5685	0.0444	0.5105	0.4045	1.7126	1.1815	1.2482	1.0692
7	0.0236	0.0206	182.5	145.1	147.2	145.0	107.8	-2.4	C.6319	0.0167	0.5071	0.3965	1.7081	1.1932	1.2467	1.0705
8	0.0194	0.0133	186.1	145.2	151.5	149.2	107.5	-1.0	C.6162	0.0070	0.5080	0.4043	1.7193	1.2159	1.2467	1.0705
9	0.0051	0.0080	188.8	151.7	150.8	151.4	113.5	4.7	C.6456	0.0368	0.5123	0.4081	1.7248	1.2342	1.2539	1.0764
10	0.0031	0.0027	181.5	143.6	144.3	143.5	110.7	4.8	C.6545	0.0331	0.4901	0.3835	1.7031	1.2476	1.2564	1.0741

SL	IACP	EFV	ILFA	BPCVR-1	BPCVR-2	D-FAC	OMEGA-B	LOSS-P	PG2/	BEFF-A	BEFF-P
RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	RACIAN	TOTAL	TOTAL	TOTAL
1	0.0254	C.1572	C.0538	32.25	44.65	C.4346	C.1348	C.6284	0.8743	97.46	97.74
2	0.0152	C.1565	0.7312	44.53	49.30	C.3764	C.0818	0.0186	0.9838	92.28	92.51
3	0.0430	C.1322	0.7633	41.75	52.74	C.3658	C.0284	0.0063	0.9947	87.96	88.32
4	0.0102	C.1213	0.8143	45.95	52.58	C.3420	C.0290	0.0063	0.9951	92.01	92.25
5	0.0199	C.1210	0.8682	48.73	48.68	C.3585	C.0396	0.0103	0.9538	101.91	101.85
6	0.0133	C.1128	0.8122	47.22	46.85	C.3729	C.0368	0.0108	0.9541	102.70	102.82
7	0.0069	C.1050	0.8488	44.44	45.56	C.3911	C.0382	0.0123	0.9939	93.01	93.22
8	0.0121	C.1101	0.8222	45.24	46.15	C.3894	C.0474	0.0157	0.9923	92.75	92.68
9	0.0187	C.1274	0.8144	44.46	46.32	C.3977	C.0682	0.0237	0.9886	90.85	91.15
10	0.0105	C.1252	C.6234	42.32	43.24	C.4183	C.0687	0.0308	0.9869	90.64	90.94

MCCFR	MCCFR	IC/IC	FC/FC	EFF-AD	EFF-P	TC2/T01	PG2/PG1	EFF-AC
INLET	INLET	INLET	INLET	INLET	INLET	R	R	STAGE
84.29	84.5	1.1574	1.3213	84.90	86.01	1.0703	0.9909	93.64

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	FF-1-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RUN NC430, SPEED CODE 63, POINT NO 1																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.2041	0.1620	136.4	199.5	136.4	133.3	0.0	148.4	0.0	0.8366	0.4074	0.5901	99.2	108.5	0.5038	0.4215	168.7	139.1
2	0.1848	0.1299	137.4	197.4	137.4	146.2	0.0	132.6	0.0	0.7343	0.4106	0.5839	111.1	118.9	0.5278	0.4364	176.7	146.9
3	0.1559	0.1047	138.5	182.6	138.5	144.7	0.0	113.1	0.0	0.6423	0.4140	0.5416	124.3	130.4	0.5563	0.4297	186.2	145.7
4	0.1298	0.0865	138.7	172.1	138.7	140.5	0.0	99.4	0.0	0.6150	0.4146	0.5044	136.5	141.3	0.5817	0.4314	194.7	146.6
5	0.0862	0.0609	133.8	151.4	133.8	128.5	0.0	80.2	0.0	0.5581	0.3995	0.4434	164.0	164.4	0.6318	0.4532	211.7	154.7
6	0.0699	0.0498	125.7	145.2	125.7	123.4	0.0	76.4	0.0	0.5444	0.3744	0.4243	177.3	178.9	0.6473	0.4690	217.3	160.5
7	0.0567	0.0407	120.4	142.7	120.4	122.1	0.0	73.9	0.0	0.5449	0.3582	0.4168	185.7	184.7	0.6585	0.4853	221.3	166.2
8	0.0465	0.0276	116.5	139.9	116.5	119.4	0.0	72.4	0.0	0.5473	0.3465	0.4078	194.0	194.7	0.6730	0.4978	226.3	170.7
9	0.0243	0.0147	112.7	136.9	112.7	113.0	0.0	77.2	0.0	0.5996	0.3348	0.3979	203.0	203.0	0.6899	0.4916	232.2	169.1
10	0.0100	0.0026	108.4	133.0	108.4	105.2	0.0	81.3	0.0	0.6578	0.3219	0.3851	213.2	213.2	0.7101	0.4888	239.2	168.8
11	0.0076	0.0016	107.0	129.1	107.0	98.0	0.0	84.0	0.0	0.7086	0.3174	0.3727	221.8	221.8	0.7309	0.4882	246.3	169.1

SL	INCS	INCH	DEV	TURN	RHOWN-1	RHOWN-2	D-FAC	OMEGA-B	LOSS-P	P02/	REFF-P	REFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO	
RUN NC430, SPEED CODE 63, POINT NO 1																		
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC
1	0.0499	0.0010	0.2485	0.9197	31.33	30.71	0.3903	0.2849	0.0641	1.1547	75.89	75.39	0.6302	-0.2894	-99.2	39.9	1.1741	INLET
2	0.0214	0.0029	0.2226	0.7748	31.53	34.75	0.3650	0.0917	0.0233	1.1852	91.53	91.33	0.6020	-0.6928	-111.1	13.7	1.2057	INLET
3	0.0206	0.0716	0.2177	0.6146	31.77	35.04	0.3873	0.0597	0.0164	1.1768	93.54	93.39	0.7335	0.1189	-124.3	-17.3	1.1980	INLET
4	0.0139	0.0755	0.1925	0.4694	31.91	34.41	0.3992	0.0585	0.0164	1.1664	92.79	92.64	0.7790	0.2894	-136.5	-41.9	1.1875	INLET
5	0.0015	0.0700	0.1059	0.2960	31.65	31.86	0.3967	0.0644	0.0186	1.1527	90.10	89.90	0.8874	0.5914	-164.0	-86.3	1.1638	INLET
6	0.0019	0.1009	0.0794	0.2615	28.68	30.70	0.3865	0.0432	0.0118	1.1629	93.45	93.30	0.9540	0.6933	-177.3	-102.5	1.1611	INLET
7	0.0070	0.1175	0.0706	0.2704	27.40	30.43	0.3714	0.0166	0.0045	1.1722	97.59	97.53	0.9963	0.7460	-185.7	-112.7	1.1608	INLET
8	0.0074	0.1374	0.0700	0.2341	26.49	29.79	0.3668	0.0143	0.0038	1.1773	97.93	97.88	1.0302	0.7961	-194.0	-122.0	1.1588	INLET
9	0.0064	0.1418	0.0674	0.2252	25.58	28.09	0.4615	0.0483	0.0179	1.1803	89.87	89.63	1.0643	0.8391	-203.0	-125.8	1.1588	INLET
10	0.0177	0.1664	0.0691	0.2027	24.60	26.04	0.4321	0.1232	0.0311	1.1822	82.39	81.97	1.1004	0.8977	-213.2	-132.0	1.1517	INLET
11	0.0195	0.1672	0.1459	0.1689	24.26	24.16	0.4598	0.1728	0.0417	1.1795	75.63	75.05	1.1215	0.9526	-221.8	-137.8	1.1474	INLET

TO2/TO1	PO2/PO1	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	ROTOR	ROTOR	STAGE	STAGE
1.0519	1.1696	88.36	88.62	127.91	1.0519	1.1696	88.36	88.62

STATOR 1

SL	FFS1-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RUN NC430, SPEED CODE 63, POINT NO 1																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1946	0.1369	178.7	132.3	110.6	130.2	140.3	23.8	0.9019	0.1784	0.5249	0.3840	1.1440	1.0557	1.1250	1.0557	1.0557	1.0557
2	0.1299	0.0977	184.5	149.2	134.1	147.3	126.8	23.8	0.7572	0.1598	0.5434	0.4349	1.1869	1.0547	1.1668	1.0547	1.0547	1.0547
3	0.0970	0.0708	177.0	145.5	139.6	144.4	109.8	18.2	0.6615	0.1749	0.5209	0.4245	1.1863	1.0511	1.1653	1.0511	1.0511	1.0511
4	0.0648	0.0575	168.7	140.5	139.6	139.4	96.2	17.2	0.6064	0.1225	0.4980	0.4099	1.1788	1.0487	1.1578	1.0487	1.0487	1.0487
5	0.0420	0.0444	152.3	129.1	130.5	129.1	78.5	16.0	0.5421	0.1245	0.4461	0.3762	1.1592	1.0461	1.1448	1.0461	1.0461	1.0461
6	0.0373	0.0398	147.5	126.4	127.0	125.3	74.9	16.8	0.5330	0.1335	0.4314	0.3679	1.1552	1.0470	1.1552	1.0470	1.0470	1.0470
7	0.0341	0.0364	146.2	125.6	126.2	124.4	73.9	17.6	0.5297	0.1403	0.4272	0.3653	1.1545	1.0486	1.1643	1.0486	1.0486	1.0486
8	0.0318	0.0336	144.3	123.8	125.5	122.5	71.3	17.6	0.5166	0.1429	0.4214	0.3599	1.1525	1.0481	1.1698	1.0481	1.0481	1.0481
9	0.0282	0.0299	142.2	121.8	120.2	120.5	76.0	17.6	0.5063	0.1449	0.4140	0.3531	1.1498	1.0534	1.1734	1.0534	1.0534	1.0534
10	0.0199	0.0198	139.2	118.9	113.4	117.5	80.4	18.4	0.6163	0.1550	0.4038	0.3435	1.1459	1.0593	1.1761	1.0593	1.0593	1.0593
11	0.0077	0.0092	135.5	112.9	108.4	111.1	83.8	20.2	0.6671	0.1799	0.3917	0.3251	1.1369	1.0644	1.1687	1.0644	1.0644	1.0644

SL	INCS	INCH	DEV	TURN	RHOWN-1	RHOWN-2	D-FAC	OMEGA-B	LOSS-P	P02/	REFF-A	REFF-P
RUN NC430, SPEED CODE 63, POINT NO 1												
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC
1	0.0177	0.0646	0.2732	0.7236	26.36	32.15	0.3929	0.1471	0.0305	0.9748	82.52	82.15
2	0.0497	0.0206	0.2025	0.5474	32.50	37.02	0.3152	0.0796	0.0177	0.9855	87.47	87.74
3	0.1712	0.0238	0.1488	0.5366	34.19	36.55	0.3001	0.0599	0.0144	0.9899	87.92	88.16
4	0.1522	0.0514	0.1395	0.4840	34.14	35.37	0.2869	0.0505	0.0129	0.9922	85.43	85.71
5	0.1949	0.0824	0.1269	0.4176	32.33	32.45	0.2721	0.0487	0.0142	0.9938	89.57	89.7
6	0.2074	0.0942	0.1199	0.3895	31.52	31.48	0.2651	0.0478	0.0132	0.9944	91.54	91.72
7	0.2068	0.0948	0.1342	0.3894	31.31	31.43	0.2657	0.0475	0.0131	0.9944	95.63	95.73
8	0.2242	0.0997	0.1372	0.3737	31.16	30.98	0.2650	0.0507	0.0167	0.9944	87.66	87.93
9	0.1674	0.0544	0.1272	0.4194	29.70	30.32	0.2838	0.0499	0.0169	0.9944	80.11	80.56
10	0.1707	0.0392	0.1551	0.4613	27.94	29.38	0.3044	0.0520	0.0183	0.9945	70.78	71.42
11	0.1752	0.0404	0.2196	0.4872	26.07	27.61	0.2386	0.0619	0.0331	0.9908		

MC/PP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR	STAGE	STAGE
446.07	1.0519	1.1596	83.41	83.75	1.0519	0.9914	83.41	83.75

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1520	0.1046	118.3	185.8	118.0	159.1	23.0	96.0	0.1948	0.5373	0.3423	0.5212	123.4	131.4	0.4439	0.4721	153.4	163.0
2	0.1147	0.0830	144.7	187.5	145.1	166.1	22.1	87.0	0.1505	0.4797	0.4274	0.5441	134.2	139.9	0.3543	0.5060	183.3	174.3
3	0.0911	0.0670	147.1	179.8	146.0	163.5	17.5	74.7	0.1189	0.4274	0.4394	0.5220	144.2	148.4	0.5644	0.5207	193.3	179.3
4	0.0485	0.0502	143.8	166.3	142.9	155.8	16.6	63.5	0.1154	0.3866	0.4200	0.4885	154.9	157.7	0.5808	0.5295	198.9	182.1
5	0.0194	0.0096	133.7	146.3	132.7	141.0	14.1	39.2	0.1210	0.2711	0.3898	0.4251	179.3	180.0	0.4132	0.5288	210.3	199.3
6	0.0059	0.0024	131.9	137.9	130.8	132.4	17.1	38.4	0.1298	0.2824	0.3841	0.3995	187.9	188.1	0.4204	0.5789	215.1	199.8
7	0.0010	0.0065	129.7	135.2	128.5	127.5	17.5	44.9	0.1357	0.3382	0.3778	0.3907	194.3	194.3	0.4412	0.5721	220.1	198.0
8	0.0053	0.0084	126.6	131.9	125.3	125.3	17.6	41.2	0.1394	0.3172	0.3670	0.3799	207.8	207.0	0.4404	0.5986	227.8	207.9
9	0.0079	0.0108	122.5	128.9	122.1	122.6	18.5	39.7	0.1505	0.3130	0.3570	0.3701	215.7	215.2	0.4704	0.4149	231.9	214.1
10	0.0061	0.0090	117.6	116.4	115.9	110.8	20.1	41.8	0.1719	0.4607	0.3387	0.3385	223.6	223.3	0.4745	0.6079	236.1	212.7

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	POZ/	SEFF-P	SEFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1973	0.0758	0.2960	0.4937	29.08	39.48	0.0686	0.0215	0.0051	1.1130	97.35	97.31	0.7101	0.2164	-100.4	-35.4	1.2758
2	0.2468	0.1215	0.1623	0.2494	36.65	42.23	0.1474	0.0796	0.0198	1.0947	86.64	86.47	0.6563	0.3069	-112.1	-53.0	1.3010
3	0.1874	0.0964	0.1338	0.2918	36.87	42.06	0.1572	0.0415	0.0105	1.0434	91.90	91.70	0.7138	0.4220	-126.7	-73.7	1.2950
4	0.1649	0.0762	0.1143	0.2242	36.01	40.39	0.1555	0.0121	0.0031	1.0860	97.47	97.42	0.7691	0.5429	-138.3	-94.2	1.2763
5	0.0900	0.0224	0.1102	0.1632	33.36	36.88	0.0910	0.0897	-0.0215	1.0698	142.28	142.67	0.8879	0.7847	-163.1	-140.8	1.2370
6	0.0709	0.0122	0.1071	0.0712	32.85	34.47	0.1074	0.0580	-0.0089	1.0562	119.27	119.43	0.9174	0.8462	-170.8	-149.6	1.2197
7	0.0465	0.0048	0.0791	0.0745	32.34	33.03	0.1476	0.0399	0.0095	1.0529	84.16	84.05	0.9474	0.8708	-178.7	-151.4	1.2140
8	0.0316	0.0071	0.0725	0.0643	31.32	32.24	0.1266	0.0244	0.0058	1.0504	88.97	88.89	0.9879	0.9235	-150.2	-145.9	1.2073
9	0.0163	0.0225	0.0770	0.0552	30.36	31.37	0.1132	0.0128	0.0029	1.0493	93.73	93.68	1.0161	0.9609	-197.2	-175.5	1.2015
10	0.0065	0.0454	0.1224	0.0203	28.64	28.08	0.1301	0.0518	0.0112	1.0416	74.77	74.62	1.0532	1.0228	-203.5	-181.5	1.1833

TC/TC	PO/PO	EFF-AD	EFF-P	WC1/A1	TC2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		Σ	Σ	SOM			Σ	Σ
1.0731	1.2418	87.37	87.75	139.12	1.0702	1.0709	97.84	97.85

STATOR 2

SL	FPS1-1	FPS1-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1708	0.1393	148.9	149.7	137.8	169.7	94.2	-0.7	0.5986	-0.0044	0.4807	0.4891	1.2466	1.0893	1.0855	1.0319		
2	0.0966	0.0935	177.7	182.3	156.1	182.3	85.1	-3.5	0.4674	-0.0191	0.5144	0.5285	1.2869	1.0854	1.0829	1.0302		
3	0.0633	0.0655	175.3	175.3	159.4	175.3	73.1	-5.3	0.4294	-0.0303	0.4505	0.5684	1.2764	1.0796	1.0766	1.0279		
4	0.0461	0.0457	167.2	165.8	155.2	165.7	62.3	-4.4	0.3814	-0.0325	0.4853	0.4810	1.2537	1.0733	1.0675	1.0243		
5	0.0291	0.0270	147.4	143.2	142.4	142.2	38.3	-1.4	0.2430	-0.0128	0.4284	0.4157	1.2065	1.0604	1.0436	1.0134		
6	0.0254	0.0232	139.7	139.6	134.4	134.8	38.2	-2.1	0.2768	-0.0153	0.4049	0.4051	1.2005	1.0619	1.0395	1.0132		
7	0.0211	0.0140	137.1	132.7	129.6	132.7	44.5	-2.1	0.3207	-0.0161	0.3963	0.3834	1.1875	1.0655	1.0299	1.0177		
8	0.0168	0.0152	133.8	129.7	127.5	129.7	40.8	-1.3	0.3096	-0.0103	0.3855	0.3734	1.1827	1.0713	1.0290	1.0160		
9	0.0137	0.0130	130.9	127.9	124.6	127.9	39.6	-1.1	0.3076	0.0164	0.3762	0.3673	1.1803	1.0753	1.0305	1.0148		
10	0.0071	0.0073	121.0	121.4	113.5	121.4	41.7	3.6	0.3522	0.0298	0.3460	0.3473	1.1697	1.0811	1.0294	1.0157		

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PO2/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.2909	0.1442	0.6010	35.32	47.28	0.1022	0.1678	0.0354	0.9755	74.33	74.62
2	-0.2671	0.1212	0.5165	40.29	46.24	0.0954	0.0653	0.0147	0.9892	76.24	76.51
3	-0.3457	0.1144	0.4496	41.27	44.70	0.1035	0.0918	0.0219	0.9852	76.28	76.53
4	-0.3457	0.1165	0.4139	40.28	47.36	0.1077	0.1131	0.0266	0.9833	77.71	77.92
5	-0.4569	0.1465	0.2758	37.16	36.68	0.1075	0.1296	0.0575	0.9762	91.85	91.93
6	-0.4444	0.1440	0.2921	34.90	35.72	0.0967	0.1469	0.0442	0.9843	84.54	84.63
7	-0.3922	0.1907	0.2468	33.50	33.72	0.1387	0.2125	0.0664	0.9782	47.91	48.13
8	-0.4276	0.1667	0.3149	32.71	32.76	0.1356	0.2064	0.0689	0.9797	51.61	51.81
9	-0.4741	0.2130	0.2911	31.85	32.18	0.1245	0.1429	0.0652	0.9818	58.32	58.50
10	-0.4028	0.2519	0.3224	28.71	30.32	0.1114	0.1479	0.0524	0.9880	53.03	53.23

NC/PP	MC/NA	TC/TC	PO/PO	EFF-AD	EFF-P	TC2/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
KG/SEC	KG/SEC			Σ	Σ			Σ
546.07	63.8	1.0731	1.2191	79.73	80.29	1.0202	0.9818	71.33

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

																RUN NO430, SPEED CODE 63, POINT NO 2			
SL	FPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.2071	0.1629	128.6	189.7	128.6	123.2	0.0	144.3	0.0	0.8617	0.3834	0.5598	99.3	108.6	0.4844	0.3784	162.5	128.3	
2	0.1817	0.1297	129.5	188.5	129.5	136.2	0.0	130.3	0.0	0.7611	0.3861	0.5560	111.2	119.0	0.5089	0.4031	170.7	134.7	
3	0.1511	0.1044	130.5	176.2	130.5	135.4	0.0	112.5	0.0	0.6911	0.3891	0.5186	124.5	130.6	0.5377	0.4027	180.3	134.8	
4	0.1242	0.0854	130.6	166.0	130.6	132.8	0.0	99.6	0.0	0.6426	0.3894	0.4874	136.7	141.5	0.5637	0.4089	189.0	139.2	
5	0.0794	0.0566	126.1	147.2	126.1	122.0	0.0	82.5	0.0	0.5946	0.3758	0.4305	164.2	164.6	0.6168	0.4332	207.0	168.2	
6	0.0633	0.0443	118.7	141.5	118.7	116.8	0.0	79.8	0.0	0.5994	0.3530	0.4127	177.4	179.1	0.6349	0.4472	213.5	193.3	
7	0.0510	0.0345	113.9	139.5	113.9	116.4	0.0	76.9	0.0	0.5835	0.3385	0.4068	185.9	186.9	0.6479	0.4470	218.0	180.2	
8	0.0352	0.0205	110.2	137.3	110.2	113.4	0.0	77.4	0.0	0.5992	0.3273	0.3995	194.2	194.9	0.6631	0.4752	223.3	163.3	
9	0.0183	0.0068	106.4	134.8	106.4	105.0	0.0	84.5	0.0	0.6772	0.3156	0.3906	203.2	203.2	0.6807	0.4594	229.4	158.6	
10	0.0059	0.0020	102.0	130.9	102.0	96.9	0.0	88.0	0.0	0.7374	0.3025	0.3782	213.4	213.4	0.7015	0.4577	234.4	158.5	
11	0.0001	0.0001	100.6	127.8	100.6	90.3	0.0	90.3	0.0	0.7844	0.2981	0.3682	222.1	222.0	0.7224	0.4462	243.8	159.8	

SL	INCS	INCH	DEV	TURK	RMOVH-1	RMOVH-2	D-FAC	DMFGA-B	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0172	0.0796	0.2575	0.4393	29.86	28.94	0.4277	0.2713	0.0613	1.1556	78.08	77.62	0.6589	0.2804	-99.3	35.7	1.1718
2	0.0021	0.0923	0.2333	0.7935	30.04	32.92	0.3991	0.0804	0.0204	1.1851	92.94	92.77	0.7114	0.0821	-111.2	11.3	1.2026
3	0.0094	0.1014	0.2309	0.6314	30.25	33.39	0.4157	0.0416	0.0114	1.1804	95.76	95.66	0.7635	0.1321	-124.5	-18.1	1.1986
4	0.0166	0.1060	0.2082	0.5042	30.27	33.05	0.4206	0.0327	0.0092	1.1735	96.20	96.11	0.8095	0.3053	-136.7	-41.9	1.1955
5	0.0275	0.1071	0.1182	0.3127	29.21	30.72	0.4189	0.0489	0.0184	1.1635	93.28	93.14	0.9164	0.6037	-144.2	-84.1	1.1747
6	0.0585	0.1290	0.0904	0.2774	27.41	28.50	0.4150	0.0398	0.0108	1.1726	94.39	94.27	0.9818	0.7044	-173.4	-99.3	1.1711
7	0.0931	0.1424	0.0817	0.2444	26.26	29.48	0.3849	0.0115	0.0031	1.1814	98.63	98.60	1.0215	0.7571	-185.9	-110.0	1.1719
8	0.1170	0.1572	0.0772	0.2515	25.37	28.69	0.3995	0.0232	0.0061	1.1868	97.20	97.13	1.0549	0.8033	-194.2	-117.5	1.1710
9	0.1344	0.1734	0.0751	0.2420	24.47	26.45	0.4531	0.1022	0.0265	1.1899	86.28	85.93	1.0887	0.8468	-203.2	-118.8	1.1687
10	0.1521	0.1909	0.1042	0.2320	23.46	24.32	0.4812	0.1545	0.0383	1.1918	79.82	79.31	1.1248	0.9128	-213.4	-125.4	1.1654
11	0.1525	0.1913	0.1622	0.1767	23.12	22.65	0.4993	0.1967	0.0464	1.1908	74.54	73.89	1.1455	0.9688	-222.1	-131.7	1.1631

TO/TO	PC/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
%	%	%	%	SOM	%	%	%	%
1.0537	1.1775	89.05	89.30	130.96	1.0537	1.1775	89.05	89.30

STATOR 1

																RUN NO430, SPEED CODE 63, POINT NO 2			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO			
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01			
1	0.1956	0.1392	169.8	119.7	101.1	117.5	136.4	23.1	0.9319	0.1920	0.4978	0.3466	1.1462	1.0542	1.1298	1.0542			
2	0.329	0.1013	175.6	136.7	123.9	134.8	124.5	23.0	0.7875	0.1684	0.5159	0.3975	1.1846	1.0537	1.1674	1.0537			
3	0.3901	0.0745	169.4	135.6	130.4	134.4	108.2	18.1	0.6928	0.1335	0.4976	0.3946	1.1885	1.0510	1.1705	1.0510			
4	0.6686	0.0618	167.3	131.4	130.6	130.3	96.3	16.9	0.6353	0.1292	0.4761	0.3825	1.1829	1.0488	1.1649	1.0488			
5	0.0495	0.0509	147.6	121.2	122.6	120.2	80.7	15.7	0.5784	0.1303	0.4316	0.3574	1.1670	1.0474	1.1540	1.0474			
6	0.0493	0.0478	143.2	118.6	120.1	117.5	78.1	16.1	0.5767	0.1362	0.4181	0.3443	1.1637	1.0489	1.1631	1.0489			
7	0.0421	0.0443	142.5	118.7	119.5	117.3	77.6	19.2	0.5761	0.1544	0.4154	0.3442	1.1648	1.0514	1.1724	1.0514			
8	0.0400	0.0416	141.3	117.5	119.7	116.1	75.1	18.4	0.5605	0.1572	0.4117	0.3409	1.1644	1.0501	1.1786	1.0501			
9	0.0399	0.0271	139.8	115.9	112.3	114.4	83.2	18.5	0.6377	0.1602	0.4056	0.3342	1.1626	1.0584	1.1826	1.0584			
10	0.0238	0.0242	136.7	112.8	105.4	111.0	87.1	20.2	0.6806	0.1803	0.3955	0.3247	1.1589	1.0642	1.1850	1.0642			
11	0.0097	0.0099	133.9	107.0	99.0	105.2	90.1	19.8	0.7395	0.1665	0.3860	0.3070	1.1508	1.0693	1.1783	1.0693			

SL	INCS	INCH	DEV	TURK	RMOVH-1	RMOVH-2	D-FAC	DMFGA-B	LOSS-P	P02/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	P01	TOT	TOT
1	0.0122	0.0945	0.2258	0.7399	24.49	29.61	0.4315	0.1373	0.0284	0.9784	85.50	86.10
2	0.0384	0.0509	0.2111	0.6191	30.50	34.48	0.3493	0.0797	0.0177	0.9868	84.24	84.57
3	0.0900	0.0554	0.1574	0.5592	32.43	34.62	0.3274	0.0572	0.0137	0.9911	90.34	90.56
4	0.1234	0.0226	0.1433	0.5060	32.70	33.64	0.3157	0.0546	0.0146	0.9921	91.42	91.40
5	0.1585	0.0461	0.1327	0.4481	31.14	30.99	0.3078	0.0462	0.0175	0.9927	88.20	88.44
6	0.1589	0.0406	0.1326	0.4404	30.27	30.24	0.3059	0.0543	0.0167	0.9938	90.29	90.49
7	0.1604	0.0364	0.1482	0.4218	30.11	30.15	0.3031	0.0520	0.0165	0.9942	90.49	90.69
8	0.1804	0.0549	0.1496	0.4032	30.18	29.90	0.2989	0.0552	0.0181	0.9939	94.88	94.94
9	0.1140	0.0150	0.1574	0.4776	28.13	29.26	0.3288	0.0534	0.0181	0.9942	84.18	84.55
10	0.0964	0.0361	0.1894	0.5103	26.30	28.23	0.3488	0.0574	0.0201	0.9941	77.56	78.12
11	0.1039	0.0310	0.2262	0.5520	24.62	26.58	0.3931	0.1082	0.0390	0.9944	69.32	70.02

MCORP	TO/TO	PC/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
PAR/SEC	%	%	%	%	%	%	%	%
546.40	1.0537	1.1674	84.24	84.58	1.0537	0.9914	84.24	

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ¹ -1	M ¹ -2	V ¹ -1	V ¹ -2
RUN NO430, SPEED CODE 63, POINT NO 2																		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1511	0.1040	106.2	173.9	103.8	140.6	22.4	107.4	0.2112	0.6293	0.3008	0.5015	123.6	131.5	0.4187	0.4141	144.9	143.6
2	0.1142	0.0737	134.6	174.7	133.1	147.7	21.5	93.3	0.1599	0.5608	0.3919	0.5544	134.3	140.1	0.3071	0.4472	174.4	154.9
3	0.0717	0.0490	136.6	169.6	135.5	148.3	17.4	82.3	0.1272	0.5051	0.3979	0.4900	144.3	148.5	0.3408	0.4693	185.7	162.4
4	0.0700	0.0590	134.1	159.8	133.1	142.7	16.4	72.0	0.1223	0.4465	0.3907	0.4617	155.1	157.8	0.3600	0.4812	192.2	166.6
5	0.0204	0.0107	124.1	140.7	124.2	131.6	15.6	49.7	0.1349	0.3607	0.3640	0.4084	179.4	180.2	0.3979	0.5355	205.6	185.4
6	0.0052	0.0022	124.0	132.1	122.8	123.9	17.0	48.9	0.1372	0.3762	0.3601	0.3837	188.0	188.3	0.4118	0.5372	210.6	186.4
7	0.0013	0.0056	122.9	129.9	121.6	115.6	18.3	59.2	0.1493	0.4734	0.3574	0.3731	196.4	196.4	0.4271	0.5155	215.7	179.4
8	0.0010	0.0020	120.7	128.0	119.2	116.5	18.7	53.0	0.1555	0.4271	0.3488	0.3661	208.0	207.2	0.4464	0.5528	223.7	193.2
9	0.0010	0.0023	117.9	125.6	116.2	114.1	20.1	52.4	0.1715	0.4303	0.3397	0.3583	215.9	215.4	0.4558	0.5677	227.6	199.0
10	0.0014	0.0018	112.6	119.1	110.8	107.5	19.7	41.1	0.1762	0.4436	0.3233	0.3384	223.8	223.5	0.4668	0.5776	232.2	203.2

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-P	TEFF-A	B ¹ -1	B ¹ -2	VO ¹ -1	VO ¹ -2	PO/PO	
RUN NO430, SPEED CODE 63, POINT NO 2																		
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TCY	TCY	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.1793	0.0168	0.2817	0.5676	26.50	36.31	0.1576	-0.3029	-0.0007	1.1282	100.21	100.21	0.7691	0.2021	-101.2	-29.2	1.2945	
2	0.1959	0.0645	0.1601	0.3265	34.23	38.77	0.2257	0.0819	0.0204	1.1075	88.64	88.47	0.7012	0.3047	-112.8	-46.7	1.3154	
3	0.1293	0.0602	0.1379	0.3329	34.86	39.40	0.2249	0.0375	0.0095	1.1089	93.94	93.86	0.7519	0.4190	-127.0	-46.3	1.3165	
4	0.1293	0.0794	0.1125	0.2648	34.20	38.21	0.2203	0.7058	0.0015	1.1043	99.18	99.15	0.8059	0.5411	-138.7	-85.9	1.3055	
5	0.0556	0.0119	0.1067	0.1411	31.81	35.56	0.1559	-0.0097	-0.0216	1.0934	127.28	127.65	0.9223	0.7811	-163.8	-130.5	1.2793	
6	0.0401	0.0177	0.1051	0.1040	31.43	33.31	0.1693	-0.0445	-0.0105	1.0812	114.56	114.71	0.9482	0.8442	-171.1	-139.3	1.2569	
7	0.0218	0.0149	0.0796	0.1013	31.22	30.93	0.2391	0.0796	0.0187	1.0756	79.80	79.59	0.9721	0.8708	-178.2	-137.2	1.2520	
8	0.0111	0.0277	0.0727	0.0948	30.31	36.93	0.1948	0.0230	0.0077	1.0751	89.97	89.85	1.0084	0.9236	-189.3	-154.2	1.2497	
9	0.0025	0.0413	0.0759	0.0751	29.38	39.17	0.1821	0.0212	0.0049	1.0754	93.18	93.10	1.0350	0.9599	-195.7	-163.0	1.2459	
10	0.0065	0.0654	0.1127	0.0600	27.86	28.24	0.1807	0.0276	0.0061	1.0738	90.89	90.80	1.0731	1.0131	-204.1	-172.4	1.2352	

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1
INLET	INLET	INLET	INLET	KG/SEC
%	%	%	%	SGM
1.0E10	1.2750	89.78	89.17	131.25

T02/T01	PO2/PO1	EFF-AD	EFF-P
ROTOR	ROTOR	%	%
1.0259	1.0922	92.52	98.54

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PC	TO/TO	PO/PO	T02/
RUN NO430, SPEED CODE 63, POINT NO 2																
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01
1	0.1197	0.1272	158.0	147.4	122.0	147.4	106.5	0.0	0.6856	0.0000	0.4537	0.4220	1.2748	1.0911	1.1107	1.0350
2	0.0850	0.0915	166.3	159.3	139.0	159.3	91.4	-2.9	0.5798	-0.0181	0.4791	0.4582	1.3090	1.0882	1.1021	1.0334
3	0.0614	0.0631	169.8	156.2	144.9	156.1	80.6	-5.9	0.5065	-0.0349	0.4786	0.4498	1.3062	1.0836	1.1006	1.0318
4	0.0444	0.0434	159.0	148.9	142.4	148.0	70.7	-5.9	0.4600	-0.0395	0.4593	0.4290	1.2921	1.0786	1.0952	1.0288
5	0.0272	0.0245	141.8	131.0	133.1	131.0	48.0	-3.5	0.3516	-0.0265	0.4098	0.3777	1.2576	1.0690	1.0800	1.0201
6	0.0253	0.0226	134.8	126.5	125.7	126.5	48.6	-4.8	0.3687	-0.0377	0.3885	0.3641	1.2499	1.0708	1.0735	1.0197
7	0.0211	0.0188	131.7	121.2	117.9	121.2	58.7	-3.8	0.4617	-0.0317	0.3785	0.3476	1.2410	1.0756	1.0654	1.0265
8	0.0137	0.0121	129.8	119.7	118.6	119.7	52.8	-2.6	0.4187	-0.0220	0.3713	0.3418	1.2387	1.0837	1.0657	1.0233
9	0.0090	0.0082	127.4	118.9	116.2	118.9	52.2	0.9	0.4227	0.0073	0.3635	0.3386	1.2374	1.0883	1.0680	1.0225
10	0.0035	0.0032	121.1	112.6	109.8	112.6	51.0	1.9	0.4352	0.0168	0.3442	0.3198	1.2272	1.0935	1.0669	1.0226

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-A	TEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOY-STG	TOY-STG
1	-0.2019	0.1485	0.6696	32.18	38.82	0.2000	0.1164	0.0245	0.9847	87.03	87.22
2	-0.1849	0.1223	0.5979	36.93	42.54	0.1884	0.0349	0.0078	0.9949	84.33	84.54
3	-0.2275	0.1097	0.5414	38.71	61.92	0.1787	0.0494	0.0118	0.9929	87.47	87.64
4	-0.2671	0.1095	0.4909	38.18	40.06	0.1821	0.0603	0.0152	0.9920	91.53	91.65
5	-0.3714	0.1317	0.3781	35.90	35.33	0.1824	0.1049	0.0308	0.9883	110.52	110.41
6	-0.3714	0.1245	0.4664	33.75	34.02	0.1807	0.0715	0.0215	0.9929	104.13	104.09
7	-0.2611	0.1351	0.4934	31.48	32.40	0.2290	0.1004	0.0314	0.9905	69.01	69.30
8	-0.3185	0.1350	0.4447	31.42	31.76	0.2188	0.0944	0.0319	0.9912	78.92	79.11
9	-0.3590	0.2039	0.4154	30.64	31.41	0.2063	0.0781	0.0268	0.9932	84.24	84.40
10	-0.4098	0.2389	0.4184	28.77	29.56	0.2146	0.0818	0.0291	0.9935	82.45	82.64

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET
KG/SEC	KG/SEC	%	%	%	%
866.60	887.8	1.0E10	1.2638	85.45	85.93

T02/T01	PO2/PO1	EFF-AD
STAGE	STAGE	%
1.0259	0.9912	88.55

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
TIP RADIALLY DISTORTED INLET FLOW
 Baseline Inlet Configuration

S. I. UNITS

ROTOR 1

														RUN NO430, SPEED CODE 63, POINT NO 3									
SL	FPSI-1	FPSI-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V1-1	V1-2					
	RADIAN	RADIAN	P/SEC	P/SEC	P/SEC	P/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC					
1	U.2013	U.1625	120.2	161.7	120.2	114.2	0.0	141.3	C.0	0.6885	0.3577	0.5350	95.6	108.9	0.4665	0.3497	156.1	118.0					
2	C.1104	U.1253	121.1	161.0	121.1	127.2	0.0	128.7	C.C	0.7685	0.3605	0.5328	111.5	119.3	0.4899	0.3756	164.6	127.6					
3	U.1920	U.1033	122.2	169.7	122.2	128.1	0.0	111.3	C.C	0.7136	0.3639	0.4988	124.7	130.9	0.5199	0.3808	174.6	129.6					
4	U.1256	U.0833	122.5	160.3	122.5	125.8	C.0	55.4	C.0	0.6677	0.3647	0.4700	137.0	141.8	0.5471	0.3892	183.4	132.7					
5	U.1772	U.0507	117.7	142.7	117.7	115.7	U.0	83.5	C.0	0.6252	0.3502	0.4165	164.5	167.0	0.6017	0.4165	202.3	142.6					
6	U.0577	U.0358	104.9	136.8	104.9	110.0	0.0	81.3	C.C	0.6365	0.3265	0.3984	177.8	179.5	0.6208	0.4294	209.1	147.5					
7	U.0411	U.0240	104.8	135.3	104.8	110.5	0.0	78.1	C.0	0.6155	0.3109	0.3939	186.7	187.3	0.6342	0.4522	213.8	155.3					
8	U.0278	U.0097	101.8	133.8	101.8	104.1	U.0	84.1	C.C	0.6795	0.3014	0.3883	194.7	195.4	0.6511	0.4421	219.6	152.4					
9	U.0167	U.0043	98.7	132.2	98.7	99.7	0.0	92.2	C.0	0.7720	0.2924	0.3820	203.7	203.7	0.6707	0.4224	226.3	146.3					
10	U.0073	U.0028	95.5	130.7	95.5	88.1	0.0	98.2	C.C	0.8297	0.2827	0.3756	213.9	213.9	0.6998	0.4234	234.3	147.1					
11	U.0020	U.0014	94.4	128.4	94.4	83.2	0.0	97.8	C.0	0.8657	0.2754	0.3688	222.6	222.6	0.7158	0.4304	241.7	149.6					

SL	INLS	IACP	DEV	TLFA	FPCVP-1	FPCVM-2	D-FAC	CPEGA-8	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	VO*-1	VO*-2	PC/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TCI	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	U.0186	U.1135	C.2426	C.4680	28.17	27.19	C.4601	C.2728	0.0617	1.1545	79.27	78.85	0.6827	-0.2753	-99.6	32.4	1.1702
2	U.0322	U.1265	C.2420	C.8150	28.35	31.10	C.4288	C.0823	C.0209	1.1637	93.21	53.06	0.7457	-0.0794	-111.5	9.4	1.2000
3	U.0432	U.1354	C.2502	C.4495	28.60	31.68	C.4353	C.0314	C.0085	1.1813	97.00	56.92	0.7873	0.1514	-124.7	-19.6	1.1982
4	U.0495	U.1369	C.2276	C.5177	28.64	31.62	C.4388	C.0215	U.0095	1.1964	97.67	57.62	0.8424	0.2247	-137.0	-42.4	1.1931
5	U.0414	U.1410	C.1353	C.3255	27.48	29.41	C.4346	C.0351	0.0096	1.1701	95.38	55.28	0.5504	0.6249	-164.5	-83.5	1.1780
6	U.0441	U.1636	C.1145	C.2800	25.59	28.02	C.4340	C.0332	C.0088	1.1789	95.58	95.49	1.0175	0.7285	-177.8	-98.2	1.1750
7	U.0302	U.1657	C.1641	C.2791	24.36	28.22	C.4089	C.0004	C.0001	1.1883	100.15	100.16	1.0586	0.7795	-186.3	-109.2	1.1745
8	U.0514	U.1620	C.0525	0.2710	23.61	26.49	C.4514	C.0628	C.0163	1.1530	92.49	52.30	1.0856	0.8186	-196.7	-111.3	1.1769
9	U.0454	U.2244	C.0547	C.2534	22.92	23.56	C.5144	C.1543	C.0391	1.1957	81.24	80.76	1.1197	0.8666	-203.7	-111.5	1.1763
10	U.0178	U.2171	C.1167	C.2225	22.17	22.25	L.5396	C.2021	C.0493	1.1559	75.90	75.26	1.1511	0.9282	-213.9	-117.7	1.1775
11	U.0176	U.2155	C.1750	C.1673	21.92	20.99	C.5488	C.2338	0.0540	1.2011	72.27	71.54	1.1648	0.9825	-222.6	-124.7	1.1779

IC/IC	FC/FC	EFF-AC	EFF-P	NC/IAI	TO2/TO1	PC2/PO1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	M/SEC	%	%	%	%
1.0556	1.1823	88.21	88.50	123.24	1.0556	1.1822	88.21	88.50

STATOR 1

														RUN NO430, SPEED CODE 63, POINT NO 3									
SL	FPSI-1	FPSI-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO	TO2/						
	RADIAN	RADIAN	P/SEC	P/SEC	P/SEC	P/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1							
1	U.1579	U.1430	162.3	167.5	92.3	105.3	133.5	21.8	C.4653	0.2017	U.4753	0.3108	1.1441	1.0532	1.1288	1.0532							
2	U.1373	U.1065	164.0	124.4	114.6	122.2	122.8	43.0	C.8199	0.1853	C.4926	0.3601	1.1780	1.0531	1.1620	1.0531							
3	U.0971	U.0884	162.7	127.1	122.6	125.7	107.1	38.5	C.7184	0.1456	C.4771	0.3692	1.1883	1.0504	1.1715	1.0504							
4	U.0784	U.0703	156.9	124.0	123.5	122.9	56.1	16.2	C.8016	0.1314	C.4583	0.3804	1.1853	1.0489	1.1686	1.0489							
5	U.0594	U.0568	149.0	114.5	117.5	113.5	113.4	15.8	C.8076	0.1383	0.4176	0.3322	1.1721	1.0480	1.1608	1.0480							
6	U.0560	U.0571	138.5	111.5	113.5	110.4	39.3	15.5	C.8107	0.1435	0.4025	0.3232	1.1690	1.0496	1.1698	1.0496							
7	U.0590	U.0533	137.9	111.4	113.5	110.2	38.9	17.6	C.8094	0.1582	0.4015	0.3228	1.1702	1.0529	1.1793	1.0529							
8	U.0497	U.0499	137.4	110.6	111.1	105.1	40.8	17.4	C.8293	0.1623	0.3553	0.3198	1.1702	1.0533	1.1850	1.0533							
9	U.0630	U.0426	136.7	108.7	102.4	107.1	50.6	18.4	C.7245	0.1705	0.3455	0.3127	1.1682	1.0634	1.1866	1.0634							
10	U.0272	U.0262	135.5	104.8	96.1	102.6	55.2	21.3	C.7787	0.2045	C.3508	0.3004	1.1636	1.0702	1.1896	1.0702							
11	U.0111	U.0104	133.8	100.1	51.5	97.7	57.6	21.5	C.8374	0.2170	C.3846	0.2855	1.1575	1.0752	1.1803	1.0752							

SL	INLS	IACP	DEV	TLFA	FPCVP-1	FPCVM-2	D-FAC	CPEGA-8	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	VO*-1	VO*-2	PC/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TCI	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	U.0456	U.1275	C.2955	C.7636	22.60	24.84	C.4794	C.1508	0.0312	0.9783	66.28	66.87					
2	U.0660	U.0832	C.2260	C.6366	28.51	31.56	C.3911	C.1042	C.0231	0.9841	82.50	82.94					
3	U.0644	U.0311	U.1646	C.5127	30.80	32.73	C.3508	C.0602	C.0145	0.9613	91.48	91.68					
4	U.0570	U.0038	C.1455	0.5302	31.22	32.06	C.3394	C.0542	C.0135	0.9927	93.26	93.40					
5	U.1249	U.0165	C.1407	0.4693	29.88	29.56	C.3357	C.0400	C.0174	0.9532	90.70	90.50					
6	U.1249	U.0286	C.1256	0.4474	28.86	28.74	C.3360	C.0465	C.0144	0.9950	92.41	92.58					
7	U.1269	U.0030	C.1571	0.4513	28.77	28.63	C.3382	C.0450	C.0143	0.9953	91.34	91.54					
8	U.1115	U.0135	C.1547	C.4665	28.21	28.37	C.3422	C.0351	C.0180	0.9542	94.38	94.52					
9	U.0272	U.0101	C.1628	0.5540	25.81	27.60	C.3844	C.0700	C.0237	0.9928	79.05	79.55					
10	U.0083	U.0242	C.2045	C.5742	24.24	26.27	C.4201	C.1171	C.0410	0.9483	71.06	71.75					
11	U.0249	U.0159	C.2567	0.6104	22.95	24.87	0.4605	C.1785	0.0639	0.9827	64.55	65.38					

IC/IC	FC/FC	EFF-AC	EFF-P	TO2/TO1	PC2/PO1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	%	%	%	%
1.0556	1.1709	83.01	83.38	1.0556	0.9904	83.01	

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	VQ-1	VQ-2	B-1	B-2	M-1	M-2	RUN NG430.	SPEED CODE 63.	POINT NO. 3	V1-1	V1-2	
	RADIAN	RADIAN	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1475	0.1558	94.5	165.3	92.1	126.6	21.1	16.3	0.2234	0.4920	0.2726	0.4752	123.8	131.8	0.3981	0.3712	136.0	129.1
2	0.1077	0.1750	122.9	163.9	121.0	131.2	21.8	16.1	0.1778	0.4387	0.3585	0.4714	134.6	140.4	0.4797	0.3966	165.4	137.9
3	0.0870	0.0862	127.6	160.8	126.4	134.3	17.5	88.3	0.1371	0.5800	0.3710	0.4628	144.6	148.9	0.5213	0.4241	179.3	147.9
4	0.0676	0.0521	125.8	153.7	124.8	131.7	15.8	75.3	0.1255	0.5414	0.3657	0.4425	153.4	158.2	0.5446	0.4419	187.3	153.5
5	0.0237	0.1151	117.4	134.7	116.3	120.9	15.5	63.8	0.1327	0.4857	0.3457	0.3528	179.8	180.4	0.5845	0.4829	201.3	168.1
6	0.0101	0.0036	116.2	131.1	115.0	115.6	16.4	61.8	0.1420	0.4607	0.3369	0.3754	186.5	188.7	0.6000	0.4922	206.9	171.7
7	0.0049	0.0013	115.9	128.2	114.5	106.1	17.6	72.0	0.1526	0.5962	0.3360	0.3663	196.9	194.9	0.6170	0.4682	212.7	163.9
8	0.0081	0.0082	113.7	127.8	112.2	109.4	18.8	65.4	0.1656	0.5365	0.3274	0.3631	208.4	207.7	0.6344	0.5108	220.4	175.7
9	0.0032	0.0035	110.8	125.6	108.6	106.4	21.2	66.1	0.1930	0.5538	0.3174	0.3558	216.4	215.9	0.6406	0.5212	223.3	184.0
10	0.0068	0.0007	106.4	120.8	104.2	101.4	21.4	65.3	0.2025	0.5715	0.3044	0.3405	224.3	224.0	0.6523	0.5317	228.1	188.4

SL	INCS	IACH	CEV	TLFA	FPCVM-1	FPCVM-2	D-FAC	CREG-B	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	V0*-1	V0*-2	PC/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0704	0.0505	0.2762	0.6399	23.74	33.49	0.2308	0.0656	-0.0157	1.1448	105.32	105.43	0.8364	0.1966	-102.8	-25.5	1.3109
2	0.1488	0.0785	0.4388	31.46	39.21	0.2955	0.0641	0.0160	0.0109	1.1200	92.35	92.22	0.7483	0.3095	-112.8	-42.3	1.3245
3	0.1240	0.1249	0.3451	32.90	36.44	0.2915	0.0431	0.0109	1.1197	94.01	93.90	0.7872	0.4221	-127.2	-60.5	1.3301	
4	0.0926	0.1039	0.3104	32.44	36.40	0.2818	0.0123	0.0031	1.1189	98.12	98.05	0.8416	0.5390	-139.7	-76.9	1.3241	
5	0.0281	0.0464	0.0535	30.19	33.28	0.2472	0.0333	-0.0081	1.1120	106.92	107.03	0.9547	0.7679	-164.3	-116.8	1.3012	
6	0.0069	0.0090	0.0029	28.81	31.73	0.2483	0.0117	-0.0028	1.1046	102.41	102.44	0.9814	0.8320	-172.0	-126.9	1.2919	
7	0.0084	0.0090	0.0029	28.81	31.73	0.2483	0.0117	-0.0028	1.1046	102.41	102.44	0.9814	0.8320	-172.0	-126.9	1.2919	
8	0.0170	0.0058	0.0026	28.73	29.74	0.2657	0.0452	0.0107	1.1033	90.15	90.01	1.0363	0.9135	-189.7	-142.3	1.2888	
9	0.0005	0.0043	0.0073	28.63	28.86	0.2557	0.0307	0.0072	1.1036	93.11	93.00	1.0430	0.9513	-195.1	-149.8	1.2864	
10	0.0049	0.0084	0.0110	28.36	27.20	0.2533	0.0338	0.0076	1.1054	92.24	92.12	1.0961	1.0022	-202.9	-158.7	1.2792	

IC/IC	PC/PC	EFF-AD	EFF-P	NC1/A1	TC2/TO1	PO2/PC1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	NG/SEC			INLET	ROTOR
		S	S	SOM			S	S
1.0897	1.1029	87.56	88.02	123.35	1.0323	1.1128	95.85	95.91

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VP-1	VP-2	VQ-1	VQ-2	B-1	B-2	M-1	M-2	RUN NG430.	SPEED CODE 63.	POINT NO. 3	PO/PO	TO2/
	RADIAN	RADIAN	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	P/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC			INLET	TO1
1	0.1215	0.1387	151.2	127.9	109.5	127.9	104.3	0.1757	0.0067	0.4331	0.3643	1.2918	1.0925	1.1282	1.0373		
2	0.0869	0.0924	155.8	138.4	122.8	138.4	98.1	-0.4	0.6432	0.0055	0.4471	0.3957	1.3186	1.0902	1.1148	1.0357	
3	0.0628	0.0634	156.7	139.3	130.8	139.2	86.4	-3.8	0.5666	0.0272	0.4505	0.3985	1.3247	1.0868	1.1153	1.0349	
4	0.0484	0.0444	152.3	134.3	130.9	134.3	77.9	-4.9	0.5365	0.0366	0.4383	0.3845	1.3173	1.0834	1.1134	1.0332	
5	0.0276	0.0242	137.7	120.5	122.5	120.4	62.9	-5.0	0.4743	0.0412	0.3557	0.3451	1.2945	1.0786	1.1064	1.0287	
6	0.0259	0.0226	132.5	115.6	117.5	115.5	61.2	-4.7	0.4801	0.0410	0.3801	0.3304	1.2868	1.0802	1.1003	1.0281	
7	0.0214	0.0194	130.1	112.5	108.7	112.4	71.4	-4.7	0.5813	0.0414	0.3717	0.3203	1.2824	1.0865	1.0953	1.0354	
8	0.0178	0.0165	125.8	112.5	112.3	112.5	65.1	-4.7	0.5251	0.0236	0.3691	0.3185	1.2828	1.0975	1.0982	1.0317	
9	0.0074	0.0067	127.8	111.6	109.5	111.6	65.9	0.6	0.5416	0.0052	0.3622	0.3154	1.2813	1.1037	1.1012	1.0313	
10	0.0074	0.0021	123.1	105.5	104.4	105.5	65.2	1.4	0.5585	0.0130	0.3475	0.2970	1.2716	1.1091	1.0989	1.0315	

SL	IACH	CEV	TLFA	FPCVM-1	FPCVM-2	D-FAC	CREG-B	LOSS-P	PO2/	BEFF-A	BEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.1267	0.1552	0.7512	29.49	34.86	0.2965	0.1201	0.0253	0.9535	93.96	94.05
2	0.1014	0.1345	0.6691	33.23	38.16	0.2504	0.0355	0.0081	0.9524	88.44	88.62
3	0.1494	0.1174	0.6118	35.61	38.64	0.2467	0.0302	0.0072	0.9961	90.75	90.90
4	0.1908	0.1129	0.5730	35.84	37.38	0.2536	0.0393	0.0095	0.9952	93.94	94.05
5	0.2467	0.1171	0.5154	33.88	33.55	0.2670	0.0445	0.0140	0.9950	102.03	102.00
6	0.2421	0.1212	0.5211	32.22	32.10	0.2779	0.0427	0.0128	0.9959	98.57	98.58
7	0.1416	0.1254	0.6227	29.62	31.04	0.3190	0.0459	0.0144	0.9958	74.51	74.84
8	0.2121	0.1534	0.5468	30.37	30.79	0.3054	0.0520	0.0172	0.9953	85.71	85.90
9	0.2401	0.2018	0.5366	29.45	30.38	0.3024	0.0462	0.0158	0.9960	89.25	89.41
10	0.2865	0.2351	0.5455	27.92	28.50	0.3275	0.0742	0.0265	0.9540	86.54	86.74

M.LRA	MCDNR	IC/IC	PC/PC	EFF-AD	EFF-P	TO2/TO1	PC2/PC1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			INLET	ROTOR
		S	S	S	S			S	S
947.84	86.8	1.0897	1.2959	85.72	86.24	1.0323	0.9966	90.56	90.56

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA TIP RADIALLY DISTORTED INLET FLOW Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VW-1		VW-2		B-1		B-2		M-1		M-2		U-1		U-2		V'-1		V'-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	11.791	9.700	845.7	1039.0	805.7	708.0	0.0	759.7	0.0	46.9	0.7623	0.9472	519.7	568.4	0.9071	0.6699	958.8	734.1														
2	18.068	8.030	813.0	1013.9	813.0	747.9	0.0	684.5	0.0	42.4	0.7700	0.9212	581.9	611.9	0.9468	0.6818	999.7	750.4														
3	9.698	6.688	825.9	935.5	825.9	743.9	0.0	569.9	0.0	37.5	0.7838	0.8446	651.2	683.2	0.9981	0.6775	1051.8	750.5														
4	8.358	5.597	832.4	875.6	832.4	719.4	0.0	499.0	0.0	34.7	0.7909	0.7860	715.2	740.2	1.0024	0.6812	1097.6	750.8														
5	5.995	4.108	810.2	753.4	810.2	639.3	0.0	398.7	0.0	32.0	0.7671	0.6680	859.0	871.7	1.1179	0.7051	1180.8	795.2														
6	5.123	3.628	743.3	708.6	743.3	597.1	0.0	381.7	0.0	32.6	0.7179	0.6241	920.4	937.1	1.1304	0.7182	1201.9	815.5														
7	4.514	3.328	731.1	691.4	731.1	576.2	0.0	382.1	0.0	33.6	0.6847	0.6063	972.7	977.8	1.1396	0.7268	1216.8	820.8														
8	3.718	2.642	730.9	687.2	730.9	570.2	0.0	383.5	0.0	33.9	0.6621	0.6008	1016.3	1019.9	1.1372	0.7470	1239.1	854.5														
9	2.781	2.229	686.9	686.9	686.9	558.5	0.0	408.0	0.0	35.6	0.6398	0.5974	1063.5	1063.5	1.1792	0.7542	1266.8	867.2														
10	1.663	1.207	662.8	662.8	662.8	547.7	0.0	408.9	0.0	36.8	0.6136	0.5914	1116.9	1116.9	1.2062	0.7745	1290.7	895.0														
11	0.467	0.286	654.4	654.4	654.4	511.7	0.0	414.8	0.0	39.0	0.6072	0.5664	1161.9	1161.9	1.2374	0.7785	1333.5	905.3														

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B'-1		B'-2		VW'-1	VW'-2	PO/PO
													DEGREE	DEGREE	DEGREE	DEGREE			
1	-5.73	0.28	15.77	47.96	43.94	40.84	0.4274	0.3083	0.0699	1.3809	71.04	69.70	32.91	-15.05	-519.7	191.3	1.4365		
2	-5.13	0.28	13.37	40.45	44.22	46.54	0.4271	0.1679	0.0427	1.4554	83.62	82.73	35.75	-4.69	-581.9	61.6	1.5384		
3	-4.77	0.50	14.33	29.76	44.71	48.75	0.4438	0.1116	0.0313	1.4271	86.32	85.61	38.43	8.67	-651.2	-113.3	1.5160		
4	-4.67	0.50	14.96	22.28	44.93	48.75	0.4438	0.1116	0.0313	1.3999	89.81	89.11	40.81	18.53	-715.2	-241.2	1.4926		
5	-4.15	0.41	8.71	10.26	43.45	44.71	0.4400	0.1224	0.0352	1.3536	81.80	81.01	46.78	36.53	-759.0	-473.0	1.4149		
6	-2.24	1.74	7.79	7.70	40.44	41.97	0.4340	0.0957	0.0250	1.3872	86.05	85.39	50.66	42.94	-928.4	-555.4	1.3899		
7	-2.15	2.79	7.30	7.16	38.36	40.57	0.4332	0.0787	0.0202	1.4226	88.94	88.38	53.15	45.99	-972.7	-595.7	1.3833		
8	-1.62	3.72	6.56	6.09	36.91	42.29	0.4255	0.0544	0.0138	1.4670	92.63	92.22	55.15	48.17	-1016.3	-636.4	1.3908		
9	-2.49	4.73	5.72	7.24	35.83	39.42	0.4263	0.0639	0.0161	1.5081	91.74	91.24	57.17	49.93	-1063.5	-683.5	1.4008		
10	3.19	5.81	5.95	7.04	34.02	38.87	0.4267	0.0623	0.0154	1.5547	92.23	91.73	59.32	52.28	-1116.9	-707.9	1.4088		
11	3.72	5.93	9.36	7.03	33.52	35.95	0.4301	0.1053	0.0248	1.5484	86.89	86.06	60.61	55.58	-1161.9	-746.8	1.3923		

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	LBM/SEC	%	%	%	%
1.1278	1.4341	84.90	85.65	43.37	1.1278	1.4341	84.90	85.65

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VW-1		VW-2		B-1		B-2		M-1		M-2		PO/PO	TO/TO	PO/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC				
1	11.053	7.549	918.3	645.7	572.5	634.5	718.0	120.0	51.4	10.6	0.8212	0.5587	1.3779	1.1386	1.3063	1.1386										1.1386	1.1386	
2	7.116	5.022	939.4	724.8	675.0	714.6	651.4	121.2	44.0	9.6	0.8435	0.6329	1.4052	1.1368	1.4050	1.1368										1.1368	1.1368	
3	4.366	3.217	894.4	703.3	708.0	697.3	546.6	92.0	37.6	7.5	0.8025	0.6162	1.4795	1.1244	1.3926	1.1244										1.1244	1.1244	
4	2.980	2.380	851.3	681.6	704.2	678.1	482.0	85.2	34.4	7.2	0.7636	0.5974	1.4603	1.1183	1.3716	1.1183										1.1183	1.1183	
5	1.705	1.474	753.6	611.7	644.4	606.3	398.6	81.5	31.2	7.7	0.6682	0.5344	1.3894	1.1116	1.3266	1.1116										1.1116	1.1116	
6	1.534	1.723	717.1	583.1	611.2	576.7	374.6	86.4	31.5	8.5	0.6323	0.5073	1.3630	1.1145	1.3581	1.1145										1.1145	1.1145	
7	1.425	1.666	705.3	576.4	596.0	568.7	377.2	93.9	32.3	9.4	0.6195	0.5000	1.3571	1.1200	1.3519	1.1200										1.1200	1.1200	
8	1.4283	1.824	7.7.3	583.0	598.3	574.9	377.2	97.0	32.2	9.6	0.6199	0.5049	1.3633	1.1244	1.4350	1.1244										1.1244	1.1244	
9	1.451	1.843	713.7	594.5	593.9	586.1	395.8	99.4	33.7	9.6	0.6225	0.5126	1.3725	1.1361	1.4761	1.1361										1.1361	1.1361	
10	1.4841	2.017	717.4	600.7	599.2	406.0	111.8	34.5	34.5	10.7	0.6231	0.5158	1.3780	1.1460	1.5199	1.1460										1.1460	1.1460	
11	1.241	2.343	694.9	571.4	558.2	560.2	413.9	112.7	36.6	11.4	0.5997	0.4875	1.3535	1.1566	1.5933	1.1566										1.1566	1.1566	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B'-1		B'-2		VW'-1	VW'-2	PO/PO
													DEGREE	DEGREE	DEGREE	DEGREE			
1	-1.35	3.38	15.95	40.78	38.32	44.91	0.4301	0.1510	0.0313	0.9459	57.25	58.82							
2	-3.30	1.81	12.02	34.45	44.50	52.41	0.3538	0.0730	0.0207	0.9654	74.58	75.76							
3	-7.22	-1.75	8.86	30.14	47.96	51.99	0.3329	0.0672	0.0162	0.9769	79.87	80.60							
4	-9.10	-3.32	7.97	27.21	48.48	51.56	0.3175	0.0600	0.0134	0.9809	79.87	80.75							
5	-11.01	-4.56	7.79	23.56	45.11	44.88	0.3066	0.0709	0.0206	0.9814	79.84	80.69							
6	-13.65	-3.87	8.32	22.97	42.81	42.33	0.3112	0.0815	0.0259	0.9808	82.42	87.41							
7	-9.87	-2.89	9.12	22.95	41.63	41.52	0.3114	0.0817	0.0259	0.9814	87.42	88.05							
8	-10.21	-2.72	9.14	22.66	41.82	41.89	0.3082	0.0839	0.0274	0.9809	86.49	87.71							
9	-9.39	-2.64	9.19	24.05	41.33	42.40	0.3099	0.0856	0.0270	0.9803	87.05	87.79							
10	-13.62	-3.03	10.73	23.75	41.07	42.42	0.3085	0.0984	0.0344	0.9774	88.17	81.28							
11	-11.71	-3.98	13.65	23.15	38.51	39.79	0.3365	0.1294	0.0465	0.9721									

MCORR	WCI/AL	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	%	%	%	%
8324	215.13	1.1278	1.3999	78.94	79.91	1.1278	0.9761	78.94	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.622	8.017	578.4	921.5	508.8	763.3	118.5	518.2	11.8	33.7	0.4974	0.7900	848.8	888.3	0.8672	0.8709	775.8	782.5
2	0.982	4.893	712.5	908.7	703.5	773.9	111.8	464.2	9.0	30.9	0.6218	0.7737	782.8	732.0	0.8022	0.7821	918.9	817.3
3	5.957	4.189	712.4	848.5	707.0	742.8	88.0	419.1	7.1	28.8	0.6253	0.7206	755.1	777.3	0.8331	0.7113	972.0	828.6
4	4.853	3.446	697.9	798.3	693.1	711.8	82.5	361.3	6.8	24.9	0.6135	0.6854	811.4	825.9	0.8841	0.7298	1005.9	858.0
5	2.123	1.251	632.1	693.7	628.7	629.2	82.1	292.3	7.5	24.9	0.5532	0.5931	928.9	942.9	0.9290	0.7788	1061.5	903.1
6	1.059	0.448	618.1	658.7	609.8	593.8	89.2	279.4	6.3	25.2	0.5571	0.5586	983.9	985.0	0.9437	0.7949	1082.6	921.2
7	0.315	-0.173	615.4	644.8	607.9	588.9	93.9	279.3	9.0	25.7	0.5354	0.5448	1027.9	1027.9	0.9800	0.8039	1112.7	947.6
8	-0.499	-0.859	628.6	632.2	628.3	593.9	101.4	271.4	9.3	26.6	0.5431	0.5508	1088.2	1088.2	1.0071	0.8484	1163.5	1004.1
9	-0.799	-1.123	628.1	641.8	618.0	571.3	111.7	292.4	10.3	27.1	0.5386	0.5378	1129.8	1127.0	1.0238	0.8464	1189.8	1011.4
10	-0.550	-0.719	594.8	587.8	583.9	507.2	111.9	297.0	10.8	30.4	0.5083	0.4871	1171.0	1169.5	1.0339	0.8365	1208.4	1008.2

SL	INCL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-9.07	-2.11	17.11	30.37	42.36	55.70	0.1309	0.0807	0.0192	1.2767	91.97	91.68	42.92	12.55	-530.0	-172.1	1.7669
2	-11.43	-5.17	10.80	20.88	52.14	58.49	0.2147	0.1729	0.0426	1.2096	75.88	75.22	39.97	19.08	-591.2	-268.8	1.7998
3	-8.88	-3.21	9.72	17.09	52.36	57.68	0.2409	0.1632	0.0407	1.1987	74.40	73.73	43.32	26.23	-647.1	-267.1	1.7687
4	-7.05	-1.97	8.55	13.36	51.03	56.36	0.2371	0.1150	0.0285	1.1965	79.63	79.11	46.47	33.11	-729.0	-466.6	1.6780
5	-4.27	1.67	7.32	7.87	49.42	50.71	0.2146	0.0289	0.0063	1.2014	94.12	93.95	53.83	45.94	-856.8	-650.4	1.6801
6	-0.89	2.82	7.57	5.62	43.88	47.64	0.2106	0.0289	0.0059	1.1878	93.83	93.67	55.74	49.92	-894.7	-703.6	1.6143
7	-0.98	2.83	6.83	4.70	43.68	46.43	0.2103	0.0414	0.0093	1.1791	89.75	89.50	56.86	52.19	-932.0	-746.6	1.6080
8	-0.58	1.84	5.12	3.96	44.18	44.94	0.1929	0.0364	0.0083	1.1730	90.15	89.92	57.83	53.88	-984.7	-812.8	1.6122
9	-0.54	1.88	4.96	3.21	43.65	44.58	0.2109	0.0831	0.0189	1.1642	78.68	78.22	58.82	55.61	-1017.9	-834.7	1.6001
10	1.18	3.39	8.24	1.30	40.99	38.89	0.2293	0.1319	0.0276	1.1470	67.05	66.41	61.13	59.83	-1089.1	-872.7	1.5488

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1976	1.6695	79.79	81.19	37.53	1.0618	1.1926	83.32	83.74

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	0.910	8.020	815.7	798.2	638.3	798.0	506.8	-10.2	38.3	-1.3	0.6895	0.6740	1.6774	1.2280	1.2104	1.0784
2	5.115	5.722	834.7	844.8	700.4	804.0	454.1	-34.4	32.9	-2.4	0.7111	0.6833	1.7101	1.2174	1.1496	1.0741
3	4.032	4.387	808.8	762.3	702.1	762.0	401.6	-23.5	29.7	-1.8	0.6913	0.6481	1.6713	1.2037	1.1331	1.0718
4	3.195	3.325	779.5	744.5	693.9	744.3	355.0	-14.5	27.1	-1.5	0.6677	0.6254	1.6636	1.1911	1.1174	1.0664
5	1.981	1.898	713.2	657.5	638.2	658.5	288.1	-17.0	24.3	-3.2	0.5990	0.5601	1.5820	1.1754	1.1315	1.0573
6	1.056	1.545	688.0	638.6	608.2	638.5	276.5	-5.2	24.5	-0.5	0.5692	0.5427	1.5657	1.1768	1.1318	1.0540
7	1.323	1.188	639.0	619.4	597.5	619.3	277.1	10.8	24.9	1.0	0.5394	0.5243	1.5484	1.1815	1.1379	1.0539
8	1.068	0.949	667.2	619.1	609.9	618.6	270.5	24.8	23.9	2.3	0.5633	0.5206	1.5480	1.1904	1.1265	1.0517
9	0.855	0.798	657.6	614.3	589.4	613.3	291.5	34.6	26.3	3.2	0.5310	0.5129	1.5433	1.2116	1.1218	1.0565
10	0.411	0.418	605.7	566.8	528.1	566.3	296.6	23.4	29.3	2.4	0.5028	0.4690	1.5016	1.2239	1.1114	1.0600

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT-576	TOT-576
1	-12.80	7.21	39.55	49.80	59.69	0.1549	0.1872	0.0395	0.9490	71.14	71.98
2	-11.94	5.84	35.31	55.34	61.47	0.1660	0.1726	0.0388	0.9508	54.69	55.56
3	-12.32	6.52	31.51	55.85	58.83	0.1816	0.1990	0.0474	0.9454	50.65	51.51
4	-14.58	7.14	28.58	55.55	58.26	0.1657	0.1598	0.0402	0.9589	60.30	61.08
5	-17.12	5.84	27.53	51.24	51.84	0.1966	0.1927	0.0555	0.9583	71.66	72.23
6	-18.92	6.83	24.92	48.51	50.11	0.1718	0.1543	0.0464	0.9695	76.23	76.71
7	-18.53	13.58	23.89	47.44	48.31	0.1860	0.1836	0.0575	0.9649	69.60	70.15
8	-18.32	12.44	21.82	47.93	47.73	0.1926	0.2052	0.0678	0.9603	66.94	67.50
9	-18.47	14.49	23.89	45.66	46.75	0.2033	0.1974	0.0676	0.9629	59.03	59.69
10	-19.09	15.13	26.95	48.19	43.45	0.2277	0.1972	0.0701	0.9684	50.93	51.68

MLGRA	WCCRO	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
RM	LB/SEC	1.1976	1.6009	72.81	74.54	1.0618	0.9589	63.08
6324	215.13							

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M'-1		M'-2		V'-1		V'-2		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	41.627	9.647	813.8	1119.1	813.8	692.8	747.4	0.0	47.1	0.7708	0.9270	519.3	568.2	0.9145	0.6510	969.5	719.6	0.0	43.2	0.7757	0.9073	581.6	622.6	0.9517	0.6626	1004.0	731.0	0.0	43.2	0.7846	0.8377	651.0	682.9	0.9986	0.6658	1052.2	738.6
2	11.742	7.914	818.4	1123.4	818.4	728.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	9.4	6.624	826.7	1129.3	826.7	730.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	8.111	5.537	824.7	1113.3	824.7	706.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	6.954	4.082	835.0	1113.3	835.0	634.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	5.249	3.619	753.3	1117.1	753.3	590.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	4.767	3.317	719.5	1100.7	719.5	569.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	3.493	2.819	696.9	1100.7	696.9	564.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	2.4	2.111	675.1	1090.2	675.1	547.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	1.755	1.234	651.4	1092.5	651.4	526.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	1.049	0.419	624.3	1092.5	624.3	507.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO	INLET
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	INLET
1	-0.11	-0.57	16.37	47.67	44.5	40.79	0.4474	0.3008	0.0684	1.3737	71.00	69.68	32.62	-14.45	-519.5	179.2	1.4503	1.4503
2	-0.3	0.0	13.05	40.55	44.70	46.12	0.4494	0.1719	0.0437	1.4539	83.15	82.24	35.53	-5.02	-581.6	64.1	1.5373	1.5373
3	-0.84	0.0	14.11	29.92	45.03	48.85	0.4498	0.1131	0.0310	1.4364	87.27	86.61	38.37	0.45	-651.0	-108.6	1.5244	1.5244
4	-0.55	0.57	12.60	22.72	45.16	48.79	0.4565	0.1085	0.0305	1.4112	86.52	85.84	40.88	18.16	-714.9	-232.5	1.5007	1.5007
5	-1.04	0.55	7.59	11.62	42.61	49.09	0.4580	0.1292	0.0355	1.3752	81.86	81.02	47.03	35.41	-858.6	-457.7	1.4390	1.4390
6	-1.06	2.11	0.75	9.11	41.45	42.12	0.4575	0.1085	0.0288	1.4114	85.24	84.48	51.03	41.92	-922.0	-529.3	1.4186	1.4186
7	0.41	3.65	0.34	8.57	38.24	40.76	0.4564	0.0892	0.0232	1.4504	88.31	87.69	53.60	45.03	-972.3	-569.8	1.4093	1.4093
8	1.08	4.18	3.74	8.26	35.81	40.25	0.4467	0.0815	0.0158	1.4968	92.20	91.74	55.61	47.35	-1015.8	-612.2	1.4173	1.4173
9	2.94	5.18	4.96	8.45	35.40	39.38	0.4640	0.0803	0.0206	1.5384	96.29	95.68	57.62	49.17	-1063.0	-635.4	1.4786	1.4786
10	4.91	6.24	5.34	8.08	33.95	38.51	0.4661	0.0822	0.0206	1.5852	98.39	97.75	59.75	51.67	-1116.4	-678.7	1.4378	1.4378
11	4.13	6.56	6.47	6.33	33.45	36.25	0.4783	0.1101	0.0289	1.5876	86.02	85.09	61.02	54.69	-1161.4	-715.8	1.4296	1.4296

TU/TU	PO/PO	EFF-AD	EFF-P	NC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	%	%	SGFT			%	%
1.1335	1.4540	84.53	85.33	43.12	1.1335	1.4540	84.53	85.33

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M'-1		M'-2		V'-1		V'-2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC			
1	11.225	7.875	896.7	604.6	552.4	592.8	706.3	118.9	51.9	11.2	0.8603	0.5217	1.3762	1.1363	1.3035	1.1363	0.0	10.1	0.8267	0.5965	1.4780	1.1372	1.3946	1.1372	0.0	10.1	0.8267	0.5965	1.4780	1.1372	1.3946	1.1372	0.0	10.1	0.8267	0.5965	1.4780	1.1372
2	7.011	5.474	923.1	666.1	654.7	675.4	654.7	120.9	45.1	10.1	0.8267	0.5965	1.4780	1.1372	1.3946	1.1372	0.0	10.1	0.8267	0.5965	1.4780	1.1372	1.3946	1.1372	0.0	10.1	0.8267	0.5965	1.4780	1.1372	1.3946	1.1372	0.0	10.1	0.8267	0.5965	1.4780	1.1372
3	4.747	3.677	864.9	678.0	671.9	672.6	551.6	85.1	38.5	7.2	0.7924	0.5921	1.4678	1.1259	1.4019	1.1259	0.0	10.1	0.7924	0.5921	1.4678	1.1259	1.4019	1.1259	0.0	10.1	0.7924	0.5921	1.4678	1.1259	1.4019	1.1259	0.0	10.1	0.7924	0.5921	1.4678	1.1259
4	3.364	2.859	845.6	658.8	689.3	653.6	490.2	83.0	35.4	7.2	0.7554	0.5757	1.46729	1.1205	1.3851	1.1205	0.0	10.1	0.7554	0.5757	1.46729	1.1205	1.3851	1.1205	0.0	10.1	0.7554	0.5757	1.46729	1.1205	1.3851	1.1205	0.0	10.1	0.7554	0.5757	1.46729	1.1205
5	2.117	2.210	759.9	600.3	638.8	594.9	411.6	82.5	32.8	7.7	0.6723	0.5224	1.46167	1.1175	1.3502	1.1175	0.0	10.1	0.6723	0.5224	1.46167	1.1175	1.3502	1.1175	0.0	10.1	0.6723	0.5224	1.46167	1.1175	1.3502	1.1175	0.0	10.1	0.6723	0.5224	1.46167	1.1175
6	1.884	2.449	724.7	576.3	604.6	567.6	394.2	87.7	33.4	8.8	0.6372	0.4977	1.3940	1.1217	1.3850	1.1217	0.0	10.1	0.6372	0.4977	1.3940	1.1217	1.3850	1.1217	0.0	10.1	0.6372	0.4977	1.3940	1.1217	1.3850	1.1217	0.0	10.1	0.6372	0.4977	1.3940	1.1217
7	1.711	1.949	714.2	568.9	589.5	561.1	403.2	94.0	34.4	9.5	0.6254	0.4493	1.3896	1.1281	1.4227	1.1281	0.0	10.1	0.6254	0.4493	1.3896	1.1281	1.4227	1.1281	0.0	10.1	0.6254	0.4493	1.3896	1.1281	1.4227	1.1281	0.0	10.1	0.6254	0.4493	1.3896	1.1281
8	1.514	1.748	725.6	574.7	594.0	566.0	399.5	94.6	33.9	10.0	0.6258	0.44958	1.3959	1.1311	1.4490	1.1311	0.0	10.1	0.6258	0.44958	1.3959	1.1311	1.4490	1.1311	0.0	10.1	0.6258	0.44958	1.3959	1.1311	1.4490	1.1311	0.0	10.1	0.6258	0.44958	1.3959	1.1311
9	1.274	1.642	723.1	567.0	586.4	577.7	423.1	103.9	35.8	10.2	0.6266	0.5037	1.4054	1.1451	1.5104	1.1451	0.0	10.1	0.6266	0.5037	1.4054	1.1451	1.5104	1.1451	0.0	10.1	0.6266	0.5037	1.4054	1.1451	1.5104	1.1451	0.0	10.1	0.6266	0.5037	1.4054	1.1451
10	0.744	0.823	766.5	594.7	582.5	583.0	434.2	117.7	36.7	11.4	0.6287	0.5081	1.4121	1.1566	1.5557	1.1566	0.0	10.1	0.6287	0.5081	1.4121	1.1566	1.5557	1.1566	0.0	10.1	0.6287	0.5081	1.4121	1.1566	1.5557	1.1566	0.0	10.1	0.6287	0.5081	1.4121	1.1566
11	0.249	0.299	711.2	567.5	555.4	556.0	444.3	113.8	38.7	11.6	0.6117	0.4816	1.3885	1.1659	1.5426	1.1659	0.0	10.1	0.6117	0.4816	1.3885	1.1659	1.5426	1.1659	0.0	10.1	0.6117	0.4816	1.3885	1.1659	1.5426	1.1659	0.0	10.1	0.6117	0.4816	1.3885	1.1659

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC
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ROTOR 2

SL	EPSI-1		EPSI-2		V-1		V-2		W-1		W-2		V-1		V-2		B-1		B-2		M-1		M-2		U-1		U-2		N-1		N-2		V-1		V-2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE			
1	0.731	5.999	536.5	831.3	523.9	641.8	115.4	529.1	12.3	39.1	0.4683	0.7668	646.2	688.0	0.6399	0.5683	745.9	661.2																				
2	0.796	4.977	677.1	822.1	667.8	667.3	111.8	480.2	9.5	35.6	0.5885	0.6976	702.5	732.7	0.7749	0.6054	891.6	713.6																				
3	5.741	6.292	884.7	792.7	679.8	659.7	82.5	439.5	6.9	33.6	0.5987	0.6738	754.8	776.9	0.8368	0.6291	956.1	741.8																				
4	4.745	3.569	876.1	754.2	689.2	635.9	80.6	405.6	6.9	32.5	0.5982	0.6488	811.1	825.8	0.8674	0.6466	998.7	762.8																				
5	3.040	1.835	821.8	689.1	615.5	588.5	82.4	361.9	7.4	31.9	0.5412	0.5771	938.5	942.5	0.9189	0.6926	1054.4	821.8																				
6	1.493	0.536	816.3	648.5	599.6	562.5	89.8	355.4	8.5	33.2	0.5263	0.5441	983.5	984.6	0.9341	0.6978	1076.2	838.8																				
7	3.502	3.119	655.4	633.6	597.4	514.8	97.7	374.5	9.3	35.8	0.5247	0.5288	1027.5	1027.5	0.9578	0.6942	1105.2	834.2																				
8	0.138	-0.099	627.6	644.3	612.4	531.8	106.1	343.7	9.8	34.4	0.5345	0.5338	1067.7	1067.7	0.9949	0.7416	1157.8	895.1																				
9	0.022	-0.010	623.7	648.7	612.6	523.6	117.0	302.9	10.8	36.2	0.5341	0.5368	1129.1	1129.1	1.0138	0.7487	1183.1	909.5																				
10	0.042	-0.037	597.1	624.5	596.3	503.5	113.8	373.8	10.9	36.8	0.5688	0.5186	1178.5	1169.8	1.0286	0.7682	1209.1	939.6																				

SL	INCH	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	W-1	W-2	PO/PO	T02/T01	P02/P01	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOT	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	STAGE	STAGE	STAGE	STAGE
1	31.45	39.23	52.34	0.2598	0.0072	-0.0206	1.3435	107.46	107.77	45.19	13.74	538.9	-158.9	1.8516							
2	20.80	56.71	56.15	0.3116	0.0584	0.0143	1.2735	92.70	92.44	41.41	20.61	590.9	-252.5	1.8933							
3	17.64	51.76	56.82	0.3368	0.0485	0.0170	1.2757	96.72	96.39	44.64	27.82	-372.3	-337.5	1.8984							
4	14.10	50.72	55.72	0.3279	0.0356	0.0088	1.2888	94.81	94.62	47.52	33.42	-736.5	-628.0	1.8788							
5	9.29	45.96	51.76	0.3112	0.0312	-0.0075	1.3082	105.88	105.27	54.29	45.88	-856.1	-808.6	1.8368							
6	6.91	44.48	48.18	0.3153	0.0170	-0.0039	1.2943	102.88	102.99	56.14	49.23	-893.7	-825.2	1.8633							
7	4.44	44.34	45.33	0.3362	0.0374	0.0085	1.2844	93.74	93.53	57.28	51.96	-929.8	-857.0	1.7924							
8	4.44	44.85	44.48	0.3115	0.0273	0.0043	1.2841	95.14	94.96	58.63	53.54	-981.6	-726.0	1.8891							
9	4.45	44.57	45.37	0.3287	0.0537	0.0124	1.2882	98.64	98.32	58.81	54.85	-1012.1	-743.7	1.8175							
10	4.21	42.97	42.97	0.3121	0.0449	0.0104	1.2953	91.78	91.67	60.99	57.82	-1057.5	-795.3	1.7943							

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	%	%	SOFT	%	%	%	%
1.2227	1.6379	85.24	86.44	36.82	1.0786	1.2924	96.48	96.62

STATOR 2

SL	EPSI-1		EPSI-2		V-1		V-2		W-1		W-2		V-1		V-2		B-1		B-2		M-1		M-2		U-1		U-2		N-1		N-2		V-1		V-2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE			
1	7.619	8.067	743.7	599.3	532.4	599.3	519.3	8.5	4.1	0.0	0.6240	0.4962	1.7912	1.2289	1.3004	1.0615																						
2	3.231	3.615	767.2	608.1	608.1	470.4	9.6	37.7	0.1	0.6449	0.5401	1.8625	1.2234	1.2527	1.0772																							
3	3.976	4.036	761.1	651.1	627.6	651.1	93.9	9.4	36.4	-0.8	0.6439	0.5449	1.8815	1.2144	1.2648	1.0796																						
4	2.956	2.875	739.4	625.4	623.8	398.5	-18.4	32.6	-1.7	0.6264	0.5223	1.8885	1.2063	1.2660	1.0772																							
5	1.823	1.442	689.6	568.4	589.9	588.2	357.1	-15.0	31.2	-1.5	0.5828	0.4729	1.8128	1.2030	1.2903	1.0757																						
6	1.631	1.475	588.3	538.3	558.5	537.8	351.5	-22.6	32.3	-2.4	0.5528	0.4476	1.7886	1.2074	1.2852	1.0746																						
7	1.436	1.266	646.0	525.0	531.3	525.0	367.5	-7.5	34.7	-0.8	0.5398	0.4346	1.7788	1.2158	1.2775	1.0792																						
8	1.929	0.824	659.1	561.3	558.8	561.3	362.8	-4.7	33.3	-0.5	0.5468	0.4449	1.7941	1.2354	1.2757	1.0781																						
9	3.543	3.463	664.6	545.2	544.1	545.1	381.7	13.1	35.1	1.4	0.5478	0.4452	1.7966	1.2519	1.2727	1.0828																						
10	3.186	3.157	641.6	517.3	521.8	517.2	373.3	1.2	35.8	1.1	0.5253	0.4195	1.7788	1.2634	1.2767	1.0836																						

SL	INCH	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	W-1	W-2	PO/PO	T02/T01	P02/P01	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOT	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	STAGE	STAGE	STAGE	STAGE
1	43.28	45.86	53.13	0.3365	0.1402	0.0296	0.9676	95.48	95.64												
2	37.87	52.86	58.73	0.2918	0.0663	0.0149	0.9837	85.97	86.42												
3	35.26	55.88	59.89	0.2813	0.0285	0.0088	0.9931	87.69	88.10												
4	34.28	55.43	57.72	0.2986	0.0378	0.0095	0.9913	91.07	91.37												
5	32.71	52.64	52.45	0.3366	0.0459	0.0190	0.9885	99.59	99.61												
6	34.89	49.14	49.53	0.3366	0.0496	0.0149	0.9886	99.39	99.42												
7	35.50	48.59	48.82	0.3679	0.0412	0.0129	0.9826	91.32	91.42												
8	33.81	47.82	48.92	0.3812	0.0439	0.0145	0.9819	92.02	92.30												
9	33.67	46.81	46.88	0.3786	0.0443	0.0221	0.9881	85.87	86.35												
10	34.45	44.47	45.86	0.3955	0.0835	0.0297	0.9857	86.17	86.65												

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	FPSI-1		EPSI-2		V-1		V-2		VP-1		VP-2		V0-1		V0-2		B-1		B-2		M-1		M-2		U-1		U-2		M'-1		M'-2		V'-1		V'-2				
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE			
1	11.268	6.646	785.6	955.6	765.5	852.9	0.0	457.7	0.0	44.6	0.7411	0.8443	515.7	546.4	0.8084	0.6020	942.0	942.0	665.6	665.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	10.896	6.007	752.6	954.3	792.6	880.4	0.0	449.1	0.0	44.4	0.7484	0.8401	501.8	622.9	0.9285	0.6167	909.2	909.2	681.9	681.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
3	9.465	6.718	805.4	916.3	805.4	713.8	0.0	575.4	0.0	38.4	0.7619	0.8245	451.2	603.2	0.9799	0.6495	1035.7	1035.7	721.9	721.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	8.655	5.559	812.8	864.9	812.8	656.4	0.0	512.5	0.0	36.4	0.7652	0.7740	715.1	740.2	1.0253	0.6555	1082.6	1082.6	732.5	732.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
5	5.904	4.015	752.4	770.3	762.4	623.4	0.0	452.5	0.0	36.0	0.7483	0.6794	854.0	871.7	1.1034	0.6625	1164.6	1164.6	751.2	751.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	5.204	3.474	741.1	734.2	741.1	582.5	0.0	447.0	0.0	37.5	0.6949	0.6424	528.3	937.1	1.1139	0.6461	1187.9	1187.9	761.2	761.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7	4.034	3.086	704.7	718.6	704.7	564.1	0.0	445.1	0.0	38.3	0.6578	0.6261	972.6	977.7	1.1211	0.6761	1201.1	1201.1	775.9	775.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	3.784	2.465	680.7	712.7	680.7	551.7	0.0	448.8	0.0	35.1	0.6335	0.6185	1016.2	1019.9	1.1344	0.6402	1223.1	1223.1	795.4	795.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
9	2.579	1.781	650.4	711.7	650.4	528.8	0.0	476.4	0.0	42.0	0.6052	0.6131	1063.4	1063.4	1.1598	0.6806	1249.7	1249.7	800.1	800.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	1.568	0.860	630.3	706.5	630.3	508.4	0.0	460.5	0.0	44.0	0.5873	0.6045	1116.8	1116.8	1.1868	0.6903	1282.4	1282.4	806.7	806.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	0.552	0.248	620.6	686.7	620.6	475.9	0.0	457.8	0.0	46.3	0.5738	0.5857	1161.9	1161.9	1.2177	0.6945	1317.2	1317.2	816.7	816.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

SL	INCS	TACP	CEV	TLFA	RHCVR-1	RHCVR-2	D-FAC	EMEGA-B	LOSS-P	PC2/	REFF-P	TEFF-A	B*-1	B*-2	V0*-1	V0*-2	PC/PG
DEGREE	DEGREE	CEGREE	CEGREE	CEGREE	CEGREE	CEGREE	CEGREE	TOTAL	TOTAL	PC1	TOT	TCY	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-5.16	0.37	19.06	44.72	43.84	39.90	0.4734	0.2940	0.0478	1.3476	71.14	65.91	33.56	-11.16	-519.7	129.3	1.4122
2	-4.45	0.95	16.19	40.30	44.16	44.30	0.4821	0.1825	0.0465	1.4360	82.35	81.42	36.42	-3.87	-581.8	46.2	1.5082
3	-4.24	1.19	14.24	30.74	46.72	49.23	0.4559	0.0775	0.0213	1.4636	91.63	91.16	39.11	8.58	-451.2	-107.8	1.5463
4	-3.85	1.17	12.50	23.41	45.45	49.46	0.4670	0.0755	0.0214	1.4419	90.55	90.47	41.48	18.06	-715.1	-227.3	1.5301
5	-3.57	1.04	6.12	13.48	43.80	45.51	0.4874	0.1300	0.0364	1.4147	83.13	82.28	47.41	33.94	-859.0	-429.1	1.4845
6	-1.41	2.97	4.43	11.29	40.50	42.73	0.4929	0.1116	0.0364	1.4631	86.20	85.64	51.49	40.11	-928.3	-490.1	1.4682
7	0.57	3.80	4.49	10.77	38.15	41.52	0.4896	0.0863	0.0231	1.5072	89.70	89.10	54.16	43.39	-972.6	-532.7	1.4658
8	2.50	4.81	4.30	10.32	36.63	40.87	0.4867	0.0692	0.0183	1.5540	92.10	91.59	58.24	45.91	-1016.2	-571.0	1.4731
9	3.67	5.50	3.74	10.34	35.12	38.88	0.5154	0.1035	0.0272	1.5957	88.64	87.87	58.35	48.00	-1063.4	-587.1	1.4825
10	4.24	7.06	4.61	9.63	33.55	37.35	0.5248	0.1185	0.0304	1.6413	87.45	86.55	60.57	50.94	-1116.8	-626.3	1.4911
11	5.04	7.21	8.14	7.53	32.58	34.67	0.5370	0.1565	0.0380	1.6450	83.55	82.36	61.89	54.36	-1161.9	-663.7	1.4839

IC/TC	FC/FC	EFF-AD	EFF-P	WCI/PI	TC2/TC1	PC2/PC1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LEM/SEC	%	%	STAGE	%
1.1419	1.4856	84.96	85.76	42.40	1.1419	1.4856	84.96	85.76

STATOR 1

SL	FPSI-1		EPSI-2		V-1		V-2		VP-1		VP-2		V0-1		V0-2		B-1		B-2		M-1		M-2		PO/PO		TO/TO		PO/PO		TO/TO	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	11.044	6.188	824.0	512.8	454.1	501.3	859.4	107.0	53.1	11.5	0.7315	0.4408	1.3555	1.1273	1.2935	1.1273	53.1	11.5	0.7315	0.4408	1.3555	1.1273	1.2935	1.1273	53.1	11.5	0.7315	0.4408	1.3555	1.1273	1.2935	1.1273
2	6.224	6.563	643.9	594.3	517.1	580.8	833.9	125.9	47.2	12.2	0.7689	0.5133	1.4390	1.1323	1.3714	1.1323	47.2	12.2	0.7689	0.5133	1.4390	1.1323	1.3714	1.1323	47.2	12.2	0.7689	0.5133	1.4390	1.1323	1.3714	1.1323
3	5.791	4.567	644.4	646.7	636.7	636.7	595.4	111.2	40.1	9.9	0.7705	0.5605	1.5043	1.1276	1.4251	1.1276	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
4	4.937	4.020	636.2	638.0	672.6	632.4	496.9	88.4	35.0	8.0	0.6789	0.5108	1.4662	1.1225	1.3866	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
5	2.557	3.058	764.5	589.7	630.8	584.0	440.7	62.1	35.0	8.6	0.6519	0.4510	1.4501	1.1322	1.4900	1.1322	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
6	2.834	2.803	743.8	564.8	602.8	582.7	435.7	68.1	35.0	9.0	0.6410	0.4807	1.4459	1.1396	1.4715	1.1396	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
7	2.356	2.572	734.7	563.9	586.8	555.1	442.4	66.2	32.0	10.6	0.6397	0.4845	1.4497	1.1419	1.5202	1.1419	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
8	2.140	2.258	734.5	564.8	550.8	555.1	438.5	103.9	36.5	11.0	0.6406	0.4905	1.4590	1.1601	1.5633	1.1601	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
9	1.767	1.900	740.5	576.1	573.6	565.5	469.1	103.7	39.3	11.0	0.6406	0.4905	1.4590	1.1601	1.5633	1.1601	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225
10	1.076	1.148	763.3	578.5	562.7	565.7	465.7	121.1	40.8	12.1	0.6389	0.4896	1.4614	1.1740	1.6065	1.1740	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225	36.5	5.0	0.7453	0.5566	1.5075	1.1225	1.4217	1.1225

ROTOR 2

SL	FPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	V8-1	V8-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V*-1	V*-2
1	0.302	0.706	441.2	781.5	439.1	542.9	103.7	562.1	13.3	45.4	0.3029	0.6503	646.5	608.3	0.5955	0.4695	695.7	557.9
2	5.677	4.350	552.7	775.5	570.0	580.1	122.1	516.8	11.9	41.4	0.5257	0.6533	762.0	732.9	0.7069	0.5221	819.9	615.7
3	4.688	3.889	458.0	755.9	649.4	582.9	105.0	467.3	9.2	35.8	0.5735	0.6406	755.1	777.2	0.8009	0.5649	919.0	651.1
4	4.225	3.562	449.0	735.8	644.5	590.8	82.7	438.4	7.3	34.4	0.5669	0.6201	811.4	825.9	0.8487	0.5956	972.0	704.5
5	2.060	1.450	410.4	600.2	404.6	562.5	63.7	382.4	7.9	34.2	0.5289	0.5697	538.9	542.9	0.9076	0.6651	1047.3	794.1
6	1.202	0.850	355.1	455.4	352.2	534.7	60.4	379.4	4.7	31.4	0.5169	0.5461	983.5	985.0	0.9248	0.6729	1071.7	607.9
7	0.701	0.484	295.8	400.1	292.7	490.2	101.0	401.8	9.8	38.5	0.5134	0.5259	1027.5	1027.9	0.9455	0.6624	1097.2	800.1
8	0.407	0.430	412.3	450.4	462.1	516.0	111.2	355.0	10.5	37.4	0.5225	0.5338	1048.1	1084.1	0.9792	0.7069	1147.6	861.3
9	0.336	0.338	412.1	454.4	461.2	510.7	120.4	405.6	11.3	38.7	0.5202	0.5334	1129.5	1127.0	0.9967	0.7175	1174.6	880.7
10	0.177	0.158	505.3	626.5	377.8	496.4	116.1	356.8	11.4	38.8	0.4567	0.5154	1171.0	1169.5	1.0137	0.7419	1202.7	916.8

SL	INCS	TACP	CRV	TLFA	FACVW-1	BACVW-2	C-FAC	CREGAB	LOSS-P	PG2/	BEFF-P	BEFF-A	B*-1	B*-2	VB*-1	VB*-2	PC/PO
1	-0.91	6.05	17.48	30.16	33.61	44.96	0.3724	-0.1370	-0.0325	1.3948	109.52	105.77	51.08	12.92	-542.8	-126.1	1.8946
2	-6.41	-0.16	15.19	24.52	45.09	51.53	-0.3770	-0.0228	-0.0056	1.8271	102.30	102.40	44.99	20.48	-580.7	-218.1	1.9366
3	-7.25	-1.57	5.86	18.55	51.52	52.94	-0.4102	0.0928	-0.0229	1.2907	88.65	88.54	44.56	26.36	-650.1	-290.0	1.9557
4	-5.01	-0.07	8.00	15.28	51.05	54.00	0.3820	0.0540	0.0144	1.3018	92.63	92.66	44.50	33.26	-728.7	-387.6	1.9582
5	-1.78	2.55	6.26	9.65	47.10	52.86	0.3377	0.0345	-0.0083	1.3295	105.23	105.44	54.75	44.90	-655.2	-560.5	1.9991
6	-0.16	3.15	6.21	7.51	45.80	50.03	0.3409	0.0241	-0.0056	1.3254	103.72	103.77	54.46	48.56	-693.3	-605.6	1.9188
7	0.471	3.09	6.12	6.10	45.46	46.32	0.3713	0.0375	0.0087	1.3146	94.39	94.17	57.65	51.49	-926.9	-626.0	1.9079
8	-0.07	2.25	4.37	5.21	45.77	47.55	0.3437	0.0205	0.0048	1.3207	96.73	96.60	58.34	53.13	-978.9	-689.1	1.9272
9	0.06	2.28	3.40	4.66	45.24	46.59	0.3478	0.0256	0.0083	1.3255	94.38	94.15	59.21	54.55	-1009.2	-717.4	1.9374
10	1.32	3.55	5.61	4.08	42.92	44.92	0.3346	0.0192	0.0043	1.3375	96.63	96.79	61.29	57.20	-1054.9	-770.7	1.9236

TC/TL	FC/PC	EFF-AC	EFF-P	WCI/VI	TCR/TOT	PC2/PC1	EFF-AD	EF.-P
INLET	INLET	INLET	INLET	LEM/SEC			RTCR	RTOR
				SCF				
1.2390	1.9327	66.55	87.77	35.58	1.0050	1.3243	57.06	98.14

STATOR 2

SL	FPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	V8-1	V8-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V*-1	V*-2
1	0.950	7.970	712.8	458.3	451.4	468.3	591.4	3.8	50.5	0.4	0.5681	0.6094	1.8381	1.2295	1.3544	1.0907		
2	5.228	5.537	730.2	537.9	527.8	537.7	564.9	16.2	43.4	1.7	0.6122	0.6435	1.8845	1.2279	1.2953	1.0824		
3	3.552	3.968	732.4	575.3	555.5	575.3	477.7	4.6	40.4	0.5	0.6159	0.6768	1.9372	1.2211	1.2799	1.0852		
4	2.668	2.693	722.5	576.0	580.5	575.9	420.7	-10.7	36.5	-1.1	0.6086	0.6784	1.9450	1.2186	1.2951	1.0843		
5	1.888	1.427	685.2	543.0	571.9	543.0	377.3	-7.2	33.4	-0.8	0.5742	0.6496	1.9278	1.2185	1.3212	1.0804		
6	1.523	1.256	664.8	521.2	548.5	521.1	315.0	-10.7	34.3	-1.2	0.5542	0.6256	1.9091	1.2254	1.3182	1.0805		
7	1.351	1.162	652.0	505.1	517.4	505.1	309.9	-5.8	32.5	-0.7	0.5405	0.6141	1.8963	1.2360	1.3108	1.0856		
8	0.831	0.656	664.9	524.1	536.4	524.1	352.9	-4.0	36.2	-0.4	0.5464	0.6264	1.9138	1.2592	1.3117	1.0852		
9	0.435	0.352	670.5	535.8	531.9	530.4	408.2	20.6	37.5	2.2	0.5471	0.6285	1.9184	1.2778	1.3122	1.0887		
10	0.107	0.076	653.5	508.3	518.5	506.2	358.3	7.5	37.5	0.5	0.5268	0.6058	1.8946	1.2912	1.3172	1.0892		

SL	TACP	CRV	TLFA	FACVW-1	BACVW-2	C-FAC	CREGAB	LOSS-P	PG2/	BEFF-P	BEFF-A	B*-1	B*-2	VB*-1	VB*-2	PC/PO
1	-0.35	6.95	50.03	40.48	47.41	0.4604	0.1382	0.0291	0.9765	99.63	99.65					
2	-0.16	5.17	41.92	47.58	51.84	0.4123	0.1135	0.0256	0.9745	92.87	93.13					
3	-1.41	6.74	40.19	51.19	56.39	0.3675	0.0406	0.0097	0.9708	85.60	86.09					
4	-4.11	7.48	37.61	54.02	57.01	0.3586	0.0217	0.0044	0.9752	90.73	91.07					
5	-6.11	8.31	34.17	53.62	53.72	0.3698	0.0305	0.0088	0.9639	102.88	102.77					
6	-7.03	8.11	35.53	51.16	51.24	0.2913	0.0315	0.0096	0.9640	101.80	101.74					
7	-3.52	8.89	38.14	47.85	49.23	0.4184	0.0221	0.0101	0.9642	93.88	94.11					
8	-4.01	9.31	36.64	49.05	50.35	0.4081	0.0368	0.0121	0.9633	94.27	94.50					
9	-1.28	13.45	35.28	48.18	50.29	0.4086	0.0535	0.0184	0.9601	90.66	91.04					
10	-10.84	13.62	36.63	46.57	47.77	0.4382	0.0668	0.0309	0.9849	91.51	91.84					

WCI/VI	TCR/TOT	PC2/PC1	EFF-AD	EF.-P
INLET	INLET	INLET	STAGE	
1.2390	1.9130	85.12	86.40	1.0850
				0.9858
				94.33

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

RUN NO430, SPEED CODE 90, POINT NO 1																			
SL	FPFI-1	FPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	11.92	9.60	708.5	900.2	708.5	617.0	0.0	55.5	0.0	46.6	0.6616	0.8156	467.1	518.8	0.7925	0.5741	848.6	833.7	
2	11.141	7.660	717.3	899.4	717.3	672.6	0.0	45.7	0.0	41.4	0.6706	0.8139	522.9	559.8	0.8299	0.6107	807.6	873.5	
3	9.766	6.476	731.2	882.9	731.2	676.2	0.0	50.5	0.0	36.4	0.6698	0.7600	585.2	614.0	0.8772	0.6226	936.6	807.7	
4	8.426	5.376	736.7	793.8	736.7	657.1	0.0	44.5	0.0	34.1	0.6636	0.7132	642.7	665.2	0.9188	0.6224	979.9	692.9	
5	7.439	4.712	723.1	701.6	723.1	600.8	0.0	38.2	0.0	31.1	0.6624	0.6247	772.0	783.4	0.9896	0.6531	1057.7	733.5	
6	6.743	4.097	674.6	683.8	674.6	563.1	0.0	31.5	0.0	32.0	0.6274	0.5874	834.3	842.1	0.9979	0.6609	1072.9	746.8	
7	7.772	2.493	478.8	446.8	478.8	562.3	0.0	32.4	0.0	33.0	0.5918	0.5702	874.1	878.7	1.0029	0.6442	1082.7	755.7	
8	2.731	1.844	617.5	434.7	617.5	527.2	0.0	35.6	0.0	34.1	0.5707	0.5592	913.3	916.4	1.0189	0.6754	1102.5	768.9	
9	1.644	1.190	567.9	629.2	567.9	506.5	0.0	37.3	0.0	34.4	0.5514	0.5487	955.7	955.7	1.0397	0.6743	1127.3	771.8	
10	0.650	0.476	576.0	623.6	576.0	463.6	0.0	39.8	0.0	39.2	0.5301	0.5414	1003.7	1003.7	1.0650	0.6757	1157.2	778.3	
11	0.087	0.039	567.0	606.8	567.0	490.5	0.0	40.5	0.0	42.3	0.5214	0.5252	1044.2	1043.8	1.0925	0.6712	1188.2	778.0	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-R	LOSS-P	PC2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-5.25	0.30	17.68	46.64	42.27	39.13	0.4411	0.2657	0.0664	1.3045	74.42	73.44	33.49	-13.15	-467.1	144.7	1.3600
2	-4.62	0.79	15.02	39.30	42.64	45.36	0.4146	0.0885	0.0226	1.3821	91.14	90.72	36.26	-3.04	-522.9	35.9	1.4464
3	-4.35	0.43	15.14	29.37	43.29	47.82	0.4141	0.0267	0.0073	1.3756	96.87	96.73	36.85	9.48	-585.2	-13.4	1.4434
4	-3.26	0.63	12.51	22.67	43.65	47.41	0.4777	0.0323	0.0091	1.3500	95.79	95.61	41.44	18.48	-642.7	-219.8	1.4264
5	-4.90	0.60	7.21	11.94	42.35	44.55	0.4220	0.0352	0.0097	1.3250	94.66	94.43	46.97	35.03	-772.0	-420.9	1.3836
6	-1.79	2.19	5.44	10.03	39.07	41.87	0.4207	0.0045	0.0019	1.3697	99.04	98.99	51.12	41.68	-834.3	-496.6	1.3632
7	0.70	2.54	5.44	9.73	36.73	40.33	0.4215	-0.0110	-0.0029	1.4003	101.55	101.62	53.89	44.16	-874.1	-526.3	1.3560
8	2.23	4.53	5.12	9.24	35.40	39.19	0.4243	-0.0076	-0.0020	1.4228	101.13	101.18	55.96	46.72	-913.3	-559.7	1.3544
9	3.20	5.54	4.78	8.99	34.22	37.50	0.4441	0.0307	0.0079	1.4391	96.00	95.79	57.98	48.99	-955.7	-582.4	1.3538
10	4.42	6.64	5.26	8.56	32.94	35.60	0.4448	0.0763	0.0192	1.4*91	90.53	90.01	60.15	51.59	-1002.7	-609.9	1.3555
11	4.60	6.82	6.43	8.8E	32.45	32.95	0.4888	0.1351	0.0326	1.4563	83.54	82.64	61.50	54.62	-1044.2	-634.3	1.3479

TOZ/TO1	PO/PO	EFF-AD	EFF-P	WCI/AL	TOZ/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1053	1.3832	92.31	92.66	40.45	1.1053	1.3832	92.31	92.66

STATOR 1

RUN NO430, SPEED CODE 90, POINT NO 1																			
SL	FPFI-1	FPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2	TOZ/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	TOZ/
1	11.053	7.767	788.7	567.0	488.2	557.1	619.5	105.3	51.7	10.6	0.7038	0.4942	1.3040	1.1075	1.2508	1.1075	1.1075	1.1075	
2	7.283	5.452	827.6	649.9	601.5	641.0	568.4	107.5	43.3	9.5	0.7423	0.5710	1.3964	1.1071	1.3373	1.1071	1.1071	1.1071	
3	4.882	3.835	804.6	651.3	644.9	645.5	461.2	86.2	36.7	7.6	0.7225	0.5746	1.4138	1.0988	1.3475	1.0988	1.0988	1.0988	
4	3.510	3.046	773.6	636.1	642.6	630.7	430.6	82.6	33.8	7.5	0.6931	0.5613	1.4043	1.0952	1.3348	1.0952	1.0952	1.0952	
5	2.320	2.372	705.2	585.4	609.4	560.2	354.9	77.6	30.2	7.6	0.6281	0.5251	1.3609	1.0911	1.3090	1.0911	1.0911	1.0911	
6	2.128	2.252	676.3	564.6	582.1	558.9	344.3	80.7	30.6	8.2	0.5995	0.4952	1.3445	1.0943	1.3442	1.0943	1.0943	1.0943	
7	1.964	2.089	684.5	555.8	566.2	548.3	347.8	91.0	31.6	8.4	0.5869	0.4859	1.3382	1.0994	1.3751	1.0994	1.0994	1.0994	
8	1.762	1.875	659.0	544.5	558.1	541.4	350.4	93.7	32.1	9.8	0.5803	0.4792	1.3346	1.1035	1.3991	1.1035	1.1035	1.1035	
9	1.494	1.588	655.9	545.1	542.8	536.4	368.1	97.2	34.2	10.3	0.5747	0.4730	1.3318	1.1132	1.4137	1.1132	1.1132	1.1132	
10	0.998	1.063	654.6	540.9	525.9	529.8	389.7	108.6	36.5	11.6	0.5702	0.4665	1.3289	1.1256	1.4298	1.1256	1.1256	1.1256	
11	0.470	0.449	641.2	519.0	494.1	508.9	406.6	101.9	39.6	11.3	0.5549	0.4444	1.3126	1.1372	1.4181	1.1372	1.1372	1.1372	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-R	LOSS-P	PC2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO		
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET		
1	-1.00	1.71	15.95	41.11	33.39	41.16	0.4148	0.1443	0.0299	0.9593	61.45	62.64	30.88	81.65	80.88	81.65	80.88	81.65	
2	-3.98	1.14	11.92	33.87	42.53	48.72	0.3382	0.1015	0.0226	0.9689	90.11	90.52	90.11	90.52	90.11	90.52	90.11	90.52	
3	-6.14	-2.87	8.96	29.12	46.65	49.96	0.3075	0.0709	0.0170	0.9792	90.37	90.75	90.37	90.75	90.37	90.75	90.37	90.75	
4	-9.65	-3.87	6.26	26.37	47.00	46.99	0.2921	0.0585	0.0150	0.9840	87.81	88.26	87.81	88.26	87.81	88.26	87.81	88.26	
5	-12.01	-4.78	7.77	22.60	45.16	44.88	0.2850	0.0458	0.0226	0.9823	93.52	93.79	93.52	93.79	93.52	93.79	93.52	93.79	
6	-11.43	-4.75	6.01	27.39	43.08	43.00	0.2643	0.0691	0.0212	0.9851	95.88	96.06	95.88	96.06	95.88	96.06	95.88	96.06	
7	-10.63	-3.45	9.07	22.14	41.74	41.97	0.2890	0.0652	0.0206	0.9864	97.52	97.64	97.52	97.64	97.52	97.64	97.52	97.64	
8	-10.21	-3.12	9.39	22.31	41.05	41.31	0.2944	0.0722	0.0236	0.9853	91.96	92.34	91.96	92.34	91.96	92.34	91.96	92.34	
9	-8.82	-1.53	9.74	23.87	39.68	40.60	0.3083	0.0810	0.0274	0.9837	85.75	86.45	85.75	86.45	85.75	86.45	85.75	86.45	
10	-8.45	-0.96	11.58	24.95	38.19	39.69	0.3263	0.1074	0.0357	0.9797	76.51	77.64	76.51	77.64	76.51	77.64	76.51	77.64	
11	-9.47	-0.09	13.79	28.27	35.60	37.63	0.3663	0.1398	0.0502	0.9726									

MECFR	MECFE	TC/TC	PO/PO	EFF-AD	EFF-P	TOZ/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
74.81	200.77	1.1053	1.3551	86.21	86.80	1.1053	0.9797	86.21	

ROTOR 2

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	W-1	W-2	POINT NO	1
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC				
1	0.522	5.766	507.4	852.1	497.0	716.4	162.2	470.5	11.5	33.2	0.4402	0.7394	561.0	610.5	0.5986	0.6299	690.1	725.7
2	4.329	4.491	446.0	779.4	638.9	725.1	100.9	423.2	0.9	30.1	0.5604	0.7301	431.0	650.7	0.7290	0.6629	690.5	762.0
3	5.100	3.081	460.1	607.3	654.8	712.1	83.2	300.7	7.2	28.0	0.5031	0.7024	670.0	690.5	0.7019	0.6787	685.0	700.0
4	3.956	2.897	651.1	761.2	646.2	685.7	79.9	330.4	7.5	25.7	0.5757	0.6620	729.2	742.2	0.8009	0.6956	916.1	799.9
5	1.494	0.892	402.7	646.7	497.7	608.6	77.1	251.9	7.4	22.5	0.5310	0.5705	643.8	667.4	0.8566	0.7376	972.1	851.4
6	0.814	0.382	589.1	625.5	502.9	574.6	84.9	241.4	8.3	22.0	0.5171	0.5370	804.2	885.2	0.8686	0.7445	989.3	863.1
7	0.272	0.082	570.7	613.0	572.3	558.6	92.4	252.6	9.2	24.3	0.5074	0.5264	923.7	923.7	0.8835	0.7490	1009.3	873.2
8	0.106	0.271	575.4	611.9	565.0	557.9	98.9	251.2	9.9	24.2	0.4903	0.5220	977.9	976.3	0.9070	0.7792	1044.9	913.4
9	0.418	0.604	547.5	605.6	557.2	548.9	107.7	256.0	10.9	25.0	0.4902	0.5134	1015.1	1012.0	0.9199	0.7928	1064.9	934.9
10	0.398	0.522	545.3	592.8	535.0	496.2	101.2	243.4	10.7	26.1	0.4479	0.4464	1052.3	1051.0	0.9368	0.7966	1091.6	947.0

SL	INCS	INCN	DEV	TUEN	RMCVN-1	RMCVN-2	D-FAC	OMEGA-E	LOSS-P	P02/	REFF-P	REFF-A	B-1	B-2	W-1	W-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	YOT	YOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.26	-1.36	16.19	52.11	37.56	53.23	0.0972	0.0476	0.0114	1.2411	95.23	95.00	43.73	11.63	-478.0	-140.1	1.4261
2	-11.90	-0.53	9.40	21.73	49.03	56.08	0.1912	0.1597	0.0397	1.1704	77.15	76.61	39.60	17.07	-530.7	-235.5	1.4501
3	-0.98	-4.31	7.40	18.22	50.41	56.29	0.2149	0.1503	0.0382	1.1700	75.64	75.10	42.22	24.00	-595.4	-318.3	1.4510
4	-8.29	-3.31	6.30	14.18	49.60	55.03	0.2089	0.1094	0.0270	1.1594	79.41	78.98	45.12	30.95	-649.3	-411.0	1.4197
5	-3.97	-0.10	5.73	7.69	45.53	49.41	0.1850	0.0571	0.0139	1.1350	85.30	85.03	52.06	44.37	-766.6	-595.4	1.5344
6	-7.72	0.58	5.00	5.67	44.17	46.41	0.1836	0.0651	0.0153	1.1201	81.60	81.30	53.90	48.24	-799.6	-643.0	1.5020
7	-1.48	0.90	4.87	5.23	43.21	44.79	0.1936	0.0892	0.0210	1.1101	75.53	75.14	55.44	50.23	-831.4	-671.1	1.4930
8	-1.14	1.07	3.58	4.92	42.15	44.25	0.1816	0.0788	0.0187	1.1205	77.44	77.10	57.26	52.34	-879.0	-723.2	1.4919
9	-0.71	1.51	3.40	4.40	41.10	43.08	0.1775	0.0782	0.0185	1.1195	77.01	76.64	58.45	54.05	-907.4	-756.0	1.4860
10	0.64	2.87	4.83	2.18	39.16	39.31	0.1852	0.1126	0.0244	1.0993	65.40	64.93	60.60	52.43	-951.1	-807.5	1.4410

TC/TO	PC/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	ROTOR	ROTOR
		%	%	LB/SEC			%	%
1.1598	1.5507	83.56	84.54	35.82	1.0493	1.1443	79.46	79.85

STATOR 2

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	N-1	N-2	PC/PO	T02/		
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	STAGE		
													INLET	T01		
1	7.039	0.113	762.2	746.7	606.3	746.4	462.0	-19.4	37.1	-1.5	0.6544	0.6401	1.5410	1.1815	1.1750	1.0668
2	5.194	5.703	787.6	782.6	670.0	782.1	414.0	-26.1	31.4	-1.9	0.6664	0.6759	1.6069	1.1740	1.1417	1.0626
3	1.928	4.166	779.1	756.6	684.7	756.0	371.9	-20.1	28.5	-2.3	0.6757	0.6545	1.5892	1.1642	1.1267	1.0607
4	2.938	3.608	749.6	730.2	675.9	729.8	324.1	-23.7	25.0	-1.9	0.6510	0.6329	1.5481	1.1537	1.1236	1.0544
5	1.932	1.769	661.0	622.8	612.0	622.2	247.7	-2.8	22.0	-0.3	0.5735	0.5376	1.4625	1.1393	1.0836	1.0434
6	1.611	1.559	631.3	611.6	584.3	611.6	239.1	-5.5	22.3	-0.5	0.5449	0.5270	1.4554	1.1411	1.0852	1.0405
7	1.321	1.236	623.1	592.3	570.4	592.2	250.8	-3.4	23.7	-0.3	0.5356	0.5078	1.4389	1.1401	1.0774	1.0431
8	0.952	0.882	623.6	593.2	571.2	593.1	250.1	0.5	23.6	0.9	0.5324	0.5052	1.4396	1.1626	1.0812	1.0420
9	0.675	0.658	617.5	587.1	562.4	586.9	255.1	16.6	24.4	1.6	0.5242	0.4972	1.4342	1.1744	1.0801	1.0427
10	0.322	0.321	546.6	542.0	511.7	542.4	243.3	19.2	25.4	2.0	0.4767	0.4559	1.3981	1.1851	1.0663	1.0421

SL	INCN	DEV	TUEN	RMCVN-1	RMCVN-2	D-FAC	OMEGA-E	LOSS-P	P02/	REFF-A	REFF-P	T02/STG	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	YOT	YOT	TOT-STG	TOT-STG
1	-13.74	7.03	39.60	47.96	56.43	0.1516	0.2099	0.0442	0.9476			70.76	71.41
2	-12.18	6.14	37.53	52.50	60.72	0.1311	0.1157	0.0260	0.9401			61.55	62.25
3	-13.49	6.01	30.74	55.03	59.31	0.1564	0.1381	0.0329	0.9639			57.15	57.86
4	-16.56	6.68	27.45	54.59	57.73	0.1412	0.1246	0.0315	0.9693			62.23	62.84
5	-19.44	6.81	22.24	49.69	49.07	0.1693	0.2267	0.0654	0.9545			53.53	54.06
6	-19.11	8.78	27.78	46.97	48.10	0.1483	0.1703	0.0512	0.9688			58.25	58.73
7	-17.68	9.21	24.09	45.52	46.20	0.1772	0.2046	0.0641	0.9637			49.95	50.48
8	-18.60	11.06	22.73	45.06	45.77	0.1758	0.1995	0.0659	0.9650			52.65	53.16
9	-20.38	11.88	22.79	43.88	44.83	0.1846	0.2072	0.0711	0.9644			52.04	52.56
10	-22.49	14.75	23.40	39.28	40.00	0.1850	0.2088	0.0742	0.9696			43.88	44.39

MC/PP	MCOR	T0/TO	PC/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	STAGE
PPM	PPM			%	%			%	%
200.77	200.77	1.1598	1.4941	76.07	77.38	1.0493	0.9635	57.25	57.25

ROTOR 2

RUN NC430. SPEEC CODE 90. POINT NO 2																		
SL	FPS1-1	FPS1-2	V-1	V-2	W-1	W-2	V6-1	V6-2	B-1	B-2	M-1	M-2	U-1	U-2	N1-1	N1-2	V1-1	V1-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	4.669	5.024	492.4	363.1	442.2	577.4	100.8	468.9	1.8	40.5	0.3921	0.4537	582.7	620.4	0.5653	0.5055	654.0	590.1
2	6.275	6.613	551.5	458.7	583.0	613.3	100.2	466.0	1.7	35.5	0.5144	0.4505	633.5	667.7	0.6090	0.5573	790.1	649.6
3	5.150	3.856	415.3	336.7	413.6	413.2	13.5	411.5	7.7	33.8	0.5440	0.4345	600.4	700.0	0.7522	0.5821	856.2	677.7
4	4.160	3.210	412.6	304.1	408.5	599.1	10.9	313.3	7.4	31.9	0.5356	0.4003	737.4	744.5	0.7845	0.6053	952.2	705.0
5	2.975	2.478	577.3	626.4	572.0	545.1	28.4	369.1	7.8	29.6	0.5057	0.5355	844.3	849.9	0.8380	0.6562	937.5	767.9
6	1.329	1.043	567.4	556.3	560.5	515.0	15.5	300.5	6.7	30.3	0.4953	0.5073	888.5	887.9	0.8538	0.6444	978.2	781.2
7	1.187	0.939	561.6	583.9	553.9	489.0	52.5	317.5	9.5	33.0	0.4890	0.4942	926.5	926.5	0.8718	0.6672	1001.2	781.3
8	0.681	0.530	562.9	587.4	554.6	505.1	56.3	300.3	9.8	30.7	0.4855	0.4938	960.8	977.2	0.9005	0.7798	1044.0	844.6
9	0.559	0.422	555.8	554.4	550.3	568.8	102.4	317.7	10.5	31.2	0.4803	0.4565	1018.2	1015.9	0.9167	0.7707	1088.4	872.0
10	0.193	0.213	541.7	573.1	520.9	465.4	107.7	304.4	11.5	32.1	0.4619	0.4759	1055.5	1054.2	0.9263	0.7717	1088.4	893.3

SL	INCS	INCP	DEV	TLSA	FPCVN-1	BNCVN-2	D-FAC	CPGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VB*-1	VB*-2	PC/P0
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.73	2.23	14.30	35.52	34.46	47.82	C.2602	-0.0030	-0.0152	1.2036	105.00	105.10	47.26	11.74	-481.9	-121.5	1.6897
2	-9.06	-7.80	10.62	23.24	46.01	52.20	C.2589	C.0551	0.0134	1.2368	93.32	93.12	42.34	19.12	-533.7	-214.1	1.7275
3	-8.04	-2.36	6.62	15.03	48.78	53.29	C.3178	C.0786	0.0196	1.2268	89.37	89.46	44.17	25.13	-597.1	-288.7	1.7360
4	-4.92	-1.44	7.18	15.26	46.30	52.47	C.3082	C.0444	0.0112	1.2259	93.29	93.05	46.99	31.73	-652.4	-371.1	1.7237
5	-2.70	1.17	6.13	6.59	45.01	48.73	C.2794	C.0064	-0.0015	1.2186	101.23	101.26	53.33	44.78	-767.9	-580.8	1.6720
6	-1.61	1.70	6.41	6.26	43.85	45.85	C.2787	C.0034	0.0000	1.2073	99.31	99.29	55.01	46.76	-801.3	-587.3	1.6473
7	-0.51	1.66	5.88	5.24	43.26	43.32	C.3013	C.0494	0.0114	1.2050	90.41	90.35	56.41	51.18	-836.0	-600.6	1.6395
8	-0.51	1.72	4.51	4.84	42.42	44.27	C.2661	C.0046	0.0011	1.2123	99.05	99.02	57.51	53.26	-884.4	-676.9	1.6476
9	-0.16	2.06	3.65	4.66	41.72	44.27	C.2602	C.0013	0.0003	1.2217	99.74	99.72	58.59	54.30	-915.8	-708.2	1.6572
10	0.24	3.01	5.40	3.66	39.74	42.85	C.2521	C.0126	-0.0029	1.2241	102.75	102.82	60.74	51.07	-947.8	-749.8	1.6604

IC/IC	FO/FC	EFF-AC	EFF-P	N1/A1	T02/T01	PC2/P01	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	LEM/SEC			CTOR	CTOR
		8	8	SCFT			8	8
1.1812	1.4784	88.00	88.04	34.30	1.0612	1.2242	57.16	97.24

STATOR 2

RUN NC430. SPEEC CODE 90. POINT NO 2																
SL	FPS1-1	FPS1-2	V-1	V-2	W-1	W-2	V6-1	V6-2	B-1	B-2	M-1	M-2	PC/PC	TO/TO	PO/PO	TC2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	6.517	7.924	453.4	567.3	451.1	567.3	469.7	3.0	44.7	0.2	0.5050	0.4770	1.6455	1.1971	1.2599	1.0725
2	5.015	5.303	717.0	617.3	564.2	617.3	437.3	2.1	37.4	0.2	0.6131	0.5223	1.7084	1.1824	1.2224	1.1672
3	3.665	3.772	717.0	622.4	552.7	622.5	403.5	-10.0	34.2	-0.5	0.6145	0.5207	1.7240	1.1751	1.2192	1.0673
4	2.672	2.614	657.0	600.4	553.7	600.2	366.0	-13.9	31.7	-1.3	0.5987	0.5104	1.7087	1.1685	1.2158	1.0642
5	1.460	1.336	631.3	537.7	552.9	537.4	306.0	-9.4	28.9	-1.0	0.5357	0.4561	1.6549	1.1619	1.2065	1.0572
6	1.270	1.145	603.4	512.0	525.3	514.5	257.7	-15.8	25.5	-1.8	0.5140	0.4355	1.6361	1.1650	1.1991	1.0556
7	1.000	0.904	552.5	505.9	502.7	505.7	316.1	-11.4	32.2	-1.3	0.5030	0.4256	1.6283	1.1711	1.1967	1.0604
8	0.539	0.445	554.2	516.4	516.1	516.4	259.3	-3.1	30.0	-0.3	0.5039	0.4314	1.6353	1.1923	1.2033	1.0571
9	0.281	0.240	406.2	515.5	522.8	519.8	306.8	10.2	30.4	1.1	0.5071	0.4319	1.6359	1.2062	1.2042	1.0589
10	0.050	0.084	502.8	456.8	500.8	496.4	306.0	11.9	31.3	1.4	0.4869	0.4102	1.6158	1.2171	1.2058	1.0577

SL	TACH	DEV	TLSA	FPCVN-1	BNCVN-2	D-FAC	CPGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	T02/T01	PC2/P01	EFF-AC	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	STAGE	STG
1	-6.14	8.82	44.41	42.15	50.25	C.3277	C.1244	0.0262	0.9739	94.05	94.24	87.82	88.16		
2	-6.38	8.23	37.24	45.53	55.74	C.2751	C.0504	0.0113	0.9887	88.43	88.81	85.41	89.70		
3	-7.86	7.36	35.12	52.11	56.50	C.2678	C.0278	0.0066	0.9530	86.25	86.36	85.41	85.72		
4	-6.54	7.21	33.00	52.80	55.21	C.2758	C.0383	0.0097	0.9918	87.19	87.51	84.96	85.09		
5	-12.57	8.07	26.85	49.30	49.39	C.2916	C.0342	0.0156	0.9903	94.96	95.09	93.20	93.36		
6	-11.83	7.53	21.31	46.35	47.03	C.3034	C.0412	0.0126	0.9852	94.96	95.09	93.20	93.36		
7	-6.25	8.26	33.48	44.27	45.75	C.3204	C.0431	0.0135	0.9952	94.96	95.09	93.20	93.36		
8	-12.28	5.60	30.31	45.23	46.17	C.3048	C.0480	0.0150	0.9924	94.96	95.09	93.20	93.36		
9	-14.38	12.35	26.28	45.25	45.64	C.3105	C.0793	0.0272	0.9873	94.96	95.09	93.20	93.36		
10	-17.15	14.10	28.85	42.93	43.35	C.3296	C.1001	0.0336	0.9850	94.96	95.09	93.20	93.36		

MCORR	MCORR	TO/TC	FC/FC	EFF-AC	EFF-P	T02/T01	PO2/P01	EFF-AC
INLET	INLET	INLET	INLET					STAGE
REF	LEM/SEC			8	8			8
7503.	194.07	1.1812	1.2400	88.00	87.03	1.0612	0.9895	91.58

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

		RUN NC430, SPEED CODE 90, POINT NO 3																
SL	EPSSI-1	EPSSI-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.774	9.474	636.6	665.2	626.6	577.2	0.0	645.5	0.0	48.3	0.5855	0.7843	467.6	511.4	0.7315	0.5356	789.9	593.6
2	10.657	7.450	642.0	660.6	643.0	607.5	0.0	609.6	0.0	45.6	0.5959	0.7744	523.5	560.4	0.7684	0.5484	829.1	605.4
3	9.312	6.251	652.8	615.1	652.8	627.3	0.0	526.7	0.0	40.0	0.6056	0.7350	585.5	614.7	0.8138	0.5684	877.2	633.4
4	7.755	5.133	651.5	578.2	657.5	615.4	0.0	472.5	0.0	37.5	0.6107	0.6536	643.4	666.0	0.8542	0.5766	920.2	645.2
5	5.047	3.325	638.8	655.4	628.8	556.6	0.0	412.9	0.0	36.4	0.5917	0.6149	772.9	784.3	0.9288	0.5938	1002.7	671.6
6	4.023	2.550	557.0	685.5	577.0	526.5	0.0	412.4	0.0	38.2	0.5506	0.5880	835.3	843.1	0.9466	0.5968	1026.7	675.5
7	3.220	1.559	567.6	656.2	567.6	513.3	0.0	412.1	0.0	38.8	0.5219	0.5762	875.1	879.7	0.9592	0.6079	1043.1	694.3
8	2.272	1.268	546.2	652.3	546.2	493.4	0.0	426.7	0.0	40.5	0.5032	0.5682	914.3	917.6	0.9786	0.6063	1066.1	696.0
9	1.780	0.944	528.7	647.7	528.7	462.3	0.0	453.7	0.0	44.5	0.4845	0.5403	956.8	956.8	1.0017	0.5911	1093.2	683.3
10	0.478	0.013	507.3	636.0	507.3	427.1	0.0	471.3	0.0	47.8	0.4640	0.5464	1004.5	1004.9	1.0295	0.5872	1125.7	683.5
11	0.077	-0.165	455.1	625.0	455.1	398.4	0.0	411.6	0.0	50.4	0.4561	0.5361	1045.4	1045.1	1.0587	0.5897	1158.4	690.1

SL	INCS	INCP	CFV	TLR	PCVP-1	PCVM-2	D-FAC	EMEGA-B	LOSS-P	F02/	BEFF-P	BEFF-A	B*-1	B*-2	VO*-1	VO*-2	PC/PO
	DEGREE	DEGREE	CEFFEE	CEGREE			TOTAL	TOTAL		P01	TOT	ICI	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.35	3.15	17.35	45.82	40.28	38.12	0.4489	0.2511	0.0665	1.3050	75.05	74.05	36.38	-13.43	-467.6	138.4	1.3508
2	-1.58	3.82	13.46	43.50	40.61	42.26	0.4557	0.1603	0.0408	1.3672	85.89	85.24	35.30	-4.61	-523.5	49.1	1.4145
3	-1.15	4.13	13.23	34.05	41.11	45.58	0.4444	0.0713	0.0195	1.3789	92.87	92.54	42.64	7.97	-585.9	-88.0	1.4332
4	-0.45	4.17	11.43	27.05	41.36	45.80	0.4511	0.0460	0.0170	1.3896	93.33	93.03	44.48	17.39	-643.4	-151.1	1.4256
5	-0.44	4.12	5.15	16.52	35.95	42.65	0.4689	0.0404	0.0254	1.3597	88.78	88.28	50.49	33.57	-712.4	-371.4	1.3963
6	1.59	5.57	4.06	15.47	31.04	40.24	0.4817	0.0676	0.0242	1.3944	89.57	89.07	54.49	39.22	-835.3	-429.6	1.3891
7	3.88	6.71	3.45	14.72	25.02	39.32	0.4755	0.0723	0.0197	1.4225	91.41	91.18	57.07	42.34	-875.1	-467.6	1.3892
8	5.34	7.64	3.25	14.21	23.14	37.73	0.4974	0.0555	0.0258	1.4457	89.17	88.80	58.07	44.86	-914.3	-490.9	1.3725
9	6.40	8.64	3.25	14.21	23.14	35.16	0.5372	0.1524	0.0404	1.4647	83.43	82.73	61.08	47.42	-956.8	-503.1	1.3904
10	7.48	9.70	5.00	11.85	21.18	32.35	0.5823	0.1543	0.0502	1.4804	79.31	78.14	63.21	51.33	-1004.9	-533.6	1.3950
11	7.58	9.80	6.52	5.74	20.61	30.11	0.5776	0.2380	0.0572	1.4845	75.39	73.99	64.48	54.74	-1045.4	-563.5	1.3944

IC/TC	PC/PC	EFF-AC	EFF-P	WCI/A1	T02/T01	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	LEM/SEC			ROTOR	ROTOR
B	B	B	B	S			B	B
1.1190	1.4000	84.63	83.54	37.51	1.1190	1.4000	84.63	85.54

STATOR 1

		RUN NC430, SPEED CODE 90, POINT NO 3																
SL	EPSSI-1	EPSSI-2	V-1	V-2	VP-1	VP-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.852	6.411	757.6	472.4	443.0	461.8	614.2	55.6	54.1	12.0	0.6738	0.4085	1.3007	1.1067	1.2566	1.1067		
2	8.314	6.411	783.2	540.2	527.3	529.1	576.2	105.1	47.7	11.6	0.6578	0.4655	1.3637	1.1090	1.3164	1.1090		
3	5.960	5.130	773.1	577.3	563.1	569.3	557.6	55.7	41.1	9.5	0.6056	0.5044	1.4075	1.1049	1.3547	1.1049		
4	4.650	4.252	750.1	571.3	554.5	565.8	557.3	79.4	37.6	8.0	0.6682	0.4597	1.4050	1.1015	1.3338	1.1015		
5	3.488	3.523	653.5	528.3	565.2	522.9	461.7	75.2	35.4	8.2	0.6132	0.4601	1.3797	1.1028	1.3350	1.1028		
6	3.273	3.394	676.6	514.7	544.8	508.6	461.7	78.7	36.4	8.8	0.5954	0.4464	1.3720	1.1090	1.3659	1.1090		
7	3.066	3.167	671.6	513.1	531.7	505.5	410.3	88.2	37.7	9.4	0.5885	0.4433	1.3726	1.1172	1.3946	1.1172		
8	2.774	2.850	670.8	512.6	526.0	503.6	413.7	94.3	38.1	10.6	0.5861	0.4423	1.3752	1.1200	1.4219	1.1200		
9	2.347	2.431	671.9	513.4	522.0	503.6	445.9	98.5	41.6	11.1	0.5830	0.4397	1.3768	1.1363	1.4407	1.1363		
10	1.512	1.544	655.2	502.3	475.0	489.4	465.7	110.9	44.4	12.8	0.5734	0.4272	1.3703	1.1496	1.4430	1.1496		
11	0.617	0.622	456.3	481.1	447.0	488.7	480.5	108.7	47.1	13.1	0.5624	0.4085	1.3560	1.1615	1.4536	1.1615		

SL	INCS	INCP	CFV	TLR	PCVP-1	PCVM-2	D-FAC	EMEGA-B	LOSS-P	F02/	BEFF-P	BEFF-A	B*-1	B*-2	VO*-1	VO*-2	PC/PO
	DEGREE	DEGREE	CEFFEE	CEGREE			TOTAL	TOTAL		P01	TOT	ICI	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.45	8.17	17.42	42.10	31.46	3.15	0.5163	0.1356	0.0200	0.9643					63.23	64.39	
2	0.39	5.51	14.07	36.05	28.44	42.23	0.4421	0.1146	0.0253	0.9682					74.94	75.94	
3	-3.77	1.70	10.51	31.54	43.55	46.32	0.3825	0.0605	0.0146	0.9833					86.50	87.06	
4	-5.87	-0.05	8.80	25.80	44.57	48.32	0.3691	0.0494	0.0120	0.9872					89.13	89.59	
5	-6.79	-0.34	8.33	27.24	43.15	42.65	0.3766	0.0594	0.0172	0.9866					83.72	84.37	
6	-5.71	1.07	6.60	28.82	41.54	41.27	0.3861	0.0601	0.0184	0.9871					85.51	86.14	
7	-4.51	2.47	9.56	27.76	40.41	40.76	0.3903	0.0533	0.0169	0.9888					85.07	85.76	
8	-4.34	2.85	10.17	27.45	40.04	40.84	0.3884	0.0556	0.0182	0.9884					88.52	89.08	
9	-1.47	5.52	10.63	30.53	37.80	40.15	0.4105	0.0620	0.0209	0.9872					80.71	81.68	
10	-0.65	4.45	12.76	31.65	35.51	38.80	0.4337	0.0691	0.0310	0.9822					75.34	76.60	
11	-1.14	4.53	15.33	34.02	27.25	36.46	0.4750	0.1421	0.0508	0.9725					68.48	70.07	

W CORR	IC/TC	PC/PC	EFF-AC	EFF-P	T02/T01	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
B	B	B	B	B			B	B
7489.	186.00	1.1190	1.3306	60.20	81.07	1.1190	0.9826	80.20

ROTOR 2

SL	FP31-1	FP31-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
1	4.911	5.771	405.1	721.2	351.6	508.3	58.6	911.6	13.5	44.8	0.3527	0.4142	581.7	619.3	0.5408	0.4425	627.4	519.6
2	6.037	4.475	532.6	712.5	321.5	570.2	105.2	449.1	11.4	41.0	0.4619	0.4065	632.3	659.5	0.6439	0.4847	741.5	569.0
4	5.014	3.607	583.5	656.7	376.4	543.7	50.5	440.4	8.9	38.9	0.5103	0.5065	679.4	699.3	0.7208	0.5134	824.1	602.2
5	4.215	3.431	574.1	671.7	373.8	547.6	25.3	356.6	7.5	36.0	0.5665	0.5777	736.0	743.1	0.7420	0.5916	870.6	647.1
6	1.247	0.553	546.1	553.0	333.6	458.2	41.8	348.4	8.7	33.4	0.4687	0.5043	844.7	848.3	0.8106	0.6137	939.8	729.6
7	0.775	0.617	540.5	506.2	332.6	467.8	51.9	358.2	9.8	37.4	0.4685	0.4944	924.5	924.8	0.8565	0.6169	986.6	734.8
8	0.575	0.465	545.6	548.2	335.7	481.1	59.9	354.7	10.4	36.4	0.4675	0.4571	975.1	975.5	0.8832	0.6538	1029.5	785.7
9	0.334	0.376	536.5	603.3	345.0	476.2	110.3	373.5	11.9	38.1	0.4573	0.5001	1014.3	1014.0	0.9264	0.6594	1047.1	798.1
10	0.050	0.690	518.1	581.3	306.7	453.3	108.2	363.8	12.1	38.7	0.4388	0.4767	1053.6	1052.3	0.9085	0.6760	1072.6	824.3

SL	INCS	INCP	DEV	TLPA	PNCVM-1	PNCVM-2	D-FAC	(MEGA-8)	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	V0*-1	V0*-2	PC/PO
1	-1.57	5.44	16.37	38.64	31.74	44.13	C.3460	0.1126	-0.0268	1.2160	107.82	108.13	53.47	11.81	-485.3	-107.7	1.7139
2	-0.22	0.04	11.13	23.78	42.04	47.65	C.3701	C.CC7C	0.0017	1.2660	99.24	95.21	45.18	19.42	-527.2	-190.3	1.7430
3	-0.65	-0.58	8.67	20.17	46.55	49.25	C.3901	C.0784	0.0197	1.2454	90.56	90.20	45.55	21.38	-588.9	-358.9	1.7595
4	-4.75	0.33	7.55	16.62	46.75	50.38	C.3670	C.0427	0.0107	1.2520	94.35	94.10	48.77	32.11	-654.7	-344.2	1.7612
5	-1.08	2.75	5.52	10.35	45.51	48.11	C.3247	C.0254	-0.0071	1.2618	104.72	104.67	54.95	44.56	-769.3	-907.7	1.7362
6	-0.22	3.09	5.86	8.35	42.77	46.37	C.3149	C.0324	-0.0076	1.2551	105.40	105.65	58.40	48.21	-803.5	-557.4	1.7220
7	0.44	2.85	5.10	8.94	42.64	43.20	C.3552	C.0423	0.0099	1.2509	93.42	93.21	57.40	52.46	-769.9	-566.7	1.7190
8	0.22	2.44	3.43	6.45	42.10	43.49	C.3317	C.0234	0.0056	1.2587	96.11	95.97	58.44	52.18	-879.2	-620.8	1.7331
9	0.75	2.57	2.71	6.54	40.75	43.05	C.3374	C.0267	0.0064	1.2724	95.71	95.56	59.90	53.36	-906.0	-640.5	1.7440
10	1.84	4.07	5.04	5.18	36.85	40.57	C.3299	C.0225	0.0053	1.2731	96.20	96.06	61.81	54.63	-945.4	-688.4	1.7256

IC/IC	PC/PC	EFF-AD	EFF-P	IC1/A1	IC2/T01	PC2/P01	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1574	1.7372	86.45	87.46	32.90	1.0703	1.2626	57.54	98.01

STATOR 2

SL	FP31-1	FP31-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
1	8.986	8.002	656.3	478.7	427.3	476.1	502.1	4.1	49.4	0.5	0.5581	0.3972	1.6894	1.1901	1.2826	1.0754		
2	5.166	5.471	473.1	518.0	452.0	518.0	459.4	8.4	42.9	0.9	0.5711	0.4335	1.7145	1.1876	1.2458	1.0701		
3	3.836	3.811	477.1	546.8	521.4	546.8	432.0	-0.6	39.6	-0.7	0.5759	0.4555	1.7502	1.1830	1.2387	1.0716		
4	2.744	2.574	482.7	541.4	540.5	541.2	352.0	-16.1	35.9	-1.6	0.5685	0.4560	1.7520	1.1786	1.2458	1.0703		
5	1.553	1.328	421.9	521.5	523.2	501.1	336.1	-18.7	32.7	-2.1	0.5276	0.4214	1.7258	1.1772	1.2541	1.0655		
6	1.457	1.242	463.9	483.3	508.9	482.8	325.3	-21.4	32.6	-2.5	0.5105	0.4045	1.7120	1.1815	1.2482	1.0636		
7	1.354	1.180	506.7	475.9	483.1	475.8	351.6	-7.6	36.2	-1.0	0.5031	0.3965	1.7081	1.1932	1.2432	1.0692		
8	0.880	0.764	410.4	485.4	458.3	489.6	352.8	-3.4	35.3	-0.4	0.5086	0.4043	1.7153	1.2159	1.2487	1.0705		
9	0.523	0.457	619.3	457.7	454.4	457.5	332.3	15.3	37.0	1.8	0.5123	0.4081	1.7248	1.2342	1.2579	1.0744		
10	0.175	0.152	556.9	471.2	473.5	470.9	363.4	15.6	37.5	1.6	0.4901	0.3835	1.7031	1.2476	1.2566	1.0741		

SL	INCP	DEV	TLPA	PNCVM-1	PNCVM-2	D-FAC	(MEGA-8)	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	V0*-1	V0*-2	PC/PO
1	-1.45	5.00	48.91	38.25	44.85	C.4346	C.1340	0.0284	0.9743	97.66	97.74					
2	-0.17	6.67	42.01	44.57	49.30	C.3794	C.0818	0.0184	0.9838	92.28	92.51					
3	-2.46	7.56	40.37	47.75	52.74	C.3456	C.0264	0.0063	0.9947	87.96	88.32					
4	-5.74	6.95	37.51	45.55	52.56	C.3420	C.0250	0.0063	0.9951	92.01	92.25					
5	-6.31	6.53	34.82	44.73	48.66	C.3585	C.0354	0.0103	0.9638	101.91	101.85					
6	-6.78	6.75	35.12	47.22	46.45	C.3729	C.0360	0.0108	0.9641	102.70	102.42					
7	-5.21	8.40	37.16	44.44	45.55	C.3911	C.0382	0.0120	0.9939	93.01	93.27					
8	-6.94	5.74	35.70	43.24	46.15	C.3896	C.0474	0.0157	0.9923	92.75	92.98					
9	-7.83	13.03	35.16	44.48	46.37	C.3947	C.0492	0.0237	0.9886	90.85	91.15					
10	-10.52	14.62	35.60	42.12	43.24	C.4183	C.0667	0.0308	0.9869	90.64	90.94					

IC/IC	PC/PC	EFF-AD	EFF-P	IC1/A1	IC2/T01	PC2/P01	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
7.889	10.00	1.1574	1.7372	86.45	86.01	1.0703	0.9909	93.56

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	DFCRFF	DECRFF	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.697	0.333	447.6	654.5	447.6	437.3	C.0	486.9	0.0	47.9	0.4074	0.5901	325.6	356.1	0.5036	0.4115	553.5	496.5
2	10.587	7.443	450.8	647.7	450.8	479.8	C.0	435.1	0.0	42.1	0.4104	0.5838	364.5	390.2	0.5278	0.4344	579.7	481.9
3	8.928	6.001	454.5	602.5	454.5	474.7	0.0	371.1	0.0	37.9	0.4160	0.5416	468.0	428.0	0.5563	0.4297	610.8	478.1
4	7.498	4.954	455.7	564.7	455.2	461.0	0.0	376.1	0.0	35.2	0.4166	0.5064	448.0	463.7	0.5817	0.4314	638.7	481.1
5	4.938	3.489	439.1	498.9	439.1	421.5	0.0	263.1	0.0	32.0	0.3995	0.4436	538.1	546.1	0.6318	0.4532	694.5	507.7
6	4.005	2.886	412.4	476.3	412.4	405.0	0.0	250.7	0.0	31.8	0.3744	0.4243	581.6	587.0	0.6473	0.4690	712.9	526.5
7	3.226	2.331	394.9	468.3	394.9	400.5	0.0	242.6	0.0	31.2	0.3582	0.4168	609.3	612.5	0.6585	0.4853	726.1	545.2
8	2.320	1.580	382.4	458.8	382.4	351.8	0.0	238.7	0.0	31.4	0.3465	0.4078	636.6	638.9	0.6730	0.4978	742.6	560.0
9	1.372	0.805	269.7	444.1	369.7	370.7	0.0	223.4	0.0	34.4	0.3348	0.3979	666.2	666.2	0.6899	0.4916	761.9	554.8
10	0.571	0.147	355.8	436.2	355.8	345.2	0.0	266.7	0.0	37.7	0.3219	0.3851	699.7	699.7	0.7101	0.4888	784.9	533.7
11	0.149	-0.091	351.0	423.5	351.0	321.5	0.0	275.6	0.0	40.6	0.3174	0.3727	727.9	727.9	0.7309	0.4882	808.1	554.7

SL	INCE	INCH	DEF	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
	DFCRFF	DECRFF	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.63	2.92	14.24	52.69	31.33	30.71	0.3903	0.2848	0.0441	1.1547	75.89	75.39	36.11	-16.58	-325.6	130.9	1.1741
2	-1.60	3.61	12.75	44.39	31.53	34.75	0.3650	0.0917	0.0239	1.1852	91.53	91.33	39.08	-5.31	-364.5	44.8	1.2057
3	-1.18	4.10	12.46	35.21	31.77	35.04	0.3873	0.0597	0.0164	1.1768	93.54	93.39	42.02	6.81	-468.0	-56.9	1.1980
4	-0.79	4.33	11.63	28.04	31.81	34.41	0.3992	0.0588	0.0166	1.1664	92.79	92.64	44.64	18.59	-448.0	-137.6	1.1875
5	-0.29	4.47	4.07	16.96	30.65	31.86	0.3967	0.0664	0.0186	1.1527	90.10	89.90	50.84	33.89	-538.1	-283.0	1.1658
6	1.80	5.78	4.55	14.98	28.68	30.70	0.3865	0.0452	0.0118	1.1629	93.45	93.30	54.71	39.73	-581.6	-336.4	1.1611
7	3.89	6.73	4.05	14.34	27.40	30.43	0.3714	0.0166	0.0045	1.1722	97.59	97.53	57.09	42.74	-609.3	-369.9	1.1608
8	5.29	7.60	4.01	13.41	26.49	29.79	0.3668	0.0143	0.0038	1.1773	97.93	97.88	59.03	45.61	-636.6	-400.2	1.1588
9	6.30	8.53	3.86	12.90	25.58	28.09	0.4015	0.0483	0.0179	1.1803	89.87	89.63	60.96	48.68	-666.2	-412.8	1.1558
10	7.31	9.53	5.11	11.61	24.60	26.04	0.4321	0.1732	0.0311	1.1822	82.39	81.97	63.05	51.44	-699.7	-433.0	1.1517
11	7.56	9.58	6.56	9.66	24.26	24.18	0.4558	0.1728	0.0417	1.1795	75.63	75.05	64.26	54.58	-727.9	-452.1	1.1474

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SOFT			%	%
1.0519	1.1696	88.36	88.62	28.26	1.0519	1.1696	88.36	88.62

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	DFCRFF	DECRFF	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.152	7.646	586.2	434.2	363.0	427.1	460.3	77.9	51.7	10.2	0.5249	0.3840	1.1440	1.0537	1.1250	1.0557		
2	7.446	5.897	605.5	489.5	439.8	483.2	416.1	78.2	43.4	9.2	0.5434	0.4349	1.1869	1.0547	1.1666	1.0547		
3	4.983	4.054	590.8	477.4	458.2	473.7	356.9	59.6	37.9	7.2	0.5209	0.4245	1.1863	1.0511	1.1653	1.0511		
4	3.713	3.292	553.6	460.9	454.9	457.5	315.5	56.3	34.7	7.0	0.4960	0.4099	1.1788	1.0487	1.1578	1.0487		
5	2.454	2.521	499.6	423.7	428.0	420.4	257.7	52.6	31.1	7.1	0.4461	0.3762	1.1592	1.0461	1.1448	1.0461		
6	2.140	2.279	483.9	414.7	416.8	411.0	245.8	55.7	30.5	7.6	0.4314	0.3674	1.1552	1.0470	1.1552	1.0470		
7	1.951	2.085	479.7	412.2	414.0	408.2	242.3	57.6	30.3	8.0	0.4272	0.3653	1.1543	1.0486	1.1643	1.0486		
8	1.822	1.937	473.5	406.2	411.7	402.0	233.8	57.8	29.6	8.2	0.4214	0.3599	1.1525	1.0481	1.1698	1.0481		
9	1.621	1.713	466.6	399.7	394.3	395.5	249.5	57.7	32.3	8.3	0.4140	0.3531	1.1498	1.0534	1.1734	1.0534		
10	1.078	1.125	456.6	370.2	372.6	385.8	263.9	60.7	35.3	8.9	0.4038	0.3435	1.1459	1.0593	1.1761	1.0593		
11	0.440	0.470	444.4	370.5	349.1	344.6	275.0	66.3	38.2	10.3	0.3917	0.3251	1.1369	1.0644	1.1687	1.0644		

SL	INCE	INCH	DEF	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PO2/	EFF-A	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
	DFCRFF	DECRFF	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	STAGE	STAGE	%	%
1	-1.01	3.70	14.60	41.46	21.36	32.15	0.3929	0.1471	0.0305	0.9748			61.52	62.15		
2	-3.93	1.16	11.69	34.23	32.50	37.02	0.3152	0.0706	0.0177	0.9855			82.52	82.91		
3	-6.95	-1.48	8.52	30.75	34.19	36.55	0.3001	0.0599	0.0144	0.9899			87.47	87.74		
4	-8.72	-2.95	7.82	27.73	34.14	35.37	0.2869	0.0504	0.0129	0.9922			87.92	88.16		
5	-11.17	-4.72	7.27	23.92	32.33	32.45	0.2721	0.0487	0.0142	0.9938			85.43	85.71		
6	-11.60	-4.83	7.44	22.81	31.52	31.69	0.2611	0.0428	0.0132	0.9949			89.57	89.77		
7	-11.85	-4.86	7.69	22.31	31.31	31.43	0.2457	0.0475	0.0151	0.9944			91.54	91.72		
8	-12.45	-5.66	7.75	21.41	21.18	30.98	0.2650	0.0507	0.0167	0.9941			87.63	87.93		
9	-10.74	-3.35	7.86	24.03	29.70	30.32	0.2738	0.0499	0.0169	0.9944			87.66	87.93		
10	-9.78	-2.19	8.88	26.43	27.94	29.38	0.3044	0.0520	0.0183	0.9945			80.11	80.56		
11	-10.04	-2.31	12.58	27.91	26.07	27.61	0.3386	0.0919	0.0331	0.9908			70.78	71.42		

WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
%	%	%	%	%
28.26	1.0519	0.9914	88.41	83.75

ROTOR 2

SL	FP21-1	FP21-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	8.704	8.995	388.1	609.7	380.7	522.1	75.6	315.0	11.2	30.8	0.3423	0.5382	405.0	431.2	0.4439	0.4721	503.4	536.9
2	6.570	6.754	481.4	815.1	476.0	544.9	72.4	285.3	8.8	27.5	0.4278	0.5441	440.3	459.2	0.5343	0.5066	601.5	571.9
3	4.221	3.837	482.6	594.8	479.1	534.4	57.3	245.2	6.8	24.5	0.4294	0.5220	473.0	486.9	0.5644	0.5207	634.3	588.3
4	2.928	2.879	471.9	552.1	488.7	511.3	44.4	208.4	6.8	22.1	0.4200	0.4685	508.3	517.6	0.5808	0.5282	652.5	597.4
5	1.117	0.491	438.5	486.2	435.3	462.4	52.9	128.4	6.9	15.5	0.3898	0.4251	588.2	590.7	0.6132	0.5788	689.9	653.9
6	0.335	-0.134	432.6	452.5	429.0	434.4	56.0	126.1	7.4	16.2	0.3841	0.3995	616.4	617.1	0.6266	0.5789	705.7	655.6
7	-0.057	-0.374	425.6	443.5	421.7	418.4	57.4	147.2	7.8	19.4	0.3778	0.3907	643.9	643.9	0.6412	0.5721	722.2	649.5
8	-3.304	-0.440	415.3	432.8	411.3	411.2	57.7	135.0	8.0	18.2	0.3670	0.3799	681.7	679.2	0.6654	0.5986	747.3	682.6
9	-0.441	-0.418	404.2	422.8	400.7	402.3	60.8	130.2	8.4	17.9	0.3570	0.3701	707.6	706.9	0.6704	0.6149	760.9	702.4
10	-0.352	-0.460	395.8	388.5	380.1	383.5	66.0	137.1	9.8	20.7	0.3387	0.3385	733.6	732.6	0.6745	0.6079	768.2	697.7

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PC2/	TEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	TOT
1	-11.30	-4.75	16.96	28.24	29.08	39.68	0.0686	0.0215	1.1130	97.35	97.31	40.69	12.40	-329.4	-116.2	1.2758
2	-13.80	-7.53	9.30	20.02	34.65	42.23	0.1474	0.0796	1.0947	86.64	86.47	37.60	17.58	-307.8	-173.8	1.3010
3	-11.31	-5.64	7.67	16.72	36.87	42.06	0.1572	0.0415	1.0434	91.80	91.70	40.89	24.18	-413.7	-241.7	1.2950
4	-9.45	-4.37	6.55	12.96	36.61	40.39	0.1555	0.0121	1.0860	97.47	97.42	44.07	31.10	-453.9	-309.0	1.2763
5	-5.15	-1.28	6.32	5.92	33.36	36.88	0.0910	-0.0877	1.2498	142.28	142.67	50.87	44.96	-535.2	-462.1	1.2370
6	-4.06	-0.75	6.14	4.08	32.85	34.47	0.1074	-0.0080	1.0562	119.27	119.43	52.56	48.49	-560.4	-490.9	1.2197
7	-2.68	-0.28	4.53	4.39	32.34	33.03	0.1476	0.0399	1.0529	84.16	84.05	54.28	49.89	-568.3	-494.8	1.2140
8	-1.81	0.41	4.16	3.69	31.32	32.24	0.1266	0.0266	1.0504	88.97	88.89	56.60	52.91	-623.9	-544.2	1.2073
9	-0.94	1.20	4.41	3.16	30.36	31.37	0.1132	0.0128	1.0493	93.73	93.68	58.22	55.06	-646.9	-573.8	1.2015
10	0.37	2.60	7.21	1.74	28.64	28.08	0.1301	0.0518	1.0416	74.77	74.62	60.34	58.60	-667.6	-595.6	1.1833

TC/TO	PC/PO	EFF-AD	EFF-P	W.1/A1	TO2/TO1	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LHM/SEC	%	%	ROTOR	ROTOR
1.0731	1.2418	87.37	87.75	26.51	1.0202	1.0709	97.84	97.85

STATOR 2

SL	FP21-1	FP21-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	6.970	7.921	547.6	596.8	452.0	556.8	309.2	-2.4	34.2	-0.2	0.4807	0.4891	1.2446	1.0893	1.0855	1.0319		
2	4.964	5.360	583.2	598.2	512.0	598.1	278.1	-11.5	28.5	-1.1	0.5144	0.5285	1.2869	1.0854	1.0829	1.0302		
3	3.624	3.754	574.3	575.3	422.9	575.0	239.9	-17.4	24.6	-1.7	0.5085	0.5086	1.2744	1.0796	1.0766	1.0279		
4	2.642	2.616	546.7	543.9	309.2	543.6	204.4	-17.7	21.9	-1.9	0.4853	0.4810	1.2537	1.0753	1.0675	1.0243		
5	1.470	1.325	483.7	489.9	467.1	469.9	125.8	-8.0	15.1	-0.7	0.4284	0.4157	1.2065	1.0604	1.0436	1.0134		
6	1.444	1.325	488.5	458.7	441.0	458.6	125.7	-7.0	15.9	-0.9	0.4049	0.4051	1.2005	1.0619	1.0395	1.0132		
7	1.211	1.090	449.7	435.5	425.4	435.5	146.0	-7.0	15.9	-0.9	0.3963	0.3834	1.1875	1.0655	1.0299	1.0177		
8	0.960	0.872	439.1	425.6	418.2	425.6	133.8	-4.4	17.7	-0.6	0.3855	0.3734	1.1827	1.0713	1.0290	1.0160		
9	0.785	0.744	429.6	414.6	404.4	414.6	130.0	6.9	17.6	0.9	0.3762	0.3673	1.1803	1.0753	1.0305	1.0148		
10	0.410	0.419	396.9	396.4	272.5	398.2	136.9	11.9	20.2	1.7	0.3460	0.3473	1.1697	1.0811	1.0294	1.0157		

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PC2/	TEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-16.67	8.26	34.43	35.32	42.28	0.1022	0.1678	0.0354	0.9755	74.33	74.62
2	-15.71	6.98	29.60	40.29	46.74	0.0854	0.0653	0.0147	0.9892	76.24	76.51
3	-17.44	6.55	26.34	41.27	44.70	0.1035	0.0916	0.0219	0.9852	76.28	76.53
4	-19.81	6.68	23.71	40.28	47.36	0.1077	0.1131	0.0286	0.9833	77.71	77.92
5	-26.35	6.34	16.40	37.16	76.68	0.1075	0.1196	0.0575	0.9762	91.85	91.93
6	-25.52	6.42	16.75	34.90	55.72	0.0887	0.1464	0.0442	0.9843	84.54	84.63
7	-22.67	6.55	19.87	33.50	53.72	0.1397	0.2125	0.0666	0.9782	47.91	48.13
8	-24.50	6.55	18.33	32.71	32.75	0.1356	0.2084	0.0689	0.9797	51.61	51.81
9	-27.14	12.20	16.68	31.85	32.58	0.1245	0.1928	0.0662	0.9818	58.32	58.50
10	-28.74	14.43	18.47	28.71	30.52	0.1114	0.1478	0.0526	0.9880	53.03	53.23

W.1/A1	PC2/PO1	EFF-AD	EFF-P	TO2/TO1	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	STAGE	STAGE
1.2191	1.2191	79.73	80.29	1.0202	0.9818	71.33	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M1-1	M1-2	V1-1	V1-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.638	9.331	422.0	422.5	422.0	404.2	0.0	473.4	0.0	49.4	0.3834	0.3588	325.9	356.4	0.4844	0.3784	533.2	420.8
2	10.409	7.432	424.0	418.4	424.9	446.8	0.0	427.5	0.0	43.6	0.3861	0.3560	364.9	390.6	0.5089	0.4031	560.0	448.4
3	8.648	5.884	428.0	428.0	428.0	445.0	0.0	369.1	0.0	39.6	0.3891	0.3184	408.4	428.4	0.5377	0.4027	591.6	448.9
4	7.117	4.885	428.4	444.5	428.4	435.6	0.0	326.6	0.0	36.8	0.3894	0.4874	448.4	444.2	0.5637	0.4089	620.2	456.6
5	4.552	3.244	413.8	483.1	413.8	400.2	0.0	276.6	0.0	34.1	0.3758	0.4365	538.6	546.6	0.6168	0.4332	679.2	486.1
6	3.678	2.536	389.4	464.2	389.4	383.3	0.0	261.9	0.0	34.3	0.3530	0.4127	582.1	587.6	0.6349	0.4472	700.3	503.0
7	2.923	1.977	373.7	457.8	373.7	362.1	0.0	252.2	0.0	33.4	0.3385	0.4068	609.9	613.1	0.6479	0.4470	715.3	529.6
8	2.014	1.175	361.6	450.4	361.6	372.0	0.0	254.0	0.0	34.3	0.3275	0.3995	637.2	639.5	0.6631	0.4752	732.7	535.7
9	1.048	0.389	349.0	442.2	349.0	344.6	0.0	277.1	0.0	38.8	0.3156	0.3906	666.6	666.6	0.6807	0.4596	752.4	520.3
10	0.330	-0.116	334.8	429.6	334.8	318.0	0.0	288.9	0.0	42.3	0.3026	0.3782	700.3	700.3	0.7015	0.4577	776.2	520.0
11	0.004	-0.179	330.0	419.4	330.0	296.9	0.0	296.3	0.0	44.9	0.2981	0.3682	728.6	728.6	0.7226	0.4602	799.8	524.2

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	SEFF-P	SEFF-A	B1-1	B1-2	VP1-1	VP1-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-0.99	4.56	14.75	53.82	29.86	28.94	0.4277	0.2713	0.0613	1.1550	78.08	77.62	37.75	-18.07	-325.9	117.0	1.1718
2	-0.12	7.29	13.36	45.46	30.04	32.92	0.3991	0.0904	0.0204	1.1851	92.94	92.77	40.76	-4.70	-364.9	36.9	1.2026
3	0.54	5.82	13.23	36.18	30.25	33.39	0.4157	0.0416	0.0114	1.1804	95.76	95.66	43.75	7.57	-408.4	-59.3	1.1986
4	0.95	6.07	11.93	28.89	30.27	33.05	0.4206	0.0327	0.0092	1.1735	96.20	96.11	46.38	17.49	-448.4	-137.5	1.1915
5	1.58	6.14	6.77	17.92	29.21	30.72	0.4189	0.0483	0.0134	1.1635	93.28	93.14	52.51	34.59	-538.6	-276.0	1.1747
6	2.38	7.33	5.18	15.89	27.41	29.50	0.4150	0.0399	0.0108	1.1726	94.39	94.27	58.25	40.36	-582.1	-325.7	1.1711
7	3.32	8.17	4.68	15.15	26.26	29.48	0.3949	0.0115	0.0031	1.1814	98.63	98.60	58.53	43.38	-609.9	-360.9	1.1719
8	4.71	9.01	4.42	14.41	25.37	28.69	0.3995	0.0232	0.0061	1.1868	97.20	97.13	60.44	46.03	-637.2	-385.5	1.1710
9	7.70	9.94	4.30	13.86	24.47	26.45	0.4531	0.1022	0.0265	1.1899	86.28	85.93	62.38	48.52	-664.8	-389.8	1.1687
10	8.71	10.94	5.97	12.15	23.46	24.32	0.4812	0.1545	0.0383	1.1918	79.02	79.31	64.45	52.30	-700.3	-411.5	1.1654
11	8.74	10.96	9.29	10.13	23.12	22.65	0.4993	0.1967	0.0464	1.1908	74.54	73.89	65.63	55.51	-728.6	-432.1	1.1631

TC/TO	PC/PO	EFF-AD	EFF-P	WC1/A1	TOT/TOT1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LEM/SEC	%	%	ROTOR	ROTOR
%	%	%	%	%	%	%	%	%
1.0537	1.1775	89.05	89.30	26.84	1.0537	1.1775	89.05	89.30

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TOT/TO	PC/PO	TOT/STG
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	INLET	INLET	STAGE	TOT
1	11.209	7.974	557.0	392.9	331.7	365.5	447.4	75.8	53.4	11.0	0.4978	0.3468	1.1462	1.0542	1.1298	1.0542	1.0542	1.0542
2	7.612	6.815	576.1	448.5	406.4	447.1	408.4	75.5	45.1	9.6	0.5159	0.3975	1.1846	1.0537	1.1674	1.0531	1.0531	1.0531
3	5.164	4.271	444.9	444.8	427.8	440.8	357.1	59.3	39.7	7.7	0.4976	0.3946	1.1885	1.0510	1.1705	1.0510	1.0510	1.0510
4	3.931	3.560	532.4	431.1	428.6	427.5	315.9	55.6	38.4	7.4	0.4761	0.3825	1.1829	1.0488	1.1649	1.0488	1.0488	1.0488
5	2.827	2.914	484.3	397.8	405.6	394.4	264.6	51.7	33.1	7.5	0.4316	0.3924	1.1670	1.0474	1.1560	1.0474	1.0474	1.0474
6	2.593	2.736	470.0	389.1	394.1	385.5	256.1	52.8	33.0	7.8	0.4181	0.3443	1.1637	1.0469	1.1631	1.0469	1.0469	1.0469
7	2.414	2.536	467.4	389.5	392.0	384.8	254.5	59.8	33.0	8.8	0.4154	0.3442	1.1648	1.0514	1.1724	1.0514	1.0514	1.0514
8	2.291	2.382	463.5	385.6	392.6	380.8	246.3	60.3	32.1	9.0	0.4117	0.3409	1.1644	1.0501	1.1786	1.0501	1.0501	1.0501
9	2.057	2.127	458.5	380.3	368.5	375.5	272.9	60.6	36.5	9.2	0.4056	0.3348	1.1626	1.0584	1.1826	1.0584	1.0584	1.0584
10	1.361	1.378	448.7	370.1	347.9	364.1	285.8	66.3	39.6	10.3	0.3955	0.3247	1.1589	1.0642	1.1850	1.0642	1.0642	1.0642
11	0.444	0.560	439.2	351.2	324.8	345.1	295.6	68.1	42.2	10.7	0.3860	0.3070	1.1508	1.0693	1.1783	1.0693	1.0693	1.0693

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	SEFF-P	SEFF-A	B1-1	B1-2	VP1-1	VP1-2	PO/PO	
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET		
1	0.70	5.41	16.38	42.39	24.49	29.61	0.4315	0.1373	0.0284	0.9786	65.50	66.10	84.24	84.37	90.34	90.56	90.56	
2	-2.20	2.91	12.10	35.47	30.50	34.48	0.3993	0.0707	0.0177	0.9868	84.24	84.37	91.42	91.60	91.42	91.60	91.60	
3	-4.36	0.31	9.02	32.04	32.43	34.62	0.3274	0.0572	0.0137	0.9911	88.20	88.44	90.29	90.49	90.49	90.69	90.69	
4	-7.07	-1.29	6.21	28.99	32.70	33.84	0.3167	0.0566	0.0140	0.9921	96.88	96.94	84.18	84.35	77.58	78.12	78.12	
5	-9.09	-2.64	7.80	25.67	31.14	30.95	0.3078	0.0402	0.0175	0.9927	84.24	84.37	84.24	84.37	84.24	84.37	84.37	
6	-10.10	-2.33	7.60	25.23	30.27	30.24	0.3059	0.0547	0.0167	0.9938	90.49	90.69	90.49	90.69	90.49	90.69	90.69	
7	-9.19	-2.20	8.49	24.17	30.11	30.15	0.3031	0.0570	0.0165	0.9942	96.88	96.94	84.18	84.35	77.58	78.12	78.12	
8	-10.33	-3.14	8.57	23.10	30.16	29.90	0.2989	0.0552	0.0181	0.9939	84.18	84.35	77.58	78.12	77.58	78.12	78.12	
9	-6.53	0.86	8.75	7.36	28.13	29.26	0.3288	0.0534	0.0191	0.9942	84.18	84.35	77.58	78.12	77.58	78.12	78.12	
10	-5.42	2.07	10.35	2.24	26.30	28.23	0.3488	0.0574	0.0201	0.9941	69.32	70.02	69.32	70.02	69.32	70.02	70.02	
11	-5.95	1.77	12.96	31.63	24.62	26.58	0.3931	0.1022	0.0390	0.9994								

NCRP	WGRH	TC/TO	PC/PO	EFF-AD	EFF-P	TOT/TOT1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%	%	%	ROTOR	ROTOR
PPM	LEM/SEC	%	%	%	%	%	%	%	%
4270.0	133.06	1.0537	1.1674	84.24	84.58	1.0537	0.9914	84.24	84.24

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.656	5.959	348.5	570.7	340.8	461.4	73.9	335.9	12.1	35.7	0.3068	0.5015	409.4	431.6	0.4187	0.4141	479.6	471.2
2	6.540	4.793	442.4	573.1	436.7	484.4	70.7	306.2	9.2	32.1	0.3919	0.5044	440.7	459.6	0.5071	0.4472	572.4	508.1
3	5.254	3.952	448.3	556.4	444.7	486.5	57.0	269.9	7.3	28.9	0.3979	0.4900	473.5	487.4	0.5408	0.4693	609.3	532.9
4	4.009	3.036	439.9	524.4	436.7	468.2	53.7	236.1	7.0	26.7	0.3907	0.4617	508.8	517.9	0.5600	0.4812	630.7	546.5
5	1.177	0.616	410.6	461.6	407.4	431.9	51.2	162.9	7.2	20.7	0.3640	0.4064	588.7	591.2	0.5979	0.5355	674.5	608.3
6	0.300	-0.127	406.7	436.9	402.9	406.3	59.6	160.5	7.9	21.6	0.3601	0.3837	617.0	617.7	0.6118	0.5372	691.0	611.6
7	-0.076	-0.319	403.3	426.1	398.8	379.3	60.0	194.3	8.6	27.1	0.3574	0.3731	644.5	644.5	0.6271	0.5155	707.6	588.7
8	-0.258	-0.113	396.0	419.9	391.3	382.1	61.3	174.0	8.9	24.5	0.3488	0.3661	682.3	679.8	0.6464	0.5528	734.0	634.0
9	-0.101	-0.129	386.9	412.0	381.3	374.5	64.1	171.9	9.8	24.7	0.3397	0.3583	708.3	706.7	0.6558	0.5677	746.9	652.9
10	-0.082	-0.105	369.4	390.6	363.7	352.8	64.7	167.7	10.1	25.4	0.3233	0.3384	734.3	733.3	0.6668	0.5776	761.9	666.7

SL	INCS	INCN	DEV	TURN	RMDVM-1	RMDVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.92	-0.96	16.14	32.49	26.50	36.31	0.1576	-0.0029	-0.0007	1.1282	100.21	100.21	44.07	11.58	-331.9	-95.7	1.2945
2	-11.77	-4.96	9.17	22.72	34.23	38.77	0.2257	0.0819	0.0204	1.1075	88.84	88.84	40.18	17.46	-370.0	-153.4	1.3154
3	-9.13	-3.45	7.50	19.07	34.96	39.40	0.2249	0.0375	0.0095	1.1089	93.94	93.88	43.08	24.01	-416.3	-217.4	1.3165
4	-7.34	-2.76	6.45	15.17	34.20	38.21	0.2203	0.0058	0.0015	1.1043	99.16	99.15	46.17	31.00	-455.1	-281.8	1.3035
5	-3.18	0.68	6.11	8.09	31.81	35.96	0.1959	-0.0897	-0.0216	1.0934	127.28	127.65	52.84	44.75	-537.6	-428.3	1.2733
6	-2.30	1.01	6.02	5.96	31.43	33.31	0.1493	-0.0448	-0.0105	1.0812	114.56	114.71	54.33	48.37	-561.3	-457.2	1.2589
7	-1.25	1.14	4.53	5.80	31.22	30.93	0.2391	0.0780	0.0187	1.0756	78.80	79.59	55.69	49.89	-584.5	-450.3	1.2528
8	-0.64	1.59	4.16	4.86	30.31	36.93	0.1849	0.0330	0.0077	1.0751	89.97	89.85	57.78	52.92	-621.0	-505.9	1.2497
9	0.14	2.27	4.35	4.30	29.38	30.17	0.1821	0.0212	0.0049	1.0754	93.18	93.10	59.30	55.00	-642.2	-534.8	1.2459
10	1.52	3.75	6.46	3.44	27.86	28.24	0.1807	0.0276	0.0061	1.0738	90.89	90.80	61.49	58.05	-669.5	-565.7	1.2352

TO/TO PO/PO FFF-AD EFF-P WC1/A1 P02/P01 P02/PC1 EFF-AD EFF-P
 INLET INLET INLET INLET LRM/SEC ROTOR ROTOR
 1.0810 1.2750 86.78 89.17 26.97 1.0259 1.0922 98.52 98.54

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PC/PO	TC/TO	PC/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	6.880	7.861	518.5	483.6	400.1	483.6	329.7	0.0	39.3	0.0	0.4537	0.4220	1.2748	1.0911	1.1107	1.0350
2	4.919	5.245	545.6	522.7	455.9	522.7	299.7	-9.5	33.2	-1.0	0.4791	0.4582	1.3090	1.0882	1.1021	1.0334
3	3.719	3.616	546.0	512.4	475.4	512.1	244.3	-17.9	29.0	-2.0	0.4786	0.4498	1.3062	1.0836	1.1006	1.0318
4	2.544	2.485	521.7	468.4	467.3	488.1	231.8	-14.3	26.4	-2.3	0.4593	0.4290	1.2921	1.0786	1.0952	1.0288
5	1.560	1.403	465.2	479.9	436.8	479.7	160.2	-11.4	20.1	-1.5	0.4098	0.3777	1.2576	1.0690	1.0800	1.0201
6	1.447	1.293	442.3	415.2	417.6	414.9	159.4	-15.7	21.1	-2.2	0.3885	0.3641	1.2499	1.0708	1.0735	1.0197
7	1.200	1.078	432.1	397.8	396.9	397.6	192.5	-12.6	26.5	-1.8	0.3785	0.3476	1.2410	1.0756	1.0654	1.0265
8	0.786	0.642	425.8	392.7	389.0	392.6	173.1	-8.7	24.0	-1.3	0.3713	0.3418	1.2387	1.0837	1.0654	1.0233
9	0.518	0.470	417.9	390.0	381.1	390.0	171.4	7.8	24.2	0.4	0.3635	0.3386	1.2374	1.0833	1.0666	1.0225
10	0.199	0.184	397.2	364.6	366.2	364.5	167.5	6.2	24.9	1.0	0.3442	0.3196	1.2272	1.0935	1.0669	1.0226

SL	INCN	DEV	TURN	RMDVM-1	RMDVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-11.57	8.51	35.28	32.18	38.82	0.2000	0.1164	0.0245	0.9847	87.03	87.22
2	-10.59	7.01	34.25	36.93	42.54	0.1686	0.0349	0.0078	0.9949	84.33	84.54
3	-13.04	6.29	31.02	38.71	41.92	0.1787	0.0494	0.0118	0.9929	87.47	87.64
4	-14.31	6.28	28.62	39.18	40.06	0.1821	0.0603	0.0152	0.9920	91.53	91.65
5	-21.27	7.55	21.66	35.90	35.33	0.1824	0.1069	0.0300	0.9883	110.52	110.41
6	-20.27	7.13	23.29	33.75	34.02	0.1807	0.0715	0.0215	0.9929	104.13	104.09
7	-14.96	7.74	26.27	31.48	32.46	0.2290	0.1004	0.0315	0.9905	69.01	69.30
8	-18.25	8.88	24.25	31.42	31.76	0.2188	0.0964	0.0319	0.9912	76.92	79.11
9	-20.57	11.68	27.80	30.64	31.41	0.2065	0.0781	0.0268	0.9932	84.24	84.40
10	-23.48	13.69	23.97	28.77	29.56	0.2146	0.0818	0.0291	0.9935	82.46	82.64

NCOPE NCON INLET INLET INLET INLET INLET INLET
 5270. 133.08 1.0710 1.2638 85.45 84.93 1.0259 0.9912 88.45

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
TIP RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	RP1-1	EP1-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	V ^o -1	V ^o -2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.538	4.331	364.5	396.2	364.5	374.8	0.0	463.6	0.0	50.9	0.3577	0.5350	326.7	357.2	0.4665	0.3497	512.1	386.7
2	10.388	7.410	397.4	393.8	397.4	417.5	0.0	422.3	0.0	45.2	0.3805	0.5328	365.7	391.5	0.4899	0.3756	540.0	418.6
3	8.707	5.521	401.1	356.0	401.1	420.4	0.0	365.1	0.0	40.9	0.3839	0.4986	409.3	429.4	0.5199	0.3808	573.0	425.3
4	7.155	4.770	401.9	325.9	401.9	412.7	0.0	326.0	0.0	38.2	0.3847	0.4700	449.5	465.2	0.5471	0.3892	603.0	435.5
5	4.471	2.528	386.3	466.1	386.3	379.5	0.0	274.0	0.0	35.8	0.3902	0.4165	539.9	547.8	0.6017	0.4165	663.8	468.0
6	3.306	2.054	360.7	448.5	360.7	361.0	0.0	266.6	0.0	34.5	0.3265	0.3984	583.5	588.9	0.6208	0.4294	685.9	483.8
7	2.356	1.375	363.9	443.5	363.9	362.5	0.0	256.3	0.0	33.3	0.3109	0.3939	611.3	614.5	0.6342	0.4522	701.4	505.6
8	1.361	0.561	335.5	437.1	335.5	341.5	0.0	275.9	0.0	30.9	0.3014	0.3882	636.7	641.0	0.6511	0.4421	720.5	499.5
9	0.469	-0.248	323.7	433.8	323.7	310.9	0.0	302.6	0.0	44.2	0.2924	0.3820	668.4	668.4	0.6707	0.4226	742.6	480.0
10	0.125	-0.503	313.2	428.1	313.2	289.1	0.0	315.7	0.0	47.9	0.2827	0.3756	701.9	701.9	0.6938	0.4234	766.6	482.5
11	0.117	-0.388	305.6	421.2	305.6	273.0	0.0	320.8	0.0	49.6	0.2794	0.3686	730.2	730.2	0.7158	0.4366	791.1	491.9

SL	INCS	IACP	CEV	TLPA	RPCVM-1	RPCVM-2	O-FAC	CMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B ^o -1	B ^o -2	V0 ^o -1	V0 ^o -2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE							PO1	TOT	TCY	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	6.85	6.50	15.05	55.46	28.17	27.19	0.4601	0.2726	0.0617	1.1545	79.27	78.85	39.69	-15.77	-326.7	106.4	1.1702
2	1.65	7.25	13.66	46.43	28.35	31.10	0.4288	0.0823	0.0209	1.1837	93.21	63.06	42.72	-4.21	-365.7	30.8	1.2000
3	2.48	7.76	14.36	37.01	28.60	31.88	0.4353	0.0312	0.0085	1.1813	97.00	46.92	45.68	8.67	-409.3	-64.3	1.1982
4	2.84	7.56	13.04	29.66	28.64	31.62	0.4388	0.0211	0.0059	1.1764	97.67	67.62	48.27	18.61	-449.5	-139.2	1.1931
5	5.52	8.08	7.58	18.85	27.48	29.41	0.4366	0.0351	0.0096	1.1701	95.38	95.26	54.45	35.80	-539.9	-273.8	1.1790
6	6.56	9.37	6.56	16.56	25.55	28.02	0.4340	0.0332	0.0088	1.1789	95.58	95.49	58.30	41.74	-583.5	-322.1	1.1750
7	7.46	10.30	5.67	15.59	24.34	28.22	0.4089	0.0264	0.0081	1.1883	100.15	100.16	60.65	44.66	-611.3	-358.2	1.1765
8	8.70	11.00	5.30	15.53	23.61	26.49	0.4514	0.0628	0.0163	1.1530	92.49	52.30	62.43	46.90	-638.7	-365.0	1.1769
9	9.47	11.71	5.43	16.52	22.92	23.58	0.5144	0.1563	0.0391	1.1957	81.24	60.76	64.16	49.64	-668.4	-368.8	1.1763
10	10.27	12.44	6.86	12.77	22.17	22.25	0.5396	0.2031	0.0493	1.1959	75.90	75.26	65.95	53.18	-701.9	-386.2	1.1755
11	10.13	12.35	10.08	10.73	21.92	20.59	0.5488	0.2338	0.0540	1.2011	72.27	71.54	67.03	56.29	-730.2	-409.2	1.1779

TC/TC	IC/IC	EFF-AC	EFF-P	WCI/A1	TC2/T01	PC2/PC1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LEM/SEC			RCTCR	ROTOR
8	8	8	8	SCFT			8	8
1.0556	1.1823	88.21	88.50	25.26	1.0556	1.1823	88.21	88.50

STATOR 1

SL	RP1-1	EP1-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TC/TO	PO/PO	TOT
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TOT
1	11.340	8.194	532.7	352.7	302.9	345.4	428.2	31.4	55.3	11.6	0.4753	0.3100	1.1441	1.0532	1.1280	1.1712
2	10.215	6.215	551.2	408.0	376.1	401.0	403.0	35.4	47.0	10.6	0.4626	0.3607	1.1780	1.0531	1.1620	1.1731
3	9.064	4.778	534.0	416.5	402.1	412.5	351.4	60.6	41.0	8.4	0.4771	0.3692	1.1893	1.0506	1.1715	1.1708
4	8.190	4.027	513.4	406.8	405.1	403.3	315.3	53.3	37.9	7.5	0.4583	0.3604	1.1853	1.0489	1.1686	1.1686
5	3.404	3.426	465.2	375.6	385.4	372.0	267.7	51.7	34.6	7.9	0.4176	0.3322	1.1721	1.0480	1.1608	1.0480
6	3.210	3.270	454.3	365.8	372.3	362.1	260.3	52.2	35.0	8.2	0.4035	0.3232	1.1670	1.0496	1.1698	1.0496
7	3.035	3.052	452.5	366.0	371.2	361.4	258.9	57.6	34.9	9.1	0.4015	0.3228	1.1702	1.0529	1.1793	1.0529
8	2.868	2.833	450.8	362.8	364.6	358.0	265.2	58.6	36.1	9.3	0.3953	0.3158	1.1702	1.0533	1.1850	1.0533
9	2.485	2.443	446.6	356.6	336.0	351.4	257.2	60.5	41.5	9.8	0.3955	0.3127	1.1682	1.0634	1.1866	1.0634
10	1.554	1.500	444.7	343.8	316.6	336.7	312.3	65.6	44.6	11.7	0.3908	0.3004	1.1656	1.0702	1.1856	1.0702
11	0.634	0.568	438.5	328.4	300.2	320.7	320.1	70.7	46.8	12.4	0.3846	0.2859	1.1575	1.0752	1.1803	1.0752

SL	INCS	IACP	CEV	TLPA	RPCVM-1	RPCVM-2	O-FAC	CMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B ^o -1	B ^o -2	V0 ^o -1	V0 ^o -2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE							PO1	TOT	TCY	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	7.01	7.33	16.43	43.75	22.60	26.04	0.4794	0.1508	0.0312	0.9783			66.28	66.87			
2	-0.36	6.77	13.06	36.36	28.51	31.56	0.3711	0.1042	0.0231	0.9841			82.58	82.94			
3	-3.85	1.78	9.72	32.81	30.80	32.73	0.3508	0.0602	0.0145	0.9913			91.48	91.68			
4	-5.56	0.22	8.36	30.38	31.27	32.38	0.3394	0.0463	0.0139	0.9927			93.26	93.40			
5	-7.41	-1.57	6.66	26.85	29.88	29.58	0.3357	0.0403	0.0174	0.9932			90.70	90.90			
6	-7.15	-0.36	6.00	24.78	28.86	28.74	0.3360	0.0446	0.0144	0.9950			92.41	92.58			
7	-7.77	-1.20	6.71	25.86	28.17	28.63	0.3382	0.0450	0.0143	0.9953			91.34	91.54			
8	-6.34	0.80	8.86	24.75	28.11	28.17	0.3422	0.0551	0.0180	0.9962			94.38	94.52			
9	-4.94	5.83	9.33	11.74	25.81	27.60	0.3844	0.0700	0.0237	0.9928			79.05	79.55			
10	-0.47	7.12	11.72	12.50	24.24	26.27	0.4201	0.1175	0.0410	0.9883			71.06	71.75			
11	-1.43	6.30	11.71	34.40	22.95	24.87	0.4605	0.1785	0.0639	0.9627			64.55	65.38			

WCI/A1	WCI/A1	TC/TC	IC/IC	EFF-AC	EFF-P	T02/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
8	8	8	8	8	8			8
1.0556	1.1769	83.01	83.38			1.0556	0.9904	83.01

ROTOR 2

RUN NO430, SPEED CODE 63, POINT NO 3																
SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	W-1	W-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC		
1	0.451	5.717	310.0	342.4	302.2	415.6	49.2	340.0	12.0	30.7	0.2726	0.4752	406.3	432.6	0.3901	0.3712
2	0.174	-5.524	403.4	337.7	386.0	430.4	31.6	321.0	16.2	36.6	0.3565	0.4714	441.7	466.0	0.4797	0.3906
3	0.500	3.794	416.0	327.5	416.9	440.7	37.3	285.0	7.9	33.2	0.3710	0.4620	476.6	488.5	0.5213	0.4241
4	3.670	2.586	413.4	306.5	409.4	432.1	31.7	240.2	7.2	31.0	0.3637	0.4425	504.0	519.1	0.5666	0.4619
5	1.350	0.875	309.1	408.6	301.7	396.7	50.9	269.4	7.6	27.0	0.3467	0.3920	590.1	592.6	0.5065	0.4029
6	0.570	0.295	361.3	430.0	373.4	370.3	31.9	202.7	8.7	28.1	0.3369	0.3750	616.4	619.1	0.6000	0.4022
7	0.282	0.073	300.1	420.7	375.7	340.2	37.0	270.2	8.7	34.2	0.3360	0.3663	646.0	646.0	0.6170	0.4402
8	0.360	0.350	373.2	418.2	360.1	360.2	41.6	214.5	9.5	30.0	0.3274	0.3631	683.4	681.4	0.6344	0.5108
9	0.162	0.151	363.0	412.1	356.2	390.5	49.6	216.8	11.1	31.7	0.3174	0.3558	709.4	708.3	0.6406	0.5212
10	0.044	0.039	340.2	395.0	342.0	332.0	70.6	214.2	11.6	22.0	0.3044	0.3405	735.4	735.0	0.6523	0.5317

SL	INCS	TACP	DEV	TLPA	RMVW-1	RMVW-2	G-FAC	MEGA-B	LOSS-P	P02/	BEFF-P	BEFF-A	B*-1	B*-2	W*-1	W*-2	PC/PO
	DEGREE	DEGREE	DEGREE	DEGREE			TOTAL	TOTAL		P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.06	-2.00	15.62	36.64	23.74	33.49	C.2300-0.0650	-0.0157	1.1446	105.32	105.43	47.92	11.26	-337.1	-83.0	1.3109	
2	-0.54	-2.26	5.45	25.14	21.40	35.21	C.2955-0.0641	0.0160	1.1200	92.35	92.22	42.07	17.73	-370.1	-130.7	1.3245	
3	-7.10	-1.43	7.67	20.92	32.90	36.44	C.2915-C.0431	0.0109	1.1197	96.01	93.90	45.10	24.18	-417.2	-196.6	1.3301	
4	-5.34	-0.22	6.33	17.33	32.46	36.60	C.2010-C.0123	0.0031	1.1109	90.12	90.05	48.21	30.08	-450.3	-250.0	1.3241	
5	-1.33	2.54	5.36	10.70	30.19	33.20	C.2472-C.0232	-0.0081	1.1120	100.92	107.03	54.70	44.00	-539.1	-303.1	1.3012	
6	-0.40	2.91	5.32	8.54	29.01	31.75	C.2403-C.0117	-0.0120	1.1040	102.61	102.64	56.23	47.67	-504.4	-416.4	1.2978	
7	0.44	2.67	4.28	7.70	29.74	28.97	C.3240-C.1130	0.0269	1.1000	70.67	70.37	57.43	49.65	-508.2	-409.0	1.2870	
8	0.50	3.20	3.58	7.05	28.73	25.74	C.2657-C.0452	0.0107	1.1033	90.15	90.01	59.39	52.34	-622.3	-466.9	1.2800	
9	1.75	3.57	3.86	6.40	27.63	20.80	C.2557-C.0307	0.0072	1.1056	93.11	93.00	60.90	54.50	-640.3	-491.5	1.2804	
10	7.83	5.06	5.03	5.30	26.30	27.20	C.2533-C.0330	0.0076	1.1056	92.24	92.12	62.00	57.42	-665.6	-520.0	1.2792	

TC/TC	FC/FC	EFF-AD	EFF-P	WCI/A1	TC2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LEW/SEC			INLET	INLET
1.0097	-0.3029	87.56	88.02	25.20	1.0323	1.1124	95.05	95.91

STATOR 2

RUN NO430, SPEED CODE 63, POINT NO 3																
SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	W-1	W-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC		
1	0.493	5.444	494.2	419.5	359.2	419.5	342.3	2.8	43.4	0.4	0.4331	0.3463	1.2910	1.0925	1.1282	1.0373
2	4.977	5.294	511.0	454.1	402.1	454.1	315.3	-2.7	38.0	-0.3	0.4471	0.3557	1.3186	1.0902	1.1140	1.0357
3	3.601	3.133	514.0	457.0	420.0	456.0	284.1	-12.5	33.5	-1.4	0.4505	0.3906	1.3247	1.0868	1.1153	1.0349
4	2.450	2.545	455.0	446.0	429.5	440.5	255.7	-16.1	30.7	-2.1	0.4203	0.3645	1.3173	1.0834	1.1134	1.0332
5	1.580	1.364	451.0	395.4	401.9	395.1	204.3	-10.3	27.2	-2.4	0.3957	0.3451	1.2945	1.0786	1.1064	1.0287
6	1.483	1.293	434.0	379.3	345.7	379.0	200.0	-15.5	27.5	-2.3	0.3801	0.3304	1.2860	1.0802	1.1003	1.0281
7	1.254	1.110	426.7	364.0	356.7	360.7	234.3	-15.3	33.3	-2.4	0.3717	0.3203	1.2824	1.0847	1.0953	1.0354
8	0.731	0.624	420.0	369.3	368.6	349.2	213.5	-8.7	30.1	-1.4	0.3691	0.3105	1.2820	1.0975	1.0982	1.0317
9	0.443	0.308	419.3	366.3	359.3	366.3	216.2	1.9	31.7	0.3	0.3622	0.3154	1.2813	1.1037	1.1012	1.0313
10	0.139	0.119	403.7	360.1	342.4	340.1	213.9	4.5	32.0	0.7	0.3475	0.2970	1.2716	1.1091	1.0989	1.0315

SL	TACP	DEV	TLPA	RMVW-1	RMVW-2	G-FAC	MEGA-B	LOSS-P	P02/	BEFF-A	BEFF-P
	DEGREE	DEGREE	DEGREE			TOTAL	TOTAL		P01	TGT-STG	TOT-STG
1	-7.43	0.89	43.04	29.49	34.86	C.2965	C.1601	0.0253	0.9855	93.96	94.05
2	-5.41	7.70	36.23	23.23	30.10	C.2504	C.0355	0.0081	0.9594	88.44	88.62
3	-8.50	0.73	35.06	25.61	30.64	C.2467	C.0302	0.0072	0.9461	90.75	90.90
4	-10.62	6.45	32.83	35.84	37.36	C.2536	C.0393	0.0099	0.9952	93.94	94.05
5	-14.25	4.1	29.53	33.68	33.55	0.2670	0.0445	0.0140	0.9950	102.03	102.00
6	-13.07	1.1	29.86	32.22	32.10	0.2779	0.0427	0.0128	0.9556	98.57	98.50
7	-8.13	7.18	35.68	29.62	31.94	C.3190	C.0459	0.0144	0.9950	74.51	74.84
8	-12.15	6.79	31.44	30.37	30.79	0.3054	C.0520	0.0172	0.9953	85.71	85.90
9	-13.76	11.56	30.73	29.45	30.39	C.3024	C.0462	0.0158	0.9960	89.25	89.41
10	-16.42	13.47	31.25	27.92	28.50	C.3275	C.0243	0.0265	0.9940	86.54	86.74

WCI/A1	WCI/A2	TC/TC	FC/FC	EFF-AD	EFF-P	TC2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
1.0097	1.0255	1.0097	1.2959	85.72	86.24	1.0323	0.9944	90.96	90.96

HUB RADIALLY DISTORTED INLET FLOW DATA – BASELINE CONFIGURATION

- Overall Performance and Stall Recovery
- Overall Performance and Blade-Element Data

FAN OVERALL PERFORMANCE – HUB RADIALLY DISTORTED INLET FLOW

Performance	N _{corr} (rpm)	W _{corr} [*] (kg/sec)	W _{corr} [*] (lbm/sec)	Local				Cumulative Fan Alone				
				T ₀ /T ₀	P ₀ /P ₀	η _{st} (%)	η _r (%)	T ₀ /T ₀	P ₀ /P ₀	η _{st} (%)	η _r (%)	
432-10-1												
Rotor 1	8307	92.8	304.65	1.1213	1.3822	79.91	80.81	1.1213	1.3822	79.91	80.81	
Stator 1					0.9752				1.3480	73.45	74.55	
Rotor 2				1.0658	1.1752	71.63	72.25	1.1951	1.5742	71.99	73.73	
Stator 2					0.9693				1.5356	66.81	68.74	
432-10-2												
Rotor 1	8315	92.7	304.54	1.1176	1.3866	83.29	84.05	1.1176	1.3866	83.29	84.05	
Stator 1					0.9776				1.3546	77.27	78.23	
Rotor 2				1.0714	1.2076	77.65	78.24	1.1971	1.6369	76.68	78.23	
Stator 2					0.9821				1.6076	73.68	75.36	
431-10-1	8315	92.8	304.65						1.5328	68.73	70.54	
431-10-2	8311	92.8	304.59						1.6028	74.06	75.71	
431-10-3	8310	92.0	302.92						1.6977	78.52	80.04	
431-94-1	7845	89.3	196.92						1.482	72.60	74.08	
431-94-3	7875	86.7	191.31						1.6338	80.52	81.82	
431-63-1	5225	61.6	135.98						1.2081	76.82	77.43	
431-63-3	5243	54.6	120.47						1.2767	81.94	82.56	
431-50-1	4150	46.8	107.71						1.1280	76.38	76.78	
431-50-2	4152	44.3	97.82						1.1595	81.57	81.96	
431-50-3	4154	47.1	104.00						1.1433	81.77	82.10	

*Airflow corrected to Rotor 1 inlet (station 5)

OVERALL STALL POINT DATA

	W _{CORR} (kg/sec)	W _{CORR} (lbm/sec)	P ₀ /P ₀
431-63	57.4	117.9	1.275
94	85.9	189.5	1.641
10	91.7	202.2	1.691

SPEED CODE	IDENTIFICATION (percent of design speed)
63	63
94	94
10	100

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
HUB RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	FPS1-1	FPS1-2	V-1	V-2	V-1	V-2	V6-1	V6-2	E-1	E-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2	
RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.2050	0.1627	166.5	203.4	166.5	203.4	155.5	0.0	236.7	C.C	0.9067	0.5077	0.8021	156.1	172.9	0.6961	0.4965	231.1	168.4
2	0.1500	0.1321	170.4	216.2	170.4	216.2	0.0	217.9	C.C	0.9167	0.5136	0.8008	177.0	189.5	0.7405	0.4930	245.7	168.0	
3	0.1562	0.1160	174.1	255.5	174.1	255.5	166.2	0.0	154.6	C.C	0.8630	0.5254	0.7425	198.1	207.8	0.7959	0.4837	263.7	166.7
4	0.1254	0.0885	178.5	242.2	178.5	242.2	165.0	0.0	174.8	C.C	0.8016	0.5356	0.7025	217.5	225.2	0.8505	0.5098	281.4	176.4
5	0.0644	0.0426	155.7	226.5	155.7	226.5	181.1	0.0	136.1	C.C	0.6441	0.6080	0.6342	261.3	263.1	1.0013	0.6422	328.8	222.4
6	0.0230	0.0245	221.4	223.1	221.4	223.1	189.0	0.0	120.2	C.C	0.5885	0.6799	0.6453	282.4	285.0	1.1015	0.7233	350.8	250.0
7	0.0114	0.0165	232.6	221.8	232.6	221.8	191.7	0.0	111.6	C.C	0.5271	0.7177	0.6422	295.5	297.4	1.1612	0.7731	376.3	267.0
8	0.0044	0.0092	238.5	226.7	238.5	226.7	199.0	0.0	55.5	C.C	0.4475	0.7378	0.6426	305.1	310.2	1.2075	0.852	396.4	292.7
9	0.0040	0.0065	243.2	222.0	243.2	222.0	202.5	0.0	50.8	C.C	0.4216	0.7542	0.6471	323.5	323.5	1.2550	0.8991	404.7	308.4
10	0.0118	0.0084	247.4	224.1	247.4	224.1	214.4	0.0	58.0	C.C	0.4524	0.7685	0.6495	336.7	339.7	1.3058	0.9122	420.2	314.8
11	0.0044	0.0033	246.6	218.3	246.6	218.3	186.7	0.0	59.0	C.C	0.4875	0.7860	0.6078	353.4	353.3	1.3385	0.9073	431.0	315.4

SL	INCS	IACP	CEV	TLFA	RACIAA-1	RACIAA-2	O-FAC	CPGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VB-1	VB-2	PC/PO		
RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.0780	0.1758	C.1547	1.1423	30.65	25.15	C.5167	C.3647	0.0791	1.4345	77.94	74.75	C.7550	-0.3872	-158.1	43.8	1.2937		
2	0.0537	0.1680	C.1445	0.9355	30.50	33.13	C.5648	C.2227	0.0555	1.4500	85.58	84.75	C.8071	-0.1684	-177.0	28.4	1.3448		
3	0.0534	0.1500	C.1375	0.9325	31.43	34.35	C.5701	C.1662	0.0460	1.4943	87.79	87.08	C.8519	0.4791	-194.1	-13.2	1.3491		
4	0.0414	0.1612	C.1526	C.9457	32.05	36.44	C.5506	C.1123	0.0319	1.4582	90.61	90.05	C.8868	0.2491	-217.5	-50.3	1.3564		
5	0.0291	0.1647	C.1332	C.2453	35.55	41.38	C.4882	C.0658	C.0180	1.4610	92.09	91.67	C.9161	0.6188	-261.3	-124.1	1.3806		
6	0.0177	0.0517	C.1051	C.1855	40.45	43.40	C.4274	C.1125	C.0302	1.3694	83.65	83.20	C.9056	0.7197	-282.4	-184.9	1.3921		
7	0.0039	0.0250	C.6944	C.1344	42.64	45.65	C.4027	C.1305	C.0365	1.3533	79.64	78.73	C.9045	0.7659	-295.5	-185.0	1.3982		
8	0.0242	0.0160	C.0572	C.0503	44.17	47.81	C.3456	C.0804	C.0200	1.3391	85.70	85.10	C.9136	0.8233	-309.1	-214.7	1.4008		
9	0.0288	0.0120	C.0226	C.0316	45.23	48.88	C.3265	C.0850	C.0221	1.3257	84.45	83.82	C.9261	0.8544	-323.5	-232.6	1.4160		
10	0.0313	0.0035	C.0232	C.0253	46.44	48.01	C.3472	C.1037	0.0425	1.3085	76.61	75.47	C.9415	0.8758	-339.7	-241.8	1.4228		
11	0.0315	0.0032	C.0305	C.0240	46.52	43.67	C.3645	C.2286	0.0564	1.2653	58.65	57.57	C.9615	0.9375	-353.4	-254.3	1.3773		

IC/IC	FC/FC	EFF-AC	EFF-P	IC1/A1	TO2/TO1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
8	8	8	8	8	8	8	8	8
1.1213	1.2622	75.91	80.81	201.36	1.1213	1.3622	75.91	80.81

STATOR 1

SL	FPS1-1	FPS1-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	E-1	E-2	M-1	M-2	U-1	U-2	N-1	N-2	PC/PO	TO/TO	PC/PO	TO/TO	
RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1564	0.1350	261.2	144.2	134.5	163.5	243.7	27.9	1.0275	0.1902	0.7590	0.4608	1.2295	1.1414	1.3632	1.1414	1.3632	1.1414	1.1414		
2	0.1232	0.1356	262.0	170.4	156.8	167.5	267.8	30.3	0.9151	0.1776	0.7610	0.4797	1.2967	1.1426	1.4374	1.1426	1.4374	1.1426	1.1426		
3	0.0781	0.0515	251.0	174.0	168.2	171.8	166.3	27.5	0.8354	0.1501	0.7267	0.4904	1.3144	1.1391	1.4596	1.1391	1.4596	1.1391	1.1391		
4	0.0573	0.0272	243.7	177.6	176.1	175.4	168.5	28.4	0.7626	0.1490	0.7047	0.5021	1.3276	1.1354	1.4661	1.1354	1.4661	1.1354	1.1354		
5	0.0045	0.0027	222.0	188.3	150.3	184.3	132.4	27.1	0.6081	0.1456	0.6714	0.5209	1.3508	1.1230	1.4093	1.1230	1.4093	1.1230	1.1230		
6	0.0000	0.0001	228.1	151.5	152.3	187.9	117.8	27.5	0.5425	0.1456	0.6612	0.5495	1.2662	1.1173	1.3473	1.1173	1.3473	1.1173	1.1173		
7	0.0075	0.0015	224.1	153.5	157.5	171.5	109.3	28.3	0.5044	0.1406	0.6560	0.5556	1.2707	1.1128	1.3189	1.1128	1.3189	1.1128	1.1128		
8	0.0014	0.0001	223.5	194.2	164.6	152.2	50.9	27.7	0.4181	0.1431	0.6541	0.5625	1.2765	1.0949	1.3047	1.0949	1.3047	1.0949	1.0949		
9	0.0018	0.0031	225.0	157.6	165.1	152.0	52.5	28.7	0.4238	0.1355	0.6556	0.5705	1.3848	1.1062	1.2918	1.1062	1.2918	1.1062	1.1062		
10	0.0026	0.0038	225.6	152.7	163.3	150.8	57.8	28.9	0.4405	0.1401	0.6541	0.5767	1.3866	1.1156	1.2744	1.1156	1.2744	1.1156	1.1156		
11	0.0016	0.0024	211.3	152.7	162.6	162.6	55.0	33.2	0.4879	0.1795	0.6076	0.5298	1.3467	1.1213	1.2372	1.1213	1.2372	1.1213	1.1213		

SL	INCS	IACP	CEV	TLFA	RACIAA-1	RACIAA-2	O-FAC	CPGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	IC/IC	FC/FC	EFF-AC	EFF-P	IC1/A1	TO2/TO1	PC2/PC1	EFF-AC	EFF-P		
RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA		RACIAA	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1075	0.1502	C.2840	C.2374	22.55	32.54	C.5950	C.1556	0.0323	0.9503	65.46	66.93	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
2	0.0452	0.1784	C.2203	C.7374	32.45	38.93	C.4982	C.1326	0.0250	0.9642	76.62	77.79	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
3	0.0526	0.1481	C.1819	C.8774	35.40	40.30	C.4574	C.0887	0.0212	0.9736	81.44	82.39	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
4	0.0040	0.1040	C.1831	C.8136	37.95	41.52	C.4186	C.0617	0.0200	0.9770	84.99	85.78	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
5	0.1268	0.0183	C.1482	C.4823	43.10	44.75	C.3271	C.0508	0.0263	0.9764	83.64	84.40	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
6	0.1931	0.0740	C.1420	C.3565	45.14	45.85	C.2788	C.0368	0.0245	0.9798	75.79	76.78	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
7	0.2321	0.1102	C.1404	C.3578	46.25	46.92	C.2585	C.0283	0.0274	0.9784	77.96	78.00	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
8	0.3278	0.1573	C.1355	C.2745	48.83	47.40	C.2202	C.0527	0.0305	0.9768	85.80	84.21	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
9	0.3240	0.1589	C.1277	C.2883	48.54	47.93	C.2245	C.0591	0.0317	0.9766	72.32	73.30	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
10	0.3345	0.2059	C.1462	C.3024	48.27	47.70	C.2280	C.1022	0.0360	0.9745	62.12	63.39	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		
11	0.3544	0.2156	C.2152	C.3064	43.76	43.78	C.2361	C.0851	0.0326	0.9802	51.76	53.16	1.1213	1.2440	73.45	74.55	201.36	1.1213	0.9752	73.45	74.55		

ROTOR 2

SL		EFSI-1		EFSI-2		V-1		V-2		VP-1		VP-2		V6-1		V6-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-2		V-1		V-2	
RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1634	0.1544	142.0	245.7	139.4	208.9	27.3	164.1	C.1921	0.4594	0.3968	0.7302	194.6	209.4	0.6127	0.5939	219.3	213.7																			
2	0.0932	0.0825	175.0	263.3	176.7	216.8	28.5	149.4	C.1992	0.5596	0.5046	0.7327	213.8	222.9	0.7218	0.6371	256.0	226.9																			
3	0.0631	0.0371	187.4	233.3	186.0	216.2	26.4	135.2	C.1403	0.5606	0.5321	0.7053	225.7	234.4	0.7803	0.6596	275.6	236.9																			
4	0.0353	0.0163	152.2	235.4	151.4	217.5	26.1	119.3	C.1392	0.5206	0.5450	0.6666	246.8	251.2	0.8303	0.6898	292.2	245.9																			
5	0.0061	0.0103	171.7	214.6	156.8	191.1	27.5	57.6	C.1388	0.4719	0.5657	0.5995	285.6	266.0	0.9303	0.7513	324.5	269.0																			
6	0.0111	0.0136	155.3	208.2	157.3	185.0	28.2	85.3	C.1411	0.4483	0.5727	0.5776	295.3	299.6	0.9636	0.7854	335.3	286.6																			
7	0.0176	0.0170	154.4	208.0	156.4	185.4	27.9	56.6	C.1409	0.4778	0.5762	0.5865	312.6	312.6	1.0013	0.8016	345.9	285.2																			
8	0.0127	0.0153	201.5	208.8	155.8	153.4	26.5	78.7	C.1319	0.3483	0.5803	0.5463	331.0	329.8	1.0486	0.8898	364.2	316.9																			
9	0.0178	0.0167	206.0	205.2	157.8	188.4	25.5	61.4	C.1481	0.4076	0.5762	0.5735	343.6	342.8	1.0658	0.9013	371.1	322.3																			
10	0.0065	0.0103	185.2	185.7	182.2	186.6	33.3	83.2	C.1895	0.4649	0.5280	0.5149	358.2	355.7	1.0572	0.8849	376.8	319.1																			

SL	IACS	IACP	CEV	TLFA	SPCVP-1	RNCVP-2	D-FAC	CEGFA-B	LOSS-P	PCZ/	BEFF-P	BEFF-A	B*-1	B*-2	WB*-1	WB*-2	PC/PD		
RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.0290	0.0524	C.2900	C.0680	31.80	48.62	C.2000	C.0644	0.0149	1.3215	95.05	54.85	0.8784	0.2104	-169.3	-55.2	1.6360		
2	0.0510	0.0184	C.1759	C.0414	40.85	52.09	C.2449	C.0557	0.0237	1.2822	89.52	81.14	C.0061	0.3245	-185.2	-73.5	1.6752		
3	0.0833	0.0158	C.1512	C.0385	43.00	52.53	C.2647	C.0525	0.0257	1.2584	84.67	86.22	C.0279	0.4394	-203.3	-101.2	1.6664		
4	0.0784	0.0059	C.1344	C.0262	44.44	51.62	C.2831	C.0458	0.0265	1.2229	83.32	82.84	C.0252	0.5650	-220.7	-131.9	1.6331		
5	0.0584	0.0085	C.1058	C.0190	46.77	48.54	C.2506	C.0354	0.0374	1.1497	86.34	85.67	C.0463	0.7803	-250.1	-189.2	1.5682		
6	0.0466	0.0112	C.1046	C.0543	47.28	47.47	C.2316	C.0353	0.0363	1.1271	82.05	81.41	C.0448	0.8471	-271.1	-210.3	1.5444		
7	0.0247	0.0149	C.0716	C.0140	47.94	47.48	C.2510	C.0240	0.0488	1.1327	55.08	54.26	C.0461	0.8631	-284.8	-216.7	1.5592		
8	0.0256	0.0052	C.0632	C.0753	48.44	48.95	C.1852	C.1215	0.0289	1.1262	65.25	64.68	C.0899	0.9142	-304.5	-251.0	1.5622		
9	0.0237	0.0151	C.0623	C.0425	47.80	48.32	C.1874	C.1372	0.0373	1.1202	68.85	68.22	1.0088	0.9463	-316.1	-261.5	1.5493		
10	0.0185	0.0454	C.1224	C.0334	43.51	41.61	C.1956	C.0580	0.0362	1.1084	55.15	54.56	1.0571	1.0238	-322.9	-272.5	1.4870		

IC/IC	FG/FC	EFF-AG	EFF-P	NC1/A1	TC2/T01	PC2/P01	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ACTOR	ACTOR
		S	S	SCP			S	S
1.1551	1.5842	71.55	73.73	180.44	1.0658	1.1752	71.63	72.26

STATOR 2

SL		EFSI-1		EFSI-2		V-1		V-2		VP-1		VP-2		V6-1		V6-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-2		V-1		V-2	
RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1222	0.1355	247.8	225.0	188.2	224.0	161.3	1.5	C.7052	0.6067	0.6838	0.6128	1.5753	1.2409	1.2700	1.0871																					
2	0.0605	0.0573	252.6	236.5	205.9	234.8	145.9	-9.1	C.4058	0.0386	C.7053	0.6471	1.6363	1.2342	1.2503	1.0819																					
3	0.0475	0.0456	251.2	225.6	214.0	229.5	121.6	-7.4	C.5506	0.0322	0.6593	0.6341	1.6280	1.2237	1.2280	1.0773																					
4	0.0491	0.0485	246.5	220.3	210.7	220.3	116.9	-5.0	C.5061	0.0228	0.6717	C.8100	1.6003	1.2111	1.1948	1.0706																					
5	0.0208	0.0162	215.4	171.4	153.1	157.4	55.5	-2.2	C.4594	0.0110	0.6024	0.5485	1.5216	1.1865	1.1129	1.0604																					
6	0.0142	0.0124	207.4	150.9	137.5	190.8	67.7	-5.3	C.4367	0.0300	0.5811	0.5324	1.4596	1.1738	1.0936	1.0555																					
7	0.0112	0.0103	205.1	149.2	134.1	189.1	58.2	-5.5	C.4898	0.0291	0.5807	0.5257	1.4851	1.1679	1.0808	1.0712																					
8	0.0103	0.0103	203.2	145.9	131.5	189.9	79.0	1.7	C.3910	0.0088	0.5814	0.5295	1.4908	1.1721	1.0748	1.0536																					
9	0.0103	0.0105	201.5	144.2	124.7	188.1	81.5	7.6	C.4156	0.0374	0.5638	0.5235	1.4847	1.1779	1.0745	1.0547																					
10	0.0055	0.0060	182.8	171.5	162.8	171.8	83.1	10.3	C.4721	0.0597	0.5025	0.4715	1.4382	1.1829	1.0721	1.0547																					

SL	IACP	CEV	TLFA	SPCVP-1	RNCVP-2	D-FAC	CEGFA-E	LOSS-P	PCZ/	BEFF-A	BEFF-P
RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT	
M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1823	C.1852	C.0585	45.38	54.24	C.2302	C.1401	0.6295	0.9623	80.91	81.54
2	0.1567	C.1615	C.0444	51.1	58.26	C.2156	C.0501	0.0180	0.5772	80.22	80.83
3	0.1834	C.1124	C.0528	52.85	57.93	C.2153	C.0716	0.0171	0.9600	77.92	78.56
4	0.1110	C.1042	C.0285	52.70	55.64	C.2106	C.0687	0.0199	0.9827	74.34	74.98
5	0.2435	C.1473	C.0784	48.47	50.08	C.2114	0.1185	0.0362	0.5744	51.29	52.01
6	0.2855	C.1322	C.0463	48.05	48.54	C.2143	0.1022	0.0462	0.9699	46.56	47.23
7	0.2331	C.1377	C.0388	47.62	47.93	C.2552	C.2210	0.0492	0.9541	31.53	32.28
8	0.3462	C.1658	C.0822	45.57	48.17	C.2008	C.2227	0.0736	0.9545	38.78	39.40
9	0.3661	C.2340	C.0788	43.48	47.42	C.1964	0.2011	0.0706	0.9600	38.10	38.72
10	0.3725	C.2618	C.0124	41.24	42.71	C.2035	C.2014	0.0716	0.9674	36.71	37.33

NCBR	NCRR	IC/IC	FG/FC	EFF-AC	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
KG/SEC	KG/SEC			S	S			S
865.54	92.8	1.1551	1.5358	66.81	68.74	1.0658	0.9693	57.5

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
HUB RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

S. I. UNITS

ROTOR 1

SL	FP51-1	EP51-2	V-1	V-2	VP-1	VP-2	VG-1	VG-2	E-1	E-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.2052	0.1714	185.1	212.4	169.1	149.6	0.0	227.6	C.0	0.9078	0.5095	0.7975	158.2	173.1	0.6878	0.4663	231.6	159.2
2	0.1884	0.1513	171.2	245.3	171.2	181.8	0.0	210.2	C.0	0.9133	0.5162	0.7734	177.1	189.6	0.7428	0.4756	246.4	183.1
3	0.1900	0.1856	175.0	246.1	175.0	182.4	0.0	187.2	C.C	0.8542	0.5282	0.7192	196.3	208.0	0.7983	0.4759	246.4	184.1
4	0.1234	0.0535	124.3	236.1	129.3	166.1	0.0	183.5	C.C	0.7904	0.5419	0.6824	217.7	225.4	0.8524	0.5078	282.0	175.7
5	0.0512	0.0657	154.7	221.7	167.7	178.4	0.0	131.5	C.C	0.8345	0.6049	0.6404	261.5	265.4	0.9998	0.6445	328.5	223.2
6	0.0267	0.0267	220.0	215.3	220.0	184.0	0.0	116.3	C.C	0.5804	0.6753	0.4356	282.4	285.3	1.0493	0.7261	358.2	251.0
7	0.0162	0.0179	231.2	218.4	231.2	190.0	0.0	108.4	C.0	0.5195	0.7130	0.4340	294.1	297.7	1.1585	0.7763	375.7	268.0
8	0.0015	0.0092	237.0	217.9	237.0	157.7	0.0	51.6	C.0	0.4340	0.7327	0.4352	309.4	310.5	1.2049	0.8598	389.7	294.9
9	0.0024	0.0024	241.7	216.1	241.7	200.4	0.0	48.5	C.C	0.4157	0.7489	0.4387	323.8	323.8	1.2519	0.9011	404.0	309.1
10	0.0101	0.0062	245.8	220.2	245.8	158.5	0.0	55.4	C.C	0.4475	0.7630	0.4381	340.0	340.0	1.3025	0.9130	419.5	315.0
11	0.0083	0.0064	245.1	220.1	245.1	184.3	0.0	54.6	C.0	0.4826	0.7466	0.5586	353.7	353.6	1.3554	0.9102	430.3	316.3

SL	INCS	INCP	CEV	TLFA	F	GM-1	PLUM-2	D-FAC	EPEGA-8	LGSS-P	PG2/	REFF-P	REFF-A	B*-1	B*-2	VG*-1	VG*-2	PC/PG
RADIAN	RADIAN	RADIAN	RADIAN						TOTAL	TOTAL	PO1	TOT	TCT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0777	0.1745	C.1093	1.1025	30.75	28.68	C.5471	C.3307	0.0744	1.4225	76.91	77.44	0.7538	-0.3487	-158.2	54.6	1.2878	
2	0.0915	0.1850	C.1094	C.5305	31.65	32.86	C.5593	C.1517	0.0485	1.4824	87.18	86.45	C.5049	-0.1200	-177.1	20.6	1.3424	
3	0.0956	0.1878	C.2250	C.7226	31.62	34.50	C.5715	C.1342	0.0368	1.4877	89.58	89.40	C.8457	C.1209	-198.3	-20.8	1.3485	
4	0.0402	0.1750	C.2350	C.5562	22.24	36.35	C.5523	C.0795	0.0222	1.4529	93.22	52.62	C.8031	C.3329	-217.7	-57.5	1.3566	
5	0.0319	0.1115	C.1570	C.2777	35.84	41.34	C.4580	C.0322	0.0087	1.4661	95.93	55.71	C.5208	0.6432	-261.5	-133.9	1.3847	
6	0.0142	0.0553	C.1210	C.1735	40.25	43.85	C.4197	C.0833	0.0220	1.3989	87.94	87.30	C.9051	0.7358	-282.4	-168.4	1.3999	
7	0.0205	0.0250	C.1075	C.1250	42.67	45.25	C.3950	C.1040	C.272	1.3633	83.40	82.80	C.5078	0.7829	-296.1	-189.0	1.4075	
8	0.0207	0.0155	C.1100	C.0810	43.94	47.94	C.3350	C.0473	0.0120	1.3494	91.52	91.15	C.9171	0.8362	-309.4	-218.9	1.4105	
9	0.0248	0.0142	C.0537	C.0642	45.11	48.72	C.2214	C.0636	0.0162	1.3339	88.58	88.12	C.5255	0.8053	-323.8	-235.3	1.4240	
10	0.0278	0.0110	C.0667	C.0557	46.25	47.77	C.3429	C.1469	0.0375	1.3125	73.15	72.14	C.5450	0.8893	-340.0	-244.7	1.4280	
11	0.0281	0.0106	C.1420	C.0162	46.32	43.81	C.3591	C.1105	0.0512	1.2718	61.66	60.32	C.5649	0.5487	-353.7	-257.0	1.3842	

TC2/TO1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET
8	8	8	8
1.1176	1.3866	63.25	84.05

STATOR 1

SL	FP51-1	EP51-2	V-1	V-2	VP-1	VP-2	VG-1	VG-2	E-1	E-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1562	0.1365	250.3	164.7	127.5	138.6	215.1	27.3	1.0335	0.1934	0.7256	0.3939	1.2285	1.1361	1.3571	1.1361	1.1361	
2	0.1217	0.0518	253.0	164.1	154.2	161.2	260.8	30.8	C.9162	0.1877	0.7336	0.4617	1.2904	1.1377	1.4249	1.1377	1.1377	
3	0.0738	0.0570	242.5	165.2	164.0	167.1	139.3	27.0	C.8291	0.1598	0.7029	0.4778	1.3121	1.1341	1.4474	1.1341	1.1341	
4	0.0420	0.0341	234.5	174.1	172.5	172.3	181.9	25.4	C.7532	0.1471	0.6837	0.4625	1.3287	1.1303	1.4608	1.1303	1.1303	
5	0.0092	0.0085	223.0	185.6	188.0	183.6	188.3	27.2	C.5586	0.1467	0.6590	0.5298	1.3811	1.1194	1.4251	1.1194	1.1194	
6	0.0078	0.0031	225.4	192.0	194.0	190.0	174.7	27.9	C.5336	0.1456	0.6536	0.5505	1.3751	1.1144	1.3647	1.1144	1.1144	
7	0.0030	0.0008	223.9	193.5	194.5	191.4	186.5	28.3	C.4957	0.1467	0.6501	0.5561	1.3831	1.1103	1.3333	1.1103	1.1103	
8	0.0011	0.0050	221.5	193.6	193.8	191.7	181.6	27.6	C.4659	0.1430	0.6488	0.5614	1.3876	1.0919	1.3170	1.0919	1.0919	
9	0.0034	0.0034	222.6	193.4	193.8	195.5	194.9	26.7	C.4152	0.1352	0.6496	0.5655	1.3961	1.1030	1.3036	1.1030	1.1030	
10	0.0040	0.0034	222.4	196.2	192.0	195.8	195.2	30.0	C.4422	0.1518	0.6450	0.5695	1.3961	1.1125	1.2842	1.1125	1.1125	
11	0.0043	0.0017	225.0	194.8	185.3	181.8	186.5	33.3	C.4802	0.1812	0.6014	0.5277	1.3554	1.1183	1.2453	1.1183	1.1183	

SL	INCS	INCP	CEV	TLFA	F	GM-1	PLUM-2	D-FAC	EPEGA-8	LGSS-P	PG2/	REFF-P	REFF-A	B*-1	B*-2	VG*-1	VG*-2	PC/PG
RADIAN	RADIAN	RADIAN	RADIAN						TOTAL	TOTAL	PO1	TOT	TCT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1134	0.1561	C.2672	C.8401	25.14	31.56	C.5928	C.1541	C.0319	0.9542	66.98	66.98	0.9542	77.32	78.42	88.37	88.37	
2	0.0683	0.1376	C.2304	0.7265	32.17	37.80	C.4592	C.1285	0.0486	0.9613	73.17	73.17	0.9613	83.17	84.02	97.26	97.26	
3	0.0463	0.1418	C.1836	C.6454	35.13	39.48	C.4529	C.0570	0.0232	0.9726	87.77	87.77	0.9726	89.09	89.42	97.26	97.26	
4	0.0055	0.0593	C.1811	C.6001	37.78	41.05	C.4104	C.0016	0.0208	0.9781	89.09	89.09	0.9781	89.55	89.95	97.26	97.26	
5	0.1385	0.0255	C.1451	C.4519	43.11	44.46	C.3131	C.0757	0.0219	0.9809	81.19	81.19	0.9809	77.72	78.61	89.55	89.55	
6	0.0704	0.0036	C.1422	0.3878	45.35	46.33	C.2601	C.0666	0.0205	0.9836	77.72	77.72	0.9836	78.19	78.19	89.55	89.55	
7	0.2468	0.1488	C.1405	C.3451	46.54	46.85	C.2463	C.0772	0.0249	0.9809	65.80	65.80	0.9809	54.70	56.00	67.07	67.07	
8	0.4350	0.2095	C.1354	C.2625	45.22	47.72	C.2117	C.0474	0.0287	0.9784								
9	0.3367	0.2075	C.1280	0.2795	49.15	48.28	C.2143	C.0833	0.0283	0.9794								
10	0.3447	0.2122	C.1515	C.2504	48.18	47.94	C.2138	C.0853	0.0300	0.9792								
11	0.3621	0.2273	C.2218	C.2591	43.92	43.92	C.2257	C.0866	0.0318	0.9812								

MLCNR	TC2/TO1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET
870.72	8	8	8	8
1.1176	1.3554	77.27	78.23	

ROTOR 2

RUN NC432, SPEEC CODE 10, POINT NO 2																
SL	FP51-1	FP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	N-1	N-2	U-1	U-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1426	0.0550	136.5	256.6	133.9	155.2	26.7	146.9	0.1957	0.4095	0.3019	0.7114	196.8	209.5	0.6055	0.5943
2	0.0517	0.0636	175.5	252.6	170.1	201.6	28.7	152.1	0.1663	0.4623	0.4066	0.7007	214.0	223.1	0.7094	0.5933
3	0.0624	0.0397	182.7	244.4	180.8	201.8	25.7	137.9	0.1404	0.3970	0.3178	0.6786	229.9	236.6	0.7733	0.6238
4	0.0340	0.0181	189.3	232.4	182.6	197.2	25.3	123.0	0.1338	0.3365	0.3366	0.6458	247.0	251.5	0.8263	0.6539
5	0.0015	0.0165	156.3	211.8	156.3	184.8	27.0	103.5	0.1396	0.3103	0.3092	0.3903	285.8	287.1	0.9313	0.7260
6	0.0057	0.0117	155.2	203.1	157.2	175.8	28.1	94.4	0.1417	0.4033	0.3731	0.3670	295.6	299.9	0.9652	0.7625
7	0.0066	0.0104	157.5	204.3	155.9	177.4	27.8	101.3	0.1409	0.3189	0.3730	0.3722	312.5	312.9	1.0024	0.7735
8	0.0031	0.0048	201.6	205.4	156.9	185.8	26.5	87.6	0.1317	0.4405	0.3410	0.3794	331.3	330.1	1.0510	0.8943
9	0.0037	0.0065	200.4	203.5	158.1	182.4	28.6	90.8	0.1332	0.4584	0.3365	0.3671	343.9	343.1	1.0662	0.8696
10	0.0015	0.0021	165.8	191.2	162.8	187.6	33.3	90.0	0.1604	0.4821	0.3306	0.3270	356.3	356.1	1.0603	0.8710

SL	INCS	INCP	CEV	TLFA	#PCVN-1	#PCVN-2	D-FAC	CHRG-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	W*-1	W*-2	PC/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TCT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0077	0.1142	0.2537	0.4660	30.78	47.16	0.2938	0.0071	0.0017	1.3406	99.38	99.35	0.9002	0.2141	-170.1	-43.0	1.6668
2	0.0720	0.0373	0.1517	0.4467	35.47	50.14	0.2945	0.0067	0.0169	1.3031	92.90	92.62	0.8231	0.3363	-185.3	-71.7	1.6970
3	0.0671	0.0320	0.1450	0.3905	42.16	51.24	0.3000	0.0793	0.0190	1.2816	90.22	89.87	0.8041	0.4531	-204.2	-90.8	1.6966
4	0.0665	0.0222	0.1474	0.2615	43.95	50.84	0.2989	0.0826	0.0205	1.2497	87.79	87.40	0.8635	0.3700	-221.7	-128.4	1.6736
5	0.0572	0.0183	0.1475	0.1300	47.15	48.74	0.2814	0.1365	0.0324	1.1825	73.45	72.72	0.8207	0.7019	-250.2	-183.6	1.6270
6	0.0454	0.0119	0.1125	0.0554	47.13	47.75	0.2587	0.1304	0.0303	1.1511	70.83	70.21	0.9424	0.8521	-271.4	-205.5	1.6032
7	0.0251	0.0165	0.0815	0.0552	48.23	47.53	0.2819	0.1872	0.0443	1.1036	62.13	61.32	0.9687	0.8733	-285.1	-211.6	1.6140
8	0.0253	0.0055	0.0859	0.0733	46.67	49.84	0.2256	0.1231	0.0291	1.1612	70.26	65.42	0.9902	0.9169	-304.8	-262.5	1.6230
9	0.0255	0.0133	0.0821	0.0665	48.25	48.75	0.2226	0.1263	0.0297	1.1399	68.91	68.25	1.0070	0.9661	-313.3	-253.1	1.6188
10	0.0094	0.0083	0.1063	0.0473	49.52	44.34	0.2166	0.1090	0.0242	1.1672	73.06	72.47	1.0560	1.0087	-323.4	-266.8	1.5769

TC/TC	PC/PC	EFF-AC	EFF-P	B*/A1	TOT/TOT1	PO2/PO1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	STAGE	STAGE
1.1571	1.4385	76.68	78.23	176.22	1.0712	1.0076	77.65	78.24

STATOR 2

RUN NC432, SPEEC CODE 10, POINT NO 2																
SL	FP51-1	FP51-2	V-1	V-2	VP-1	VP-2	V6-1	V6-2	B-1	B-2	N-1	N-2	U-1	U-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1218	0.1356	240.2	203.1	135.0	203.1	143.6	0.7	0.7060	0.6032	0.6617	0.5527	1.6221	1.2378	1.3107	1.0895
2	0.0894	0.0586	245.2	212.5	145.1	212.9	148.5	1.5	0.4490	0.0072	0.6766	0.5820	1.6732	1.2317	1.2826	1.0843
3	0.0659	0.0672	242.2	211.7	141.5	211.7	136.5	-3.5	0.5878	0.0165	0.6726	0.5817	1.6804	1.2221	1.2675	1.0706
4	0.0471	0.0444	233.5	212.7	159.9	212.4	120.7	-6.4	0.5421	0.0314	0.6494	0.5581	1.6545	1.2114	1.2337	1.0746
5	0.0224	0.0158	212.5	185.0	184.7	185.0	101.4	-5.4	0.4581	0.0289	0.5928	0.5119	1.5988	1.1804	1.1597	1.0662
6	0.0120	0.0151	204.4	175.1	182.2	179.0	52.6	-6.0	0.4701	0.0336	0.5711	0.4970	1.5110	1.1773	1.1430	1.0605
7	0.0128	0.0110	204.7	179.9	174.7	175.8	103.3	-5.3	0.5291	0.0294	0.5711	0.5003	1.5129	1.1732	1.1404	1.0764
8	0.0054	0.0045	214.8	182.5	185.5	182.5	46.7	-1.5	0.4374	0.0081	0.5724	0.5078	1.5081	1.1782	1.1356	1.0621
9	0.0044	0.0042	211.5	175.0	180.3	174.5	50.0	5.8	0.4632	0.0322	0.5512	0.4837	1.5614	1.1840	1.1207	1.0633
10	0.0032	0.0033	188.3	166.8	185.5	168.7	49.9	7.2	0.4578	0.0634	0.5214	0.4593	1.5372	1.1803	1.1301	1.0622

SL	INCP	CEV	TLFA	#PCVN-1	#PCVN-2	D-FAC	CHRG-B	LOSS-P	PO2/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.1416	0.1518	0.7428	43.82	52.38	0.2954	0.1083	0.0224	0.5729	89.56	89.55
2	-0.1155	0.1475	0.8418	49.22	50.02	0.2640	0.0525	0.0119	0.9860	87.20	87.65
3	-0.1062	0.1082	0.8443	51.33	50.42	0.2591	0.0293	0.0070	0.9924	86.66	87.10
4	-0.1844	0.1176	0.5144	51.41	54.33	0.2673	0.0304	0.0067	0.9904	72.67	83.17
5	-0.2240	0.1253	0.5271	45.11	50.00	0.2726	0.0683	0.0197	0.9850	65.10	65.82
6	-0.2521	0.1246	0.5037	48.35	48.64	0.2686	0.0754	0.0227	0.9850	64.35	65.01
7	-0.1538	0.1373	0.5982	47.38	49.02	0.2885	0.0595	0.0313	0.9800	50.35	51.26
8	-0.2559	0.1650	0.4455	45.81	45.62	0.2495	0.1105	0.0367	0.9775	55.52	60.24
9	-0.3185	0.2288	0.4365	48.23	46.97	0.2748	0.1765	0.0677	0.9660	52.23	52.99
10	-0.2472	0.2855	0.4444	43.86	44.40	0.2706	0.1467	0.0522	0.9751	60.44	61.15

MC/PC	MC/PC	TC/TC	PC/PC	EFF-AC	EFF-P	TOT/TOT1	PO2/PO1	EFF-AC
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	STAGE
1.1571	1.4376	73.68	75.36	1.0712	0.9821	70.03		

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
HUB RADIALLY DISTORTED INLET FLOW
 Baseline Inlet Configuration

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPST-1	EPST-2	V-1	V-2	VP-1	VP-2	VE-1	VE-2	B-1	B-2	M-1	M-2	U-1	U-2	N*-1	N*-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	11.741	9.607	552.9	526.6	552.9	511.4	0.0	716.7	0.0	56.5	0.5077	0.8221	518.7	507.3	0.6961	0.4945	750.1	552.6
2	10.419	7.150	555.6	555.0	555.0	540.0	0.0	714.8	0.0	52.5	0.5120	0.8006	508.7	421.6	0.7405	0.4930	806.0	553.9
3	9.067	6.237	571.2	635.7	571.2	545.3	0.0	638.5	0.0	49.4	0.5254	0.7425	645.6	601.8	0.7959	0.4037	865.3	547.0
4	7.104	5.053	585.9	757.8	585.9	554.6	0.0	573.6	0.0	45.5	0.5354	0.7025	713.7	730.7	0.8505	0.5090	923.3	578.6
5	2.454	2.441	655.1	743.3	655.1	564.3	0.0	446.5	0.0	36.9	0.6000	0.6342	857.3	869.9	1.0013	0.6422	1070.9	729.7
6	1.310	1.420	724.4	724.0	724.4	616.8	0.0	354.2	0.0	32.6	0.6799	0.6453	926.5	935.2	1.1015	0.7233	1177.3	820.4
7	0.000	0.560	703.1	727.6	703.1	624.0	0.0	306.0	0.0	30.2	0.7177	0.6422	970.7	975.8	1.1612	0.7731	1236.7	875.9
8	0.251	0.525	782.4	724.2	782.4	652.0	0.0	313.4	0.0	25.6	0.7374	0.6424	1014.2	1017.8	1.2079	0.8525	1280.9	960.4
9	-0.206	-0.030	758.1	728.3	758.1	664.5	0.0	258.1	0.0	24.2	0.7542	0.6471	1061.3	1061.3	1.2550	0.8991	1327.9	1012.0
10	-0.666	-0.463	811.6	735.3	811.6	681.4	0.0	321.4	0.0	25.9	0.7665	0.6495	1114.6	1114.6	1.3056	0.9122	1376.8	1032.7
11	-0.540	-0.421	865.2	693.3	865.2	612.4	0.0	325.0	0.0	28.0	0.7660	0.6078	1156.6	1156.6	1.3385	0.9073	1414.0	1034.9

SL	INCS	IPC	LEV	TLFA	HPCVN-1	HPCVN-2	D-FAC	CREGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PC/PC	
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	4.52	10.07	8.23	65.45	20.45	25.15	0.5167	0.3637	0.0791	1.4345	77.94	76.75	43.26	-21.19	-518.7	209.4	1.2937	
2	5.17	10.77	8.42	55.45	20.40	33.13	0.5448	0.2207	0.0555	1.4908	85.58	84.75	46.24	-5.65	-500.7	93.2	1.3448	
3	5.81	10.89	10.15	44.28	21.43	39.55	0.5701	0.1607	0.0460	1.4943	87.79	87.08	48.81	4.53	-649.5	-63.3	1.3491	
4	5.26	10.38	11.00	34.72	22.45	36.44	0.5584	0.1123	0.0319	1.4582	90.61	90.05	50.69	14.56	-713.7	-103.1	1.3566	
5	1.67	8.23	7.63	17.15	25.55	41.38	0.4682	0.0656	0.0180	1.4610	96.09	96.09	51.67	52.80	35.45	-657.3	-423.4	1.3806
6	-1.02	7.56	6.08	10.85	40.45	43.80	0.4274	0.1125	0.0302	1.3894	83.55	83.20	51.89	41.24	-926.5	-540.9	1.3921	
7	-1.31	1.47	5.42	7.71	42.88	45.05	0.4027	0.1305	0.0345	1.3533	79.68	76.77	51.82	44.11	-970.7	-609.7	1.3982	
8	-1.35	0.92	5.57	5.17	44.17	47.81	0.3656	0.0804	0.0208	1.3391	95.70	85.10	52.35	47.17	-1014.2	-704.5	1.4068	
9	-1.62	0.62	4.74	4.10	45.22	48.88	0.3265	0.0556	0.0221	1.3257	94.45	83.82	53.06	48.95	-1061.3	-763.3	1.4160	
10	-1.76	0.43	3.85	3.76	46.44	48.81	0.3472	0.1633	0.0425	1.3085	71.51	65.47	53.56	50.18	-1114.6	-793.2	1.4220	
11	-1.60	0.41	7.50	1.37	46.54	43.87	0.3845	0.2288	0.0544	1.2653	58.95	57.57	55.09	53.72	-1159.6	-834.2	1.3773	

IC/IC	PC/PC	EFF-AD	EFF-P	NC1/NC1	TC2/TC1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	STAGE	STAGE	ROTOR	ROTOR
1.1213	1.3622	75.91	80.81	41.27	1.1213	1.3622	75.91	80.81

STATOR 1

SL	EPST-1	EPST-2	V-1	V-2	VP-1	VP-2	VE-1	VE-2	B-1	B-2	M-1	M-2	PC/PC	TO/TO	PO/PO	TC/TC	TC2/TC1
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	INLET	STAGE	STAGE
1	11.304	7.966	857.1	475.6	442.5	470.7	734.0	51.7	58.9	10.9	0.7590	0.4038	1.2295	1.1414	1.3632	1.1414	
2	7.058	5.133	855.7	555.7	523.0	550.6	681.9	56.4	52.4	10.2	0.7610	0.4197	1.2967	1.1420	1.4374	1.1420	
3	4.071	2.952	823.5	570.6	551.9	563.6	611.1	50.1	47.9	5.1	0.267	0.4904	1.3144	1.1391	1.4556	1.1391	
4	2.140	1.552	755.6	582.6	577.7	574.3	552.8	60.7	43.7	8.5	0.7047	0.5021	1.3276	1.1354	1.4641	1.1354	
5	0.295	0.210	761.0	611.1	624.5	604.6	435.0	80.9	34.8	8.4	0.6716	0.5305	1.3504	1.1230	1.4093	1.1230	
6	-0.236	-0.006	746.4	624.7	645.5	624.0	386.5	51.4	31.1	8.3	0.6612	0.5455	1.3662	1.1173	1.3473	1.1173	
7	-0.161	-0.008	741.7	635.0	645.3	628.2	350.5	62.8	28.9	8.4	0.6560	0.5556	1.3707	1.1120	1.3109	1.1120	
8	-0.075	0.008	734.5	637.2	671.2	630.7	250.3	50.9	24.0	8.2	0.6541	0.5625	1.3765	1.0949	1.3047	1.0949	
9	0.106	0.126	738.3	649.1	672.9	643.1	304.6	67.7	24.3	7.8	0.6550	0.5705	1.3848	1.1062	1.2518	1.1062	
10	0.150	0.218	740.2	652.0	687.0	645.1	321.0	54.5	25.7	8.4	0.6541	0.5707	1.3860	1.1156	1.2744	1.1156	
11	0.054	0.136	853.2	604.4	612.3	554.8	324.9	106.8	28.0	10.2	0.6076	0.5298	1.3467	1.1213	1.2744	1.1213	

SL	INCS	IPC	LEV	TLFA	HPCVN-1	HPCVN-2	D-FAC	CREGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PC/PC
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	6.18	10.89	16.27	47.58	26.55	32.54	0.5950	0.1551	0.0323	0.9973	65.46	66.53					
2	5.11	10.22	12.62	42.25	22.85	38.93	0.4982	0.1166	0.0250	0.9642	78.62	77.75					
3	3.02	8.49	10.44	38.81	35.40	40.30	0.4974	0.0887	0.0212	0.9136	81.44	82.39					
4	0.23	6.01	9.34	35.16	37.55	41.52	0.4186	0.0317	0.0238	0.9770	84.99	85.74					
5	-7.36	-0.64	8.49	28.45	43.10	44.15	0.3271	0.0506	0.0243	0.9164	83.64	84.40					
6	-11.00	-4.22	8.13	22.74	45.14	45.85	0.2788	0.0366	0.0245	0.9798	75.79	76.78					
7	-13.30	-6.31	8.05	20.50	46.25	46.42	0.2555	0.0663	0.0234	0.9784	72.96	74.00					
8	-18.44	-11.30	7.18	15.75	48.83	48.40	0.2202	0.0527	0.0305	0.9568	83.60	84.21					
9	-16.74	-11.40	7.32	16.52	46.54	47.93	0.2445	0.0531	0.0317	0.9764	72.32	73.30					
10	-19.34	-11.80	6.38	17.33	48.27	47.70	0.2280	0.1022	0.0300	0.9745	62.12	63.39					
11	-20.31	-12.58	12.54	17.43	43.76	43.76	0.2241	0.0856	0.0324	0.9802	51.74	53.16					

NC1/NC1	PC/PC	EFF-AD	EFF-P	NC1/NC1	TC2/TC1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	STAGE	STAGE	ROTOR	ROTOR
1.1213	1.3440	73.45	74.55	41.27	1.1213	1.3440	73.45	74.55

ROTOR 2

SL	FPSI-1		FPSI-2		V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	RUN NG432, SPEED CODE 10, PLINT NO 1		V*-1	V*-2
	DEGREE	DEGREE	FT/SEC	FT/SEC											FT/SEC	FT/SEC		
1	0.214	5.408	465.5	671.0	457.2	665.4	89.0	530.5	11.0	37.0	0.3908	0.7302	645.2	686.9	0.6127	0.5939	710.5	701.2
2	5.320	3.981	587.3	663.5	575.0	711.3	53.0	496.2	9.1	34.4	0.5046	0.7327	701.4	731.5	0.7218	0.6371	840.0	751.1
3	3.014	2.127	616.4	631.1	610.2	702.9	60.5	443.0	8.0	32.1	0.5321	0.7053	753.4	775.7	0.7805	0.6596	904.1	777.4
4	2.021	0.818	632.5	620.1	600.5	700.5	65.0	351.5	7.7	29.8	0.5450	0.6666	805.8	824.3	0.8303	0.6848	958.6	806.8
5	-0.364	-0.532	651.9	704.1	645.6	627.1	90.2	320.1	8.0	27.4	0.5697	0.5995	937.0	941.0	0.9305	0.7513	1064.8	882.5
6	-0.634	-1.011	653.8	616.5	647.3	605.6	62.4	252.2	8.1	25.7	0.5727	0.5770	981.5	983.0	0.9636	0.7854	1100.1	920.4
7	-0.723	-0.572	651.1	605.0	644.4	608.3	61.4	314.5	8.1	27.4	0.5742	0.5865	1025.8	1025.8	1.0013	0.8016	1174.0	935.6
8	-0.702	-0.677	661.3	665.2	655.5	630.6	67.0	258.3	7.6	22.1	0.5862	0.5862	1086.0	1082.0	1.0486	0.8898	1194.8	1039.8
9	-0.768	-0.505	656.1	673.4	648.5	618.2	60.8	266.5	8.5	23.4	0.5742	0.5735	1127.3	1124.8	1.0658	0.9013	1217.7	1057.4
10	-0.466	-0.548	607.6	609.1	557.7	546.5	109.1	273.1	10.3	26.4	0.5280	0.5145	1168.6	1167.2	1.0572	0.8849	1216.5	1046.8

SL	INCS	IACP	DEV	ILPN	R-PCVN-1	R-PCVN-2	U-FAC	CEGEE-B	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	V0*-1	V0*-2	PC/PC
1	-1.00	5.30	16.61	30.28	21.80	48.62	0.2000	0.0026	0.0149	1.2215	95.05	94.05	90.33	12.05	-555.6	-148.3	1.0300
2	-5.24	1.05	10.31	21.55	40.65	52.05	0.2469	0.0555	0.0237	1.2822	89.52	89.14	46.19	16.55	-607.8	-241.3	1.0752
3	-4.77	0.50	8.67	22.28	43.00	52.53	0.2647	0.1023	0.0257	1.2584	86.87	86.22	47.43	25.17	-667.1	-332.1	1.0664
4	-4.51	0.57	7.81	18.62	44.44	51.62	0.2631	0.1050	0.0265	1.2229	83.32	82.84	45.00	32.37	-724.2	-432.8	1.0331
5	-3.36	0.51	6.08	7.90	46.77	48.54	0.2506	0.1556	0.0374	1.1997	86.34	85.87	44.71	38.66	-806.8	-620.8	1.0682
6	-2.67	0.64	6.15	5.42	47.28	47.47	0.2318	0.1553	0.0363	1.1271	82.05	81.41	53.96	48.56	-889.6	-689.0	1.0444
7	-1.53	0.65	4.65	47.92	47.68	0.2310	0.2040	0.0488	0.0289	1.1327	55.08	54.28	55.41	49.45	-934.4	-711.6	1.0592
8	-1.69	0.53	3.82	4.34	48.42	49.95	0.1852	0.1215	0.0289	1.1262	45.25	44.66	56.72	52.38	-999.0	-823.7	1.0622
9	-1.36	0.67	3.57	3.50	47.80	48.32	0.1874	0.1372	0.0323	1.1202	60.85	60.22	57.80	54.22	-1030.5	-857.8	1.0495
10	0.60	2.83	7.07	1.51	43.51	41.91	0.1956	0.1586	0.0342	1.1084	55.15	54.50	60.57	58.66	-1059.5	-894.1	1.0870

IC/IC	PC/PC	EFF-AD	EFF-P	ACI/ACI	T02/T01	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	%	%
1.1551	1.0842	71.55	73.73	36.56	1.0658	1.1752	71.63	72.26

STATOR 2

SL	FPSI-1		FPSI-2		V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	RUN NG432, SPEED CODE 10, PLINT NO 1		V*-1	V*-2
	DEGREE	DEGREE	FT/SEC	FT/SEC											FT/SEC	FT/SEC		
1	7.002	0.015	113.1	724.5	617.3	734.9	524.2	5.0	40.4	0.4	0.6838	0.6128	1.5753	1.2409	1.2700	1.0471	1.0471	
2	5.176	5.977	830.6	170.0	688.5	170.2	478.6	-29.8	34.7	-2.2	0.7093	0.6471	1.6363	1.2342	1.2503	1.0819	1.0819	
3	3.665	3.567	824.3	753.3	702.1	752.5	431.8	-24.3	31.5	-1.8	0.6953	0.6341	1.6282	1.2237	1.2280	1.0773	1.0773	
4	2.815	2.778	750.5	722.5	651.2	722.8	383.5	-16.5	25.0	-1.3	0.6717	0.6100	1.6003	1.2111	1.1988	1.0700	1.0700	
5	1.193	1.100	706.7	647.6	633.4	647.6	313.4	-7.1	26.3	-0.6	0.6023	0.5489	1.5214	1.1845	1.1129	1.0604	1.0604	
6	0.814	0.740	680.3	626.3	616.5	626.0	287.7	-18.8	25.0	-1.7	0.5811	0.5324	1.4996	1.1738	1.0936	1.0555	1.0555	
7	0.642	0.552	684.6	617.3	604.1	617.1	322.1	-17.9	28.1	-1.7	0.5867	0.5257	1.4891	1.1679	1.0804	1.0712	1.0712	
8	0.542	0.577	676.8	623.0	628.5	623.0	254.1	5.5	22.4	0.5	0.5812	0.5255	1.4908	1.1721	1.0748	1.0536	1.0536	
9	0.560	0.602	682.4	617.4	606.0	617.0	267.4	23.1	23.8	2.1	0.5638	0.5235	1.4847	1.1779	1.0749	1.0547	1.0547	
10	0.317	0.342	555.7	563.9	534.1	562.5	272.7	33.7	27.0	3.4	0.5065	0.4745	1.4382	1.1829	1.0721	1.0547	1.0547	

SL	IACP	DEV	ILPN	R-PCVN-1	R-PCVN-2	U-FAC	CEGEE-B	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	V0*-1	V0*-2	PC/PC
1	-10.45	6.89	40.02	45.38	54.24	0.2302	0.1401	0.0295	0.9623	80.91	81.54					
2	-9.10	5.83	36.52	51.21	56.20	0.2158	0.0801	0.0180	0.9772	80.22	80.83					
3	-10.51	6.44	33.35	52.62	57.53	0.2153	0.0716	0.0171	0.9800	77.92	78.56					
4	-12.66	7.23	30.30	52.20	55.82	0.2108	0.0687	0.0169	0.9827	76.34	76.98					
5	-15.10	8.04	26.54	46.63	58.08	0.2114	0.1169	0.0344	0.9744	51.29	52.01					
6	-18.36	7.58	24.74	48.02	49.58	0.2143	0.1412	0.0443	0.9694	48.56	47.23					
7	-13.35	7.88	25.73	47.62	47.93	0.2352	0.1412	0.0492	0.9541	31.53	32.28					
8	-19.84	10.45	21.90	45.57	48.17	0.2080	0.2227	0.0736	0.9545	38.78	39.40					
9	-20.48	13.41	21.27	47.44	47.42	0.1984	0.2051	0.0704	0.9600	38.10	38.72					
10	-21.37	16.15	23.65	41.24	42.71	0.2035	0.2014	0.0716	0.9674	36.71	37.33					

NGERA	NCCAR	IC/IC	PC/PC	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	%
1.1551	1.0842	66.41	68.74	1.0658	0.9493	57.55		

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
HUB RADIALLY DISTORTED INLET FLOW
Baseline Inlet Configuration**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	FPSI-1	FPSI-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
DFGRRF	DFGRRF	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.250	0.020	554.7	853.7	554.7	450.0	0.0	746.0	0.0	56.6	0.5555	0.7975	519.2	567.0	0.6578	0.4663	759.8	522.5
2	10.295	0.058	561.7	870.3	561.7	530.5	0.0	885.6	0.0	52.2	0.5162	0.7734	581.2	622.2	0.7420	0.4750	806.3	535.2
3	8.636	0.023	574.1	814.0	574.1	534.2	0.0	814.2	0.0	48.9	0.5202	0.7192	650.5	682.4	0.7983	0.4759	867.6	538.5
4	7.003	0.354	588.2	714.8	588.2	544.9	0.0	550.8	0.0	45.3	0.5419	0.6824	714.4	739.4	0.8526	0.5078	925.4	576.6
5	2.936	2.618	652.0	727.5	652.0	585.8	0.0	421.4	0.0	36.4	0.6049	0.6404	758.0	870.7	0.9998	0.6445	1077.7	732.2
6	1.931	1.930	721.5	720.6	721.5	610.3	0.0	363.4	0.0	32.1	0.6753	0.6356	827.3	936.0	1.0993	0.7261	1175.2	823.4
7	0.931	1.028	758.5	718.0	758.5	623.3	0.0	356.5	0.0	26.8	0.7130	0.6340	871.6	976.7	1.1585	0.7763	1232.6	877.2
8	0.427	0.527	777.5	714.5	777.5	648.6	0.0	300.6	0.0	24.5	0.7227	0.6352	915.1	1018.7	1.2049	0.8598	1278.7	967.7
9	-0.147	-0.030	763.0	718.7	763.0	657.5	0.0	250.2	0.0	23.6	0.7489	0.6387	962.3	1062.3	1.2515	0.9011	1325.6	1014.1
10	-0.577	-0.468	802.4	722.4	802.4	651.2	0.0	12.9	0.0	25.7	0.7630	0.6381	1115.6	1115.6	1.3025	0.9130	1376.5	1033.6
11	-0.475	-0.392	804.2	662.8	804.2	604.8	0.0	116.5	0.0	27.8	0.7606	0.5988	1160.6	1160.2	1.3356	0.9102	1412.0	1037.8

SL	INCS	IACP	CEV	TLFA	PHCVN-1	PHCVN-2	O-FAC	MEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B'-1	B'-2	V0'-1	V0'-2	PC/PC
DEGREE	WPCRE	LECPRE	LECPRE	LECPRE				TOTAL	TOTAL	PO1	TO1	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	4.45	10.00	10.84	63.17	30.25	28.68	0.5471	0.3367	0.0744	1.4225	78.91	77.84	43.19	-19.98	-519.2	179.0	1.2878
2	5.24	10.64	10.85	53.32	31.05	32.86	0.5593	0.1517	0.0485	1.4824	87.18	86.45	48.12	-7.22	-581.2	67.4	1.3424
3	5.40	10.76	12.53	41.41	31.62	36.50	0.5715	0.1342	0.0380	1.4877	89.98	89.40	48.68	7.27	-650.5	-68.3	1.3485
4	5.17	10.25	13.51	31.52	32.26	36.35	0.5523	0.0795	0.0222	1.4925	93.22	92.82	50.60	19.07	-714.4	-188.5	1.3586
5	1.83	8.35	9.03	15.61	35.84	41.34	0.4588	0.0222	0.0087	1.4861	95.93	95.71	52.78	36.05	-658.0	-439.3	1.3847
6	-0.82	3.17	6.57	5.54	40.25	43.85	0.4197	0.0833	0.0220	1.3889	87.94	87.36	52.09	42.15	-921.6	-552.7	1.3999
7	-1.14	1.60	6.16	7.18	42.67	45.25	0.3956	0.1044	0.0272	1.3835	83.60	82.86	52.02	44.85	-971.6	-620.2	1.4075
8	-1.14	1.12	6.30	6.44	43.54	47.54	0.3350	0.0873	0.0120	1.3494	91.52	91.15	52.55	47.91	-1015.1	-718.1	1.4185
9	-1.67	0.82	5.37	3.48	45.11	48.72	0.2214	0.0834	0.0162	1.3339	88.58	88.12	53.26	49.58	-1062.3	-772.0	1.4240
10	-1.54	0.43	4.63	3.15	46.25	47.77	0.1429	0.1465	0.0345	1.3125	73.19	72.14	54.14	50.95	-1115.0	-802.7	1.4260
11	-1.01	0.61	8.14	0.53	46.32	43.81	0.3591	0.2105	0.0512	1.2718	61.84	60.32	55.28	54.35	-1160.6	-843.4	1.3842

IC/TC	PC/PC	EFF-AC	EFF-P	B'1/A1	TC2/TO1	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	LB/SEC			RTCR	RTOR
				%			%	%
1.1176	1.3466	83.25	84.05	41.25	1.1176	1.3466	83.25	84.05

STATOR 1

SL	FPSI-1	FPSI-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PC/PC	TO/TO	PO/PO	TO2/
DFGRRF	DFGRRF	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	11.242	7.936	821.1	481.6	415.6	452.8	705.8	89.7	59.2	11.1	0.7256	0.3935	1.2285	1.1361	1.3571	1.1361
2	8.476	5.218	830.1	538.5	506.1	528.9	658.0	101.0	52.4	10.8	0.7336	0.4617	1.2204	1.1377	1.4249	1.1377
3	4.217	3.266	757.1	555.5	538.0	548.4	588.1	88.6	47.5	9.2	0.7029	0.4776	1.3121	1.1341	1.4474	1.1341
4	2.404	1.554	778.1	571.4	565.8	565.2	531.2	83.5	43.2	8.4	0.6837	0.4929	1.3287	1.1303	1.4608	1.1303
5	0.528	0.507	748.5	608.5	606.5	602.4	421.0	89.1	34.3	8.4	0.6590	0.5298	1.3611	1.1194	1.4251	1.1194
6	0.154	0.177	739.5	630.0	636.6	623.3	376.2	51.8	30.6	8.4	0.6536	0.5505	1.3751	1.1144	1.3647	1.1144
7	0.016	0.048	734.7	634.8	646.2	628.0	349.5	52.8	28.4	8.4	0.6501	0.5581	1.3831	1.1103	1.3333	1.1103
8	0.063	0.114	727.5	635.4	668.8	628.9	277.4	50.6	23.3	8.2	0.6488	0.5616	1.3876	1.0919	1.3170	1.0919
9	0.161	0.223	730.5	647.5	688.8	641.6	254.5	47.6	23.8	7.8	0.6496	0.5655	1.3961	1.1030	1.3036	1.1030
10	0.174	0.157	725.7	645.6	659.5	642.4	317.3	48.3	25.3	8.7	0.6450	0.5695	1.3961	1.1125	1.2842	1.1125
11	0.077	0.058	685.7	664.3	668.1	556.4	109.2	27.5	10.4	0.6014	0.5277	1.3554	1.1183	1.2453	1.1183	

SL	INCS	IACP	CEV	TLFA	PHCVN-1	PHCVN-2	O-FAC	MEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B'-1	B'-2	V0'-1	V0'-2	PC/PC
DEGREE	WPCRE	LECPRE	LECPRE	LECPRE				TOTAL	TOTAL	PO1	TO1	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	0.52	11.24	16.44	48.13	25.74	31.56	0.4928	0.1541	0.0319	0.9542	66.98	66.37	43.19	-19.98	-519.2	179.0	1.2878
2	0.06	10.17	13.02	41.63	32.17	37.60	0.4993	0.1285	0.0286	0.9613	77.32	76.42	48.12	-7.22	-581.2	67.4	1.3424
3	2.65	8.12	10.52	38.35	35.13	35.48	0.4529	0.0570	0.0232	0.9726	83.17	84.02	48.68	7.27	-650.5	-68.3	1.3485
4	-0.31	5.46	5.23	34.73	37.78	41.05	0.4104	0.0816	0.0208	0.9781	87.77	88.41	49.58	19.07	-714.4	-188.5	1.3586
5	-7.93	-1.46	6.54	25.65	43.11	44.46	0.3131	0.0757	0.0219	0.9809	89.09	89.64	52.78	36.05	-658.0	-439.3	1.3847
6	-11.57	-4.79	8.15	22.22	45.35	46.33	0.2661	0.0666	0.0205	0.9834	81.19	82.00	52.09	42.15	-921.6	-552.7	1.3999
7	-13.74	-8.81	8.05	20.00	46.54	46.85	0.2403	0.0772	0.0245	0.9809	77.77	78.61	52.02	44.85	-971.6	-620.2	1.4075
8	-14.14	-12.00	7.76	15.00	45.20	47.72	0.2117	0.0614	0.0287	0.9784	89.55	89.95	52.55	47.91	-1015.1	-718.1	1.4185
9	-14.28	-11.89	7.33	16.01	45.15	48.28	0.2143	0.0633	0.0283	0.9794	77.17	78.10	53.26	49.58	-1062.3	-772.0	1.4240
10	-14.75	-12.16	6.71	16.64	48.10	47.94	0.2136	0.0853	0.0300	0.9792	65.88	67.07	54.14	50.95	-1115.0	-802.7	1.4260
11	-70.75	-13.02	12.45	17.12	43.52	43.52	0.2257	0.0686	0.0313	0.9812	54.70	56.08					

IC/TC	PC/PC	EFF-AC	EFF-P	B'1/A1	TO2/TO1	PO2/PO1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	LB/SEC			STAGE	
				%			%	%
1.1176	1.3556	71.27	78.23		1.1176	0.9776	77.77	

ROTOR 2

RUN NO432, SPEED CODE 10, POINT NO 2																
SL	FPS1-1	EPS1-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	0.184	4.442	447.5	841.5	429.2	440.4	87.8	546.4	11.2	40.1	0.3819	0.7114	445.8	447.5	0.6055	0.5543
2	5.257	3.445	566.0	828.4	558.1	681.4	54.2	459.0	9.5	36.8	0.4866	0.7607	702.0	732.1	0.7094	0.5932
3	3.577	2.277	555.3	801.8	553.4	662.0	64.2	452.4	8.0	34.2	0.5178	0.6786	754.3	776.4	0.7733	0.6238
4	2.061	1.036	621.1	762.7	615.9	677.1	63.0	403.6	7.7	31.9	0.5366	0.6458	810.5	825.0	0.8263	0.6539
5	0.488	0.460	651.5	695.0	644.1	666.4	60.5	339.5	8.0	29.2	0.5492	0.5903	837.8	941.8	0.9313	0.7260
6	0.325	0.412	653.6	666.3	641.0	550.0	52.3	305.6	8.1	27.7	0.5731	0.5670	982.8	984.9	0.9652	0.7625
7	0.376	0.555	645.3	670.2	642.9	562.0	51.2	332.4	8.1	29.7	0.5734	0.5722	1024.7	1026.7	1.0024	0.7735
8	0.177	0.277	661.5	673.6	655.6	609.5	60.9	267.4	7.5	25.2	0.5816	0.5744	1087.0	1083.0	1.0510	0.8543
9	0.184	0.255	651.6	667.5	645.5	558.4	100.3	255.4	8.8	26.3	0.5765	0.5671	1128.3	1125.8	1.0662	0.8696
10	0.085	0.122	655.6	674.1	555.7	549.7	109.4	255.4	10.3	28.3	0.5306	0.5270	1165.7	1168.2	1.0603	0.8710

SL	IACS	IACP	DEV	TLFA	RFCVM-1	RHCVM-2	D-FAC	(PEGA-0	LOSS-P	PO2/	BEFF-P	BEFF-A	B*-1	B*-2	V0*-1	V0*-2	PC/PC
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	ICT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.41	4.54	16.83	39.31	30.78	47.16	C.2538	C.0071	0.0017	1.3484	99.38	95.35	51.58	12.27	-558.0	-141.2	1.6688
2	-4.15	2.14	10.58	28.00	39.47	50.14	C.2965	C.0087	0.0169	1.3031	92.90	92.62	47.27	15.27	-607.8	-233.2	1.6970
3	-3.84	1.83	9.45	22.40	42.18	51.24	C.3060	C.0793	0.0198	1.2816	90.22	89.87	48.36	15.96	-670.1	-324.0	1.6966
4	-3.81	1.27	8.45	16.70	43.55	50.84	C.2989	C.0826	0.0205	1.2497	87.79	87.40	49.70	33.00	-727.5	-421.4	1.6730
5	-3.28	C.55	6.16	7.95	47.15	48.74	C.2814	C.1362	0.0322	1.1825	73.45	72.82	52.75	44.80	-847.3	-602.3	1.6270
6	-2.83	C.68	6.47	5.18	47.23	47.75	C.2587	C.1304	0.0303	1.1596	70.83	70.21	54.66	46.82	-890.5	-674.3	1.6027
7	-1.44	C.55	4.67	5.47	48.23	47.53	C.2819	C.1874	0.0443	1.1636	62.13	61.32	55.50	50.03	-935.5	-694.4	1.6140
8	-1.08	C.54	3.76	4.20	48.87	45.84	C.2256	C.1231	0.0291	1.1612	70.24	65.62	56.74	52.53	-1000.1	-795.6	1.6236
9	-1.96	C.76	3.56	3.95	48.25	48.75	C.2226	C.1263	0.0297	1.1599	66.91	66.25	57.69	54.21	-1026.0	-830.4	1.6188
10	0.54	2.77	6.20	2.71	43.53	44.34	C.2164	C.1190	0.0242	1.1672	73.06	72.47	60.51	57.79	-1060.3	-872.8	1.5769

IC/IC	PC/PC	EFF-AC	EFF-P	W1/A1	T02/T01	PC2/PC1	EFF-AC	EFF-P
INLET	INLET	INLET	INLET	LEW/SEC			ROTOR	
				S			S	
1.1571	1.4365	76.66	76.23	36.72	1.0712	1.2076	77.65	78.24

STATOR 2

RUN NO432, SPEED CODE 10, POINT NO 2																
SL	FPS1-1	EPS1-2	V-1	V-2	VP-1	VP-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PC/PC	T0/T0	PC/PC	T02/T01
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	INLET	INLET
1	0.981	7.595	788.0	666.3	576.8	666.3	526.8	2.2	42.7	0.2	0.6617	0.5527	1.6221	1.2376	1.5107	1.0895
2	5.121	5.502	804.5	656.6	640.1	658.5	487.4	5.0	37.2	0.4	0.6786	0.5828	1.6732	1.2317	1.2826	1.0843
3	3.773	3.853	794.8	694.7	661.0	654.6	441.3	-11.5	33.7	-0.5	0.6724	0.5817	1.6804	1.2221	1.2675	1.0806
4	2.732	2.656	766.2	665.1	656.0	664.6	356.1	-20.5	31.1	-1.8	0.6494	0.5581	1.6545	1.2111	1.2337	1.0746
5	1.270	1.136	657.4	607.1	612.6	606.4	333.2	-17.6	28.5	-1.7	0.5770	0.5115	1.5988	1.1804	1.1597	1.0682
6	0.975	0.883	670.6	587.6	577.8	587.2	303.7	-16.7	26.9	-1.5	0.5514	0.4970	1.5810	1.1773	1.1430	1.0605
7	0.723	0.629	611.7	550.3	535.9	590.0	334.0	-17.4	30.3	-1.7	0.5736	0.5003	1.5829	1.1732	1.1404	1.0764
8	0.304	0.256	671.8	600.0	606.5	599.9	284.6	-8.8	25.1	-0.5	0.5724	0.5078	1.5881	1.1782	1.1356	1.0621
9	0.250	0.239	661.1	574.7	561.4	573.9	255.4	18.5	28.5	1.4	0.5612	0.4637	1.5614	1.1660	1.1207	1.0633
10	0.184	0.150	617.8	547.4	542.8	546.9	255.0	23.7	28.5	2.5	0.5214	0.4553	1.5372	1.1603	1.1381	1.0622

SL	IACP	DEV	TLFA	RFCVM-1	RHCVM-2	D-FAC	(PEGA-0	LOSS-P	PO2/	BEFF-A	BEFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-6.11	8.70	42.56	43.82	52.38	C.2954	C.1603	0.0224	0.9729	89.56	89.95
2	-6.62	8.45	36.77	45.21	50.02	C.2648	C.0525	0.0119	0.9860	87.20	87.65
3	-8.38	7.24	34.42	51.33	50.42	C.2591	C.0293	0.0370	0.9924	86.66	87.10
4	-10.57	6.74	32.85	51.41	54.33	C.2673	C.0384	0.0097	0.9906	82.67	83.17
5	-12.66	7.48	30.20	49.14	50.00	C.2726	C.0683	0.0197	0.9856	65.10	65.82
6	-14.44	7.37	28.86	48.35	48.64	C.2680	C.0754	0.0227	0.9850	64.35	65.01
7	-11.10	7.81	34.00	47.36	49.02	C.2885	C.0695	0.0313	0.9800	50.35	51.26
8	-17.18	6.68	25.32	45.81	49.62	C.2645	C.1105	0.0367	0.9779	59.52	60.24
9	-16.25	13.11	24.65	48.23	46.57	C.2748	C.1765	0.0607	0.9660	52.23	52.99
10	-15.60	15.21	26.04	43.85	44.40	C.2706	C.1467	0.0522	0.9571	60.44	61.15

MLHR	WCRH	IC/G	PC/PC	EFF-AC	EFF-P	T02/T01	PO2/PO1	EFF-AC
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
KFP	LEW/SEC			S	S			S
831.0	204.54	1.1571	1.4076	73.68	75.36	1.0712	0.9821	70.03

UNIFORM INLET FLOW DATA – SONIC INLET, APPROACH CONFIGURATION
(Complete Acoustic Treatment)

- Overall Performance and Stall Summary
- Overall Performance and Blade-Element Data

FAN OVERALL PERFORMANCE – SONIC INLET, APPROACH CONFIGURATIONS

	N _{corr} (rpm)	W _{corr} (kg/sec)	W _{corr} (lbm/sec)	Local				Cumulative Fan Alone				Cumulative System					
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	P ₀ /P ₀	η _{ad} (%)	η _p (%)			
413-90-50																	
Sonic Inlet	6407	76.2	168.10		0.9841									0.9841			
Rotor 1	6407	77.4	170.81	1.0737	1.2531	90.38	90.68	1.0737	1.2531	90.38	90.68	1.2332	83.74	84.22			
Stator 1					0.9853				1.2345	84.25	84.71	1.2150	77.64	78.25			
Rotor 2				1.0358	1.0981	75.63	75.95	1.1122	1.3557	81.01	81.81	1.3341	76.51	77.45			
Stator 2					0.9705				1.3156	72.72	73.75	1.2947	68.26	69.39			
413-90-51																	
Sonic Inlet	6523	76.2	166.00		0.9851									0.9851			
Rotor 1	6523	77.3	170.55	1.0736	1.2662	94.85	95.03	1.0736	1.2662	94.85	95.03	1.2473	88.55	88.90			
Stator 1					0.9867				1.2493	89.30	89.64	1.2307	83.02	83.51			
Rotor 2				1.0410	1.1256	83.90	84.18	1.1176	1.4062	87.05	87.66	1.3852	82.77	83.73			
Stator 2					0.9811				1.3796	81.95	82.75	1.3590	77.89	78.83			
413-90-52																	
Sonic Inlet	6652	76.2	168.10		0.9851									0.9851			
Rotor 1	6652	77.4	170.65	1.0848	1.2900	89.01	89.40	1.0848	1.2900	89.01	89.40	1.2708	83.57	84.12			
Stator 1					0.9865				1.2726	84.11	84.64	1.2536	78.66	79.34			
Rotor 2				1.0425	1.1460	93.38	93.51	1.1309	1.4584	86.96	87.64	1.4367	83.33	84.16			
Stator 2					0.9881				1.4411	84.06	84.86	1.4196	80.43	81.38			
413-80-50																	
Sonic Inlet	6173	74.1	163.40		0.9896									0.9896			
Rotor 1	6173	74.8	165.11	1.0676	1.2325	91.16	91.42	1.0676	1.2325	91.16	91.42	1.2197	86.37	86.75			
Stator 1					0.9883				1.2184	85.99	86.38	1.2057	81.21	81.70			
Rotor 2				1.0300	1.0887	82.06	82.27	1.0996	1.3265	84.49	85.10	1.3127	81.17	81.88			
Stator 2					0.9723				1.2898	75.79	76.85	1.2764	72.51	73.44			
413-80-51																	
Sonic Inlet	6324	73.8	162.80		0.9885									0.9885			
Rotor 1	6324	74.7	164.69	1.0753	1.2548	89.08	89.43	1.0753	1.2548	89.08	89.43	1.2404	84.31	84.78			
Stator 1					0.9858				1.2370	83.29	83.73	1.2228	78.56	79.16			
Rotor 1				1.0367	1.1139	85.27	85.50	1.1147	1.3778	83.62	84.35	1.3620	80.46	81.29			
Stator 2					0.9831				1.3545	78.97	79.36	1.3389	75.82	76.79			
413-80-52																	
Sonic Inlet	6466	74.1	163.40		0.9886									0.9886			
Rotor 1	6466	74.9	165.29	1.0820	1.2700	86.29	86.75	1.0820	1.2700	86.29	86.75	1.2555	81.91	82.49			
Stator 1					0.9884				1.2552	81.93	82.51	1.2409	77.57	78.25			
Rotor 2				1.0403	1.1367	92.49	92.63	1.1255	1.4268	85.16	85.89	1.4105	82.28	83.12			
Stator 2					0.9880				1.4097	82.13	82.98	1.3936	79.26	80.21			
413-77-11																	
Sonic Inlet	6417	73.8	162.84		0.9866									0.9866			
Rotor 1	6417	74.8	165.06	1.0772	1.2710	91.97	92.24	1.0772	1.2710	91.97	92.24	1.2540	86.53	86.96			
Stator 1					0.9881				1.2559	87.22	87.63	1.2391	81.82	82.37			
Rotor 2				1.0411	1.1387	91.85	92.01	1.1215	1.4300	88.61	89.17	1.4108	85.04	85.75			
Stator 2					0.9883				1.4133	85.55	86.24	1.3944	82.01	82.84			
413-77-12																	
Sonic Inlet	6411	71.4	157.50		0.9904									0.9904			
Rotor 1	6411	72.1	159.03	1.0773	1.2735	92.60	92.85	1.0773	1.2735	92.60	92.85	1.2613	88.71	89.08			
Stator 1					0.9885				1.2589	88.02	88.41	1.2468	84.15	84.64			
Rotor 2				1.0472	1.1617	92.57	92.73	1.1282	1.4624	89.51	90.06	1.4484	87.09	87.75			
Stator 2					0.9923				1.4512	87.60	88.24	1.4373	85.19	85.93			
413-77-13																	
Sonic Inlet	6425	69.8	154.10		0.9895									0.9895			
Rotor 1	6425	70.6	155.74	1.0789	1.2790	92.40	92.66	1.0789	1.2790	92.40	92.66	1.2656	88.23	88.62			
Stator 1					0.9873				1.2628	87.45	87.86	1.2495	83.28	83.80			
Rotor 2				1.0507	1.1697	90.25	90.46	1.1336	1.4770	88.26	88.89	1.4615	85.71	86.40			
Stator 2					0.9932				1.4670	86.63	87.33	1.4517	84.10	84.91			
413-77-15																	
Sonic Inlet	6438	75.8	167.30		0.9846									0.9846			
Rotor 1	6438	77.0	169.92	1.0759	1.2659	91.84	92.12	1.0759	1.2659	91.84	92.12	1.2464	85.58	86.02			
Stator 1					0.9892				1.2523	87.48	87.88	1.2330	81.25	81.80			
Rotor 2				1.0363	1.1185	89.55	89.72	1.1150	1.4007	87.92	88.48	1.3791	83.64	84.37			
Stator 2					0.9814				1.3747	82.80	83.56	1.3535	79.55	79.45			
413-77-16																	
Sonic Inlet	6448	76.7	169.30		0.9759									0.9759			
Rotor 1	6448	78.6	173.49	1.0755	1.2650	92.10	92.37	1.0755	1.2650	92.10	92.37	1.2345	82.17	82.70			
Stator 1					0.9887				1.2508	87.53	87.91	1.2207	77.66	78.28			
Rotor 2				1.0320	1.0981	84.56	84.78	1.1099	1.3734	86.37	86.96	1.3403	79.42	80.26			
Stator 2					0.9705				1.3328	77.87	78.75	1.3007	70.98	72.04			

FAN OVERALL PERFORMANCE - SONIC INLET, APPROACH CONFIGURATIONS (Cont'd)

	N _{corr} (rpm)	W _{corr} (kg/sec)	W _{corr} (lbm/sec)	Local				Cumulative Fan alone				Cumulative System			
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _b (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _b (%)	P ₀ /P ₀	η _{ad} (%)	η _b (%)	
413-63-1															
Sonic Inlet	5259	63.8	140.70		0.9931										
Rotor 1	5259	64.2	141.67	1.0499	1.1649	89.41	89.64	1.0499	1.1649	89.41	89.64	1.1569	85.21	85.51	
Stator 1					0.9926				1.1562	84.95	85.26	1.1482	80.71	81.09	
Rotor 2				1.0210	1.0640	85.00	85.14	1.0720	1.2302	84.78	85.23	1.2217	81.78	82.29	
Stator 2					0.9802				1.2059	76.36	76.99	1.1376	73.43	74.10	
413-63-12															
Sonic Inlet	5249	59.5	131.30		0.9912										
Rotor 1	5249	60.0	132.47	1.0532	1.1766	89.49	89.73	1.0532	1.1766	89.49	89.73	1.1662	84.41	84.75	
Stator 1					0.9918				1.1669	84.84	85.17	1.1566	79.78	80.19	
Rotor 2				1.0275	1.0908	91.37	91.48	1.0822	1.2728	86.90	87.34	1.2616	83.51	84.05	
Stator 2					0.9917				1.2623	83.81	84.34	1.2512	80.44	81.05	
413-63-13															
Sonic Inlet	5256	54.4	120.00		0.9930										
Rotor 1	5256	54.8	120.85	1.0547	1.1803	88.69	88.94	1.0547	1.1803	88.69	88.94	1.1720	84.81	85.15	
Stator 1					0.9921				1.1710	87.35	84.68	1.1628	80.51	80.92	
Rotor 2				1.0352	1.1168	90.97	91.11	1.0919	1.3077	86.72	87.22	1.2985	84.32	84.89	
Stator 2					0.9952				1.3014	85.11	85.65	1.2923	82.71	83.33	

OVERALL STALL POINT DATA

	W _{corr} Sonic Inlet (lbm/sec)	W _{corr} Sonic Inlet (kg/sec)	W _{corr} Rotor 1 (lbm/sec)	W _{corr} Rotor 1 (kg/sec)	P ₀ /P ₀ (fan)	P ₀ /P ₀ (system)
11-63	118.0	53.5	118.8	53.8	1.303	1.294
77	150.1	68.0	151.6	68.7	1.480	1.465

SPEED CODE

90
80
77
63

IDENTIFICATION

Sonic Inlet Throat Mach No. = 0.9
Sonic Inlet Throat Mach No. = 0.8
77 Percent Design Speed
63 Percent Design Speed

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.9 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	PSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	RUN NO	NO413	SPEED	CODE	90.	POINT NO	50
	RADI.	DEG	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC							
1	0.194	0.1680	146.2	234.7	146.2	144.7	0.9660	104.8	0.0	0.9041	0.6377	0.6933							
2	0.16	0.1277	156.9	227.8	156.9	161.1	0.9870	141.1	0.0	0.7829	0.6717	0.6724							
3	0.1576	0.1076	159.2	214.2	159.2	163.1	0.9941	138.8	0.0	0.7039	0.6783	0.6301							
4	0.1144	0.0888	159.3	201.2	159.3	165.9	0.9953	129.9	0.0	0.6436	0.6787	0.5907							
5	0.0731	0.0684	156.3	178.4	158.3	150.3	0.9941	96.1	0.0	0.5687	0.6754	0.5209							
6	0.0489	0.0501	157.3	173.9	157.3	148.0	0.9920	90.0	0.0	0.5448	0.6723	0.5870							
7	0.0399	0.0440	156.3	171.8	156.3	148.0	0.9894	87.1	0.0	0.5322	0.6691	0.5802							
8	0.0399	0.0372	155.1	163.6	155.1	146.8	0.9884	86.9	0.0	0.5223	0.6655	0.6933							
9	0.0305	0.0294	153.2	167.3	153.2	144.6	0.9820	86.2	0.0	0.5276	0.6594	0.6858							
10	0.0130	0.0187	148.7	164.2	148.7	140.8	0.9740	86.4	0.0	0.5401	0.6454	0.6753							
11	0.0089	0.0099	140.2	157.7	140.2	133.1	0.9590	86.6	0.0	0.5661	0.6193	0.6552							

SL	INCS	INCR	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-B	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADI	RADI	RADI	RADI				TOTAL	TOTAL	PO1	TOT	TOT	RADI	RADI	N/SEC	N/SEC	INLET
1	0.0190	0.1159	0.1977	1.0354	32.26	32.65	0.4300	0.2322	0.0514	1.2710	83.00	83.30	0.8951	0.3403	-121.9	51.5	1.2476
2	0.0029	0.0972	0.2232	0.8085	34.91	37.93	0.4238	0.1311	0.0333	1.2750	89.05	88.00	0.7167	0.0922	-136.5	15.0	1.2096
3	0.0114	0.1036	0.2295	0.8348	35.51	39.58	0.4300	0.0833	0.0229	1.2600	91.89	91.61	0.7855	0.1387	-152.8	-21.5	1.2088
4	0.0189	0.1083	0.2196	0.8493	35.57	38.75	0.4232	0.0812	0.0172	1.2564	93.19	92.96	0.8119	0.3165	-161.8	-52.8	1.2707
5	0.0164	0.0962	0.1394	0.2867	35.34	37.93	0.4425	0.0634	0.0176	1.2328	91.88	90.80	0.9058	0.6249	-201.5	-188.4	1.2453
6	0.0224	0.0919	0.1036	0.2282	35.09	37.81	0.3829	0.0559	0.0150	1.2361	91.61	91.35	0.9457	0.7178	-217.8	-129.8	1.2660
7	0.0424	0.0919	0.0905	0.2049	34.82	37.78	0.3714	0.0501	0.0133	1.2404	92.23	91.98	0.9708	0.7658	-228.2	-142.3	1.2671
8	0.0544	0.0966	0.0846	0.1835	34.51	37.54	0.3621	0.0483	0.0124	1.2448	92.29	92.05	0.9963	0.8108	-238.4	-156.4	1.2677
9	0.0661	0.1051	0.0807	0.1680	34.01	37.08	0.3602	0.0570	0.0147	1.2494	90.61	90.51	1.0204	0.8524	-249.5	-165.3	1.2675
10	0.0820	0.1207	0.0920	0.1541	32.91	36.02	0.3602	0.0648	0.0158	1.2586	89.26	88.90	1.0547	0.9004	-262.0	-177.4	1.2656
11	0.1026	0.1413	0.1477	0.1412	30.90	33.97	0.3630	0.0714	0.0172	1.2685	88.70	88.31	1.0956	0.9544	-272.6	-187.9	1.2348

TO/TO	PO/PO	EFF-AD	EFF-P	W/L/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
%	%	%	%	%	%	%	%	%
1.0737	1.2531	90.38	90.68	148.08	1.0737	1.2531	90.38	90.68

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	RUN NO	NO413	SPEED	CODE	90.	POINT NO	50
	RADI	DEG	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC							
1	0.1879	0.1304	214.5	150.9	124.5	148.7	174.7	25.8	0.9501	0.1697	0.6285	0.4336							
2	0.1200	0.0877	215.8	146.3	121.2	164.6	156.0	23.7	0.7934	0.1424	0.6340	0.4807							
3	0.0757	0.0580	208.9	167.0	161.1	165.7	137.1	20.6	0.6898	0.1235	0.6136	0.4839							
4	0.0504	0.0431	199.7	163.0	162.1	162.0	115.7	18.4	0.6235	0.1130	0.5859	0.4729							
5	0.0221	0.0247	180.9	153.5	154.5	152.5	96.1	17.4	0.5455	0.1134	0.5287	0.4451							
6	0.0156	0.0195	177.5	152.9	153.0	151.7	88.6	19.1	0.5224	0.1254	0.5179	0.4433							
7	0.0128	0.0167	175.9	152.2	153.5	151.1	86.0	18.5	0.5194	0.1219	0.5130	0.4409							
8	0.0108	0.0146	174.5	151.2	152.9	150.1	84.0	18.5	0.5022	0.1223	0.5082	0.4377							
9	0.0085	0.0119	172.8	151.4	151.3	150.2	83.6	18.5	0.5045	0.1226	0.5026	0.4377							
10	0.0064	0.0071	170.5	151.2	148.4	149.7	84.0	21.1	0.5151	0.1401	0.4947	0.4363							
11	0.0009	0.0025	164.6	142.9	141.3	140.6	84.4	25.4	0.5386	0.1797	0.4760	0.4109							

SL	INCS	INCR	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADI	RADI	RADI	RADI				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0305	0.1127	0.2636	0.7804	29.21	37.23	0.4385	0.1409	0.0293	0.9671	71.28	72.11
2	0.0325	0.0568	0.1851	0.4511	34.41	42.12	0.3628	0.0863	0.0193	0.9795	80.96	81.56
3	0.0930	0.0024	0.1474	0.5662	39.47	42.87	0.2784	0.0583	0.0140	0.9869	86.51	86.94
4	0.1752	0.0343	0.1271	0.5104	40.15	42.06	0.1773	0.0462	0.0119	0.9904	88.99	89.33
5	0.1902	0.0777	0.1158	0.4333	38.84	39.51	0.2744	0.0495	0.0144	0.9914	87.00	87.37
6	0.2132	0.0949	0.1218	0.3570	38.87	39.24	0.2591	0.0657	0.0202	0.9893	86.46	86.85
7	0.2261	0.1041	0.1157	0.3885	38.89	39.02	0.2575	0.0825	0.0263	0.9865	86.05	86.45
8	0.2386	0.1131	0.1147	0.3799	38.81	38.70	0.2576	0.0985	0.0325	0.9841	85.06	85.48
9	0.2472	0.1182	0.1149	0.3819	38.41	38.65	0.2530	0.0989	0.0337	0.9843	83.82	84.29
10	0.2718	0.1393	0.1402	0.3750	37.63	38.38	0.2444	0.0947	0.0334	0.9854	83.04	83.55
11	0.3038	0.1689	0.2184	0.3599	35.72	35.81	0.2630	0.1390	0.0501	0.9801	80.59	81.18

NCORP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
STAGE	%	%	%	%	%	%	%	%
670.94	1.0737	1.2346	84.25	84.71	1.0737	0.9853	84.25	

C-3

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	U-1	U-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1533	0.1049	139.4	226.4	137.1	193.3	25.1	110.0	0.1728	0.5427	0.3995	0.6497	151.7	161.5	0.5348	0.5683	186.6	198.1
2	0.1143	0.0804	168.5	225.7	167.0	198.2	22.3	107.8	0.1321	0.4454	0.4475	0.6494	164.9	171.9	0.6355	0.5996	219.6	208.3
3	0.0887	0.0617	172.7	216.2	171.6	195.0	19.6	93.3	0.1134	0.4447	0.5014	0.6227	177.1	182.3	0.6764	0.6174	232.9	214.4
4	0.0677	0.0430	170.3	203.5	171.4	186.5	17.7	82.6	0.1043	0.4118	0.4453	0.5859	190.3	193.8	0.7033	0.6264	241.8	217.6
5	0.0183	0.0058	161.4	178.3	160.4	165.2	18.3	67.0	0.1135	0.3854	0.4690	0.5114	220.3	221.2	0.7494	0.6481	257.9	226.0
6	0.0084	0.0001	159.7	168.1	158.6	157.1	18.7	59.9	0.1172	0.3643	0.4536	0.4815	230.8	231.1	0.7689	0.6654	264.9	232.3
7	0.0017	0.0043	157.3	167.4	156.3	158.1	18.4	55.0	0.1159	0.3348	0.4562	0.4797	241.1	241.1	0.7891	0.6998	272.1	244.2
8	0.0077	0.0122	156.3	165.7	155.1	157.2	19.0	52.3	0.1223	0.3213	0.4523	0.4740	255.3	254.3	0.8179	0.7323	282.6	256.0
9	0.0121	0.0169	154.2	163.7	152.6	153.8	21.6	56.0	0.1465	0.3491	0.4451	0.4668	265.0	264.4	0.8294	0.7388	287.2	259.0
10	0.0077	0.0123	145.4	147.1	143.2	133.5	25.3	61.6	0.1747	0.4372	0.4183	0.4165	274.7	274.4	0.8275	0.7114	287.6	251.2

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	J-FAC	CMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1650	0.0436	0.2991	0.5235	34.81	48.15	0.0734	0.0845	0.0201	1.1625	97.84	90.63	0.7424	0.2185	-126.6	-43.5	1.4060
2	0.1920	0.0827	0.1661	0.3943	42.94	50.81	0.1594	0.1309	0.0325	1.1405	80.75	80.38	0.7051	0.3108	-142.6	-64.1	1.4377
3	0.1692	0.0701	0.1388	0.3152	44.02	50.86	0.1716	0.0971	0.0245	1.1313	82.65	82.34	0.7420	0.4268	-157.6	-89.0	1.4287
4	0.1396	0.0509	0.1121	0.2537	43.43	49.13	0.1807	0.0944	0.0214	1.1232	82.59	82.30	0.7944	0.5407	-172.6	-112.2	1.4036
5	0.0783	0.0107	0.0781	0.1490	41.07	43.74	0.1898	0.1017	0.0242	1.0913	72.99	72.64	0.8996	0.7506	-202.0	-154.1	1.3457
6	0.0593	0.0017	0.0892	0.1035	40.61	41.52	0.1796	0.1080	0.0253	1.0733	66.34	65.98	0.9289	0.8283	-212.1	-171.2	1.3210
7	0.0347	0.0069	0.0749	0.0525	39.99	41.47	0.1531	0.0747	0.0178	1.0755	73.99	73.72	0.9591	0.8666	-222.8	-186.1	1.3205
8	0.0299	0.0088	0.0584	0.0802	39.64	41.51	0.1397	0.0684	0.0163	1.0719	73.80	73.54	0.9896	0.9094	-236.2	-202.0	1.3162
9	0.0219	0.0169	0.0510	0.0755	38.90	40.37	0.1458	0.0863	0.0206	1.0704	68.40	68.09	1.0105	0.9350	-243.3	-208.4	1.3109
10	0.0030	0.0419	0.1099	0.0393	36.30	34.47	0.1792	0.1546	0.0342	1.0534	47.37	46.99	1.0496	1.0103	-249.4	-212.8	1.2725

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	504			%	%
1.1122	1.3557	81.01	81.81	160.91	1.0358	1.0981	75.63	75.95

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	U-1	U-2	M-1	M-2	U-1	U-2	M-1	M-2	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET			INLET	STAGE	STAGE	STAGE
1	0.1218	0.1408	203.0	206.6	166.6	206.6	115.9	1.7	0.6043	0.0053	0.5775	0.5887	1.3544	1.1377	1.1196	1.0485				
2	0.0902	0.0992	213.3	217.8	185.5	217.8	105.4	-2.4	0.5153	-0.0112	0.6112	0.6250	1.4076	1.1306	1.1163	1.0474				
3	0.0684	0.0719	210.6	200.5	189.8	209.5	91.3	-5.8	0.4477	-0.0278	0.6053	0.6023	1.3909	1.1215	1.1018	1.0434				
4	0.0520	0.0517	202.4	199.1	185.9	199.2	80.1	-5.4	0.4056	-0.0270	0.5823	0.5730	1.3652	1.1136	1.0900	1.0399				
5	0.0285	0.0250	180.0	174.3	167.5	174.3	64.0	0.5	0.3755	0.0031	0.5166	0.4992	1.2995	1.1049	1.0539	1.0346				
6	0.0221	0.0187	170.3	168.2	159.7	168.2	59.1	-0.6	0.3545	-0.0036	0.4881	0.4819	1.2853	1.1018	1.0440	1.0307				
7	0.0185	0.0154	169.3	162.9	160.2	162.9	54.6	-0.4	0.3282	-0.0022	0.4853	0.4662	1.2728	1.1003	1.0366	1.0285				
8	0.0170	0.0149	167.4	161.6	159.1	161.6	52.2	4.0	0.3170	0.0248	0.4792	0.4619	1.2709	1.1027	1.0350	1.0272				
9	0.0150	0.0139	165.5	160.6	155.7	160.3	55.9	9.3	0.3448	0.0581	0.4721	0.4577	1.2697	1.1078	1.0361	1.0288				
10	0.0083	0.0084	149.4	149.5	136.2	149.0	61.5	13.6	0.4243	0.0907	0.4235	0.4239	1.2461	1.1142	1.0312	1.0319				

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	J-FAC	CMEGA-B	LOSS-P	PO2/PO1	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT
1	0.2832	0.1558	0.5921	47.26	51.36	0.0989	0.1823	0.0384	0.9331	67.58	68.10
2	0.2492	0.1272	0.5265	48.51	55.46	0.0921	0.0934	0.0210	0.9792	67.30	67.80
3	0.2863	0.1168	0.4756	49.47	53.84	0.1131	0.1167	0.0279	0.9764	64.70	65.19
4	0.3205	0.1220	0.4336	49.06	51.44	0.1201	0.1302	0.0129	0.9734	62.45	62.91
5	0.3474	0.1613	0.3724	44.18	44.81	0.1365	0.1992	0.0574	0.9668	43.71	44.13
6	0.3677	0.1956	0.3581	42.09	43.26	0.1176	0.1793	0.0541	0.9730	40.32	40.70
7	0.3946	0.1645	0.3305	42.32	41.83	0.1395	0.2475	0.0760	0.9639	36.28	36.61
8	0.4201	0.2018	0.2921	41.40	41.42	0.1234	0.2166	0.0782	0.9554	34.25	34.57
9	0.4369	0.2547	0.2867	40.75	40.94	0.1301	0.2278	0.0780	0.9573	35.42	35.74
10	0.4207	0.3128	0.3336	39.15	37.66	0.1176	0.1742	0.0653	0.9781	27.67	27.99

NGORR	WGORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%	%			STAGE	STAGE
RAD/SEC	KG/SEC			%	%			%	%
670.94	77.6	1.1122	1.3186	77.72	73.75	1.0358	0.9705	51.18	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.9 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLFNUM	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1832	0.1604	146.1	226.7	146.1	143.3	0.9676	175.6	0.0	0.0036	0.4373	0.6562	124.1	135.8	0.5739	0.4306	191.7	148.0
2	0.1592	0.1278	155.8	221.0	155.8	150.4	0.9879	154.1	0.0	0.7692	0.4477	0.6513	139.0	148.8	0.6247	0.4671	208.0	150.5
3	0.1318	0.1077	159.4	209.0	159.4	160.9	0.9965	133.3	0.0	0.6907	0.4790	0.6142	155.5	163.2	0.6692	0.4811	222.7	163.7
4	0.1105	0.0885	159.4	197.3	159.4	158.6	0.9977	117.3	0.0	0.6363	0.4790	0.5785	170.8	174.8	0.7025	0.4997	233.0	169.4
5	0.0737	0.0577	158.4	176.2	158.4	149.5	0.9955	93.3	0.0	0.5582	0.4799	0.5143	205.2	208.2	0.7787	0.5502	259.2	188.5
6	0.0599	0.0445	157.1	170.8	157.1	146.5	0.9927	87.9	0.0	0.5405	0.4718	0.4974	221.7	223.6	0.8161	0.5821	271.8	199.8
7	0.0515	0.0402	155.7	168.2	155.7	144.8	0.9895	83.6	0.0	0.5341	0.4673	0.4894	232.3	233.5	0.8394	0.6023	279.6	207.0
8	0.0436	0.0338	154.3	165.6	154.3	142.7	0.9861	83.9	0.0	0.5316	0.4629	0.4810	242.7	243.6	0.8629	0.6222	287.6	214.2
9	0.0344	0.0269	152.4	164.2	152.4	141.4	0.9823	83.5	0.0	0.5334	0.4571	0.4762	254.0	254.0	0.8884	0.6424	296.2	221.5
10	0.0217	0.0168	147.4	162.8	147.4	139.1	0.9726	84.6	0.0	0.5466	0.4414	0.4708	266.8	266.8	0.9127	0.6628	304.8	229.2
11	0.0094	0.0073	139.5	156.2	139.5	130.4	0.9577	86.1	0.0	0.5839	0.4171	0.4501	277.5	277.4	0.9294	0.6669	310.6	231.5

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0278	0.1247	0.2683	0.9736	32.30	33.21	0.4474	0.1540	0.0349	1.2792	88.90	88.50	0.7039	0.2694	-124.1	39.8	1.2568
2	0.0148	0.1091	0.2817	0.7619	34.72	34.17	0.4334	0.0671	0.0171	1.2860	94.28	94.07	0.7282	0.0336	-139.0	5.4	1.2897
3	0.0194	0.1115	0.2818	0.5904	35.64	39.86	0.4325	0.0337	0.0092	1.2771	96.63	96.50	0.7794	0.1830	-155.5	-29.9	1.2926
4	0.0268	0.1162	0.2611	0.4615	35.70	39.93	0.4248	0.0185	0.0051	1.2676	97.91	97.83	0.8198	0.3582	-170.8	-59.5	1.2839
5	0.0249	0.1044	0.1698	0.2504	35.42	38.39	0.3939	0.0162	0.0043	1.2486	97.66	97.59	0.9138	0.6554	-205.2	-114.9	1.2618
6	0.0314	0.1009	0.1343	0.2065	35.09	37.82	0.3791	0.0209	0.0055	1.2494	96.80	96.70	0.9548	0.7485	-221.7	-135.9	1.2591
7	0.0525	0.1021	0.1209	0.1846	34.72	37.48	0.3707	0.0224	0.0050	1.2529	96.48	96.36	0.9809	0.7963	-232.3	-147.9	1.2586
8	0.0672	0.1094	0.1154	0.1634	34.35	37.01	0.3643	0.0276	0.0070	1.2563	95.57	95.42	1.0050	0.8416	-242.7	-159.7	1.2576
9	0.0762	0.1153	0.1070	0.1519	33.88	36.70	0.3603	0.0348	0.0087	1.2630	94.57	94.18	1.0308	0.8787	-254.0	-170.5	1.2595
10	0.0934	0.121	0.1102	0.1473	32.65	36.09	0.3596	0.0423	0.0164	1.2777	93.26	93.02	1.0661	0.9188	-266.8	-182.1	1.2616
11	0.1119	0.1506	0.1660	0.1323	30.77	33.69	0.3696	0.0603	0.0141	1.2860	90.63	90.28	1.1049	0.9726	-277.5	-191.3	1.2903

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	S			%	%
1.0736	1.2662	94.85	95.03	167.83	1.0736	1.2662	94.85	95.03

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	T02/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	INLET	INLET	STAGE	T01
1	0.1926	0.1350	206.0	145.7	122.1	143.6	165.9	25.0	0.9353	0.1705	0.6026	0.4188	1.2118	1.0824	1.2335	1.0824
2	0.1256	0.0939	208.5	161.7	147.3	159.8	147.5	24.9	0.7850	0.1536	0.6113	0.4674	1.2599	1.0794	1.2568	1.0794
3	0.0820	0.0659	202.9	163.9	157.5	162.5	128.0	21.1	0.6820	0.1287	0.5951	0.4749	1.2741	1.0752	1.2593	1.0752
4	0.0572	0.0502	195.1	160.8	158.7	159.6	113.4	19.8	0.6203	0.1232	0.5715	0.4662	1.2899	1.0717	1.2538	1.0717
5	0.0386	0.0326	178.3	151.3	153.1	150.1	91.4	19.1	0.5380	0.1262	0.5209	0.4386	1.2493	1.0672	1.2363	1.0672
6	0.0245	0.0275	174.2	150.3	151.3	149.2	86.4	18.8	0.5190	0.1252	0.5081	0.4356	1.2474	1.0660	1.2377	1.0660
7	0.0208	0.0239	172.5	150.0	150.4	148.8	84.4	19.1	0.5116	0.1279	0.5024	0.4343	1.2469	1.0691	1.2412	1.0691
8	0.0169	0.0198	170.6	149.6	149.1	148.5	83.0	19.4	0.5077	0.1301	0.4965	0.4327	1.2462	1.0706	1.2448	1.0706
9	0.0125	0.0150	170.0	148.5	148.6	148.6	82.8	20.8	0.5086	0.1389	0.4939	0.4355	1.2474	1.0734	1.2511	1.0734
10	0.0069	0.0089	169.5	150.1	147.2	148.1	84.1	24.4	0.5194	0.1630	0.4912	0.4326	1.2473	1.0780	1.2631	1.0780
11	0.0022	0.0034	163.5	141.7	139.1	139.5	86.0	25.3	0.5355	0.1791	0.4720	0.4069	1.2296	1.0827	1.2650	1.0827

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0156	0.0979	0.2643	0.7648	29.39	36.44	0.4330	0.1642	0.0241	0.9642	75.02	75.76
2	0.0409	0.0483	0.1963	0.6313	36.30	41.43	0.3544	0.1016	0.0226	0.9773	85.07	85.55
3	0.1007	0.0053	0.1526	0.5533	39.42	42.63	0.3182	0.0672	0.0162	0.9857	90.64	90.95
4	0.1386	0.0375	0.1373	0.4971	40.11	42.01	0.2976	0.0544	0.0139	0.9892	93.22	93.44
5	0.1789	0.0864	0.1286	0.4118	39.21	39.52	0.2694	0.0588	0.0171	0.9901	93.08	93.29
6	0.2165	0.0983	0.1214	0.3938	38.88	39.23	0.2573	0.0577	0.0178	0.9907	92.53	92.75
7	0.2249	0.1030	0.1217	0.3837	38.69	39.10	0.2515	0.0587	0.0187	0.9907	92.26	92.49
8	0.2331	0.1076	0.1225	0.3776	38.39	38.92	0.2470	0.0582	0.0192	0.9910	91.53	91.80
9	0.2432	0.1142	0.1311	0.3697	38.24	38.92	0.2427	0.0625	0.0213	0.9704	90.14	90.45
10	0.2476	0.1351	0.1631	0.3564	37.84	38.63	0.2402	0.0749	0.0263	0.9886	88.56	88.94
11	0.2889	0.1540	0.2188	0.3743	35.61	36.08	0.2691	0.1164	0.0420	0.9835	84.09	84.61

NGORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	%
RAD/SEC			%	%			%	%
683.11	1.0736	1.2493	89.30	89.64	1.0736	0.9867	89.30	

ROTOR 2

RUN NO413, SPEED CODE 90, POINT NO 51																			
SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	U-1	U-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2	
	RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	RADIAN	RADIAN			N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	
1	0.1512	0.1031	133.0	219.1	130.8	101.1	24.3	123.4	0.1826	0.5924	0.3011	0.4264	154.4	164.4	0.5204	0.5300	184.5	185.4	
2	0.1112	0.0791	163.1	218.2	141.4	105.9	23.5	114.3	0.1441	0.5482	0.4719	0.4255	167.9	175.1	0.4264	0.5406	214.0	199.6	
3	0.0841	0.0417	168.6	209.7	167.4	104.6	20.1	99.5	0.1192	0.4925	0.4894	0.4010	180.4	185.4	0.4727	0.5047	221.8	203.0	
4	0.0629	0.0441	166.9	198.5	165.0	178.0	19.2	87.0	0.1152	0.4576	0.4832	0.3695	193.8	197.3	0.4990	0.5095	240.0	209.0	
5	0.0100	0.0081	158.4	175.3	157.5	159.2	18.7	73.4	0.1100	0.4316	0.4605	0.3013	224.2	225.2	0.7521	0.6291	259.0	220.0	
6	0.0084	0.0023	157.4	166.3	156.2	152.1	18.9	67.2	0.1201	0.4199	0.4546	0.4747	235.0	235.3	0.7759	0.6471	264.7	226.7	
7	0.0019	0.0020	156.1	166.4	154.9	153.7	19.0	63.8	0.1222	0.3933	0.4524	0.4751	245.5	245.5	0.7953	0.6794	274.4	230.0	
8	0.0054	0.0091	155.0	163.1	154.3	150.5	21.5	62.0	0.1301	0.3953	0.4905	0.4643	250.9	251.0	0.8214	0.7040	284.0	247.2	
9	0.0075	0.0100	154.1	162.1	152.1	148.1	24.4	65.9	0.1592	0.4104	0.4445	0.4602	260.0	260.2	0.8329	0.7142	288.7	251.5	
10	0.0054	0.0076	145.4	149.3	143.4	133.9	25.1	64.1	0.1732	0.4504	0.4103	0.4216	270.7	270.3	0.8396	0.7110	292.2	251.0	

SL	INCH	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-P	SEFF-A	U'-1	U'-2	VO'-1	VO'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	N/SEC	N/SEC	INLET
1	0.1277	0.0863	0.2994	0.5599	33.48	46.94	0.1304	0.0367	0.0007	1.1092	96.39	96.39	0.7797	0.2190	-130.1	-41.0	1.4437
2	0.1695	0.0682	0.1894	0.4134	42.03	49.46	0.2144	0.1079	0.0260	1.1627	85.65	85.34	0.7276	0.3140	-144.3	-40.0	1.4734
3	0.1400	0.0497	0.1470	0.3273	43.64	49.90	0.2201	0.0802	0.0202	1.1327	87.12	86.05	0.7624	0.4351	-140.3	-40.2	1.4401
4	0.1233	0.0347	0.1210	0.2803	43.22	48.72	0.2109	0.0507	0.0141	1.1441	89.44	89.44	0.8187	0.5504	-174.6	-109.4	1.4404
5	0.0400	0.0067	0.0071	0.1355	41.02	43.06	0.2240	0.0724	0.0177	1.1203	83.15	82.07	0.9171	0.7615	-205.6	-151.0	1.3903
6	0.0434	0.0143	0.0960	0.1098	40.69	41.05	0.2152	0.0019	0.0194	1.1041	78.44	78.14	0.9440	0.8352	-216.2	-160.1	1.3770
7	0.0279	0.0187	0.0769	0.1023	40.33	42.35	0.1935	0.0507	0.0140	1.1070	83.35	83.10	0.9709	0.8407	-224.5	-161.7	1.3779
8	0.0231	0.0154	0.0652	0.0802	40.09	41.31	0.1835	0.0654	0.0155	1.0994	79.96	79.60	0.9964	0.9162	-230.5	-164.1	1.3717
9	0.0160	0.0221	0.0572	0.0745	39.40	40.46	0.1842	0.0741	0.0176	1.0999	77.61	77.29	1.0157	0.9412	-245.4	-203.3	1.3497
10	0.0111	0.0500	0.1097	0.0477	36.88	36.21	0.1964	0.1010	0.0224	1.0913	69.62	69.22	1.0578	1.0101	-254.6	-213.3	1.3400

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			INLET	INLET
		%	%	SON			%	%
1.1176	1.4062	87.05	87.66	150.76	1.0410	1.1254	83.90	84.10

STATOR 2

RUN NO413, SPEED CODE 90, POINT NO 51																				
SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	U-1	U-2	M-1	M-2	U-1	U-2	M-1	M-2	TO/TO	PO/PO	T02/	
	RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	RADIAN	RADIAN			N/SEC	N/SEC	N/SEC	N/SEC	INLET	INLET	STAGE	T01
1	0.1200	0.1390	198.9	190.6	157.7	190.6	121.2	0.3	0.6510	0.0016	0.5648	0.5397	1.4103	1.1393	1.1600	1.0527				
2	0.0870	0.0954	207.6	200.4	175.0	200.3	111.7	-2.6	0.5643	-0.0132	0.5920	0.5710	1.4544	1.1330	1.1470	1.0513				
3	0.0650	0.0677	204.9	194.8	180.4	194.7	97.3	-5.2	0.4930	-0.0265	0.5872	0.5564	1.4456	1.1244	1.1355	1.0474				
4	0.0484	0.0401	197.5	186.0	177.7	185.9	86.2	-4.5	0.4511	-0.0242	0.5665	0.5316	1.4234	1.1170	1.1253	1.0436				
5	0.0262	0.0230	176.7	163.8	161.3	163.7	72.2	-2.3	0.4209	-0.0130	0.5054	0.4667	1.3634	1.1097	1.0942	1.0396				
6	0.0205	0.0181	168.0	158.5	154.4	158.5	64.8	-3.1	0.4050	-0.0190	0.4799	0.4515	1.3520	1.1078	1.0847	1.0365				
7	0.0177	0.0156	160.1	155.0	155.7	155.0	63.0	-3.7	0.3865	-0.0242	0.4799	0.4412	1.3446	1.1000	1.0791	1.0354				
8	0.0154	0.0140	164.7	153.0	152.3	153.0	62.7	0.3	0.3909	0.0022	0.4692	0.4369	1.3424	1.1113	1.0760	1.0345				
9	0.0116	0.0110	163.6	153.6	149.9	153.5	65.7	6.2	0.4134	0.0401	0.4648	0.4353	1.3426	1.1169	1.0779	1.0357				
10	0.0055	0.0055	151.3	142.8	136.2	142.6	64.0	6.5	0.4513	0.0595	0.4274	0.4027	1.3109	1.1222	1.0740	1.0365				

SL	INCH	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-ST6	TOT-ST6
1	-0.2350	0.1501	0.6503	42.31	50.60	0.1685	0.1205	0.0254	0.9765	82.55	82.92
2	-0.1903	0.1272	0.5795	47.44	54.28	0.1575	0.0610	0.0137	0.9871	77.05	78.20
3	-0.2403	0.1181	0.5203	49.22	53.24	0.1663	0.0689	0.0164	0.9857	78.02	78.42
4	-0.2760	0.1240	0.4753	48.71	51.04	0.1722	0.0222	0.0208	0.9840	78.64	79.02
5	-0.3020	0.1445	0.4347	44.29	44.76	0.1937	0.1304	0.0399	0.9779	65.75	66.19
6	-0.3163	0.1424	0.4256	42.36	43.20	0.1809	0.1176	0.0354	0.9829	64.32	64.72
7	-0.3364	0.1426	0.4107	42.78	42.24	0.2020	0.1713	0.0537	0.9750	62.07	62.49
8	-0.3444	0.1792	0.3807	41.70	41.81	0.1914	0.1523	0.0503	0.9707	61.27	61.60
9	-0.3683	0.2367	0.3733	40.83	41.59	0.1804	0.1450	0.0497	0.9799	60.75	61.17
10	-0.3937	0.2814	0.3920	36.72	38.24	0.1932	0.1343	0.0477	0.9840	58.45	58.90

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
683.11	77.3	1.1176	1.3796	81.95	82.75	1.0410	0.9811	70.17

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.9 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-1	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	M/SEC	M/SEC
1	3.1842	0.1395	147.2	235.0	147.2	143.9	0.9677	105.8	0.0	0.9922	0.4410	0.4928	126.6	138.5	0.5815	0.4466	194.2	151.5
2	3.1974	0.1285	156.5	228.5	156.5	157.7	0.9877	105.8	0.0	0.9996	0.4698	0.4726	141.7	151.7	0.4339	0.4647	211.1	157.9
3	3.1930	0.1151	159.6	215.4	159.6	159.6	0.9965	105.8	0.0	0.7357	0.4795	0.4322	158.6	166.6	0.4761	0.4727	225.0	161.1
4	3.1107	0.0955	159.3	203.2	159.3	157.5	0.9976	121.6	0.0	0.6842	0.4708	0.5950	174.2	180.3	0.7094	0.4851	236.1	165.8
5	3.0793	0.0640	157.7	181.2	157.9	147.8	0.9985	105.1	0.0	0.6186	0.4744	0.5276	209.2	212.3	0.7874	0.5311	242.1	182.5
6	3.0676	0.0524	156.9	178.0	156.9	146.4	0.9929	103.6	0.0	0.6008	0.4712	0.5167	226.1	228.2	0.8265	0.5649	275.2	194.6
7	3.0590	0.0452	155.7	176.5	155.7	146.1	0.9897	99.3	0.0	0.5958	0.4676	0.5117	236.9	238.2	0.8510	0.5849	283.5	201.8
8	3.0498	0.0374	154.6	174.9	154.6	144.9	0.9862	99.0	0.0	0.5949	0.4638	0.5062	247.5	248.4	0.8757	0.6044	291.8	206.9
9	3.0383	0.0287	152.9	173.5	152.9	143.2	0.9823	97.9	0.0	0.6000	0.4586	0.5010	259.0	259.0	0.9022	0.6224	300.8	215.5
10	3.0233	0.0172	148.0	170.4	148.0	139.1	0.9727	99.3	0.0	0.6187	0.4432	0.4914	272.0	272.0	0.9276	0.6389	309.7	222.0
11	3.0107	0.0074	140.2	162.9	140.2	130.1	0.9578	99.7	0.0	0.5538	0.4190	0.4699	283.0	282.9	0.9441	0.6442	315.8	224.7

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	CMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B*-1	B*-2	VO'-1	VO'-2	PO/PO
1	3.0330	0.1303	0.2219	1.0257	32.51	32.94	0.4529	0.2055	0.0459	1.2915	85.87	85.34	0.7096	0.3161	-126.6	47.3	1.2687
2	3.0222	0.1166	0.2245	0.9245	34.83	37.52	0.4571	0.1256	0.0319	1.2998	89.90	89.31	0.7357	0.0889	-141.7	14.1	1.3033
3	3.0205	0.1207	0.2337	0.6477	35.67	39.29	0.4536	0.0980	0.0241	1.2927	91.81	91.51	0.7826	0.1349	-158.6	-21.7	1.3077
4	3.0374	0.1268	0.2200	0.5172	35.56	39.47	0.4564	0.0710	0.0200	1.2635	92.56	92.30	0.8303	0.3171	-174.2	-51.7	1.2999
5	3.0360	0.1156	0.1423	0.2972	35.33	37.86	0.4380	0.0727	0.0193	1.2658	90.64	90.33	0.9250	0.6278	-209.2	-107.2	1.2792
6	3.0414	0.1104	0.1020	0.2488	35.06	37.91	0.4218	0.0683	0.0185	1.2741	90.70	90.37	0.9648	0.7160	-226.1	-127.7	1.2842
7	3.0416	0.1121	0.0940	0.2256	34.73	37.86	0.4146	0.0681	0.0182	1.2820	90.64	90.30	0.9900	0.7613	-236.9	-139.2	1.2880
8	3.0753	0.1155	0.0797	0.2088	34.41	37.64	0.4098	0.0715	0.0183	1.2897	90.02	89.65	1.0131	0.8044	-247.5	-150.4	1.2912
9	3.0633	0.1225	0.0727	0.1935	33.97	37.26	0.4085	0.0837	0.0210	1.2979	89.68	88.25	1.0378	0.8443	-259.0	-161.1	1.2943
10	3.1000	0.1388	0.0951	0.1790	32.75	36.19	0.4117	0.0939	0.0239	1.3109	86.94	86.42	1.0727	0.8937	-272.0	-173.0	1.2944
11	3.1130	0.1567	0.1467	0.1577	30.38	33.74	0.4193	0.1078	0.0263	1.3195	85.21	84.61	1.1110	0.9533	-283.0	-183.2	1.2830

TO2/TO1	PO2/PO1	EFF-AD	EFF-P	MC1/41	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
1.0648	1.2900	89.01	89.40	167.93	1.0648	1.2900	89.01	89.40

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	M/SEC	M/SEC
1	3.1955	0.1387	213.1	133.9	120.8	136.6	175.6	25.4	0.9670	0.1820	0.6231	0.3974	1.2243	1.0889	1.2646	1.0889	1.0889	1.0889
2	3.1291	0.0981	214.8	156.5	145.0	154.4	159.5	25.1	0.9294	0.1604	0.6288	0.4498	1.2736	1.0871	1.2714	1.0871	1.0871	1.0871
3	3.0855	0.0698	208.6	159.2	155.5	157.7	139.1	21.9	0.7295	0.1376	0.6106	0.4588	1.2886	1.0834	1.2743	1.0834	1.0834	1.0834
4	3.0612	0.0544	200.5	156.3	157.3	155.1	124.4	19.5	0.6670	0.1251	0.5862	0.4908	1.2856	1.0802	1.2693	1.0802	1.0802	1.0802
5	3.0336	0.0356	183.3	143.6	151.7	147.4	102.9	18.8	0.5962	0.1265	0.5936	0.4285	1.2702	1.0771	1.2567	1.0771	1.0771	1.0771
6	3.0270	0.0297	181.4	149.3	152.2	148.0	98.0	19.5	0.5759	0.1310	0.5273	0.4301	1.2720	1.0792	1.2617	1.0792	1.0792	1.0792
7	3.0233	0.0260	181.0	150.3	152.5	148.9	97.5	20.6	0.5691	0.1378	0.5254	0.4328	1.2745	1.0813	1.2682	1.0813	1.0813	1.0813
8	3.0197	0.0221	180.5	150.7	152.3	149.3	96.8	21.9	0.5600	0.1393	0.5232	0.4334	1.2750	1.0839	1.2739	1.0839	1.0839	1.0839
9	3.0155	0.0174	180.0	151.7	151.6	150.1	96.0	21.6	0.5492	0.1426	0.5209	0.4354	1.2781	1.0876	1.2816	1.0876	1.0876	1.0876
10	3.0094	0.0109	178.5	151.9	148.9	149.5	94.4	26.4	0.5840	0.1750	0.5148	0.4349	1.2787	1.0929	1.2943	1.0929	1.0929	1.0929
11	3.0035	0.0042	172.3	141.9	140.7	141.7	94.4	25.1	0.6152	0.1757	0.4952	0.4103	1.2614	1.0975	1.2975	1.0975	1.0975	1.0975

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	CMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B*-1	B*-2	VO'-1	VO'-2	PO/PO
1	3.1473	0.1296	0.2758	0.7850	28.85	34.11	0.4950	0.1507	0.0313	1.3652	73.20	74.08	0.8155	0.82.17	0.86.53	0.86.34	0.86.34
2	3.0033	0.0927	0.2031	0.6690	35.46	40.49	0.4092	0.0935	0.0208	0.9781	81.55	82.17	0.86.53	0.86.53	0.86.53	0.86.53	0.86.53
3	3.0353	0.0421	0.1615	0.5918	38.73	41.81	0.3719	0.0650	0.0195	0.9855	87.94	88.34	0.87.94	0.87.94	0.87.94	0.87.94	0.87.94
4	3.0877	0.0111	0.1391	0.5439	39.62	41.29	0.3543	0.0543	0.0139	0.9887	87.94	87.94	0.87.94	0.87.94	0.87.94	0.87.94	0.87.94
5	3.1407	0.0282	0.1289	0.4697	38.76	39.26	0.3230	0.0394	0.0115	0.9930	86.79	86.79	0.86.79	0.86.79	0.86.79	0.86.79	0.86.79
6	3.1597	0.0414	0.1274	0.4449	39.08	39.38	0.3124	0.0535	0.0165	0.9938	86.42	86.42	0.86.42	0.86.42	0.86.42	0.86.42	0.86.42
7	3.1674	0.0454	0.1317	0.4213	39.23	39.56	0.3056	0.0602	0.0192	0.9887	85.42	85.42	0.85.42	0.85.42	0.85.42	0.85.42	0.85.42
8	3.1749	0.0494	0.1317	0.4267	39.25	39.40	0.3040	0.0692	0.0227	0.9882	84.45	84.45	0.84.45	0.84.45	0.84.45	0.84.45	0.84.45
9	3.1825	0.0535	0.1349	0.4264	39.08	39.73	0.3012	0.0736	0.0250	0.9876	82.38	82.38	0.82.38	0.82.38	0.82.38	0.82.38	0.82.38
10	3.2024	0.0704	0.1751	0.4090	38.31	39.41	0.2925	0.0746	0.0262	0.9677	79.24	79.24	0.79.24	0.79.24	0.79.24	0.79.24	0.79.24
11	3.2277	0.0923	0.2146	0.4399	36.08	37.04	0.2731	0.1091	0.0394	0.9832							

NCORR	TO2/TO1	PO2/PO1	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
696.64	1.0648	1.2726	84.11	84.64	1.0648	1.2985	84.11	84.64

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	M/SEC	M/SEC
1	0.1491	0.1012	126.2	211.7	123.8	165.8	24.7	126.4	0.1955	0.4336	0.2601	0.6011	157.5	167.6	0.5179	0.4963	181.5	174.8
2	0.1062	0.0777	157.9	209.9	156.1	174.2	23.7	116.2	0.1523	0.5850	0.4543	0.5957	171.2	178.5	0.6178	0.5263	214.7	185.1
3	0.0615	0.0447	162.8	202.5	162.5	174.3	20.7	103.0	0.1254	0.5318	0.4478	0.5764	183.9	189.3	0.6648	0.5539	230.3	194.5
4	0.0615	0.0447	162.2	192.1	161.1	164.3	18.7	90.9	0.1154	0.4419	0.4467	0.5469	197.6	201.2	0.6959	0.5752	240.8	202.0
5	0.0185	0.0102	156.4	171.2	155.2	152.3	18.9	75.3	0.1112	0.4417	0.4455	0.4858	228.7	229.7	0.7535	0.6153	261.0	218.8
6	0.0103	0.0055	158.7	163.1	155.4	147.2	20.0	73.2	0.1251	0.4451	0.4451	0.4621	239.7	239.9	0.7762	0.6366	269.1	224.7
7	0.0061	0.0033	156.9	162.4	155.6	148.3	20.7	66.2	0.1325	0.4197	0.4521	0.4539	250.4	250.4	0.7991	0.6698	277.4	238.5
8	0.0007	0.0009	157.7	162.2	156.2	149.2	22.2	63.4	0.1414	0.4028	0.4534	0.4585	265.1	264.1	0.8297	0.7065	288.7	249.9
9	0.0017	0.0027	156.9	161.5	154.7	146.2	24.4	68.4	0.1671	0.4176	0.4495	0.4550	275.1	274.5	0.8397	0.7121	292.9	252.7
10	0.0010	0.0018	148.9	152.9	146.8	137.7	25.0	66.6	0.1686	0.4507	0.4253	0.4299	285.2	284.9	0.8532	0.7230	298.8	258.0

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	
1	0.3304	0.0311	0.3151	0.5615	32.27	45.63	0.1886	0.0349	-0.0083	TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC
2	0.1421	0.0330	0.1565	0.4136	41.11	47.85	0.2591	0.0762	0.0189	1.1781	90.41	90.18	0.7548	0.3411	-147.4	-62.3	1.5098	1.5098
3	0.1427	0.0256	0.1702	0.3781	42.98	48.70	0.2591	0.0530	0.0132	1.1706	92.08	91.89	0.7865	0.4584	-163.2	-84.4	1.5091	1.5091
4	0.0965	0.0079	0.1482	0.2606	42.51	47.80	0.2521	0.0286	0.0071	1.1638	95.08	94.97	0.8374	0.5768	-179.0	-110.3	1.4926	1.4926
5	0.0441	0.0235	0.1112	0.1482	40.92	43.58	0.2453	0.0389	0.0093	1.1415	91.43	91.26	0.9338	0.7856	-209.8	-153.4	1.4500	1.4500
6	0.0334	0.0244	0.1172	0.0566	40.97	41.83	0.2318	0.0439	0.0102	1.1247	89.01	88.83	0.9549	0.8564	-219.6	-169.7	1.4324	1.4324
7	0.0134	0.0232	0.1012	0.0825	40.95	42.19	0.2081	0.0236	0.0055	1.1237	93.47	93.36	0.9754	0.8929	-229.6	-184.2	1.4331	1.4331
8	0.0204	0.0183	0.0799	0.0682	40.99	42.37	0.1895	0.0139	0.0032	1.1221	95.81	95.73	0.9990	0.9309	-242.8	-200.5	1.4345	1.4345
9	0.0102	0.0207	0.0696	0.0608	40.44	41.32	0.1961	0.0274	0.0064	1.1218	91.87	91.73	1.0143	0.9536	-248.7	-206.1	1.4335	1.4335
10	0.0104	0.0493	0.1077	0.0490	38.11	38.55	0.1939	0.0347	0.0077	1.1218	89.70	89.53	1.0571	1.0081	-260.2	-218.3	1.4135	1.4135

TU/TO	PO/PO	EFF-AD	EFF-P	W1/W1	TOT/TOT	PO2/PO1	EFF-AD	EFF-P	
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	RJTOR	
1.1309	1.4584	86.96	87.64	156.76		1.0425	1.1460	93.38	93.51

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	B-2	M-1	M-2	PO/PJ	TD/TJ	PO/PJ	TQ2/
1	0.1206	0.1386	193.9	177.2	149.0	177.3	124.1	1.3	0.6900	0.0071	0.5475	0.4982	1.4407	1.1485	1.1901	1.0547
2	0.0870	0.0943	200.2	185.6	164.9	185.6	113.6	-1.2	0.6017	-0.0062	0.5678	0.5240	1.4469	1.1432	1.1673	1.0529
3	0.0638	0.0661	198.5	182.9	171.1	182.8	100.7	-3.8	0.5310	-0.0205	0.5845	0.5176	1.4465	1.1358	1.1613	1.0498
4	0.0469	0.0463	191.6	175.1	169.6	175.0	89.1	-4.5	0.4834	-0.0264	0.5455	0.4960	1.4781	1.1292	1.1531	1.0464
5	0.0228	0.0204	172.7	157.3	155.6	157.5	75.1	-3.7	0.4445	-0.0233	0.4904	0.4453	1.4328	1.1235	1.1271	1.0418
6	0.0167	0.0145	164.8	151.4	149.8	151.3	69.2	-5.8	0.4335	-0.0181	0.4673	0.4278	1.4175	1.1218	1.1127	1.0380
7	0.0131	0.0112	164.0	149.6	150.3	149.6	65.6	-3.1	0.4118	-0.0204	0.4667	0.4223	1.4125	1.1225	1.1075	1.0362
8	0.0111	0.0100	163.5	149.2	150.6	149.2	63.7	-0.3	0.4002	-0.0019	0.4624	0.4204	1.4110	1.1264	1.1034	1.0350
9	0.0087	0.0082	162.6	149.7	147.6	149.7	68.2	3.4	0.4331	0.0228	0.4583	0.4207	1.4118	1.1330	1.1050	1.0364
10	0.0037	0.0037	154.4	143.1	139.3	143.0	61.5	6.0	0.4455	0.0416	0.4332	0.4005	1.3946	1.1385	1.1084	1.0373

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
1	0.1967	0.1596	0.6838	41.21	49.97	0.2175	0.0956	0.0202	0.9824	TOT-STG	TOT-STG
2	0.1629	0.1342	0.6079	46.01	52.55	0.2006	0.0460	0.0099	0.9913	85.39	85.70
3	0.2030	0.1241	0.5515	48.09	52.24	0.2018	0.0394	0.0091	0.9925	87.69	87.95
4	0.2437	0.1226	0.5099	47.92	50.21	0.2078	0.0461	0.0122	0.9912	89.54	89.76
5	0.2734	0.1390	0.4728	44.10	47.03	0.2182	0.0724	0.0209	0.9891	83.07	83.36
6	0.2886	0.1241	0.4717	42.40	43.19	0.2178	0.0717	0.0215	0.9901	81.45	81.73
7	0.3111	0.1464	0.4222	42.67	42.61	0.2191	0.1049	0.0329	0.9856	81.76	82.02
8	0.3370	0.1751	0.4021	42.68	42.34	0.2168	0.1206	0.0399	0.9836	81.57	81.83
9	0.3486	0.2193	0.4103	41.61	42.26	0.2169	0.1114	0.0382	0.9850	79.49	79.78
10	0.3995	0.2637	0.4039	38.98	40.06	0.2133	0.0957	0.0351	0.9880	80.01	80.30

VCORR	WCORR	IC/TC	PO/PO	EFF-AD	EFF-P	TOT/TOT	PO2/PO1	EFF-AD	
INLET	INLET	INLET	INLET	INLET	INLET			STAGF	
696.64	777.8	1.1309	1.4411	84.06	84.86		1.0425	0.9881	85.03

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	PO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PO1/PO	PO-2	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1803	0.1591	139.1	222.3	139.1	141.5	0.9703	172.7	0.0	0.9816	0.4159	0.4533	117.5	129.5	0.5442	0.4378	182.1	148.3
2	0.1499	0.1257	145.0	216.8	149.0	155.7	0.9900	151.3	0.0	0.7703	0.4465	0.5395	131.5	140.8	0.5995	0.4589	198.7	155.6
3	0.1205	0.1057	151.3	204.1	151.8	156.6	0.9970	130.9	0.0	0.6951	0.4552	0.6004	147.2	154.4	0.6340	0.4658	211.5	158.3
4	0.0987	0.0865	152.0	192.5	152.0	155.5	0.9984	113.4	0.0	0.6292	0.4557	0.5652	161.6	167.3	0.6653	0.4834	221.9	164.6
5	0.0627	0.0554	151.1	171.9	151.1	145.0	0.9977	90.7	0.0	0.5539	0.4529	0.5024	194.1	197.0	0.7374	0.5278	246.0	180.6
6	0.0302	0.0440	150.2	168.0	150.2	144.6	0.9961	85.6	0.0	0.5364	0.4501	0.4904	209.8	211.8	0.7733	0.5602	258.0	191.9
7	0.0342	0.0371	149.2	165.0	149.2	143.7	0.9940	83.0	0.0	0.5237	0.4470	0.4839	219.8	221.0	0.7960	0.5810	265.7	199.3
8	0.0343	0.0299	148.7	164.0	148.3	142.4	0.9919	81.3	0.0	0.5190	0.4442	0.4777	227.7	230.5	0.8190	0.6006	273.4	206.2
9	0.0255	0.0271	147.2	162.6	147.2	140.9	0.9897	81.2	0.0	0.5232	0.4410	0.4727	240.4	240.4	0.8441	0.6178	281.9	212.5
10	0.0155	0.0131	143.5	160.3	142.5	137.4	0.9882	81.9	0.0	0.5365	0.4293	0.4668	252.4	252.4	0.8687	0.6356	290.4	219.2
11	0.0056	0.0055	135.2	152.5	135.2	128.5	0.9684	82.1	0.0	0.5548	0.4036	0.4406	262.6	262.5	0.8819	0.6399	295.4	221.5

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	MEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO-1	VO-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL				PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1241	0.1209	0.2365	1.0016	31.11	37.57	0.4178	0.1769	0.0397	1.2537	87.48	87.07	0.7002	0.3014	-117.5	44.2	1.2292
2	0.0384	0.1031	0.2474	0.7458	33.57	37.05	0.4170	0.0966	0.0246	1.2563	91.80	91.53	0.7222	0.0676	-131.5	10.6	1.2567
3	0.0354	0.1076	0.2474	0.6209	34.31	38.35	0.4251	0.0375	0.0180	1.2471	93.48	93.27	0.7495	0.1486	-147.2	-23.5	1.2566
4	0.0210	0.1124	0.2360	0.4829	34.39	38.73	0.4106	0.0656	0.0105	1.2370	95.74	95.41	0.8199	0.3331	-161.6	-53.9	1.2470
5	0.0204	0.1003	0.1438	0.2803	34.20	37.01	0.3908	0.0450	0.0125	1.2162	93.36	93.17	0.9097	0.6294	-194.1	-106.3	1.2241
6	0.0285	0.0960	0.1036	0.2722	33.98	34.46	0.3742	0.0444	0.0120	1.2199	93.14	92.94	0.9498	0.7176	-209.8	-126.2	1.2268
7	0.0434	0.0960	0.0898	0.2697	33.73	34.74	0.3640	0.0428	0.0114	1.2219	92.20	92.00	0.9748	0.7652	-219.8	-138.	1.2273
8	0.0569	0.1001	0.0824	0.1851	33.50	34.47	0.3576	0.0474	0.0124	1.2247	92.29	92.06	0.9977	0.8086	-229.7	-149.2	1.2275
9	0.0667	0.1060	0.0747	0.1750	33.23	36.08	0.3571	0.0605	0.0157	1.2284	90.07	89.78	1.0213	0.8443	-240.4	-159.1	1.2285
10	0.0812	0.1200	0.0826	0.1628	32.31	35.27	0.3538	0.0758	0.0193	1.2357	87.65	87.28	1.0539	0.8912	-252.4	-170.5	1.2277
11	0.1024	0.1411	0.1452	0.1436	30.31	32.76	0.3656	0.0832	0.0215	1.2404	85.68	85.23	1.0954	0.9518	-262.6	-180.4	1.2138

TO/T0	PO/PO	EFF-AD	EFF-P	W1/W1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.0676	1.2325	91.16	91.42	162.48	1.0676	1.2325	91.16	91.42

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/T0	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	STAGE	STAGE	T01
1	0.1919	0.1332	204.1	146.9	122.5	145.1	143.2	23.1	0.9255	0.1559	0.5984	0.4236	1.1913	1.0767	1.2149	1.0767
2	0.1215	0.0905	205.4	161.3	145.8	159.7	144.7	22.5	0.7805	0.1390	0.6033	0.4674	1.2351	1.0737	1.2347	1.0737
3	0.0730	0.0610	198.8	161.4	154.1	160.2	125.5	13.4	0.6830	0.1199	0.5837	0.4685	1.2433	1.0697	1.2338	1.0697
4	0.0534	0.0459	190.6	157.0	156.0	156.0	109.5	17.2	0.6115	0.1094	0.5574	0.4561	1.2398	1.0654	1.2249	1.0654
5	0.0243	0.0307	173.9	149.2	149.4	147.2	86.9	16.5	0.5362	0.1115	0.5085	0.4303	1.2168	1.0618	1.2070	1.0618
6	0.0243	0.0254	171.1	147.8	144.9	144.6	86.2	18.2	0.5146	0.1238	0.4998	0.4289	1.2160	1.0627	1.2082	1.0627
7	0.0223	0.0224	169.7	147.5	146.4	146.4	81.9	18.1	0.5076	0.1230	0.4953	0.4279	1.2157	1.0634	1.2103	1.0634
8	0.0163	0.0193	169.4	147.1	147.9	146.0	80.5	18.0	0.4983	0.1228	0.4910	0.4266	1.2153	1.0648	1.2125	1.0648
9	0.0127	0.0154	167.6	147.5	146.9	146.4	80.6	18.1	0.5018	0.1228	0.4878	0.4272	1.2163	1.0676	1.2164	1.0676
10	0.0074	0.0096	156.1	147.2	144.7	145.6	81.5	21.3	0.5132	0.1456	0.4823	0.4252	1.2157	1.0715	1.2235	1.0715
11	0.0024	0.0036	158.4	134.1	135.8	135.9	82.0	24.3	0.5433	0.1772	0.4590	0.3975	1.1975	1.0746	1.2241	1.0746

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	MEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO-1	VO-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL				PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0058	0.0081	0.2497	0.7456	29.22	36.51	0.4208	0.1437	0.0299	0.9691	84.61	84.37	0.9691	0.7530	-74.61	75.30	1.0767
2	0.0434	0.0438	0.1817	0.6415	35.32	41.00	0.3462	0.0787	0.0176	0.9828	86.37	86.04	0.9828	0.8914	-86.37	89.14	1.0737
3	0.0930	0.0043	0.1438	0.5631	38.10	41.53	0.3150	0.0501	0.0121	0.9897	88.81	89.14	0.9897	0.9164	-88.81	91.64	1.0697
4	0.1473	0.0042	0.1235	0.5022	38.77	40.59	0.2987	0.0488	0.0125	0.9927	91.39	91.64	0.9927	0.8973	-91.39	89.73	1.0654
5	0.2067	0.0042	0.1139	0.4247	37.77	38.26	0.2689	0.0463	0.0137	0.9924	89.45	89.73	0.9924	0.8896	-89.45	88.96	1.0627
6	0.2213	0.1127	0.1202	0.3507	37.90	38.06	0.2556	0.0553	0.0173	0.9912	88.66	88.78	0.9912	0.8878	-88.66	88.78	1.0634
7	0.2329	0.1150	0.1169	0.3806	37.78	37.97	0.2512	0.0614	0.0195	0.9905	88.48	88.73	0.9905	0.8873	-88.48	87.73	1.0648
8	0.2425	0.1170	0.1152	0.3755	37.84	37.85	0.2491	0.0655	0.0215	0.9901	85.22	85.62	0.9901	0.8562	-85.22	85.62	1.0676
9	0.2500	0.1200	0.1151	0.3790	37.87	37.87	0.2475	0.0662	0.0226	0.9901	83.09	83.56	0.9901	0.8356	-83.09	83.56	1.0715
10	0.2730	0.1413	0.1456	0.3476	34.75	37.53	0.2422	0.0671	0.0237	0.9901	79.78	80.35	0.9901	0.8035	-79.78	80.35	1.0746
11	0.2990	0.1642	0.2159	0.3660	34.34	34.79	0.2622	0.0785	0.0395	0.9968							

WCOPI	TO/T0	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			STAGE	STAGE
			%	%			%	%
0.64639	1.0676	1.2184	85.99	85.36	1.0676	0.9985	95.99	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M-1	M-1	V-1	V-2
RJN N0413, SPEED CODE 00, POINT NO 50																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	M/SEC	M/SEC	M-1	M-1	M/SEC	M/SEC
1	3.1523	0.1074	134.9	215.7	137.0	186.2	22.4	108.9	0.1652	0.9235	0.2875	0.6207	146.1	155.6	0.5219	0.5923	181.6	192.0
2	3.1123	0.0789	162.6	215.5	161.2	190.7	21.7	100.3	0.1324	0.4911	0.4715	0.6217	138.8	165.7	0.6147	0.5817	212.0	201.6
3	0.3866	0.0600	165.0	206.6	165.0	157.6	18.3	86.5	0.1123	0.4305	0.4929	0.5956	170.7	175.7	0.6532	0.5999	224.6	207.7
4	0.3616	0.0408	143.4	154.9	162.5	179.7	16.6	75.6	0.1015	0.3974	0.4758	0.5626	183.4	186.7	0.6783	0.6097	232.9	211.2
5	0.3131	0.0017	135.7	171.5	154.7	160.5	17.4	60.5	0.1120	0.3402	0.4520	0.4936	212.2	213.1	0.7237	0.6374	246.8	221.5
6	0.3031	0.0041	154.5	160.9	183.4	152.0	19.1	52.7	0.1174	0.3336	0.4490	0.4624	222.4	222.6	0.7426	0.6554	255.5	226.0
7	0.0024	0.0080	153.1	159.9	182.0	152.8	17.9	46.9	0.1174	0.2978	0.4447	0.4600	232.3	232.3	0.7633	0.6913	262.8	240.3
8	0.3099	0.0140	152.6	158.1	151.4	152.0	18.7	43.5	0.1231	0.2788	0.4422	0.4542	245.9	245.0	0.7912	0.7252	275.0	252.4
9	0.3130	0.0171	150.3	156.1	148.7	148.8	21.7	47.2	0.1450	0.2071	0.4345	0.4472	255.3	254.7	0.8007	0.7317	276.9	255.4
10	0.3097	0.0121	140.9	137.9	134.8	130.0	24.2	51.9	0.1724	0.3400	0.4080	0.3983	264.7	264.3	0.8000	0.7088	277.7	249.0

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	J-FAC	CMEGA-R	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO	
RJN N0413, SPEED CODE 00, POINT NO 50																		
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	3.1113	0.0399	0.3221	0.5036	33.92	46.36	0.0729	0.0574	0.0135	1.1503	93.36	93.23	0.7461	0.2425	-123.7	-46.6	1.3734	
2	0.1924	0.0529	0.1835	0.3767	41.51	45.31	0.1532	0.1048	0.0259	1.1304	83.85	83.56	0.7048	0.3281	-137.6	-65.4	1.4024	
3	0.1668	0.0678	0.1538	0.3024	42.49	49.26	0.1637	0.0720	0.0181	1.1232	86.55	86.32	0.7443	0.4420	-152.3	-89.2	1.3940	
4	0.1364	0.0474	0.1244	0.2449	41.83	47.61	0.1707	0.0579	0.0146	1.1139	87.51	87.31	0.7979	0.5530	-166.8	-111.1	1.3718	
5	0.0784	0.0108	0.0856	0.1394	35.79	42.70	0.1707	0.0692	0.0173	1.0852	79.79	79.54	0.8995	0.7601	-194.8	-152.6	1.3198	
6	0.0617	0.0039	0.1020	0.0856	35.46	40.38	0.1576	0.0757	0.0178	1.0648	72.67	72.42	0.9267	0.8411	-204.3	-170.0	1.2946	
7	0.0399	0.0017	0.0896	0.0725	39.12	40.67	0.1282	0.0416	0.0097	1.0640	82.20	82.04	0.9539	0.8814	-214.4	-185.4	1.2829	
8	0.0367	0.0020	0.0735	0.0583	38.89	40.32	0.1105	0.0316	0.0074	1.0588	84.13	83.99	0.9828	0.9245	-227.2	-201.5	1.2880	
9	0.0287	0.0102	0.0648	0.0550	38.05	39.25	0.1143	0.0492	0.0108	1.0574	78.22	78.05	1.0038	0.9488	-233.6	-207.5	1.2826	
10	0.0006	0.0395	0.1213	0.0255	35.37	33.83	0.1447	0.1113	0.0242	1.0432	51.91	51.62	1.0472	1.0217	-240.5	-212.4	1.2472	

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
1.0956	1.3265	84.45	85.10	157.16	1.0300	1.0487	82.06	82.27

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RJN N0413, SPEED CODE 00, POINT NO 50																
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	INLET	INLET	INLET	STAGE
1	3.1219	0.1403	193.8	200.2	161.6	200.2	106.9	0.0	0.5815	0.0000	0.5534	0.5730	1.3268	1.1237	1.1109	1.0438
2	0.3898	0.3979	204.2	210.7	179.2	210.7	98.0	-4.3	0.4988	-0.0204	0.5869	0.6071	1.3749	1.1176	1.1083	1.0425
3	0.3678	0.0708	201.7	202.5	193.1	202.5	94.6	-4.7	0.4322	-0.0231	0.5813	0.5841	1.3584	1.1094	1.0951	1.0389
4	0.3513	0.0510	194.1	193.3	175.4	193.3	74.1	-3.9	0.3914	-0.0203	0.5601	0.5577	1.3363	1.1020	1.0857	1.0356
5	0.3286	0.0260	172.9	193.0	182.4	169.0	59.3	0.6	0.3534	0.0034	0.4978	0.4861	1.2747	1.0934	1.0481	1.0293
6	0.3222	0.0197	162.0	163.4	154.6	163.4	51.8	-0.8	0.3233	-0.0048	0.4690	0.4702	1.2622	1.0896	1.0381	1.0248
7	0.3083	0.0161	161.6	157.9	154.8	157.9	46.5	0.4	0.2917	0.0026	0.4651	0.4541	1.2498	1.0877	1.0285	1.0217
8	0.3108	0.0153	159.5	156.3	153.5	155.2	43.5	3.9	0.2760	0.0249	0.4586	0.4488	1.2469	1.0894	1.0251	1.0196
9	0.3150	0.0143	157.4	154.8	150.2	154.5	47.2	9.2	0.3047	0.0994	0.4512	0.4474	1.2447	1.0940	1.0257	1.0207
10	0.3084	0.0087	141.9	144.3	132.1	143.9	21.8	11.8	0.3740	0.0815	0.4042	0.4112	1.2274	1.0999	1.0229	1.0235

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	J-FAC	CMEGA-R	LOSS-P	PO2/	EFF-A	EFF-P
RJN N0413, SPEED CODE 00, POINT NO 50											
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT
1	3.3061	0.1449	0.5314	47.26	50.07	0.0816	0.1815	0.0388	0.9859	64.66	70.12
2	0.2659	0.1200	0.4912	47.74	53.48	0.07	0.0932	0.0210	0.9806	70.04	70.48
3	0.3119	0.1216	0.4452	48.48	52.20	0.0544	0.1199	0.0785	0.9755	67.60	68.02
4	0.3357	0.1288	0.4117	47.58	50.03	0.1037	0.1332	0.0329	0.9752	66.63	67.02
5	0.3726	0.1515	0.3470	43.05	43.59	0.1199	0.2072	0.0597	0.9677	46.10	46.46
6	0.3588	0.1574	0.3282	40.55	42.19	0.0945	0.1789	0.0532	0.9750	43.36	43.67
7	0.4197	0.1641	0.2491	41.09	40.73	0.1131	0.2409	0.0755	0.9644	37.13	37.39
8	0.4612	0.2019	0.2511	40.65	40.22	0.1096	0.2370	0.0783	0.9642	36.18	36.41
9	0.4767	0.2560	0.2453	39.51	39.43	0.1039	0.2237	0.0787	0.9696	35.37	35.61
10	0.4711	0.2936	0.2924	34.31	34.56	0.0885	0.1837	0.0652	0.9722	27.61	27.84

WCI/PP	WCI/PP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
0.66.39	74.8	1.0956	1.2858	75.79	76.45	1.0300	0.9723	54.74

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPI-1		V-1		V-2		W-1		W-2		PO1/PO		W-2		S-1		S-2		N-1		N-2		U-1		U-2		M-1		M-2		V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC		
1	0.1624	0.1595	145.6	226.8	145.6	156.5	0.9688	181.1	0.0	0.9222	0.4399	0.4687	120.3	131.6	0.3465	0.4282	180.9	145.2														
2	0.1237	0.1300	154.1	219.4	154.1	151.1	0.9920	199.1	0.0	0.9908	0.4624	0.4461	134.7	144.2	0.4142	0.4471	204.7	151.9														
3	0.1067	0.1215	152.8	208.0	152.8	154.9	0.9977	186.8	0.0	0.7305	0.4582	0.4109	150.8	158.2	0.4438	0.4584	214.7	156.1														
4	0.0919	0.0997	150.2	197.2	150.2	154.0	0.9980	173.1	0.0	0.6743	0.4582	0.3778	165.4	171.4	0.4701	0.4729	225.4	161.4														
5	0.0739	0.0809	147.3	175.3	147.3	144.5	0.9961	159.6	0.0	0.6037	0.4412	0.3115	190.9	201.8	0.7412	0.5199	247.5	177.0														
6	0.0647	0.0747	147.2	171.8	147.2	143.8	0.9942	146.0	0.0	0.5799	0.4407	0.4099	219.8	217.0	0.7801	0.5288	268.5	189.2														
7	0.0591	0.0703	147.1	169.7	147.1	143.0	0.9925	143.3	0.0	0.5484	0.4407	0.4094	229.2	226.4	0.8094	0.5719	289.8	196.7														
8	0.0501	0.0629	147.2	167.4	147.2	141.4	0.9905	139.6	0.0	0.5146	0.4407	0.4099	239.3	236.1	0.8311	0.5913	277.5	208.7														
9	0.0382	0.0515	146.7	165.6	146.7	139.4	0.9880	136.2	0.0	0.5066	0.4394	0.4088	246.2	246.2	0.8503	0.6089	286.4	218.1														
10	0.0322	0.0412	143.4	163.1	143.4	134.3	0.9868	132.7	0.0	0.5021	0.4392	0.4714	258.6	258.6	0.8847	0.6272	295.7	217.0														
11	0.0188	0.0309	136.2	154.7	136.2	125.7	0.9674	120.1	0.0	0.4220	0.4067	0.4451	269.0	268.9	0.9095	0.6271	301.5	218.6														

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-S	LOSS-P	PO2/	EFF-P	EFF-A	S-1	S-2	W-1	W-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0124	0.1092	0.1918	1.0346	32.24	31.39	0.4650	0.2086	0.0443	1.2603	89.81	89.32	0.4005	-0.3461	-126.3	49.9	1.2400
2	0.0029	0.0972	0.2178	0.8139	34.57	36.08	0.4613	0.1410	0.0358	1.2655	89.20	87.90	0.7548	-0.0975	-124.7	16.9	1.2700
3	0.0236	0.1157	0.2231	0.6533	34.51	38.82	0.4546	0.0908	0.0249	1.2636	91.44	91.15	0.7776	0.1243	-150.8	-40.4	1.2750
4	0.0446	0.1390	0.2864	0.5308	34.86	38.46	0.4426	0.0653	0.0103	1.2579	93.16	92.94	0.8335	0.2885	-165.6	-48.3	1.2700
5	0.0441	0.1243	0.1395	0.3178	33.46	36.88	0.4208	0.0693	0.0191	1.2583	90.09	90.71	0.9338	0.6161	-198.9	-182.2	1.2478
6	0.0478	0.1173	0.0998	0.2634	33.37	36.89	0.4018	0.0812	0.0160	1.2435	91.40	91.21	0.7712	0.7078	-219.0	-123.0	1.2587
7	0.0643	0.1139	0.0816	0.2358	33.31	36.82	0.3925	0.0921	0.0150	1.2472	91.40	91.20	0.9927	0.7569	-225.2	-135.1	1.2522
8	0.0743	0.1148	0.0774	0.2308	33.25	36.80	0.3875	0.0943	0.0149	1.2501	90.46	90.15	1.0124	0.8085	-235.3	-146.4	1.2526
9	0.0793	0.1194	0.0727	0.1894	33.08	36.86	0.3871	0.0954	0.0197	1.2546	89.63	88.25	1.0337	0.8443	-246.2	-157.1	1.2540
10	0.0917	0.1302	0.0834	0.1725	32.23	35.20	0.3884	0.0880	0.0224	1.2498	84.79	84.34	1.0643	0.9319	-256.4	-168.9	1.2539
11	0.1092	0.1479	0.1516	0.1440	30.47	32.33	0.3992	0.1093	0.0242	1.2657	83.78	83.19	1.1022	0.9582	-269.0	-178.8	1.2386

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.0753	1.2548	89.08	89.43	162.06	1.0753	1.2548	89.08	89.43

STATOR 1

SL	EPI-1		V-1		V-2		W-1		W-2		W-1		W-2		S-1		S-2		N-1		N-2		U-1		U-2		T02/T01	P02/P01	EFF-AD	EFF-P
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC				
1	0.1925	0.1363	206.5	140.2	119.0	138.6	171.2	21.1	0.9621	0.1493	0.4104	0.4024	1.2016	1.0824	1.2261	1.0024	1.0024													
2	0.1231	0.0910	206.3	156.1	142.2	154.5	192.2	22.2	0.8185	0.1422	0.4108	0.4805	1.2465	1.0794	1.2426	1.0794	1.0794													
3	0.0784	0.0617	202.7	158.0	152.7	156.8	133.3	19.4	0.7173	0.1280	0.5043	0.4970	1.2583	1.0759	1.2468	1.0759	1.0759													
4	0.0544	0.0469	193.4	155.0	154.8	153.8	119.1	19.4	0.6553	0.1252	0.5721	0.4485	1.2540	1.0729	1.2421	1.0729	1.0729													
5	0.0286	0.0297	177.3	146.7	148.1	145.6	97.5	17.7	0.5823	0.1213	0.5171	0.4242	1.2364	1.0693	1.2271	1.0693	1.0693													
6	0.0224	0.0247	174.8	146.4	146.4	145.3	92.4	17.8	0.5570	0.1217	0.5092	0.4231	1.2337	1.0704	1.2285	1.0704	1.0704													
7	0.0197	0.0221	173.5	146.2	148.3	145.1	90.1	18.3	0.5488	0.1236	0.5080	0.4225	1.2359	1.0715	1.2304	1.0715	1.0715													
8	0.0173	0.0194	172.1	145.7	147.5	144.5	88.5	18.4	0.5484	0.1264	0.5082	0.4205	1.2347	1.0730	1.2321	1.0730	1.0730													
9	0.0142	0.0163	171.2	146.3	146.4	143.1	88.4	18.5	0.5428	0.1271	0.4968	0.4218	1.2363	1.0759	1.2349	1.0759	1.0759													
10	0.0093	0.0116	169.8	146.6	146.5	144.7	89.2	23.8	0.5929	0.1429	0.4918	0.4218	1.2372	1.0801	1.2464	1.0801	1.0801													
11	0.0039	0.0048	161.8	138.0	134.6	135.9	89.9	24.1	0.5890	0.1755	0.4667	0.3956	1.2288	1.0638	1.2468	1.0638	1.0638													

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-S	LOSS-P	PO2/	EFF-P	EFF-A	S-1	S-2	W-1	W-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0429	0.1247	0.2421	0.8128	28.31	35.24	0.4753	0.1495	0.0912	0.9667	72.81	73.58					1.2400
2	0.0076	0.0818	0.1849	0.6762	34.87	40.87	0.3885	0.0819	0.0182	0.9819	80.09	81.28					1.2700
3	0.0455	0.0930	0.1468	0.5943	37.83	41.87	0.3546	0.0649	0.0151	0.9866	89.75	90.19					1.2750
4	0.1547	0.0822	0.1393	0.5201	38.79	40.39	0.3360	0.0642	0.0162	0.9874	87.67	88.04					1.2700
5	0.1784	0.0822	0.1227	0.4618	37.81	38.21	0.3087	0.0544	0.0139	0.9909	86.71	87.10					1.2700
6	0.1967	0.0868	0.1194	0.4282	37.96	38.10	0.2894	0.0534	0.0227	0.9881	86.84	86.44					1.2700
7	0.2084	0.0758	0.1188	0.4140	37.81	37.81	0.2884	0.0918	0.0265	0.9867	85.32	85.94					1.2700
8	0.2090	0.0799	0.1194	0.4157	37.54	37.90	0.2852	0.0912	0.0211	0.9858	84.20	84.66					1.2700
9	0.2341	0.1016	0.1429	0.3908	37.80	37.44	0.2739	0.0899	0.0216	0.9863	82.32	83.04					1.2700
10	0.2334	0.1185	0.2152	0.4134	34.29	35.13	0.2962	0.1077	0.0369	0.9931	77.71	78.40					1.2700

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
RAD/SEC	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
0.4232	1.0753	1.2378	83.29	83.70	1.0753	0.9858	83.29	83.70

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N*-1	N*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1908	0.1020	128.7	212.0	127.0	177.8	20.5	115.5	0.1900	0.5701	0.3684	0.6099	149.7	179.4	0.5107	0.5234	181.2	183.1
2	0.1103	0.0773	158.1	211.2	154.4	181.4	21.3	108.3	0.1944	0.5350	0.4566	0.6052	162.7	169.7	0.6097	0.5467	211.1	191.5
3	0.0849	0.0593	162.9	203.0	161.0	179.8	18.7	94.3	0.1151	0.4411	0.4710	0.5822	174.0	180.0	0.6512	0.5712	224.8	199.2
4	0.0640	0.0411	161.2	192.3	160.1	173.1	18.8	83.4	0.1170	0.4492	0.4473	0.5512	187.9	191.2	0.6750	0.5844	232.8	203.0
5	0.0511	0.0344	153.9	187.4	152.9	155.1	17.5	62.2	0.1143	0.4143	0.4420	0.4839	217.4	218.3	0.7209	0.6168	251.4	215.0
6	0.0357	0.0212	153.0	181.1	151.9	148.6	18.0	62.1	0.1179	0.3953	0.4420	0.4594	227.0	228.1	0.7490	0.6390	259.0	222.0
7	0.0207	0.0054	151.5	160.0	150.4	149.1	18.3	58.1	0.1200	0.3714	0.4200	0.4543	238.0	238.0	0.7700	0.6444	266.3	233.0
8	0.0070	0.0105	151.5	154.9	150.2	146.6	19.3	59.8	0.1292	0.3634	0.4371	0.4447	252.0	251.0	0.7984	0.6932	276.7	244.2
9	0.0000	0.0100	150.1	156.2	148.2	143.9	23.8	60.7	0.1590	0.3991	0.4322	0.4433	261.5	261.0	0.8068	0.7001	280.2	246.4
10	0.0022	0.0049	141.6	145.0	139.3	131.4	23.9	61.3	0.1699	0.4364	0.4061	0.4093	271.1	270.8	0.8144	0.6984	283.8	247.3

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1169	0.0045	0.3107	0.5513	32.72	44.07	0.1316	0.0290	0.0069	1.1757	96.99	96.92	0.7905	0.2391	-129.2	-43.9	1.4139
2	0.1645	0.0932	0.1797	0.4081	40.75	48.15	0.2005	0.1017	0.0232	1.1513	86.13	85.85	0.7325	0.3245	-141.5	-61.4	1.4430
3	0.1449	0.0439	0.1549	0.3232	42.12	48.48	0.2113	0.0679	0.0171	1.1420	88.01	88.40	0.7643	0.4431	-154.1	-89.7	1.4372
4	0.1210	0.0332	0.1267	0.2569	41.63	47.14	0.2090	0.0428	0.0100	1.1347	91.84	91.69	0.8122	0.5553	-169.8	-107.4	1.4107
5	0.0601	0.0074	0.0964	0.1487	39.73	42.40	0.2132	0.0482	0.0159	1.1085	83.89	83.65	0.9170	0.7691	-199.8	-150.1	1.3699
6	0.0442	0.0136	0.1014	0.1037	39.48	40.61	0.2014	0.0705	0.0164	1.0932	79.99	79.75	0.9442	0.8405	-209.8	-168.0	1.3510
7	0.0232	0.0105	0.0871	0.0919	39.87	40.77	0.1789	0.0482	0.0113	1.0955	84.97	84.76	0.9707	0.8700	-219.7	-179.9	1.3408
8	0.0226	0.0162	0.0754	0.0705	38.95	39.96	0.1682	0.0527	0.0125	1.0850	81.97	81.35	0.9969	0.9264	-232.4	-193.2	1.3427
9	0.0192	0.0196	0.0635	0.0658	38.34	39.03	0.1726	0.0474	0.0158	1.0857	77.58	77.31	1.0133	0.9475	-237.8	-200.2	1.3411
10	0.0103	0.0492	0.1103	0.0462	35.87	35.29	0.1034	0.0940	0.0200	1.0802	69.51	69.16	1.0869	1.0107	-247.2	-209.5	1.3161

TD/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1147	1.3770	83.62	84.95	154.96	1.0367	1.1139	85.27	85.80

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TD/TO	PO/PO	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	STAGE	INLET	INLET	INLET
1	0.1216	0.1394	192.3	186.9	153.3	186.9	113.4	0.2	0.4274	0.6010	0.5459	0.5299	1.3064	1.1331	1.1489	1.0488			
2	0.0880	0.0962	201.1	196.4	171.0	196.4	105.8	-2.4	0.5523	0.6124	0.5761	0.5401	1.4262	1.1291	1.1374	1.0476			
3	0.0640	0.0483	198.6	190.5	175.9	190.4	92.2	-4.8	0.4821	0.6251	0.5404	0.5440	1.4164	1.1214	1.1267	1.0436			
4	0.0493	0.0487	191.5	181.8	173.0	181.7	82.0	-5.7	0.4421	0.6315	0.5400	0.5194	1.3960	1.1143	1.1172	1.0398			
5	0.0264	0.0239	179.8	160.2	157.1	160.1	67.1	-2.4	0.4035	0.6150	0.4801	0.4564	1.3418	1.1079	1.0858	1.0354			
6	0.0206	0.0182	162.9	155.0	150.9	154.9	61.2	-3.3	0.3855	0.6214	0.4649	0.4415	1.3298	1.1084	1.0760	1.0321			
7	0.0174	0.0154	161.6	150.9	151.0	150.8	57.6	-8.7	0.3644	0.6242	0.4612	0.4295	1.3205	1.1083	1.0697	1.0304			
8	0.0131	0.0137	158.4	149.4	148.2	149.4	55.9	0.8	0.3608	0.6055	0.4510	0.4244	1.3177	1.1084	1.0654	1.0293			
9	0.0111	0.0105	157.3	149.3	145.3	149.2	60.6	5.9	0.3952	0.6095	0.4472	0.4232	1.3179	1.1137	1.0649	1.0308			
10	0.0090	0.0050	144.6	139.2	133.2	138.9	61.2	0.2	0.4308	0.6093	0.4143	0.3927	1.2964	1.1187	1.0640	1.0322			

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-5TC	TOT-5TC
1	-0.2602	0.1495	0.6264	41.56	49.32	0.1304	0.1225	0.0250	0.9773	82.84	83.17
2	-0.2123	0.1280	0.5647	46.18	52.85	0.1430	0.0978	0.0130	0.9884	78.72	79.10
3	-0.2520	0.1195	0.5072	47.74	51.64	0.1534	0.0680	0.0164	0.9865	79.60	79.94
4	-0.2050	0.1175	0.4736	47.16	49.49	0.1642	0.0800	0.0204	0.9851	80.73	81.02
5	-0.3195	0.1433	0.4185	42.82	43.44	0.1785	0.1265	0.0365	0.9810	67.17	67.55
6	-0.3367	0.1408	0.4049	41.13	42.00	0.1677	0.1116	0.0336	0.9846	65.85	66.21
7	-0.3582	0.1424	0.3889	41.19	40.82	0.1832	0.1583	0.0494	0.9785	63.83	64.20
8	-0.3764	0.1826	0.3553	40.28	40.33	0.1711	0.1419	0.0469	0.9815	62.50	62.84
9	-0.3865	0.2358	0.3559	39.32	40.10	0.1731	0.1346	0.0462	0.9826	60.73	61.10
10	-0.4142	0.2014	0.3716	35.71	37.02	0.1807	0.1340	0.0476	0.9850	55.54	55.94

NCORR	NCORR	TD/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
662.22	74.77	1.1147	1.3345	78.97	79.86	1.0367	0.9831	71.99	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL		RADIUS		V-1		V-2		VM-1		VM-2		PO1/PO		VO-2		A-1		A-2		M-1		M-2		U-1		U-2		M-1		M-2		V-1		V-2	
RADIUS		RADIUS		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		RADIANS		RADIANS		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC			
1	0.1360	0.1360	145.1	279.0	145.1	136.6	0.9670	183.4	0.0	0.9289	0.4342	0.6748	125.1	134.6	0.5694	0.4279	190.2	149.2																	
2	0.1359	0.1284	154.2	223.0	134.2	151.0	0.9912	164.0	0.0	0.9244	0.4627	0.6560	137.8	147.3	0.6204	0.4469	206.8	151.9																	
3	0.1059	0.1274	152.3	211.2	152.3	154.9	0.9956	143.5	0.0	0.7668	0.4567	0.6196	154.2	161.7	0.6499	0.4578	216.7	156.0																	
4	0.0909	0.1064	150.4	200.0	150.4	154.3	0.9970	127.3	0.0	0.6995	0.4507	0.5854	169.3	175.2	0.6787	0.4729	226.4	161.6																	
5	0.0713	0.0859	148.4	179.7	148.4	148.0	0.9986	104.8	0.0	0.5225	0.4447	0.5231	203.4	206.4	0.7543	0.5178	251.8	177.9																	
6	0.0655	0.0634	148.3	176.0	148.3	144.4	0.9950	103.5	0.0	0.6082	0.4443	0.5111	219.8	221.9	0.7943	0.5478	265.1	186.6																	
7	0.0550	0.0353	148.0	174.2	148.0	143.6	0.9029	98.5	0.0	0.6015	0.4434	0.5052	230.3	231.5	0.8200	0.5676	273.8	195.7																	
8	0.0473	0.0271	147.9	172.4	147.9	142.7	0.9908	97.4	0.0	0.6039	0.4429	0.4991	240.6	241.5	0.8459	0.5860	282.4	202.4																	
9	0.0355	0.0190	147.5	170.7	147.5	140.2	0.9884	97.3	0.0	0.5065	0.4417	0.4931	251.9	251.8	0.8739	0.6029	291.8	208.7																	
10	0.0217	0.0101	144.6	168.1	144.6	136.0	0.9891	98.8	0.0	0.6282	0.4329	0.4840	264.4	264.4	0.9019	0.6172	301.4	216.3																	
11	0.0099	0.0033	136.7	160.7	136.7	126.1	0.8676	99.6	0.0	0.6184	0.4084	0.4608	275.1	275.0	0.9175	0.6196	307.2	216.0																	

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	CMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
RADIANS				RADIANS	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	RADIANS	RADIANS	M/SEC	M/SEC	M/SEC
1	0.0453	0.1220	0.1939	1.0453	32.04	31.35	0.4772	0.2147	0.0475	1.2749	85.16	84.64	0.7013	0.3440	-123.1	49.2	1.2489
2	0.0356	0.1081	0.2066	0.6731	34.35	36.02	0.4730	0.1537	0.0396	1.2749	87.34	86.89	0.7272	0.1087	-137.8	16.6	1.2814
3	0.0336	0.1284	0.2151	0.5426	34.05	38.04	0.4663	0.1006	0.0277	1.2779	90.85	90.52	0.7903	0.1173	-154.2	-18.3	1.2870
4	0.0512	0.1405	0.2044	0.3324	33.49	37.24	0.4345	0.0849	0.0243	1.2731	92.06	91.79	0.8441	0.3015	-149.3	-48.0	1.2810
5	0.0354	0.1259	0.0947	0.2791	33.61	37.07	0.4739	0.0889	0.0245	1.2527	89.37	89.02	0.9407	0.6081	-203.4	-101.6	1.2629
6	0.0471	0.1212	0.0717	0.2520	33.45	36.98	0.4188	0.0893	0.0241	1.2578	88.27	87.88	0.9778	0.6987	-219.8	-121.3	1.2660
7	0.0424	0.1225	0.0659	0.2281	33.36	36.89	0.4114	0.0959	0.0245	1.2628	87.89	87.48	1.0000	0.7470	-230.3	-132.9	1.2684
8	0.0368	0.1259	0.0473	0.2073	33.23	36.24	0.4140	0.1083	0.0285	1.2726	84.83	84.29	1.0412	0.8340	-251.8	-154.5	1.2724
9	0.0376	0.1366	0.0744	0.1872	32.48	35.12	0.4211	0.1342	0.0335	1.2910	81.90	81.25	1.0706	0.8833	-264.4	-165.6	1.2726
10	0.1165	0.1552	0.1409	0.1620	30.57	32.45	0.4314	0.1475	0.0359	1.2972	79.80	79.06	1.1095	0.9475	-275.1	-175.4	1.2599

TO/T0	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	ROTOR	ROTOR
		%	%	SOM			%	%
1.0420	1.2700	86.29	86.75	162.65	1.0420	1.2700	86.29	86.75

STATOR 1

SL		RADIUS		V-1		V-2		VM-1		VM-2		PO1/PO		VO-2		A-1		A-2		M-1		M-2		U-1		U-2		M-1		M-2		V-1		V-2	
RADIUS		RADIUS		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		RADIANS		RADIANS		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC			
1	0.1934	0.1392	207.7	145.3	117.5	133.0	174.7	24.7	0.9753	0.1815	0.6133	0.3872	1.2091	1.0855	1.2367	1.0855																			
2	0.1240	0.1097	213.9	157.4	141.0	150.5	154.8	24.1	0.8278	0.1579	0.6176	0.4343	1.2553	1.0838	1.2535	1.0838																			
3	0.0851	0.1067	205.0	155.4	151.7	154.1	138.0	23.4	0.7330	0.1814	0.6003	0.4491	1.2699	1.0804	1.2610	1.0804																			
4	0.0616	0.0557	197.4	152.7	154.3	151.5	128.2	19.0	0.5739	0.1249	0.5774	0.4407	1.2669	1.0773	1.2563	1.0773																			
5	0.0374	0.0347	181.1	144.6	149.3	143.8	102.5	17.0	0.6207	0.1246	0.5274	0.4180	1.2520	1.0746	1.2418	1.0746																			
6	0.0321	0.0360	178.9	145.7	149.1	144.4	94.7	16.8	0.5850	0.1298	0.5199	0.4107	1.2544	1.0749	1.2459	1.0749																			
7	0.0269	0.0304	178.0	146.7	148.2	145.3	97.1	20.3	0.5759	0.1390	0.5170	0.4224	1.2573	1.0787	1.2514	1.0787																			
8	0.0245	0.0252	177.3	147.2	148.9	145.9	94.2	20.5	0.5739	0.1400	0.5142	0.4235	1.2592	1.0810	1.2560	1.0810																			
9	0.0194	0.0204	176.6	147.1	149.0	146.5	95.3	21.5	0.5771	0.1450	0.5112	0.4254	1.2617	1.0845	1.2618	1.0845																			
10	0.0142	0.0143	175.3	148.2	145.8	145.0	96.2	26.1	0.5942	0.1771	0.5059	0.4247	1.2625	1.0900	1.2698	1.0900																			
11	0.0046	0.0054	166.5	139.7	136.1	137.4	57.4	24.7	0.6345	0.1794	0.4942	0.3945	1.2444	1.0946	1.2716	1.0946																			

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	CMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
RADIANS				RADIANS	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	RADIANS	RADIANS	M/SEC	M/SEC	M/SEC
1	0.0590	0.1379	0.2753	0.7477	27.95	34.13	0.5010	0.1408	0.0292	0.9804	73.23	74.02					
2	0.0314	0.1017	0.2036	0.6400	34.37	39.37	0.4171	0.0859	0.0191	0.9805	79.65	80.29					
3	0.0146	0.0500	0.1552	0.6056	37.63	40.70	0.3796	0.0607	0.0144	0.9868	85.27	85.75					
4	0.0087	0.0161	0.1330	0.5470	34.72	40.18	0.3614	0.0557	0.0143	0.9897	87.25	87.66					
5	0.0123	0.0228	0.1270	0.4770	38.30	38.14	0.3555	0.0497	0.0143	0.9914	85.57	86.01					
6	0.0150	0.0323	0.1261	0.4552	34.11	38.27	0.3716	0.0533	0.0144	0.9910	84.60	84.89					
7	0.0196	0.0377	0.1239	0.4377	24.21	38.48	0.3142	0.0517	0.0165	0.9916	84.16	84.66					
8	0.0173	0.0414	0.1234	0.4329	24.16	38.77	0.3108	0.0529	0.0174	0.9917	83.16	83.70					
9	0.0177	0.0455	0.1192	0.4111	37.92	38.65	0.3065	0.0534	0.0173	0.9917	81.37	81.97					
10	0.0127	0.0607	0.1172	0.4171	7.14	38.37	0.3035	0.0531	0.0183	0.9916	78.54	79.25					
11	0.0117	0.0769	0.1131	0.4573	34.64	35.45	0.3330	0.0814	0.0294	0.9870	75.14	75.98					

TO/T0	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	STAGE	%
		%	%	SOM			%	%
1.0420	1.2552	81.93	82.51		1.0420	0.9884	81.93	

ROTOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
1	3.1493	0.1008	122.7	207.2	120.3	166.1	26.0	123.9	0.1954	0.6394	0.3903	0.5893	153.1	163.0	0.5039	0.4853	176.5	170.7
2	0.1084	0.0773	153.6	204.9	151.9	170.5	22.4	118.6	0.1473	0.5042	0.4420	0.5834	166.4	173.5	0.4020	0.5148	209.1	188.8
3	0.3844	0.0611	159.6	198.2	158.4	171.0	19.3	109.2	0.1211	0.5281	0.4409	0.5649	178.9	184.0	0.4491	0.5429	224.3	190.5
4	0.0620	0.0444	157.9	188.1	156.9	165.4	18.4	89.4	0.1167	0.4956	0.4566	0.5361	192.1	195.5	0.4766	0.5598	234.0	196.4
5	0.0181	0.0097	152.3	168.1	151.2	150.9	18.7	74.1	0.1195	0.4961	0.4398	0.4777	222.3	223.2	0.7336	0.6030	254.0	212.2
6	0.3093	1.0044	152.9	160.0	151.6	144.7	19.5	68.3	0.1322	0.4610	0.4411	0.4541	232.9	233.2	0.7533	0.6225	261.8	219.4
7	0.0047	0.0020	153.3	156.6	152.0	146.1	20.3	64.4	0.1329	0.4156	0.4420	0.4529	243.4	243.4	0.7779	0.6552	269.9	231.0
8	0.0004	0.0020	154.3	158.9	152.4	146.3	22.2	62.0	0.1443	0.4006	0.4436	0.4501	257.6	256.7	0.8049	0.6888	280.6	243.6
9	0.3018	0.0033	153.4	159.1	151.2	143.4	26.1	66.0	0.1706	0.4306	0.4400	0.4463	267.4	266.8	0.8169	0.6971	286.8	246.9
10	0.0013	0.0020	145.0	149.1	142.8	134.6	24.7	64.1	0.1716	0.4464	0.4141	0.4189	277.2	276.9	0.8786	0.7075	290.1	251.8

SL	INCS	INCM	DEV	TURN	RNDVM-1	RNDVM-2	D-FAC	MEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
1	0.0903	0.0311	0.3079	0.5888	31.29	44.32	0.1040	-0.0217	-0.0051	1.2001	101.93	101.98	0.8171	0.2283	-129.1	-39.1	1.4534
2	0.1412	0.0319	0.1913	0.4199	39.88	46.48	0.2581	0.0071	0.0215	1.1676	89.05	88.80	0.7559	0.3359	-143.8	-60.0	1.4745
3	0.1237	0.0246	0.1662	0.3322	41.65	47.35	0.2568	0.0614	0.0133	1.1402	92.75	90.54	0.7875	0.4543	-159.4	-83.9	1.4740
4	0.0982	0.0095	0.1404	0.2668	41.27	46.26	0.2533	0.0390	0.0097	1.1940	93.33	91.18	0.8358	0.5690	-173.7	-106.0	1.4587
5	0.0647	0.0228	0.1050	0.1538	39.74	42.52	0.2411	0.0388	0.0093	1.1338	91.37	91.22	0.9331	0.7194	-204.1	-149.2	1.4209
6	0.0353	0.0225	0.1113	0.1027	39.84	40.75	0.2285	0.0455	0.0705	1.1170	88.46	88.27	0.9531	0.8504	-213.4	-164.9	1.4031
7	0.0212	0.0204	0.0944	0.0665	39.91	41.18	0.2050	0.0250	0.0061	1.1159	92.71	92.58	0.9726	0.8861	-223.0	-178.9	1.4043
8	0.0261	0.0147	0.0750	0.0464	39.97	41.19	0.1865	0.0173	0.0040	1.1129	94.66	94.57	0.9954	0.9260	-235.4	-194.7	1.4044
9	0.0213	0.0175	0.0659	0.0613	39.43	40.22	0.1888	0.0276	0.0065	1.1120	91.50	91.36	1.0112	0.9499	-241.4	-200.8	1.4029
10	0.0093	0.0483	0.1064	0.0492	36.98	37.35	0.1881	0.0335	0.0075	1.1119	89.66	89.51	1.0560	1.0068	-252.5	-212.8	1.3823

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
1.1255	1.4288	85.16	85.89	153.73	1.0403	1.1367	92.49	92.63

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
1	0.1206	0.1384	190.0	173.9	146.0	173.9	121.6	1.3	0.6510	0.6072	0.5374	0.4496	1.4204	1.1424	1.1424	1.1784	1.0524	
2	0.3087	0.0933	196.0	182.4	161.5	182.4	111.0	-1.2	0.6002	-0.0065	0.5565	0.5158	1.4633	1.1374	1.1590	1.1374	1.0507	
3	0.0634	0.0656	194.4	179.4	167.9	179.3	99.0	-4.0	0.5273	-0.0223	0.5535	0.5085	1.4618	1.1304	1.1511	1.1047		
4	0.0464	0.0458	187.7	172.0	165.9	171.9	87.9	-4.8	0.4954	-0.0282	0.5349	0.4879	1.4449	1.1242	1.1438	1.0445		
5	0.0224	0.0201	189.7	155.1	153.2	155.0	72.8	-6.4	0.4437	-0.0287	0.4823	0.4393	1.4025	1.1187	1.1190	1.0396		
6	0.0164	0.0143	161.8	149.2	147.1	149.1	67.4	-3.4	0.4300	-0.0365	0.4993	0.4223	1.3882	1.1170	1.1047	1.0360		
7	0.0128	0.0110	161.2	147.4	148.0	147.4	63.9	-3.5	0.4074	-0.0233	0.4576	0.4170	1.3834	1.1174	1.0990	1.0362		
8	0.0110	0.0100	160.2	146.4	147.4	146.4	62.1	-1.0	0.3981	-0.0069	0.4537	0.4133	1.3804	1.1211	1.0937	1.0328		
9	0.0088	0.0084	159.0	146.7	144.8	146.7	65.8	3.2	0.4256	0.0217	0.4493	0.4130	1.3808	1.1271	1.0967	1.0337		
10	0.0039	0.0040	150.4	143.1	135.1	140.0	64.0	6.0	0.3999	0.0425	0.4228	0.3929	1.3663	1.1323	1.0988	1.0343		

SL	INCM	DEV	TURN	RNDVM-1	RNDVM-2	D-FAC	MEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO	
1	-0.1966	0.1558	0.8838	40.04	47.98	0.2164	0.0978	0.0200	0.9825							91.53	91.73
2	-0.1647	0.1339	0.8067	44.67	51.12	0.1969	0.0407	0.0042	0.9923							84.36	84.69
3	-0.2088	0.1224	0.5456	46.77	50.71	0.1999	0.0392	0.0093	0.9927							86.13	86.43
4	-0.2405	0.1209	0.5148	48.41	48.78	0.2043	0.0482	0.0122	0.9915							87.79	88.03
5	-0.2793	0.1286	0.4733	49.03	49.86	0.2158	0.0776	0.0224	0.9896							82.20	82.58
6	-0.3122	0.1257	0.4664	41.31	42.11	0.2127	0.0750	0.0227	0.9898							80.21	80.48
7	-0.3395	0.1433	0.4503	41.65	41.55	0.2163	0.1123	0.3352	0.9850							79.85	80.13
8	-0.3591	0.1701	0.4051	41.47	41.11	0.2161	0.1295	0.3428	0.9830							78.98	79.25
9	-0.3591	0.2183	0.4049	40.46	40.98	0.2137	0.1202	0.0417	0.9864							77.65	77.93
10	-0.4057	0.2464	0.3573	37.74	38.85	0.2066	0.1016	0.0361	0.9882							79.36	79.63

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
877.13	74.9	1.1255	1.4047	82.13	82.98	1.0403	0.9880	93.63

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)**

S. I. UNITS

ROTOR 1

RUN NO413, SPEED CODE 77, POINT NO 11																		
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ¹ -1	N ¹ -2		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN				M/SEC	M/SEC				
1	0.1697	0.1593	193.8	222.8	193.8	193.1	0.9976	178.3	0.0	0.9265	0.4299	0.6549	121.1	133.6	0.3629	0.4134	168.5	160.4
2	0.1372	0.1292	151.9	219.9	151.9	150.6	0.9980	158.2	0.0	0.8205	0.4843	0.6345	136.7	144.4	0.4119	0.4730	204.1	147.3
3	0.1070	0.1019	121.4	204.4	121.4	121.1	0.9982	137.9	0.0	0.7299	0.4848	0.5999	153.0	160.5	0.4154	0.4481	219.3	152.8
4	0.0919	0.1091	169.9	193.9	169.9	150.2	0.9983	122.6	0.0	0.6481	0.4423	0.5673	168.0	173.9	0.4749	0.4441	225.2	158.7
5	0.0744	0.0641	147.7	173.7	147.7	141.8	0.9978	100.0	0.0	0.6144	0.4423	0.5023	201.8	204.8	0.7490	0.5134	250.1	174.3
6	0.0605	0.0509	147.6	171.3	147.6	142.5	0.9978	95.1	0.0	0.5825	0.4420	0.4981	218.1	220.2	0.7087	0.5514	263.3	189.4
7	0.0500	0.0414	147.7	170.3	147.7	143.1	0.9980	92.7	0.0	0.5732	0.4423	0.4972	228.5	229.7	0.8151	0.5754	272.1	196.1
8	0.0481	0.0312	147.9	169.0	147.9	142.4	0.9982	91.0	0.0	0.5685	0.4432	0.4903	238.8	239.6	0.8414	0.5973	280.9	205.0
9	0.0347	0.0211	147.9	167.5	147.9	140.7	0.9983	90.9	0.0	0.5748	0.4438	0.4850	249.9	249.9	0.8697	0.6145	290.4	212.7
10	0.0188	0.0097	144.9	165.3	144.9	137.2	0.9983	92.2	0.0	0.5914	0.4335	0.4770	262.4	262.4	0.8971	0.6311	299.7	218.6
11	0.0048	0.0024	138.7	156.8	138.7	126.1	0.9987	93.1	0.0	0.6360	0.4145	0.4507	273.0	272.9	0.9150	0.6312	304.2	219.6

SL	INCS	INCR	DSV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/P01	EFF-P	EFF-A	B ¹ -1	B ¹ -2	VO ¹ -1	VO ¹ -2	PG/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0247	0.1238	0.2156	1.6254	31.84	31.09	0.4892	0.1432	0.0364	1.2776	88.53	88.14	0.7030	0.3223	-122.1	44.7	1.2531
2	0.0188	0.1131	0.2388	0.8126	33.97	33.51	0.4812	0.1052	0.0268	1.2790	91.34	91.09	0.7322	0.0904	-136.7	11.9	1.2899
3	0.0523	0.1275	0.2477	0.6409	34.15	37.51	0.4706	0.0623	0.0171	1.2760	94.16	93.94	0.7094	0.1409	-153.0	-22.6	1.2847
4	0.0408	0.1382	0.2323	0.5123	33.92	37.87	0.4592	0.0417	0.0125	1.2670	95.32	95.16	0.8417	0.3294	-168.0	-51.3	1.2789
5	0.0508	0.1303	0.1511	0.3021	33.43	34.49	0.4299	0.0470	0.0120	1.2520	95.92	95.72	0.9397	0.6366	-201.8	-104.1	1.2695
6	0.0538	0.1228	0.1044	0.2161	33.35	34.95	0.4079	0.0360	0.0096	1.2615	95.07	94.90	0.9766	0.7295	-216.1	-125.1	1.2675
7	0.0691	0.1187	0.0808	0.2334	33.33	37.23	0.3940	0.0309	0.0082	1.2682	95.62	95.47	0.9973	0.7641	-228.5	-137.0	1.2723
8	0.0787	0.1109	0.0508	0.2894	33.31	37.17	0.3889	0.0343	0.0090	1.2729	94.99	94.82	1.0165	0.8069	-238.8	-148.7	1.2750
9	0.0822	0.1213	0.0747	0.1982	33.24	34.74	0.3901	0.0507	0.0132	1.2772	92.50	92.34	1.0366	0.8464	-249.9	-159.6	1.2769
10	0.0937	0.1325	0.0940	0.1739	32.47	35.80	0.3940	0.0716	0.0182	1.2887	89.48	89.10	1.0665	0.8926	-262.4	-170.2	1.2770
11	0.1077	0.1444	0.1523	0.1417	30.98	32.77	0.4093	0.1035	0.0268	1.2943	84.96	84.42	1.1007	0.9390	-273.0	-179.8	1.2610

TO/TO	PG/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
				SEN				
1.0772	1.2710	91.97	92.26	162.42	1.0772	1.2710	91.97	92.24

STATOR 1

RUN NO413, SPEED CODE 77, POINT NO 11																
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	TO/TO	PG/PO	TO2/	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN				INLET	INLET	STAGE	INLET
1	0.1958	0.1381	204.6	134.9	116.2	132.7	168.5	24.5	0.9663	0.1802	0.5984	0.3869	1.2131	1.0823	1.2572	1.0823
2	0.1283	0.0963	205.0	150.9	138.3	149.1	151.4	23.7	0.9299	0.1948	0.6080	0.4348	1.2570	1.0803	1.2564	1.0803
3	0.0841	0.0668	199.1	153.6	148.4	152.4	132.7	19.1	0.7294	0.1247	0.5826	0.4434	1.2706	1.0747	1.2612	1.0747
4	0.0593	0.0508	191.8	150.9	150.6	149.8	118.8	18.2	0.6774	0.1211	0.5409	0.4360	1.2676	1.0739	1.2565	1.0739
5	0.0317	0.0318	175.3	143.4	143.4	142.3	98.0	18.1	0.5933	0.1264	0.5107	0.4143	1.2529	1.0708	1.2443	1.0708
6	0.0250	0.0264	174.1	144.5	147.0	143.4	93.4	17.8	0.5642	0.1238	0.5067	0.4172	1.2553	1.0723	1.2492	1.0723
7	0.0220	0.0236	174.2	145.6	148.3	144.4	91.4	18.3	0.5522	0.1263	0.5066	0.4201	1.2577	1.0734	1.2536	1.0734
8	0.0196	0.0210	173.7	144.0	148.7	144.8	89.8	18.7	0.5435	0.1282	0.5066	0.4210	1.2598	1.0737	1.2568	1.0731
9	0.0183	0.0175	173.0	147.8	147.7	145.8	98.1	19.1	0.5477	0.1300	0.5018	0.4234	1.2616	1.078	1.2618	1.0785
10	0.0109	0.0110	171.8	147.2	145.4	143.3	91.6	23.1	0.5621	0.1377	0.4970	0.4229	1.2622	1.0814	1.2702	1.0814
11	0.0047	0.0052	163.8	138.7	135.0	134.5	92.9	24.2	0.6029	0.1793	0.4718	0.3968	1.2648	1.0818	1.2677	1.0878

SL	INCS	INCR	DSV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/P01	EFF-P	EFF-A	TO/TO	PG/PO	TO2/	TO2/
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	INLET	INLET	STAGE	INLET
1	0.0466	0.1289	0.2740	0.7860	27.99	34.20	0.4853	0.1473	0.0304	0.9682			1.0772	1.2559	76.24	76.95
2	0.0048	0.0932	0.1995	0.6731	34.07	39.13	0.4819	0.0830	0.0188	0.9828					84.03	84.54
3	0.0534	0.0428	0.1486	0.6046	37.16	40.42	0.3631	0.0526	0.0127	0.9892					89.43	89.77
4	0.0312	0.0396	0.1352	0.5464	38.13	39.87	0.3469	0.0473	0.0121	0.9909					91.31	91.60
5	0.0437	0.0312	0.1288	0.4669	37.30	37.87	0.3141	0.0374	0.0109	0.9939					91.07	91.34
6	0.0493	0.0318	0.1202	0.4424	37.93	38.15	0.3045	0.0311	0.0179	0.9907					90.91	91.0
7	0.0483	0.0424	0.1201	0.4260	38.38	38.40	0.2986	0.0303	0.0224	0.9887					90.75	91.04
8	0.0473	0.0719	0.1209	0.4153	38.54	39.47	0.2951	0.0379	0.0257	0.9876					89.89	90.21
9	0.0204	0.0751	0.1223	0.4176	38.29	38.65	0.2911	0.0355	0.0257	0.9881					87.61	88.01
10	0.0248	0.0923	0.1577	0.4048	37.62	38.39	0.2893	0.0363	0.0269	0.9881					74.88	85.39
11	0.0299	0.1046	0.2158	0.4275	34.73	35.79	0.3075	0.0916	0.0331	0.9878					79.90	80.56

NEORA	TO/TO	PG/PO	EFF-AD	EFF-P	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC								
671.97	1.0772	1.2559	87.22	87.63	1.0772	0.9881	87.22	87.22

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	W-1	W-2	W0-1	W0-2	S-1	S-2	N-1	N-2	U-1	U-2	W*-1	W*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1496	0.1013	123.1	204.1	120.7	165.6	23.6	122.6	0.1930	0.6311	0.3919	0.5070	151.9	161.7	0.5036	0.4066	176.1	170.2
2	0.1804	0.0775	152.6	204.4	151.0	170.3	22.1	113.1	0.1460	0.5031	0.4399	0.5032	163.1	172.7	0.5995	0.5142	200.0	100.3
3	0.0039	0.0004	150.4	197.6	157.3	170.0	10.0	99.3	0.1130	0.5247	0.4500	0.5041	177.4	182.6	0.6477	0.5426	224.0	190.1
4	0.0007	0.0027	156.8	197.0	155.0	165.4	17.0	89.0	0.1130	0.4922	0.4260	0.5062	190.4	194.1	0.6736	0.5902	232.7	183.9
5	0.0140	0.0047	151.2	164.1	150.2	150.5	17.7	74.9	0.1173	0.4616	0.4373	0.4704	220.4	221.5	0.7303	0.5900	252.4	210.1
6	0.0051	0.0013	151.6	159.6	150.6	144.1	10.0	60.1	0.1100	0.4415	0.4304	0.4530	231.2	231.4	0.7346	0.6191	261.0	217.0
7	0.0007	0.0030	151.4	157.1	150.4	143.1	10.5	44.0	0.1223	0.4250	0.4379	0.4463	241.5	241.5	0.7771	0.6456	269.0	227.3
8	0.0023	0.0045	152.3	154.7	151.1	143.0	19.4	41.0	0.1293	0.4095	0.4394	0.4443	259.7	254.7	0.8078	0.6826	280.2	240.7
9	0.0027	0.0043	151.4	154.1	149.4	141.7	23.3	45.5	0.1543	0.4330	0.4354	0.4415	265.4	264.0	0.8105	0.6915	284.6	244.5
10	0.0015	0.0023	143.0	147.0	141.0	132.4	24.1	45.5	0.1691	0.4500	0.4406	0.4165	275.1	274.0	0.8247	0.6976	287.9	247.7

SL	INCL	INCR	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	P02/	EFF-P	EFF-A	S*-1	S*-2	W0*-1	W0*-2	P01/0
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0937	0.0250	0.3005	0.5020	31.51	44.43	0.1040	-0.0224	-0.0077	1.1000	102.92	102.99	0.2117	0.2209	-120.1	-39.1	1.4560
2	0.1400	0.0316	0.1072	0.4264	30.78	46.47	0.2540	0.0700	0.0100	1.1700	90.88	90.47	0.7542	0.3310	-143.0	-39.1	1.4002
3	0.0067	0.0036	0.1661	0.3304	41.53	47.35	0.2564	0.0096	0.0124	1.1606	92.39	92.43	0.7908	0.4523	-159.4	-33.2	1.4790
4	0.0075	0.0000	0.1363	0.2716	41.11	46.50	0.2515	0.0236	0.0059	1.1500	94.00	93.00	0.8305	0.5640	-172.0	-105.0	1.4664
5	0.0046	0.0231	0.0970	0.1612	39.41	42.40	0.2472	0.0370	0.0002	1.1373	91.00	91.44	0.9324	0.7722	-202.9	-164.6	1.4364
6	0.0324	0.0234	0.1007	0.1001	39.72	40.70	0.2350	0.0491	0.0115	1.1191	87.01	87.40	0.9559	0.8070	-213.2	-163.2	1.4007
7	0.0165	0.0231	0.0901	0.0075	39.70	40.40	0.2194	0.0450	0.0104	1.1147	87.70	87.00	0.9773	0.8090	-223.0	-170.0	1.4009
8	0.0102	0.0205	0.0706	0.0717	39.77	40.45	0.1909	0.0461	0.0004	1.1121	89.35	89.19	1.0013	0.9704	-234.0	-192.0	1.4033
9	0.0152	0.0236	0.0485	0.0448	39.24	39.05	0.2003	0.0485	0.0104	1.1123	86.70	84.40	1.0173	0.9525	-242.1	-199.3	1.4020
10	0.0125	0.0514	0.1055	0.0532	36.71	37.02	0.1990	0.0463	0.0103	1.1135	86.40	86.27	1.0092	1.0059	-251.1	-209.3	1.3045

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
		%	%	%			%	%
1.1215	1.4300	00.41	09.17	153.10	1.0411	1.1307	91.05	92.01

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	W-1	W-2	W0-1	W0-2	S-1	S-2	N-1	N-2	U-1	U-2	W*-1	W*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1206	0.1303	100.0	173.2	145.4	173.2	120.4	0.9	0.6002	0.0091	0.5347	0.4004	1.4322	1.1302	1.1770	1.0517		
2	0.0067	0.0036	195.5	102.2	101.2	102.2	110.5	-2.7	0.5995	0.0149	0.5500	0.5163	1.4009	1.1334	1.1012	1.0500		
3	0.0037	0.0050	193.7	170.7	167.6	170.0	97.1	-4.2	0.5242	0.0234	0.5325	0.5073	1.4657	1.1205	1.1537	1.0470		
4	0.0473	0.0460	107.3	171.3	165.7	171.3	87.4	-4.9	0.4040	0.0200	0.5340	0.4049	1.4491	1.1204	1.1445	1.0444		
5	0.0240	0.0210	169.6	154.0	152.0	154.7	73.7	-4.0	0.4491	0.0262	0.4830	0.4303	1.4074	1.1152	1.1220	1.0405		
6	0.0101	0.0150	160.9	148.2	140.0	140.0	67.1	-3.6	0.4301	0.0375	0.4574	0.4200	1.3922	1.1129	1.1073	1.0349		
7	0.0143	0.0124	158.0	144.5	144.9	144.5	64.5	-3.0	0.4100	0.0210	0.4500	0.4093	1.3035	1.1134	1.0991	1.0300		
8	0.0110	0.0106	137.9	144.3	143.2	144.3	61.9	0.0	0.4029	0.0091	0.4470	0.4000	1.3827	1.1168	1.0954	1.0346		
9	0.0090	0.0085	137.1	144.5	142.0	144.4	65.4	3.0	0.4296	0.0201	0.4443	0.4074	1.3029	1.1225	1.0947	1.0357		
10	0.0040	0.0040	149.2	137.9	134.1	137.0	65.4	0.0	0.4541	0.0436	0.4202	0.3074	1.3045	1.1272	1.1007	1.0361		

SL	INCL	INCR	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	P02/	EFF-P	EFF-A	S*-1	S*-2	W0*-1	W0*-2	P01/0	
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.1399	0.1336	0.4032	40.09	40.02	0.2143	0.0040	0.0204	0.0020	0.9020							92.41	92.70
2	0.1053	0.1255	0.6162	44.04	51.33	0.1047	0.0400	0.0092	0.0022	0.9222							86.10	86.47
3	0.0090	0.1213	0.5474	44.94	50.74	0.2001	0.0436	0.0104	0.0010	0.9910							87.43	87.00
4	0.2423	0.1203	0.5155	44.62	40.03	0.2070	0.0540	0.0137	0.0005	0.9905							89.74	89.04
5	0.1730	0.1321	0.4752	43.12	43.92	0.2197	0.0000	0.0235	0.0001	0.9801							82.42	82.71
6	0.1043	0.1247	0.4474	41.24	42.04	0.2143	0.0700	0.0210	0.0004	0.9904							80.07	80.30
7	0.1043	0.1450	0.4395	40.92	40.03	0.2222	0.1000	0.0332	0.0042	0.9842							76.00	76.40
8	0.1344	0.1772	0.4027	40.95	40.75	0.2134	0.1147	0.0379	0.0053	0.9853							74.34	74.67
9	0.1521	0.2227	0.4005	40.00	40.30	0.2150	0.1107	0.0370	0.0040	0.9840							74.00	75.19
10	0.1910	0.2657	0.4105	37.37	38.45	0.2101	0.1003	0.0357	0.0003	0.9803							76.00	77.17

W0*-1	W0*-2	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
				%	%			%	%
071.97	74.0	1.1215	1.4130	05.55	04.24	1.0411	0.9003	03.41	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	VP-1	VP-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1899	0.1602	139.7	214.0	133.7	127.4	0.9739	171.9	0.0	0.9305	0.3999	0.4288	122.0	133.4	0.5401	0.3911	101.0	133.1
2	0.1644	0.1326	143.2	209.0	143.2	140.1	0.9916	155.1	0.0	0.8343	0.4284	0.6134	136.6	146.2	0.5920	0.4119	197.9	140.4
3	0.1322	0.1240	145.5	197.6	145.5	144.1	0.9972	135.1	0.0	0.7530	0.4356	0.5785	152.9	160.4	0.6318	0.4204	211.1	144.3
4	0.1077	0.1041	144.9	187.8	144.9	143.4	0.9973	121.3	0.0	0.7019	0.4337	0.5488	167.9	173.8	0.6637	0.4463	221.8	152.7
5	0.0834	0.0861	143.8	184.0	143.8	136.7	0.9970	98.4	0.0	0.6289	0.4302	0.4914	201.6	204.6	0.7410	0.5017	247.4	172.5
6	0.0694	0.0521	143.0	185.0	143.0	135.0	0.9960	94.8	0.0	0.6126	0.4278	0.4790	217.9	220.0	0.7798	0.5343	260.7	184.1
7	0.0399	0.0442	142.1	184.5	142.1	135.4	0.9943	93.5	0.0	0.6048	0.4250	0.4770	228.3	229.5	0.8043	0.5564	268.9	191.9
8	0.0304	0.0359	141.2	183.6	141.2	135.0	0.9929	92.8	0.0	0.6030	0.4221	0.4737	238.4	239.4	0.8288	0.5766	277.2	199.2
9	0.0217	0.0262	139.8	182.2	139.8	133.0	0.9901	92.9	0.0	0.6098	0.4180	0.4687	249.6	249.6	0.8553	0.5939	286.1	205.6
10	0.0124	0.0157	136.8	181.1	136.8	130.4	0.9853	94.4	0.0	0.6278	0.4088	0.4639	262.2	262.2	0.8833	0.6115	295.7	212.3
11	0.0048	0.0067	129.8	155.4	129.8	122.8	0.9755	95.3	0.0	0.6604	0.3872	0.4462	272.7	272.7	0.9007	0.6190	302.1	215.7

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	EFF-P	EFF-A	B ^o -1	B ^o -2	VO ^o -1	VO ^o -2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0637	0.1604	0.2460	1.0318	30.20	30.25	0.4965	0.1608	0.0362	1.2687	89.14	88.78	0.7399	-0.2919	-122.0	36.5	1.2476
2	0.0487	0.1430	0.2520	0.8254	32.56	34.44	0.4964	0.0903	0.0230	1.2778	92.85	92.59	0.7621	-0.6533	-136.6	8.9	1.2794
3	0.0543	0.1484	0.2722	0.6370	33.18	36.37	0.4865	0.0422	0.0115	1.2750	94.16	94.02	0.8104	0.1733	-152.9	-25.2	1.2838
4	0.0461	0.1554	0.2538	0.5081	33.06	36.77	0.4747	0.0206	0.0057	1.2722	97.90	97.83	0.8590	0.3509	-167.9	-52.5	1.2811
5	0.0627	0.1422	0.1710	0.2950	32.84	35.71	0.4389	0.0265	0.0071	1.2580	94.61	94.50	0.9516	0.6566	-201.6	-105.3	1.2664
6	0.0666	0.1363	0.1336	0.2426	32.67	35.47	0.4229	0.0364	0.0096	1.2605	95.05	94.88	0.9902	0.7476	-217.9	-125.1	1.2677
7	0.0859	0.1354	0.1128	0.2261	32.44	35.65	0.4129	0.0383	0.0099	1.2675	94.72	94.59	1.0143	0.7882	-228.3	-136.0	1.2725
8	0.0987	0.1390	0.1016	0.2089	32.20	35.57	0.4071	0.0464	0.0120	1.2735	93.46	93.23	1.0366	0.8277	-238.6	-146.4	1.2761
9	0.1059	0.1450	0.0956	0.1930	31.67	35.12	0.4064	0.0631	0.0160	1.2784	91.08	90.76	1.0603	0.8673	-249.6	-156.7	1.2780
10	0.1170	0.1558	0.1012	0.1800	31.14	34.39	0.4109	0.0867	0.0216	1.2875	87.84	87.4	1.0807	0.9097	-262.2	-167.6	1.2809
11	0.1335	0.1772	0.1586	0.1613	29.44	32.30	0.4170	0.1026	0.0263	1.2945	85.77	85.2	1.1245	0.9653	-272.7	-177.3	1.2724

TO/TO	PO/PO	EFF-AD	EFF-P	1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	%/SEC			ROTOR	ROTOR
%	%	%	%	SOM			%	%
1.0773	1.2735	92.60	92.85	156.49	1.0773	1.2735	92.60	92.85

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	STAGE	TOT/
																TOT/
1	0.1974	0.1421	194.6	123.0	107.2	120.8	162.5	22.7	0.9870	0.1837	0.5681	0.3521	1.2074	1.0793	1.2288	1.0793
2	0.1340	0.1043	197.1	140.4	129.9	138.4	148.2	74.1	0.8507	0.1721	0.5758	0.4039	1.2498	1.0785	1.2501	1.0785
3	0.0916	0.0786	191.6	145.8	140.7	144.3	130.1	20.6	0.7462	0.1418	0.5599	0.4205	1.2687	1.0753	1.2604	1.0753
4	0.0663	0.0597	185.7	144.9	143.9	143.7	117.3	18.6	0.6842	0.1285	0.5420	0.4181	1.2701	1.0730	1.2612	1.0730
5	0.0377	0.0393	171.0	137.9	140.6	136.8	97.3	17.5	0.6056	0.1270	0.4976	0.3980	1.2579	1.0703	1.2496	1.0703
6	0.0304	0.0329	168.0	137.9	139.8	136.6	93.2	19.0	0.5880	0.1381	0.4880	0.3977	1.2584	1.0719	1.2509	1.0719
7	0.0265	0.0289	168.2	134.2	140.8	137.9	92.1	19.5	0.5791	0.1408	0.4883	0.4012	1.2615	1.0739	1.2562	1.0739
8	0.0224	0.0245	168.1	140.3	141.0	138.9	91.6	20.1	0.5791	0.1440	0.4874	0.4039	1.2641	1.0764	1.2612	1.0764
9	0.0175	0.0192	167.5	140.7	139.9	139.2	92.0	20.6	0.5818	0.1468	0.4845	0.4045	1.2654	1.0800	1.2657	1.0800
10	0.0108	0.0119	167.0	141.7	138.0	139.6	94.0	24.3	0.5879	0.1726	0.4818	0.4043	1.2675	1.0853	1.2737	1.0853
11	0.0040	0.0046	161.9	134.8	131.0	132.8	95.1	23.3	0.6280	0.1736	0.4655	0.3851	1.2537	1.0898	1.2755	1.0898

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0673	0.1496	0.2775	0.8033	24.31	31.60	0.5161	0.1608	0.0334	0.9683	76.52	77.20
2	0.0248	0.1140	0.2148	0.6786	32.57	36.77	0.4270	0.1080	0.0240	0.9782	83.91	84.42
3	0.0386	0.0589	0.1657	0.6043	35.84	39.79	0.3770	0.0603	0.0165	0.9883	90.93	91.22
4	0.0745	0.0284	0.1420	0.5537	37.01	38.77	0.3565	0.0488	0.0125	0.9911	93.95	94.15
5	0.1313	0.0188	0.1294	0.4786	36.64	36.96	0.3298	0.0450	0.0131	0.9930	93.56	93.76
6	0.1476	0.0273	0.1345	0.4499	36.55	36.87	0.3155	0.0463	0.0142	0.9930	91.92	92.18
7	0.1573	0.0354	0.1345	0.4383	36.89	37.18	0.3102	0.0557	0.0177	0.9916	91.14	91.43
8	0.1649	0.0394	0.1346	0.4319	36.98	37.40	0.3061	0.0614	0.0202	0.9908	89.76	90.10
9	0.1700	0.0409	0.1390	0.4350	36.68	37.40	0.3057	0.0642	0.0225	0.9902	87.08	87.51
10	0.1891	0.0566	0.1727	0.4252	36.12	37.35	0.2996	0.0705	0.0248	0.9896	83.81	84.36
11	0.2143	0.0795	0.2133	0.4545	34.18	35.28	0.3298	0.1067	0.0385	0.9853	80.18	80.85

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC	%	%	%	%			%	%
671.37	1.0773	1.2589	88.02	88.41	1.0773	0.9885	88.02	88.41

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RUN NO413, SPEED CODE 77, POINT NO 12																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1468	0.0092	111.1	198.9	108.9	151.5	22.0	128.9	0.1982	0.6903	0.3175	0.5649	151.8	161.6	0.4840	0.4402	169.4	155.0
2	0.1044	0.0754	141.8	195.3	139.9	154.5	23.0	119.5	0.1623	0.6551	0.4079	0.5550	165.0	172.1	0.5734	0.4636	190.3	163.1
3	0.0813	0.0404	150.5	189.8	144.3	156.4	19.4	107.5	0.1209	0.6005	0.4347	0.5397	177.3	182.5	0.6275	0.4932	217.3	173.4
4	0.0610	0.0456	150.1	181.4	149.0	153.8	17.8	96.2	0.1185	0.5503	0.4338	0.5158	190.5	193.9	0.6594	0.5180	228.1	182.2
5	0.0215	0.0142	144.3	164.1	143.2	140.6	18.1	84.4	0.1260	0.5417	0.4168	0.4651	220.4	221.3	0.7158	0.5558	247.8	196.1
6	0.0131	0.0087	144.8	157.2	143.5	136.0	19.2	78.8	0.1328	0.5254	0.4179	0.4451	231.0	231.2	0.7384	0.5782	255.8	204.3
7	0.0089	0.0065	145.9	155.6	144.6	136.0	19.9	75.5	0.1365	0.5069	0.4207	0.4408	241.3	241.3	0.7625	0.6064	264.4	214.4
8	0.0045	0.0038	146.6	155.6	145.1	137.6	21.0	72.4	0.1434	0.4855	0.4217	0.4391	255.4	254.5	0.7932	0.6437	275.7	228.1
9	0.0025	0.0020	147.1	156.2	145.1	136.3	24.4	76.3	0.1668	0.5102	0.4222	0.4395	265.2	264.6	0.8064	0.6541	281.1	232.4
10	0.0011	0.0010	140.1	150.2	138.2	130.4	23.1	74.6	0.1659	0.5194	0.4006	0.4210	274.9	274.5	0.8212	0.6691	287.2	238.7

SL	INCS	INCR	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-E	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO	
RUN NO413, SPEED CODE 77, POINT NO 12																		
RADIAN	RADIAN	RADIAN	RADIAN							PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	-0.0384	0.0829	0.2894	0.6589	28.80	41.77	0.2542	-0.0589	-0.0140	1.2200	104.59	104.72	0.8688	0.2899	-129.7	-32.7	1.4754	
2	-0.1044	0.0826	0.1810	0.4447	37.32	43.38	0.3184	0.0472	0.0166	1.1853	92.57	92.39	0.7903	0.3256	-142.0	-52.5	1.4912	
3	-0.0991	-0.0001	0.1571	0.3668	40.01	44.40	0.3196	0.0481	0.0171	1.1755	91.05	90.84	0.8170	0.4453	-157.9	-74.9	1.4945	
4	-0.0755	0.0131	0.1365	0.2933	39.94	44.30	0.3057	0.0404	0.0181	1.1709	93.92	93.77	0.8585	0.5652	-172.7	-97.7	1.4852	
5	-0.0230	0.0445	0.0949	0.1835	38.35	40.84	0.3003	0.0490	0.0119	1.1594	91.17	90.97	0.9549	0.7713	-202.3	-136.7	1.456	
6	-0.0130	0.0448	0.1029	0.1333	38.43	39.55	0.2845	0.0497	0.0117	1.1468	90.04	89.84	0.9753	0.8421	-211.8	-152.4	1.4450	
7	-0.0014	0.0402	0.0920	0.1087	38.68	39.56	0.2665	0.0439	0.0102	1.1431	90.46	90.27	0.9924	0.8837	-221.4	-165.8	1.4442	
8	-0.0030	0.0358	0.0720	0.0975	38.69	39.49	0.2447	0.0313	0.0073	1.1440	92.66	92.51	1.0165	0.9230	-234.5	-181.9	1.4478	
9	-0.0041	0.0347	0.0601	0.0843	38.52	39.46	0.2462	0.0404	0.0095	1.1449	90.53	90.34	1.0284	0.9441	-240.7	-188.3	1.4513	
10	0.0021	0.0411	0.0926	0.0758	36.45	37.53	0.2425	0.0402	0.0091	1.1487	90.56	90.37	1.0488	0.9930	-251.7	-200.0	1.4389	

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	PO2/PO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.1282	1.4624	89.51	90.06	147.17	1.04	1.1617	92.57	92.73

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PG/PO	TO/TO	PO/PO	TO2/
RUN NO413, SPEED CODE 77, POINT NO 12																
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1220	0.1401	183.4	153.1	132.7	153.1	126.5	1.6	0.7581	0.0103	0.5163	0.4293	1.4484	1.1395	1.1976	1.0556
2	0.0884	0.0952	186.8	142.5	145.7	142.5	116.9	-0.5	0.4747	-0.0033	0.5294	0.4574	1.4816	1.1356	1.1769	1.0537
3	0.0645	0.0659	185.8	142.0	153.2	142.0	105.2	-3.4	0.4012	-0.0211	0.5279	0.4574	1.4871	1.1298	1.1698	1.0518
4	0.0477	0.0461	180.5	156.2	153.8	156.2	94.5	-4.2	0.3503	-0.0269	0.5132	0.4413	1.4763	1.1249	1.1643	1.0491
5	0.0237	0.0203	165.5	143.5	143.0	143.4	83.5	-4.7	0.3285	-0.0328	0.4694	0.4047	1.4488	1.1218	1.1520	1.0473
6	0.0177	0.0144	159.0	138.3	138.7	138.2	77.8	-5.0	0.3111	-0.0364	0.4504	0.3899	1.4374	1.1205	1.1406	1.0442
7	0.0137	0.0111	157.4	137.1	138.3	137.0	75.0	-3.6	0.4948	-0.0265	0.4452	0.3859	1.4345	1.1222	1.1352	1.0431
8	0.0093	0.0077	157.3	138.5	139.5	138.5	72.5	-1.3	0.4795	-0.0093	0.4440	0.3893	1.4372	1.1264	1.1356	1.0424
9	0.0052	0.0043	157.7	139.7	138.1	139.7	76.1	3.0	0.5039	0.0216	0.4439	0.3917	1.4391	1.1332	1.1355	1.0436
10	0.0013	0.0010	151.7	131.9	132.2	131.8	74.5	4.3	0.5129	0.0329	0.4255	0.3681	1.4217	1.1387	1.1351	1.0447

SL	INCR	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
RUN NO413, SPEED CODE 77, POINT NO 12											
RADIAN	RADIAN	RADIAN							PO1	TOT-STG	TOT-STG
1	-0.1295	0.1589	0.7477	37.46	44.18	0.3062	0.1096	0.0231	0.9817	94.72	94.86
2	-0.0898	0.1371	0.6780	41.46	47.54	0.2702	0.0379	0.0085	0.9934	88.61	88.87
3	-0.1329	0.1235	0.6223	43.94	47.83	0.2655	0.0265	0.0063	0.9954	88.39	88.65
4	-0.1768	0.1221	0.5772	44.37	46.29	0.2711	0.0339	0.0086	0.9944	90.47	90.68
5	-0.1944	0.1254	0.5613	41.43	42.46	0.2861	0.0403	0.0116	0.9944	87.23	87.49
6	-0.2110	0.1258	0.5475	40.23	40.88	0.2867	0.0394	0.0118	0.9949	86.69	86.94
7	-0.2260	0.1403	0.5233	40.15	40.44	0.2856	0.0537	0.0168	0.9932	85.54	85.80
8	-0.2578	0.1677	0.4888	40.46	40.75	0.2744	0.0587	0.0194	0.9926	87.20	87.43
9	-0.2778	0.2182	0.4822	39.90	40.87	0.2733	0.0657	0.0225	0.9917	84.64	84.93
10	-0.3322	0.2550	0.4799	37.98	38.25	0.2955	0.1016	0.0361	0.9881	82.45	82.76

W CORR	W CORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
KG/SEC	KG/SEC			%	%			%	%
671.37	721.1	1.1282	1.4512	87.60	88.24	1.0472	0.9923	87.72	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)

S. I. UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	V ^o -1	V ^o -2
RUN NO413, SPEED CODE 77, POINT NO 13																		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLEN/M	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1644	0.1664	130.1	211.7	130.1	122.5	0.9930	172.6	0.0	0.9517	0.3079	0.6214	122.3	133.7	0.5326	0.3773	170.5	128.5
2	0.1366	0.1350	136.9	207.5	138.9	135.5	0.9904	157.1	0.0	0.8571	0.4150	0.6002	134.9	146.5	0.5027	0.3905	195.0	136.0
3	0.1147	0.1102	139.7	197.5	139.7	141.0	0.9956	137.4	0.0	0.7066	0.4176	0.5779	153.2	160.7	0.4190	0.4206	207.3	143.7
4	0.1005	0.0937	139.4	187.8	139.4	141.6	0.9961	123.2	0.0	0.71	0.4160	0.5482	168.2	174.1	0.4531	0.4394	210.5	150.5
5	0.0798	0.0647	139.4	167.7	139.4	133.9	0.9954	100.9	0.0	0.6457	0.4179	0.4872	202.1	205.1	0.7541	0.4930	245.4	167.7
6	0.0705	0.0507	139.4	165.0	139.4	134.1	0.9943	96.0	0.0	0.6217	0.4176	0.4705	218.4	220.4	0.7740	0.5307	259.2	187.9
7	0.0615	0.0410	139.3	164.6	139.3	134.4	0.9928	94.9	0.0	0.6152	0.4163	0.4760	226.0	230.0	0.8064	0.5521	267.9	190.6
8	0.0492	0.0384	138.8	163.0	138.8	133.6	0.9912	94.7	0.0	0.6171	0.4167	0.4737	239.1	239.9	0.8260	0.5706	276.4	197.3
9	0.0349	0.0199	137.7	161.4	137.7	130.4	0.9890	95.1	0.0	0.6305	0.4115	0.4657	250.2	250.2	0.8532	0.5045	285.4	202.4
10	0.0201	0.0090	134.7	159.7	134.7	127.0	0.9840	96.9	0.0	0.6519	0.4023	0.4594	262.7	262.7	0.8815	0.4097	295.3	208.9
11	0.0082	0.0025	128.4	153.5	128.4	117.5	0.9730	98.0	0.0	0.6492	0.3020	0.4397	273.3	273.2	0.9002	0.4024	302.0	210.3

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-P	SEFF-A	B ^o -1	B ^o -2	VO ^o -1	VO ^o -2	PO/PO	
RUN NO413, SPEED CODE 77, POINT NO 13																		
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.0760	0.1729	0.2315	1.0506	29.54	29.07	0.5127	0.1907	0.0445	1.2637	87.17	86.73	0.7521	0.3064	-122.3	38.9	1.2637	
2	0.0629	0.1572	0.2177	0.8540	31.78	33.28	0.5090	0.1230	0.0313	1.2754	90.02	90.49	0.7763	0.0776	-136.9	10.6	1.2766	
3	0.0745	0.1607	0.2611	0.6683	32.05	35.77	0.4872	0.0549	0.0150	1.2782	95.43	95.27	0.8206	0.1423	-153.2	-23.3	1.2861	
4	0.0857	0.1751	0.2475	0.5340	32.00	36.33	0.4752	0.0269	0.0075	1.2761	97.42	97.33	0.8706	0.3446	-160.2	-50.9	1.2944	
5	0.0779	0.1575	0.1759	0.3055	32.01	35.11	0.4450	0.0269	0.0072	1.2681	96.70	96.59	0.9069	0.6616	-202.1	-104.2	1.2707	
6	0.0793	0.1400	0.1341	0.2546	31.97	35.41	0.4250	0.0236	0.0062	1.2705	96.91	96.80	1.0027	0.7401	-210.4	-124.4	1.2767	
7	0.0943	0.1439	0.1127	0.2366	31.86	35.61	0.4175	0.0264	0.0068	1.2703	96.46	96.33	1.0247	0.7801	-220.8	-135.1	1.2826	
8	0.1075	0.1477	0.1010	0.2181	31.71	35.45	0.4136	0.0307	0.0099	1.2647	94.71	94.52	1.0453	0.8272	-239.1	-145.2	1.2869	
9	0.1134	0.1524	0.1001	0.1960	31.45	34.60	0.4199	0.0628	0.0150	1.2673	91.34	91.02	1.0677	0.8717	-250.2	-155.0	1.2867	
10	0.1243	0.1630	0.1088	0.1796	30.72	33.67	0.4253	0.0890	0.0219	1.2957	87.82	87.36	1.0970	0.9174	-262.7	-165.8	1.2886	
11	0.1386	0.1773	0.1714	0.1536	29.19	31.83	0.4397	0.1197	0.0278	1.2994	83.91	83.31	1.1316	0.9700	-273.3	-174.4	1.2788	
	TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1					TO2/TO1	PO2/PO1	EFF-AD	EFF-P					
	INLET	INLET	INLET	INLET	KG/SEC							ROTOR	ROTOR					
			%	%	SOM							%	%					
	1.0789	1.2790	92.40	92.40	153.26					1.0789	1.2790	92.40	92.40					

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	V ^o -1	V ^o -2
RUN NO413, SPEED CODE 77, POINT NO 13																		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1954	0.1400	191.9	115.3	101.1	113.3	163.2	21.4	0.0152	0.1046	0.5596	0.3297	1.2073	1.0798			1.2275	1.0790
2	0.1287	0.1026	194.5	131.7	123.0	129.4	150.0	26.1	0.8000	0.1035	0.5675	0.3777	1.2440	1.0797			1.2447	1.0797
3	0.0870	0.0760	189.8	140.1	136.3	138.7	132.2	20.4	0.7700	0.1460	0.5540	0.4033	1.2673	1.0767			1.2590	1.0767
4	0.0620	0.0590	184.0	140.9	140.1	139.7	119.2	18.0	0.7045	0.1203	0.5364	0.4061	1.2719	1.0743			1.2636	1.0743
5	0.0359	0.0375	168.7	135.0	136.4	133.9	98.9	17.4	0.6267	0.1290	0.4903	0.3891	1.2622	1.0716			1.2547	1.0716
6	0.0307	0.0322	167.1	135.2	138.0	133.9	94.3	19.0	0.5990	0.1412	0.4852	0.3893	1.2631	1.0730			1.2566	1.0730
7	0.0286	0.0297	167.8	137.0	139.4	135.0	93.4	19.6	0.5983	0.1437	0.4867	0.3943	1.2673	1.0751			1.2627	1.0751
8	0.0260	0.0267	168.2	138.6	139.9	137.2	93.4	19.9	0.5888	0.1439	0.4873	0.3905	1.2712	1.0781			1.2687	1.0781
9	0.0215	0.0218	166.0	138.7	137.7	137.3	94.2	19.7	0.5990	0.1427	0.4820	0.3902	1.2722	1.0820			1.2725	1.0820
10	0.0144	0.0145	166.1	138.9	135.4	136.8	96.2	23.0	0.6174	0.1723	0.4787	0.3976	1.2731	1.0873			1.2794	1.0873
11	0.0062	0.0063	160.5	132.3	126.7	130.2	98.5	23.1	0.6609	0.1754	0.4606	0.3771	1.2602	1.0932			1.2802	1.0932

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-A	SEFF-P	STAGE	STG
RUN NO413, SPEED CODE 77, POINT NO 13														
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	STAGE	STG
1	0.0935	0.1770	0.2784	0.8306	24.01	29.01	0.5513	0.1492	0.0309	0.9713			75.44	76.34
2	0.0541	0.1433	0.2262	0.6965	31.06	34.51	0.4665	0.1239	0.0275	0.9756			81.09	81.67
3	0.0120	0.0627	0.1690	0.6240	34.78	37.39	0.4041	0.0746	0.0179	0.9858			89.13	89.48
4	0.0541	0.0467	0.1423	0.5762	36.17	37.88	0.3754	0.0565	0.0145	0.9899			93.09	93.32
5	0.1103	0.0622	0.1314	0.4977	35.78	36.34	0.3410	0.0461	0.0134	0.9730			93.60	93.80
6	0.1357	0.0175	0.1373	0.4587	36.31	36.30	0.3305	0.0674	0.0207	0.9900			92.49	92.73
7	0.1461	0.0262	0.1373	0.4467	36.76	36.76	0.3239	0.0761	0.0242	0.9886			91.00	92.07
8	0.1520	0.0265	0.1362	0.4450	36.91	37.14	0.3237	0.0810	0.0266	0.9878			90.19	90.52
9	0.1520	0.0229	0.1350	0.4571	36.28	37.08	0.3210	0.0767	0.0261	0.9887			87.05	87.49
10	0.1490	0.0371	0.1724	0.4450	35.62	36.79	0.3185	0.0834	0.0293	0.9879			83.39	83.96
11	0.1014	0.0466	0.2150	0.4856	33.17	34.75	0.3483	0.1006	0.0392	0.9853			78.52	79.25
	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P					TO2/TO1	PO2/PO1	EFF-AD	EFF-P	
	INLET	INLET	INLET	INLET	INLET							STAGE	STAGE	
	RAD/SEC			%	%							%	%	
	672.80	1.0789	1.2628	87.45	87.86					1.0789	0.9873	87.45	87.45	

ROTOR 2

RUN NO413, SPEED CODE 77, POINT NO 13																		
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC				
1	0.1442	0.0969	105.5	195.2	103.4	144.4	20.8	131.3	0.1971	0.7913	0.3010	0.3530	152.1	161.9	0.4769	0.4103	167.1	147.4
2	0.0940	0.0705	133.0	191.4	131.9	147.4	22.9	121.9	0.1710	0.6067	0.3041	0.3426	165.3	172.4	0.5371	0.4421	194.1	156.0
3	0.0730	0.0559	145.0	184.6	144.4	150.3	19.0	110.4	0.1300	0.5325	0.4204	0.3293	177.4	182.0	0.6107	0.4730	214.4	166.7
4	0.0550	0.0424	145.7	179.4	144.7	149.1	17.1	99.7	0.1177	0.5004	0.4206	0.3000	190.9	194.3	0.6526	0.5010	224.1	176.4
5	0.0174	0.0111	140.7	164.1	139.5	137.2	18.1	89.9	0.1291	0.5001	0.4090	0.4439	220.9	221.0	0.7099	0.5301	244.1	190.3
6	0.0095	0.0057	141.6	157.0	140.3	135.1	19.3	84.0	0.1365	0.5072	0.4002	0.4454	231.5	231.7	0.7333	0.5500	254.4	190.2
7	0.0041	0.0044	143.5	155.9	142.1	133.2	19.7	80.9	0.1379	0.5059	0.4131	0.4395	241.0	241.0	0.7592	0.5090	263.7	200.9
8	0.0020	0.0025	144.1	154.1	142.7	135.4	20.0	77.3	0.1394	0.5101	0.4130	0.4391	254.0	255.0	0.7919	0.4290	275.7	223.5
9	0.0011	0.0009	144.0	154.0	142.0	133.4	24.0	81.7	0.1671	0.5493	0.4127	0.4305	265.7	265.1	0.8033	0.4341	280.4	226.0
10	0.0004	0.0004	137.4	149.9	135.5	127.4	22.9	79.0	0.1677	0.5551	0.3922	0.4105	275.5	275.1	0.8177	0.4531	284.4	233.9

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0074	0.1140	0.2054	0.6940	27.44	40.11	0.2940	-0.0444	-0.0111	1.2723	103.40	103.50	0.9000	0.2060	-131.3	-30.6	1.4821
2	-0.0759	0.0334	0.1827	0.4939	35.25	41.70	0.3439	0.0548	0.0141	1.1900	94.00	93.93	0.8212	0.3273	-142.4	-50.5	1.4907
3	-0.0011	0.0179	0.1503	0.3034	30.92	43.11	0.3494	0.0808	0.0215	1.1703	89.29	89.63	0.8300	0.4445	-150.4	-72.2	1.5016
4	-0.0504	0.0303	0.1359	0.3111	30.99	43.22	0.3300	0.0534	0.0134	1.1794	92.44	92.26	0.8794	0.3440	-173.7	-94.4	1.4950
5	-0.0099	0.0577	0.0909	0.2027	37.40	40.13	0.3246	0.0400	0.0141	1.1609	89.13	88.00	0.9400	0.7653	-202.0	-131.9	1.4753
6	-0.0017	0.0541	0.0957	0.1510	37.00	30.95	0.3129	0.0494	0.0145	1.1549	87.30	87.11	0.9067	0.4340	-212.2	-144.9	1.4640
7	0.0070	0.0494	0.0875	0.1274	30.25	39.00	0.2932	0.0659	0.0155	1.1517	84.99	84.72	1.0016	0.4792	-222.1	-160.9	1.4429
8	0.0073	0.0441	0.0406	0.1070	30.24	39.45	0.2691	0.0525	0.0124	1.1533	80.05	80.42	1.0248	0.9100	-234.0	-177.7	1.4474
9	0.0071	0.0459	0.0542	0.0973	37.92	38.04	0.2729	0.0426	0.0148	1.1551	84.02	84.54	1.0395	0.9422	-241.0	-183.5	1.4705
10	0.0316	0.0705	0.0944	0.0834	35.91	34.07	0.2647	0.0548	0.0129	1.1572	87.75	87.50	1.0702	0.9940	-252.5	-194.1	1.4572

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
				SGM				
1.1334	1.4770	80.26	80.09	143.70	1.0507	1.1697	90.25	90.46

STATOR 2

RUN NO413, SPEED CODE 77, POINT NO 13																
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01
1	0.1227	0.1402	180.0	144.3	126.7	144.3	120.9	2.2	0.7906	0.0155	0.5100	0.4033	1.4544	1.1421	1.2024	1.0577
2	0.0009	0.0945	183.4	153.7	139.3	153.7	119.3	0.6	0.7044	0.0040	0.5104	0.4313	1.4059	1.1304	1.1844	1.0552
3	0.0048	0.0653	182.7	155.1	147.1	155.1	100.3	-2.8	0.6334	0.0100	0.5177	0.4364	1.4959	1.1393	1.1750	1.0540
4	0.0479	0.0460	178.3	150.5	149.0	150.5	97.9	-3.4	0.5809	0.0223	0.5054	0.4238	1.4007	1.1290	1.1721	1.0517
5	0.0244	0.0212	165.3	139.5	139.4	139.5	88.0	-4.0	0.5471	0.0209	0.4675	0.3922	1.4660	1.1272	1.1621	1.0511
6	0.0183	0.0155	159.4	134.7	135.7	134.6	83.4	-5.4	0.5523	0.0403	0.4503	0.3785	1.4567	1.1264	1.1500	1.0485
7	0.0142	0.0119	157.6	133.9	135.5	133.9	80.3	-3.9	0.5350	0.0294	0.4443	0.3750	1.4549	1.1205	1.1451	1.0474
8	0.0100	0.0085	157.7	135.7	137.5	135.7	77.3	-1.7	0.5120	0.0126	0.4439	0.3799	1.4505	1.1336	1.1462	1.0470
9	0.0053	0.0045	157.9	137.2	135.2	137.1	81.5	3.4	0.5424	0.0248	0.4429	0.3830	1.4611	1.1400	1.1478	1.0464
10	0.0010	0.0007	151.4	128.1	129.3	128.0	78.9	4.4	0.5400	0.0357	0.4230	0.3561	1.4413	1.1444	1.1447	1.0467

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-5TC	TOT-5TC
1	-0.0970	0.1041	0.7751	35.97	42.11	0.3471	0.1141	0.0241	0.9014	93.75	93.91
2	-0.0501	0.1444	0.7024	39.07	45.40	0.3050	0.0437	0.0099	0.9927	89.49	89.94
3	-0.1007	0.1200	0.6514	42.46	46.29	0.2940	0.0213	0.0051	0.9945	87.28	87.57
4	-0.1462	0.1267	0.6032	43.25	45.10	0.2979	0.0276	0.0070	0.9956	89.74	89.99
5	-0.1559	0.1293	0.5960	40.68	41.77	0.3174	0.0343	0.0105	0.9950	85.74	86.04
6	-0.1699	0.1219	0.5920	39.64	40.20	0.3226	0.0372	0.0112	0.9952	84.30	84.70
7	-0.1870	0.1374	0.5644	39.40	39.96	0.3176	0.0440	0.0130	0.9944	83.20	83.52
8	-0.2252	0.1844	0.5246	40.12	40.36	0.3051	0.0492	0.0163	0.9930	84.57	84.87
9	-0.2393	0.2214	0.5176	39.29	40.56	0.3010	0.0503	0.0172	0.9937	82.45	82.99
10	-0.2970	0.2570	0.5123	37.34	37.53	0.3207	0.0932	0.0332	0.9892	80.67	81.23

NCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET					STAGE
RAD/SEC	KG/SEC							
672.40	70.0	1.1334	1.4670	86.43	87.33	1.0507	0.9932	86.24

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1044	0.1590	143.1	229.6	143.1	144.8	0.9643	178.1	0.0	0.8855	0.4280	0.6775	122.5	134.0	0.5635	0.4468	188.4	151.4
2	0.1579	0.1255	154.3	222.7	154.3	158.4	0.9867	136.5	0.0	0.7767	0.4631	0.6565	137.2	146.8	0.6195	0.4680	206.5	158.7
3	0.1300	0.1043	156.8	210.6	156.8	160.5	0.9928	136.3	0.2	0.7025	0.4709	0.6191	157.5	161.0	0.6589	0.4776	219.4	162.4
4	0.1081	0.0849	157.6	198.5	157.6	158.1	0.9948	120.0	0.0	0.6485	0.4733	0.5822	168.6	174.5	0.6930	0.4904	230.8	167.2
5	0.0708	0.0552	157.1	177.3	157.1	148.3	0.9940	97.2	0.0	0.5803	0.4718	0.5172	202.5	205.5	0.7696	0.5355	256.3	183.6
6	0.0370	0.0445	156.1	173.7	156.1	146.9	0.9918	92.8	0.0	0.5633	0.4687	0.5058	218.8	220.9	0.8070	0.5675	268.8	196.9
7	0.0482	0.0381	155.2	171.9	155.2	146.0	0.9894	90.8	0.0	0.5564	0.4657	0.5000	229.3	230.5	0.8308	0.5876	276.8	202.1
8	0.0396	0.0313	154.1	170.1	154.1	144.6	0.9868	89.6	0.0	0.5550	0.4624	0.4939	239.5	240.4	0.8566	0.6065	284.8	208.9
9	0.0299	0.0240	152.6	169.0	152.6	143.1	0.9835	89.9	0.0	0.5613	0.4576	0.4897	250.7	250.7	0.8801	0.6235	293.5	215.2
10	0.0179	0.0142	148.1	166.4	148.1	139.6	0.9753	90.5	0.0	0.5753	0.4438	0.4808	263.3	263.3	0.9049	0.6417	302.1	222.1
11	0.0075	0.0059	140.5	159.3	140.5	131.2	0.9611	90.5	0.0	0.6038	0.4201	0.4587	273.9	273.9	0.9202	0.6690	307.8	225.4

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC
1	0.0315	0.1284	0.2436	1.0020	31.43	33.33	0.4278	0.1450	0.0326	1.2829	89.84	89.48	0.7078	0.2944	-122.5	44.1	1.2565
2	0.0129	0.1072	0.2547	0.7870	34.40	37.91	0.4299	0.0807	0.0205	1.2829	93.21	92.94	0.7263	0.0606	-137.2	9.7	1.2857
3	0.0208	0.1130	0.2515	0.6222	35.05	39.48	0.4341	0.0425	0.0116	1.2778	95.88	95.72	0.7749	0.1527	-153.5	-24.8	1.2885
4	0.0264	0.1158	0.2339	0.4883	35.25	39.53	0.4306	0.0321	0.0090	1.2659	96.43	96.30	0.8193	0.3310	-168.6	-54.4	1.2790
5	0.0224	0.1020	0.1450	0.2808	35.14	37.81	0.4117	0.0441	0.0120	1.2405	93.40	93.70	0.9113	0.6308	-202.5	-108.2	1.2571
6	0.0281	0.0576	0.1034	0.2341	34.89	37.68	0.3973	0.0452	0.0122	1.2505	93.42	93.20	0.9514	0.7174	-218.8	-128.1	1.2597
7	0.0479	0.0574	0.0881	0.2128	34.43	37.57	0.3893	0.0463	0.0123	1.2553	93.12	92.88	0.9762	0.7634	-239.3	-139.7	1.2615
8	0.0615	0.1017	0.0804	0.1828	34.36	37.26	0.3847	0.0529	0.0139	1.2599	91.99	91.72	0.9993	0.8068	-259.5	-150.8	1.2628
9	0.0699	0.1089	0.0720	0.1806	33.98	36.91	0.3847	0.0651	0.0170	1.2669	90.12	89.78	1.0242	0.8436	-250.7	-168.7	1.2655
10	0.0854	0.1243	0.0825	0.1672	32.88	36.00	0.3855	0.0775	0.0217	1.2771	88.33	87.91	1.0583	0.8911	-263.3	-172.7	1.2650
11	0.1038	0.1425	0.1432	0.1470	31.06	33.72	0.3896	0.0883	0.0277	1.2833	86.81	86.34	1.0968	0.9498	-273.9	-183.3	1.2527

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SOM			%	%
1.0759	1.2659	91.84	92.12	167.21	1.0759	1.2659	91.84	92.12

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	INLET	INLET	STAGE
1	0.1944	0.1365	209.0	145.2	123.8	143.1	168.3	24.5	0.9356	0.1675	0.6119	0.4172	1.2154	1.0625	1.2411	1.0825	1.2411	1.0825	
2	0.1278	0.0954	210.0	160.5	167.4	158.9	169.7	22.6	0.7925	0.1404	0.6162	0.4637	1.2620	1.0796	1.2600	1.0796	1.2600	1.0796	
3	0.0835	0.0668	204.3	162.0	156.9	160.8	130.8	19.5	0.6943	0.1205	0.5992	0.4689	1.2741	1.0758	1.2636	1.0758	1.2636	1.0758	
4	0.0590	0.0516	195.9	157.9	157.9	156.8	116.0	17.8	0.6334	0.1128	0.5741	0.4572	1.2677	1.0724	1.2547	1.0724	1.2547	1.0724	
5	0.0330	0.0350	179.0	148.6	151.6	147.6	95.2	16.7	0.5605	0.1127	0.5225	0.4300	1.2483	1.0690	1.2365	1.0690	1.2365	1.0690	
6	0.0268	0.0300	176.9	149.2	151.5	148.1	91.2	18.2	0.5418	0.1224	0.5155	0.4316	1.2501	1.0707	1.2409	1.0707	1.2409	1.0707	
7	0.0232	0.0264	176.0	149.6	151.5	148.4	89.5	18.6	0.5338	0.1246	0.5123	0.4324	1.2515	1.0723	1.2453	1.0723	1.2453	1.0723	
8	0.0195	0.0225	175.0	149.8	150.9	148.6	88.6	18.7	0.5308	0.1249	0.5089	0.4325	1.2523	1.0743	1.2493	1.0743	1.2493	1.0743	
9	0.0149	0.0174	174.7	150.8	150.3	149.6	89.2	18.9	0.5357	0.1246	0.5071	0.4349	1.2550	1.0780	1.2563	1.0780	1.2563	1.0780	
10	0.0084	0.0103	173.1	150.9	147.8	149.0	90.1	24.0	0.5473	0.1595	0.5010	0.4342	1.2553	1.0823	1.2670	1.0823	1.2670	1.0823	
11	0.0027	0.0038	166.5	141.9	139.9	139.7	90.3	24.5	0.5732	0.1738	0.4802	0.4066	1.2362	1.0857	1.2668	1.0857	1.2668	1.0857	

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT
1	0.0160	0.0983	0.2613	0.7681	29.63	36.44	0.4464	0.1462	0.0304	0.9673	77.20	77.89
2	0.0334	0.0558	0.1831	0.6521	36.07	41.31	0.3698	0.0797	0.0178	0.9820	85.85	86.31
3	0.0885	0.0270	0.1443	0.5738	39.03	42.25	0.3373	0.0515	0.0124	0.9889	91.23	91.52
4	0.1252	0.0244	0.1269	0.5206	39.66	41.35	0.3219	0.0436	0.0112	0.9913	92.81	92.85
5	0.1764	0.0239	0.1151	0.4478	38.56	38.89	0.2979	0.0410	0.0119	0.9930	90.85	90.91
6	0.1938	0.0255	0.1188	0.4194	38.69	38.96	0.2841	0.0452	0.0139	0.9935	89.99	90.30
7	0.2027	0.0408	0.1182	0.4092	38.74	39.05	0.2790	0.0483	0.0154	0.9921	89.54	89.87
8	0.2100	0.0845	0.1173	0.4056	38.63	39.04	0.2766	0.0507	0.0167	0.9918	88.41	88.77
9	0.2161	0.0870	0.1182	0.4097	38.44	39.22	0.2747	0.0518	0.0177	0.9917	86.88	86.92
10	0.2396	0.1031	0.1596	0.3878	37.76	38.91	0.2640	0.0496	0.0174	0.9922	85.33	85.52
11	0.2691	0.1343	0.2136	0.3993	35.62	36.23	0.2923	0.0890	0.0321	0.9870	81.84	82.25

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RD/SEC			%	%			%	%
674.14	1.0759	1.2523	87.48	87.88	1.0759	0.9892	87.48	87.88

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RUM NO 413, SPEED CODE 77, POINT NO 15																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1513	0.1035	152.2	214.6	170.0	178.4	23.8	119.2	0.1798	0.5832	0.3787	0.6134	152.4	162.2	0.5239	0.5247	182.9	189.6
2	0.1116	0.0757	161.6	213.4	160.2	183.7	21.1	108.6	0.1308	0.5307	0.4671	0.6114	145.7	172.8	0.4237	0.5576	215.7	194.6
3	0.0863	0.0620	166.4	205.1	165.4	182.2	18.6	96.2	0.1115	0.4756	0.4823	0.5884	172.0	183.2	0.4660	0.5816	229.7	202.8
4	0.0422	0.0437	163.9	194.1	163.0	175.7	17.1	82.4	0.1046	0.4378	0.4758	0.5564	191.3	194.7	0.4924	0.5980	238.5	208.5
5	0.0140	0.0040	156.8	172.1	155.9	158.3	17.5	67.5	0.1115	0.4030	0.4547	0.4921	221.3	222.2	0.7440	0.6329	256.6	221.4
6	0.0038	0.0025	156.6	162.9	155.5	151.2	18.4	60.5	0.1175	0.3809	0.4536	0.4650	231.9	232.2	0.7652	0.6530	264.2	228.7
7	0.0021	0.0005	156.0	161.8	154.9	151.6	18.5	56.3	0.1190	0.3556	0.4513	0.4417	242.3	242.3	0.7874	0.6849	272.1	240.0
8	0.0071	0.0102	156.4	159.2	155.2	150.1	19.8	53.0	0.1270	0.3393	0.4515	0.4534	256.5	256.6	0.8168	0.7182	283.0	252.1
9	0.0080	0.0108	154.8	159.0	152.9	148.2	24.0	57.7	0.1558	0.3710	0.4457	0.4519	266.3	265.7	0.8249	0.7257	286.4	255.4
10	0.0058	0.0073	145.5	146.5	143.6	134.2	24.4	58.8	0.1683	0.4127	0.4418	0.4442	276.0	275.7	0.8312	0.7209	289.7	255.1

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	V0'-1	V0'-2	PO/PO	
RUM NO 413, SPEED CODE 77, POINT NO 15																		
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	INLET
1	0.1307	0.0093	0.3133	0.5429	33.60	46.60	0.1370	0.0160	0.0038	1.1833	98.35	98.31	0.7766	0.2337	-128.6	-43.0	1.4406	
2	0.1050	0.0557	0.1894	0.3981	41.81	49.17	0.2109	0.0931	0.0230	1.1568	87.14	86.86	0.7321	0.3340	-144.5	-64.2	1.4676	
3	0.1451	0.0461	0.1645	0.3134	43.19	49.57	0.2126	0.0589	0.0147	1.1486	90.17	89.97	0.7660	0.4527	-159.4	-89.0	1.4621	
4	0.1162	0.0275	0.1390	0.2502	42.54	48.30	0.2094	0.0316	0.0079	1.1416	93.93	93.81	0.8178	0.5676	-174.1	-112.3	1.4427	
5	0.0599	0.0076	0.0993	0.1442	40.63	43.75	0.2058	0.0413	0.0100	1.1166	89.51	89.34	0.9179	0.7738	-203.9	-154.7	1.3951	
6	0.0469	0.0108	0.1055	0.0927	40.55	41.72	0.1925	0.0484	0.0113	1.0973	85.49	85.29	0.9614	0.8487	-213.6	-171.6	1.3729	
7	0.0285	0.0132	0.0950	0.0786	40.38	41.86	0.1709	0.0313	0.0073	1.0951	89.54	89.40	0.9654	0.8868	-223.8	-186.0	1.3710	
8	0.0291	0.0096	0.0820	0.0574	40.36	41.28	0.1544	0.0295	0.0068	1.0871	88.81	88.67	0.9904	0.9330	-236.7	-202.6	1.3646	
9	0.0248	0.0140	0.0676	0.0561	39.66	40.58	0.1554	0.0371	0.0087	1.0885	86.35	86.18	1.0077	0.9516	-242.2	-208.0	1.3640	
10	0.0056	0.0445	0.1161	0.0357	37.61	36.38	0.1687	0.0690	0.0151	1.0816	75.46	75.19	1.0523	1.0166	-251.6	-216.9	1.3351	

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.1150	1.4007	87.92	88.48	157.97	1.0363	1.1185	89.55	89.72

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RUM NO 413, SPEED CODE 77, POINT NO 15																
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	INLET	STAGE
1	0.1209	0.1391	195.0	189.6	155.9	189.6	117.1	0.3	0.6405	0.0017	0.5537	0.5377	1.4050	1.1306	1.1532	1.0501
2	0.0877	0.0953	203.4	200.1	173.6	200.1	106.1	-3.1	0.5469	-0.0156	0.5809	0.5710	1.4510	1.1304	1.1432	1.0486
3	0.0647	0.0674	201.0	194.1	178.6	194.0	92.1	-5.3	0.4753	-0.0275	0.5756	0.5548	1.4404	1.1222	1.1321	1.0445
4	0.0479	0.0475	193.6	185.5	176.0	185.4	80.8	-5.2	0.4301	-0.0281	0.5553	0.5307	1.4191	1.1150	1.1238	1.0408
5	0.0259	0.0235	173.7	163.5	160.5	163.5	66.4	-2.3	0.3925	-0.0139	0.4969	0.4664	1.3809	1.1080	1.0890	1.0355
6	0.0203	0.0180	164.6	158.3	153.4	158.2	59.6	-2.2	0.3704	-0.0205	0.4701	0.4513	1.3483	1.1053	1.0775	1.0312
7	0.0169	0.0149	163.3	154.3	153.5	154.3	55.8	-2.7	0.3487	-0.0176	0.4664	0.4396	1.3389	1.1054	1.0694	1.0293
8	0.0144	0.0131	160.5	153.1	151.4	153.1	53.1	1.4	0.3373	0.0091	0.4572	0.4354	1.3364	1.1083	1.0666	1.0273
9	0.0110	0.0104	160.0	153.2	149.3	153.0	57.6	6.3	0.3682	0.0411	0.4548	0.4346	1.3369	1.1135	1.0668	1.0284
10	0.0053	0.0053	147.9	142.6	135.8	142.4	58.7	8.6	0.4081	0.0601	0.4482	0.4028	1.3139	1.1184	1.0643	1.0301

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
RUM NO 413, SPEED CODE 77, POINT NO 15											
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-STG	TOT-STG
										%	%
1	-0.2471	0.1502	0.6389	42.07	50.32	0.1521	0.1328	0.0280	0.9750	82.94	83.29
2	-0.2177	0.1248	0.5625	47.26	54.19	0.1356	0.0548	0.0123	0.9888	80.14	80.52
3	-0.2027	0.1172	0.5028	48.92	52.98	0.1474	0.0687	0.0164	0.9862	81.05	81.38
4	-0.2570	0.1209	0.4582	48.39	50.83	0.1519	0.0810	0.0205	0.9848	83.01	83.29
5	-0.3305	0.1444	0.4063	44.20	44.60	0.1715	0.1479	0.0426	0.9771	69.56	69.93
6	-0.3517	0.1417	0.3909	42.21	43.15	0.1530	0.1224	0.0368	0.9828	69.14	69.48
7	-0.3741	0.1492	0.3664	42.27	41.99	0.1675	0.1680	0.0527	0.9767	65.95	66.28
8	-0.3999	0.1861	0.3283	41.56	41.55	0.1522	0.1539	0.0509	0.9794	66.18	66.48
9	-0.4135	0.2377	0.3271	40.79	41.37	0.1550	0.1500	0.0514	0.9800	65.51	65.83
10	-0.4369	0.2822	0.3486	38.73	38.15	0.1580	0.1410	0.0501	0.9839	59.57	59.93

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC	KG/SEC			%	%			%	%
674.14	77.8	1.1150	1.3747	82.80	83.56	1.0363	0.9814	74.36	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	PO1/PO	VO-2	S-1	S-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN				M/SEC	M/SEC			M/SEC	M/SEC
1	0.1873	0.1908	151.9	236.3	151.9	149.8	0.0602	182.8	0.0	0.5818	0.4553	0.4965	122.7	126.2	0.5954	0.4654	195.2	157.6
2	0.1623	0.1264	163.7	229.5	163.7	164.9	0.0854	159.6	0.0	0.7644	0.4955	0.6778	137.4	147.1	0.4429	0.4885	213.7	165.6
3	0.1343	0.1035	164.1	216.2	164.1	167.8	0.0887	137.4	0.0	0.4872	0.4959	0.6368	153.8	161.3	0.4767	0.4968	224.9	168.7
4	0.1101	0.0841	161.9	203.9	161.9	165.8	0.0855	119.7	0.0	0.6269	0.4867	0.5990	168.9	174.8	0.7093	0.5110	233.9	173.9
5	0.0671	0.0537	161.8	188.7	161.8	152.4	0.0871	96.7	0.0	0.5449	0.4865	0.5277	202.8	205.8	0.7801	0.5478	299.4	187.4
6	0.0542	0.0443	160.4	176.3	160.4	158.4	0.0853	92.1	0.0	0.5494	0.4826	0.5138	119.2	221.2	0.8167	0.5777	271.7	198.2
7	0.0435	0.0386	157.2	173.8	157.2	148.8	0.0783	89.9	0.0	0.5439	0.4719	0.5059	229.7	230.9	0.8356	0.5964	276.3	204.9
8	0.0350	0.0316	154.3	171.4	154.3	147.1	0.0716	86.5	0.0	0.5417	0.4629	0.4987	239.9	240.8	0.8559	0.6153	295.3	211.7
9	0.0250	0.0229	152.4	170.4	152.4	145.9	0.0669	88.1	0.0	0.5437	0.4570	0.4943	251.1	251.1	0.8808	0.6343	293.7	218.7
10	0.0135	0.0124	151.8	167.9	151.8	142.9	0.0667	88.1	0.0	0.5526	0.4550	0.4858	263.7	263.7	0.9123	0.6550	304.3	226.4
11	0.0051	0.0047	144.0	159.4	144.0	133.2	0.0520	87.9	0.0	0.5832	0.4310	0.4481	274.3	274.2	0.9271	0.6689	309.9	229.1

SL	INCS	INCH	DEV	TURN	RNOVN-1	RNOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	SEFF-P	SEFF-A	S-1	S-2	VO-1	VO-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0033	0.1001	0.2258	0.9915	33.85	33.82	0.4227	0.1689	0.0278	1.2835	87.47	87.22	0.4794	-0.3121	-122.7	48.6	1.2629
2	-0.0151	0.0792	0.2398	0.7739	35.97	38.82	0.4213	0.0994	0.0254	1.2827	91.25	90.93	0.4904	-0.0755	-137.4	12.5	1.2953
3	0.0088	0.0913	0.2407	0.6114	36.13	40.47	0.4212	0.0478	0.0131	1.2786	95.20	95.02	0.7532	0.1418	-153.8	-23.9	1.2953
4	0.0148	0.1034	0.2243	0.4855	35.65	40.71	0.4091	0.0112	0.0032	1.2728	98.77	98.72	0.8869	0.3214	-168.9	-55.0	1.2854
5	0.0088	0.0884	0.1350	0.2772	35.70	38.36	0.4028	0.0482	0.0132	1.2421	93.15	92.94	0.8977	0.6286	-202.8	-109.1	1.2564
6	0.0156	0.0851	0.0959	0.2290	35.40	38.08	0.3987	0.0541	0.0146	1.2445	91.93	91.68	0.9389	0.7099	-219.2	-129.2	1.2564
7	0.0427	0.0922	0.0832	0.2123	34.54	37.70	0.3812	0.0447	0.0119	1.2536	93.24	93.02	0.9710	0.7585	-229.7	-140.9	1.2567
8	0.0417	0.1021	0.0770	0.1964	33.85	37.34	0.3741	0.0404	0.0107	1.2675	93.88	93.58	0.9996	0.8832	-239.9	-152.3	1.2570
9	0.0710	0.1101	0.0692	0.1844	33.38	37.08	0.3707	0.0454	0.0119	1.2710	93.81	92.76	1.0254	0.8408	-251.1	-162.9	1.2594
10	0.0759	0.1144	0.0791	0.1610	33.22	36.33	0.3727	0.0722	0.0185	1.2709	88.73	88.33	1.0486	0.8876	-263.7	-175.6	1.2586
11	0.0943	0.1338	0.1434	0.1372	31.40	33.74	0.3785	0.0873	0.0211	1.2740	86.48	86.01	1.0873	0.9501	-274.3	-186.3	1.2429

TD/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	K6/SEC			ROTOR	ROTOR
		%	%	SGM			%	%
1.0755	1.2650	92.10	92.37	170.72	1.0755	1.2650	92.10	92.37

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	S-1	S-2	M-1	M-2	PO/PO	TO/TO	PO/PO	T02/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01
1	0.1914	0.1338	215.2	152.7	128.3	150.8	172.7	24.3	0.9308	0.1580	0.6308	0.4391	1.2283	1.0848	1.2400	1.0848
2	0.1253	0.0927	216.7	148.1	153.8	144.4	152.4	23.5	0.7808	0.1197	0.6366	0.4861	1.2697	1.0812	1.2576	1.0812
3	0.0811	0.0643	209.9	148.4	163.4	167.3	131.8	18.6	0.4782	0.1106	0.6167	0.4881	1.2799	1.0765	1.2631	1.0765
4	0.0588	0.0498	201.3	143.7	164.8	162.8	115.4	17.5	0.6115	0.1079	0.5910	0.4749	1.2715	1.0722	1.2592	1.0722
5	0.0314	0.0347	182.4	152.9	155.9	152.0	94.7	17.0	0.5458	0.1115	0.5331	0.4431	1.2472	1.0688	1.2330	1.0688
6	0.0250	0.0295	179.4	153.0	154.9	151.8	90.4	18.9	0.5298	0.1236	0.5234	0.4430	1.2475	1.0704	1.2354	1.0704
7	0.0217	0.0257	177.9	152.8	154.1	151.6	88.7	18.5	0.5222	0.1216	0.5182	0.4420	1.2474	1.0718	1.2442	1.0718
8	0.0176	0.0217	176.5	152.2	153.3	151.1	87.5	18.4	0.5188	0.1212	0.5136	0.4401	1.2468	1.0734	1.2519	1.0734
9	0.0134	0.0169	176.0	152.9	152.8	151.8	87.4	18.6	0.5198	0.1217	0.5115	0.4416	1.2463	1.0766	1.2600	1.0766
10	0.0079	0.0107	174.3	152.7	150.7	150.7	87.7	24.5	0.5271	0.1610	0.5053	0.4399	1.2479	1.0803	1.2597	1.0803
11	0.0029	0.0044	166.4	143.5	141.4	141.6	87.7	23.1	0.5532	0.1616	0.4887	0.4120	1.2286	1.0894	1.2595	1.0894

SL	INCS	INCH	DEV	TURN	RNOVN-1	RNOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-37C	TOT-37C
1	0.0111	0.0934	0.2518	0.7728	30.19	37.78	0.4317	0.1437	0.0299	0.9862	74.88	75.56
2	-0.0451	0.0442	0.1824	0.6412	37.08	42.63	0.3563	0.0819	0.0183	0.9804	83.44	83.97
3	-0.1048	-0.0091	0.1344	0.5676	40.07	43.36	0.3264	0.0530	0.0128	0.9880	90.32	90.64
4	-0.1471	-0.0463	0.1211	0.5045	40.85	42.32	0.3106	0.0500	0.0128	0.9895	94.38	94.56
5	-0.1911	-0.0786	0.1139	0.4344	39.88	39.43	0.2859	0.0418	0.0122	0.9927	89.69	89.99
6	-0.2045	-0.0882	0.1200	0.4054	38.97	39.35	0.2711	0.0423	0.0130	0.9928	88.53	88.87
7	-0.2143	-0.0923	0.1154	0.4006	38.83	39.26	0.2676	0.0444	0.0142	0.9925	89.83	90.14
8	-0.2221	-0.0966	0.1136	0.3976	38.64	39.07	0.2671	0.0505	0.0166	0.9917	90.14	90.45
9	-0.2319	-0.1029	0.1140	0.3981	38.53	39.17	0.2653	0.0541	0.0184	0.9912	89.20	89.55
10	-0.2398	-0.1273	0.1611	0.3661	37.96	38.78	0.2531	0.0541	0.0190	0.9913	85.06	85.54
11	-0.2871	-0.1323	0.2013	0.3936	35.49	36.18	0.2799	0.0779	0.0282	0.9886	81.79	87.36

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
			%	%			%	%
RAD/SEC	1.0755	1.2508	87.53	87.91	1.0755	0.9887	87.52	87.52
675.27								

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RUN NO413, SPEED CODE 77, POINT NO 16																		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1527	0.1044	139.6	223.2	137.6	192.3	23.6	113.4	0.1689	0.5274	0.4002	0.6402	152.6	162.5	0.5407	0.5492	186.6	198.4
2	0.1140	0.0801	169.0	222.3	167.6	196.8	21.9	109.3	0.1297	0.4807	0.4893	0.6395	145.9	173.1	0.6396	0.6007	221.0	206.8
3	0.0879	0.0615	173.0	212.6	172.1	193.7	17.8	87.7	0.1027	0.4238	0.3626	0.6124	176.3	183.5	0.6836	0.6223	235.4	216.5
4	0.0634	0.0428	170.2	200.1	169.3	184.9	17.0	76.7	0.1000	0.3926	0.4448	0.5762	191.6	195.0	0.7072	0.6318	243.2	219.5
5	0.0151	0.0039	161.2	176.1	160.2	164.9	18.0	61.6	0.1116	0.3572	0.4481	0.5051	221.7	222.6	0.7525	0.6614	259.2	230.5
6	0.0043	0.0030	160.3	166.2	159.2	157.2	18.6	53.8	0.1163	0.3295	0.4449	0.4762	232.3	232.6	0.7729	0.6823	266.5	238.1
7	0.0022	0.0073	158.6	164.5	157.6	157.3	18.3	48.2	0.1155	0.2971	0.4595	0.4715	242.7	242.7	0.7942	0.7170	274.2	250.2
8	0.0091	0.0131	158.4	162.9	157.1	156.3	19.7	45.9	0.1248	0.2858	0.4577	0.4662	254.9	256.0	0.8223	0.7492	284.5	261.8
9	0.0119	0.0137	156.2	161.8	154.3	153.3	24.3	51.7	0.1560	0.3252	0.4503	0.4616	266.7	266.1	0.8286	0.7521	287.4	263.6
10	0.0088	0.0110	146.7	145.3	144.9	135.4	22.9	52.8	0.1569	0.3721	0.4215	0.4118	276.5	276.1	0.8391	0.7401	292.0	261.1

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	
RUN NO413, SPEED CODE 77, POINT NO 16																		
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	-0.1873	-0.0359	0.3267	0.5029	35.83	48.56	0.0771	0.0379	0.0090	1.1668	95.85	95.55	0.7501	0.2471	-129.0	-49.1	1.4268	
2	-0.1891	-0.0797	0.1838	0.3696	43.11	51.08	0.1582	0.0973	0.0240	1.1421	85.01	84.72	0.7000	0.2984	-144.0	-69.7	1.4570	
3	-0.1617	-0.0627	0.1695	0.2918	44.29	51.13	0.1678	0.0477	0.0169	1.1323	87.21	86.98	0.7495	0.4576	-160.5	-95.8	1.4466	
4	-0.1338	-0.0451	0.1399	0.2318	43.52	49.28	0.1723	0.0497	0.0124	1.1222	89.15	88.98	0.8003	0.5085	-174.6	-118.3	1.4213	
5	-0.0736	-0.0061	0.0989	0.1389	41.11	44.14	0.1690	0.0531	0.0133	1.0943	83.72	83.50	0.9043	0.7733	-205.7	-161.1	1.3650	
6	-0.0578	-0.0001	0.1103	0.0811	40.85	42.01	0.1554	0.0587	0.0137	1.0743	78.66	78.43	0.9905	0.8494	-213.7	-178.8	1.3404	
7	-0.0352	0.0064	0.0991	0.0678	40.41	42.05	0.1294	0.0318	0.0072	1.0725	86.79	86.65	0.9506	0.8908	-224.4	-194.5	1.3366	
8	-0.0339	0.0048	0.0799	0.0547	40.24	41.44	0.1154	0.0288	0.0065	1.0664	86.47	86.34	0.9854	0.9309	-237.2	-210.0	1.3317	
9	-0.0284	0.0104	0.0661	0.0539	39.41	40.59	0.1211	0.0441	0.0103	1.0665	88.31	88.12	1.0041	0.9501	-245.4	-214.4	1.3280	
10	0.0049	0.0438	0.1254	0.0257	36.82	35.36	0.1485	0.1079	0.0233	1.0514	55.10	54.79	1.0515	1.0238	-253.6	-223.3	1.2896	

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
%	%	%	%	SOM	%	%	%	%
1.1099	1.3734	86.37	86.96	161.45	1.0320	1.0981	86.56	84.78

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
RUN NO413, SPEED CODE 77, POINT NO 16																
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01
1	0.1221	0.1413	200.2	206.9	164.3	206.9	111.3	-1.5	0.5864	-0.0072	0.5696	0.5902	1.3727	1.1358	1.1223	1.0471
2	0.0903	0.0995	210.3	218.5	184.5	218.5	100.9	-3.8	0.4989	-0.0173	0.6026	0.6280	1.4287	1.1285	1.1197	1.0459
3	0.0683	0.0721	207.4	209.6	188.9	209.5	85.8	-5.6	0.4258	-0.0266	0.5963	0.6030	1.4092	1.1192	1.1035	1.0413
4	0.0517	0.0516	199.3	199.3	184.6	199.3	75.3	-3.5	0.3868	-0.0175	0.5737	0.5737	1.3829	1.1112	1.0925	1.0375
5	0.0286	0.0253	177.9	174.0	167.3	174.0	60.6	0.6	0.3473	0.0032	0.5100	0.4991	1.3152	1.1027	1.0543	1.0310
6	0.0227	0.0194	168.4	168.7	159.8	168.7	53.0	-0.9	0.3201	-0.0052	0.4827	0.4839	1.3028	1.0995	1.0442	1.0262
7	0.0189	0.0160	166.4	162.9	159.4	162.9	47.8	-0.2	0.2912	-0.0011	0.4771	0.4668	1.2891	1.0981	1.0344	1.0233
8	0.0168	0.0148	164.5	161.6	158.0	161.6	46.0	3.5	0.2834	0.0214	0.4710	0.4624	1.2871	1.1005	1.0309	1.0215
9	0.0143	0.0133	163.2	160.8	154.9	160.5	51.6	8.8	0.3216	0.0546	0.4659	0.4588	1.2861	1.1056	1.0323	1.0232
10	0.0077	0.0077	147.3	150.1	137.5	149.7	52.8	11.3	0.3464	0.0754	0.4176	0.4260	1.2628	1.1119	1.0292	1.0263

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
RUN NO413, SPEED CODE 77, POINT NO 16											
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.3009	0.1413	0.5939	43.72	51.74	0.0834	0.1926	0.0406	0.9620	71.07	71.54
2	-0.2656	0.1231	0.5162	48.93	56.02	0.0723	0.0883	0.0198	0.9808	72.11	72.56
3	-0.3082	0.1180	0.4525	50.29	54.19	0.0930	0.1104	0.0278	0.9751	69.05	69.48
4	-0.3403	0.1316	0.4042	49.26	51.77	0.0982	0.1316	0.0333	0.9738	68.24	68.64
5	-0.3756	0.1615	0.3441	44.60	45.01	0.1187	0.2104	0.0624	0.9647	69.70	69.58
6	-0.4021	0.1570	0.3253	42.56	43.66	0.0941	0.1889	0.0568	0.9722	67.37	67.69
7	-0.4316	0.1657	0.2923	42.48	42.10	0.1110	0.2457	0.0770	0.9645	61.69	61.98
8	-0.4539	0.1984	0.2620	41.98	41.68	0.1025	0.2374	0.0785	0.9665	60.53	60.80
9	-0.4601	0.2312	0.2670	40.90	41.24	0.1091	0.2318	0.0794	0.9675	59.50	59.79
10	-0.4786	0.2975	0.2910	35.83	38.08	0.0850	0.1876	0.0666	0.9783	51.43	51.71

NCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
RAD/SEC	KG/SEC	%	%	%	%	%	%	%	%
675.27	71.6	1.1099	1.3328	77.87	78.75	1.0320	0.9705	57.22	

ROTOR 2

RUN NO413, SPEED CODE 63, POINT NO 1																		
SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	S-1	S-2	M-1	M-2	U-1	U-2	V1-1	V1-2		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC		
1	0.1519	0.1035	119.5	187.4	118.0	184.3	19.0	90.0	0.1584	0.4939	0.3433	0.3426	124.5	132.5	0.4376	0.4915	158.3	169.7
2	0.1115	0.0783	142.5	187.4	141.5	188.1	16.9	82.9	0.1185	0.4533	0.4149	0.3439	135.3	141.1	0.5372	0.5163	184.5	177.9
3	0.0845	0.0591	144.2	179.8	143.5	184.7	14.7	71.9	0.1017	0.4101	0.4207	0.3219	145.4	149.7	0.5662	0.5289	194.1	182.2
4	0.0587	0.0394	141.9	166.9	141.1	157.7	14.2	63.0	0.1000	0.3794	0.4142	0.4931	156.2	159.0	0.5946	0.5361	208.2	184.7
5	0.0092	0.0017	135.4	150.1	134.7	142.1	13.8	48.5	0.1024	0.3289	0.3958	0.4350	160.8	161.5	0.6238	0.5639	214.5	194.7
6	0.0012	0.0087	134.4	141.0	133.7	134.8	14.1	41.4	0.1052	0.2982	0.3919	0.4083	169.5	169.7	0.6429	0.5801	220.5	200.4
7	0.0068	0.0126	132.8	138.5	131.9	133.3	15.2	37.7	0.1146	0.2755	0.3869	0.4011	197.9	197.6	0.6567	0.6034	225.4	208.4
8	0.0122	0.0169	131.2	136.2	130.2	131.5	16.1	35.3	0.1228	0.2626	0.3817	0.3939	209.5	208.8	0.6784	0.6296	231.2	217.6
9	0.0139	0.0184	128.8	133.2	127.6	127.8	18.0	37.6	0.1400	0.2859	0.3743	0.3845	217.5	217.0	0.6879	0.6359	234.8	220.3
10	0.0099	0.0120	121.0	119.7	119.5	112.8	18.8	39.9	0.1564	0.3402	0.3504	0.3499	225.5	225.2	0.6914	0.6232	238.7	216.9

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-8	LOSS-P	POZ/	SEFF-P	SEFF-A	S1-1	S1-2	VO1-1	VO1-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1809	0.0595	0.3295	0.4766	29.88	41.23	0.0522	0.0305	0.0072	1.1089	96.03	95.97	0.7265	0.2499	-105.5	-42.5	1.2649
2	0.2023	0.0930	0.1844	0.3634	36.09	42.95	0.1360	0.0815	0.0201	1.0963	86.40	86.22	0.6948	0.3314	-118.4	-58.2	1.2870
3	0.1733	0.0743	0.1512	0.2985	36.57	42.60	0.1472	0.0490	0.0123	1.0923	90.21	90.08	0.7378	0.4393	-130.7	-77.7	1.2802
4	0.1460	0.0573	0.1172	0.2422	35.96	41.06	0.1529	0.0340	0.0086	1.0852	92.15	92.04	0.7881	0.5439	-142.1	-96.0	1.2644
5	0.0861	0.0185	0.0779	0.1394	34.32	37.00	0.1509	0.0481	0.0119	1.0424	84.19	84.05	0.8918	0.7524	-166.9	-133.0	1.2272
6	0.0689	0.0111	0.0936	0.0867	34.07	35.14	0.1372	0.0552	0.0131	1.0465	77.09	76.92	0.9195	0.8328	-175.3	-148.2	1.2088
7	0.0482	0.0066	0.0853	0.0686	33.64	34.76	0.1139	0.0337	0.0079	1.0432	83.20	83.09	0.9456	0.8770	-182.7	-160.2	1.2038
8	0.0413	0.0025	0.0709	0.0563	33.18	34.20	0.0987	0.0280	0.0044	1.0391	83.70	83.60	0.9782	0.9219	-193.4	-175.4	1.1995
9	0.0307	0.0081	0.0680	0.0499	32.45	33.08	0.1027	0.0448	0.0105	1.0366	75.16	75.03	1.0018	0.9519	-199.5	-179.4	1.1925
10	0.0002	0.0087	0.1233	0.0228	30.26	28.94	0.1280	0.1002	0.0217	1.0265	48.34	48.14	1.0464	1.0237	-206.6	-185.2	1.1885

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SGM			%	%
1.0720	1.2302	84.78	85.23	140.91	1.0210	1.0640	85.00	85.14

STATOR 2

RUN NO413, SPEED CODE 63, POINT NO 1																
SL	EPS1-1	EPS1-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	S-1	S-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1218	0.1397	168.4	175.9	143.4	175.9	88.4	0.4	0.5495	0.0029	0.4890	0.5077	1.2354	1.0906	1.0812	1.0312
2	0.0894	0.0964	178.0	180.5	138.5	184.5	81.0	-3.5	0.4711	-0.0187	0.5150	0.5351	1.2687	1.0859	1.0807	1.0308
3	0.0673	0.0695	175.8	177.2	161.1	177.1	70.3	-5.3	0.4110	-0.0301	0.5099	0.5142	1.2562	1.0798	1.0723	1.0282
4	0.0504	0.0498	169.4	169.4	157.7	169.4	61.8	-5.3	0.3729	-0.0314	0.4917	0.4919	1.2411	1.0743	1.0657	1.0255
5	0.0286	0.0260	151.3	147.9	143.7	147.9	47.4	-1.3	0.3189	-0.0085	0.4386	0.4282	1.1955	1.0677	1.0350	1.0205
6	0.0229	0.0203	142.8	143.0	136.9	143.0	40.7	-0.7	0.2888	-0.0050	0.4136	0.4143	1.1865	1.0645	1.0272	1.0168
7	0.0191	0.0167	140.0	137.2	134.9	137.2	37.3	-0.5	0.2699	-0.0035	0.4056	0.3971	1.1756	1.0628	1.0188	1.0146
8	0.0170	0.0153	137.4	134.3	132.8	134.3	35.3	1.5	0.2599	0.0111	0.3977	0.3884	1.1711	1.0638	1.0154	1.0132
9	0.0147	0.0139	134.3	132.3	129.0	132.2	37.6	5.3	0.2837	0.0404	0.3878	0.3820	1.1485	1.0668	1.0155	1.0138
10	0.0080	0.0083	121.4	123.5	114.7	123.3	39.9	7.5	0.3348	0.0611	0.3489	0.3551	1.1538	1.0709	1.0133	1.0156

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-8	LOSS-P	POZ/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-0.3381	0.1511	0.3470	36.99	43.80	0.0640	0.1679	0.0354	0.9751	72.16	72.48
2	-0.2935	0.1216	0.4898	41.11	44.73	0.0690	0.0851	0.0191	0.9859	72.84	73.14
3	-0.3231	0.1146	0.4410	41.90	45.13	0.0930	0.1101	0.0262	0.9821	71.47	71.76
4	-0.3542	0.1177	0.4043	41.08	43.32	0.0979	0.1155	0.0292	0.9825	71.94	72.20
5	-0.4040	0.1498	0.3274	37.39	37.70	0.1152	0.1956	0.0564	0.9757	48.29	48.52
6	-0.4333	0.1572	0.2938	35.59	34.50	0.0859	0.1639	0.0493	0.9818	45.83	46.04
7	-0.4530	0.1633	0.2734	35.12	34.98	0.1052	0.2170	0.0680	0.9767	36.55	36.73
8	-0.4773	0.1881	0.2488	34.48	34.21	0.1040	0.2203	0.0728	0.9772	33.16	33.31
9	-0.4980	0.2370	0.2433	33.32	33.58	0.1012	0.2056	0.0705	0.9794	31.97	32.14
10	-0.5102	0.2832	0.2737	29.34	31.10	0.0820	0.1584	0.0563	0.9868	24.40	24.55

MCOR #	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
550.69	64.2	1.0720	1.2059	76.36	76.99	1.0210	0.9802	57.39

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(63 Percent of Design Speed)**

S. I. UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	VM-5	VM-6	VM-7	VM-8	VM-9	VM-10	VM-11	VM-12	VM-13	VM-14	VM-15	VM-16	VM-17	VM-18	VM-19	VM-20	
1	0.1937	0.1613	111.3	149.2	111.3	111.8	0.9971	131.5	0.0	0.9324	0.3305	0.5543	99.9	109.2	0.4441	0.3519	149.5	119.5							
2	0.1706	0.1285	116.7	182.5	116.7	123.4	0.9953	139.3	0.0	0.8245	0.3471	0.5348	111.9	119.7	0.4807	0.3660	161.7	124.4							
3	0.1418	0.1045	117.0	171.4	117.0	124.5	0.9958	117.8	0.0	0.7567	0.3478	0.5029	125.1	131.3	0.5093	0.3674	171.3	125.2							
4	0.1124	0.0856	115.8	161.7	115.8	123.2	0.9954	106.8	0.0	0.7040	0.3472	0.4737	137.4	142.2	0.5362	0.3772	180.3	128.8							
5	0.0831	0.0555	115.8	144.0	115.8	116.2	0.9937	85.1	0.0	0.6321	0.3442	0.4200	165.1	167.5	0.5994	0.4158	201.4	142.4							
6	0.0537	0.0332	115.2	141.2	115.2	116.5	0.9929	79.8	0.0	0.6008	0.3424	0.4119	178.4	180.1	0.6312	0.4432	212.4	153.7							
7	0.0243	0.0235	114.9	140.1	114.9	116.8	0.9926	77.5	0.0	0.5822	0.3416	0.4055	186.9	187.9	0.6522	0.4683	219.4	160.7							
8	0.0150	0.0150	114.6	139.3	114.6	115.5	0.9923	76.1	0.0	0.5829	0.3405	0.4028	195.3	196.0	0.6730	0.4847	226.4	166.5							
9	0.0100	0.0100	114.0	138.3	114.0	113.4	0.9918	75.0	0.0	0.5887	0.3387	0.3964	204.4	204.4	0.6954	0.4987	234.0	171.5							
10	0.0050	0.0104	110.2	133.4	110.2	109.3	0.9874	75.6	0.0	0.6115	0.3274	0.3871	214.6	214.6	0.7185	0.5107	241.3	175.0							
11	0.0016	0.0041	103.4	127.7	103.4	100.9	0.9785	77.6	0.0	0.6552	0.3067	0.3682	223.3	223.2	0.7298	0.5126	246.1	177.2							

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	MEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VM*-1	VM*-2	PO/PO
1	0.3557	0.1525	0.1786	1.0912	26.11	26.44	0.4485	0.2597	0.0593	1.1735	92.37	81.96	0.7319	0.3594	-99.9	42.2	1.1690
2	0.3513	0.1456	0.1595	0.8815	27.47	30.06	0.4475	0.1444	0.0366	1.1831	98.92	84.55	0.7647	0.1168	-111.8	14.6	1.1880
3	0.0862	0.1583	0.2085	0.7126	27.23	30.84	0.4819	0.0910	0.0252	1.1824	91.98	91.79	0.8202	0.1076	-125.1	-13.5	1.1879
4	0.3744	0.1657	0.1579	0.5727	27.47	30.90	0.4589	0.0636	0.0180	1.1768	93.64	93.48	0.8673	0.2950	-137.4	-37.5	1.1888
5	0.3706	0.1501	0.1817	0.3623	27.22	29.58	0.4358	0.0251	0.0155	1.1840	92.81	92.64	0.9395	0.6172	-165.1	-82.4	1.1720
6	0.3763	0.1434	0.2566	0.2871	27.08	25.33	0.4097	0.0439	0.0119	1.1727	93.92	93.79	0.9977	0.7105	-178.4	-106.2	1.1748
7	0.3105	0.1404	0.0821	0.2622	27.02	25.97	0.2964	0.0418	0.0132	1.1752	93.96	93.82	1.0197	0.7575	-186.9	-110.4	1.1771
8	0.3105	0.1427	0.0778	0.2364	26.93	26.69	0.3916	0.0510	0.0140	1.1750	92.09	91.90	1.0403	0.8040	-195.3	-119.9	1.1771
9	0.3178	0.1448	0.0749	0.2134	26.80	26.15	0.3922	0.0228	0.0188	1.1789	88.72	88.65	1.0621	0.8485	-204.4	-128.7	1.1766
10	0.3126	0.1623	0.0927	0.1950	25.89	26.05	0.3995	0.0670	0.0244	1.1792	85.29	84.94	1.0963	0.9013	-214.6	-138.0	1.1747
11	0.3144	0.1878	0.1593	0.1722	24.23	25.84	0.4107	0.1199	0.0284	1.1816	82.10	81.67	1.1370	0.9549	-223.3	-145.7	1.1665

TO/T0	PO/PO	EFF-AD	EFF-P	WC1/A1	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
1.0532	1.1766	85.49	89.73	130.36	1.0532	1.1766	89.49	89.73

STATOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	VM-5	VM-6	VM-7	VM-8	VM-9	VM-10	VM-11	VM-12	VM-13	VM-14	VM-15	VM-16	VM-17	VM-18	VM-19	VM-20	
1	0.1942	0.1378	113.1	171.5	113.1	111.5	143.1	18.9	0.9832	0.1561	0.4025	0.3266	1.1428	1.0572	1.1475	1.0572									
2	0.1294	0.0982	172.7	177.0	114.9	125.7	124.4	18.3	0.9406	0.1443	0.5050	0.3681	1.1729	1.0557	1.1685	1.0557									
3	0.0855	0.0696	166.1	177.4	121.7	126.4	113.1	15.7	0.7494	0.1237	0.4868	0.3696	1.1787	1.0535	1.1732	1.0535									
4	0.3005	0.0541	159.5	124.7	127.2	123.8	101.3	15.1	0.6476	0.1212	0.4667	0.3620	1.1758	1.0515	1.1709	1.0515									
5	0.3020	0.0343	145.4	119.0	119.2	118.1	93.3	14.4	0.4100	0.1212	0.4246	0.3455	1.1668	1.0493	1.1638	1.0493									
6	0.3254	0.0292	143.7	119.1	120.3	118.2	78.6	14.7	0.5734	0.1239	0.4193	0.3459	1.1671	1.0497	1.1650	1.0497									
7	0.3227	0.0264	143.2	119.5	121.0	118.6	76.5	14.5	0.5634	0.1229	0.4176	0.3456	1.1678	1.0503	1.1661	1.0503									
8	0.3201	0.0235	141.9	119.1	120.3	118.7	75.3	14.7	0.5592	0.1242	0.4156	0.3453	1.1674	1.0515	1.1661	1.0515									
9	0.3167	0.0196	140.4	119.7	119.9	117.9	75.1	15.0	0.5641	0.1254	0.4086	0.3460	1.1673	1.0535	1.1666	1.0535									
10	0.3110	0.0131	138.2	119.7	115.9	117.7	76.2	16.7	0.5936	0.1412	0.4014	0.3423	1.1670	1.0567	1.1711	1.0567									
11	0.3044	0.0055	137.3	111.4	107.4	109.9	77.4	17.7	0.6245	0.1599	0.3833	0.3217	1.1563	1.0598	1.1713	1.0598									

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	MEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VM*-1	VM*-2	PO/PO
1	0.3039	0.1458	0.2595	0.9171	23.11	28.47	0.4406	0.1436	0.0292	1.1776	70.16	70.73					
2	0.3197	0.1060	0.1870	0.6569	28.35	32.47	0.4404	0.0753	0.0170	1.1887	81.80	82.19					
3	0.0364	0.0611	0.1475	0.4247	30.35	32.84	0.3735	0.0520	0.0125	1.1822	87.46	87.65					
4	0.3711	0.0798	0.1351	0.3664	31.01	33.27	0.3561	0.0457	0.0125	1.1952	89.53	89.77					
5	0.3125	0.0144	0.1231	0.4889	30.30	30.80	0.3138	0.0373	0.0109	1.1996	89.97	90.19					
6	0.3171	0.0389	0.1203	0.4454	30.71	30.81	0.3093	0.0553	0.0178	1.1935	89.85	90.08					
7	0.3171	0.0511	0.1168	0.4405	30.76	30.85	0.3040	0.0634	0.0218	1.1922	89.85	90.08					
8	0.3143	0.0561	0.1165	0.4150	30.73	30.76	0.3073	0.0740	0.0244	1.1918	87.26	87.53					
9	0.3187	0.0585	0.1187	0.4177	30.35	30.62	0.3009	0.0727	0.0248	1.1921	84.23	84.50					
10	0.3203	0.0709	0.1413	0.4425	29.46	30.37	0.2968	0.0640	0.0276	1.1933	81.49	81.91					
11	0.3217	0.0829	0.1396	0.4647	27.33	28.35	0.3217	0.0907	0.0328	1.1911	77.77	77.78					

INLET	INLET	INLET	INLET	INLET	T02/T01	PO2/PO1	EFF-AD	EFF-P
547.62	1.0532	1.1469	84.44	85.17	1.0532	0.9918	84.84	

ROTOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M1-1	M1-2	V1-1	V1-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	M/SEC	M/SEC	M1-1	M1-2	M/SEC	M/SEC
1	3.1908	0.1030	102.9	172.8	101.9	141.7	18.4	98.5	0.1781	0.8018	0.2967	0.4968	124.2	132.3	0.4224	0.4193	146.5	145.7
2	0.1113	0.0793	127.9	170.8	126.7	144.8	17.3	90.6	0.1391	0.5564	0.1709	0.4921	135.1	140.9	0.3017	0.4414	175.0	159.2
3	3.0859	0.0618	131.0	144.8	130.1	144.2	15.1	79.7	0.1152	0.5035	0.3804	0.4749	145.1	149.4	0.5343	0.4615	189.9	180.1
4	3.0623	0.0443	129.4	144.8	128.8	139.2	14.6	71.6	0.1132	0.4743	0.3768	0.4510	155.9	158.7	0.5957	0.4732	171.2	164.2
5	3.0180	0.0087	124.4	140.5	123.8	126.8	14.5	60.4	0.1167	0.4442	0.3622	0.4040	180.4	181.2	0.6017	0.5038	207.1	175.2
6	0.0082	0.0022	124.3	133.2	123.9	121.3	14.6	54.8	0.1176	0.4235	0.3611	0.3830	189.1	189.9	0.6210	0.5209	213.8	181.3
7	0.0028	0.0007	123.5	131.0	122.7	120.5	14.6	51.4	0.1188	0.4031	0.3587	0.3763	197.5	197.5	0.6394	0.5441	220.3	189.4
8	0.0018	0.0006	122.4	129.1	121.7	119.5	15.2	48.9	0.1243	0.3886	0.3553	0.3703	209.1	208.3	0.6639	0.5715	228.9	198.2
9	3.3831	0.0049	121.5	128.3	120.3	118.0	15.8	50.3	0.1383	0.4026	0.3515	0.3673	217.1	216.6	0.6761	0.5839	233.7	208.9
10	3.3822	0.0031	114.5	120.2	113.2	109.1	17.6	50.3	0.1546	0.4315	0.3307	0.3630	225.0	224.8	0.6818	0.5874	236.3	208.8

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B1-	B1-2	VO1-1	VO1-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	3.1030	0.0186	0.3103	0.5736	26.06	36.37	0.1532	-0.0244	-0.0058	1.1314	102.27	102.30	0.8044	0.2307	-105.9	-33.7	1.2946
2	0.1903	0.0409	0.1871	0.4151	32.83	38.34	0.2321	0.0790	0.0188	1.1112	89.84	89.68	0.7468	0.3317	-117.8	-50.2	1.3079
3	0.1271	0.0781	0.1602	0.3357	33.71	38.59	0.2310	0.0399	0.0100	1.1083	93.61	93.51	0.7840	0.4483	-130.0	-69.6	1.3057
4	3.1027	0.0142	0.1300	0.2726	33.37	37.50	0.2318	0.0231	0.0058	1.1035	95.77	95.71	0.8311	0.5586	-141.3	-87.1	1.2956
5	0.3483	0.0195	0.0867	0.1688	32.09	34.33	0.2311	0.0387	0.0095	1.0898	90.94	90.84	0.9209	0.7611	-166.0	-120.8	1.2716
6	3.3333	0.0245	0.0972	0.1187	32.01	32.87	0.2198	0.0482	0.0174	1.0783	97.14	87.00	0.9551	0.8364	-174.5	-134.5	1.2590
7	0.3117	0.0274	0.0855	0.0587	31.81	32.61	0.2022	0.0397	0.0093	1.0756	88.35	88.21	0.9799	0.8813	-182.9	-146.1	1.2558
8	0.3774	0.0294	0.0766	0.0824	31.49	32.27	0.1859	0.0367	0.0081	1.0735	88.85	88.72	1.0101	0.9275	-193.9	-159.4	1.2531
9	3.3027	0.0361	0.0695	0.0711	31.03	31.78	0.1847	0.0620	0.0099	1.0736	86.44	86.28	1.0298	0.9535	-200.3	-166.3	1.2521
10	0.0243	0.0632	0.1114	0.0592	29.08	29.22	0.1860	0.0493	0.0109	1.0717	83.91	83.75	1.0710	1.0118	-207.4	-174.5	1.2383

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/41	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SMH			%	%
1.0822	1.2722	86.90	87.34	130.77	1.0275	1.0908	91.37	91.48

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	INLET	INLET	STAGE	TO1
1	3.1213	0.1396	157.5	148.0	124.3	148.8	95.8	-0.7	0.5790	-0.0046	0.4515	0.4255	1.2778	1.0943	1.1144	1.0351
2	0.0882	0.0961	163.1	156.2	134.9	156.2	88.7	-3.6	0.5730	-0.0727	0.4690	0.4483	1.3021	1.0908	1.1064	1.0341
3	3.0455	0.0675	161.7	152.1	141.6	152.0	73.1	-6.2	0.5031	-0.0436	0.4638	0.4370	1.2977	1.0862	1.1015	1.0317
4	3.0466	0.0468	156.5	145.7	139.8	145.5	70.3	-4.5	0.4655	-0.0444	0.4509	0.4187	1.2867	1.0821	1.0912	1.0297
5	3.0244	0.0201	142.1	130.7	129.1	130.9	59.5	-4.3	0.4320	-0.0325	0.4089	0.3758	1.2591	1.0781	1.0791	1.0273
6	3.0182	0.0143	134.8	126.0	123.5	125.9	54.0	-3.5	0.4119	-0.0436	0.3876	0.3615	1.2501	1.0762	1.0706	1.0249
7	3.0141	0.0109	132.4	122.1	122.1	122.0	51.0	-4.8	0.3955	-0.0355	0.3804	0.3500	1.2431	1.0762	1.0648	1.0238
8	0.0111	0.0090	130.1	120.5	120.6	120.5	48.8	-3.1	0.3844	-0.0761	0.3733	0.3451	1.2433	1.0784	1.0626	1.0231
9	3.0081	0.0070	129.1	120.8	118.9	120.8	50.2	0.8	0.3992	0.0069	0.3696	0.3453	1.2408	1.0821	1.0639	1.0237
10	3.0034	0.0031	121.1	113.4	110.2	113.3	50.2	2.9	0.4274	0.0259	0.3496	0.3232	1.2285	1.0852	1.0633	1.0239

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-0.2297	0.1440	0.6625	33.10	39.53	0.1874	0.1003	0.0211	0.9849	81.09	81.23
2	-0.1916	0.1177	0.5956	36.45	42.01	0.1774	0.0317	0.0071	0.9956	86.05	86.24
3	-0.2310	0.1041	0.5436	38.06	41.11	0.1819	0.0614	0.0099	0.9943	88.34	88.51
4	-0.2616	0.1047	0.5095	37.66	39.48	0.1911	0.0497	0.0125	0.9936	89.42	89.56
5	-0.2910	0.1298	0.4644	34.85	35.45	0.2069	0.0841	0.0262	0.9909	88.64	88.84
6	-0.3102	0.1188	0.4553	33.37	34.08	0.1979	0.0679	0.0264	0.9933	79.16	79.37
7	-0.3274	0.1313	0.4310	33.00	32.98	0.2085	0.1057	0.0391	0.9900	75.91	76.13
8	-0.3526	0.1509	0.4109	32.53	32.49	0.2056	0.1106	0.0365	0.9899	75.72	75.93
9	-0.3823	0.2035	0.3923	31.98	32.47	0.1962	0.0993	0.0361	0.9910	75.24	75.47
10	-0.4174	0.2480	0.4016	29.47	30.30	0.2032	0.0994	0.0356	0.9921	74.06	74.31

WCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
KG/SEC	KG/SEC			%	%			%
549.62	88.8	1.0822	1.2673	83.81	84.34	1.0275	0.9917	82.55

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(63 Percent of Design Speed)**

S. I. UNITS

ROTOR 1

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1462	0.1610	97.0	172.4	57.0	96.2	0.0881	143.0	0.0	0.9764	0.2875	0.5059	100.0	109.4	0.4128	0.2991	139.4	101.9
2	0.1747	0.1907	102.7	168.9	107.7	105.2	0.0947	132.1	0.0	0.8961	0.3047	0.4951	112.0	119.9	0.4506	0.3105	152.0	106.0
3	0.1452	0.1102	104.9	161.4	104.9	112.5	0.0961	115.7	0.0	0.7986	0.3111	0.4724	125.3	131.5	0.4888	0.3325	163.4	113.8
4	0.1181	0.0894	104.2	153.2	106.2	112.5	0.0966	104.0	0.0	0.7412	0.3152	0.4478	137.4	142.4	0.5158	0.3476	173.8	118.9
5	0.0864	0.0544	104.2	137.0	106.2	106.5	0.0957	89.1	0.2	0.7977	0.3152	0.3990	149.3	147.7	0.5831	0.3910	196.5	134.2
6	0.0472	0.0416	105.2	132.9	105.2	104.9	0.0947	81.4	0.0	0.8611	0.3120	0.3885	178.7	180.3	0.6150	0.4191	207.3	144.1
7	0.0357	0.0340	104.3	132.1	104.3	104.8	0.0941	80.4	0.0	0.6561	0.3095	0.3839	187.2	188.2	0.6356	0.4371	214.3	150.4
8	0.0251	0.0260	103.3	131.7	103.3	104.3	0.0928	80.5	0.0	0.6572	0.3065	0.3824	195.6	196.3	0.6560	0.4524	221.2	155.8
9	0.1155	0.0177	102.1	130.1	102.1	101.8	0.0927	81.0	0.0	0.6721	0.3028	0.3770	204.7	204.7	0.6782	0.4642	228.7	160.2
10	0.0061	0.0098	99.7	127.8	99.7	97.6	0.0906	82.6	0.0	0.7025	0.2955	0.3696	214.9	214.9	0.7022	0.4754	236.6	164.4
11	0.0036	0.0047	93.8	125.1	93.8	92.2	0.0884	84.6	0.0	0.7427	0.2779	0.3608	223.6	223.5	0.7180	0.4408	242.5	166.7

SL	INCS	INCH	DEV	TWRN	RHOVM-1	RHOVM-2	D-FAC	CMEGA-A	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	PACIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1250	0.2218	0.2030	1.1860	23.10	25.21	0.5182	0.3038	0.3674	1.1625	81.74	81.34	0.8011	0.5349	-100.0	53.7	1.1568
2	0.1161	0.2104	0.1979	0.9450	24.45	25.48	0.5195	0.1894	0.0480	1.1759	86.91	86.61	0.8296	0.1155	-112.0	12.3	1.1779
3	0.1212	0.2134	0.2378	0.7367	24.58	28.31	0.5016	0.0781	0.0214	1.1830	93.78	93.62	0.8753	0.1390	-125.3	-15.8	1.1867
4	0.1214	0.2108	0.2321	0.5951	25.29	28.86	0.4929	0.0478	0.0134	1.1815	95.54	95.44	0.9144	0.3292	-137.6	-38.5	1.1858
5	0.1137	0.1905	0.1885	0.3454	25.27	27.52	0.4647	0.0670	0.0128	1.1744	94.35	94.24	0.9999	0.6540	-165.3	-81.7	1.1776
6	0.1156	0.1851	0.1414	0.2872	25.01	27.21	0.4451	0.0521	0.0135	1.1758	93.25	93.09	1.038	0.7554	-178.7	-98.8	1.1777
7	0.1341	0.1836	0.1241	0.2450	24.82	27.24	0.4553	0.0574	0.0147	1.1788	92.34	92.18	1.0625	0.7995	-187.2	-107.6	1.1802
8	0.1469	0.1871	0.1115	0.2470	24.59	27.13	0.4327	0.0719	0.0183	1.1826	92.25	90.02	1.0847	0.8377	-195.6	-115.8	1.1882
9	0.1938	0.1927	0.1106	0.2257	24.31	26.47	0.4369	0.0974	0.0242	1.1739	88.64	86.51	1.1080	0.8823	-204.7	-123.7	1.1836
10	0.1637	0.2075	0.1270	0.2009	23.73	25.34	0.4468	0.1317	0.0317	1.1742	81.96	81.52	1.1364	0.9355	-214.9	-132.3	1.1894
11	0.1804	0.2191	0.1745	0.1983	27.30	25.89	0.4513	0.1525	0.0331	1.1926	79.55	79.03	1.1734	0.9851	-233.6	-138.9	1.1819

TO/TD	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
%	%	%	%	504	%	%	%	%
1.0547	1.1803	88.69	88.94	118.91	1.0547	1.1803	88.69	88.94

STATOR 1

SL	EPS1-1	EPS1-2	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TD	PO/PO	TO2/	
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	INLET	STAGE	
1	0.1959	0.1418	71.5	78.5	89.9	135.2	17.2	1.0439	0.1868	0.4567	0.2637	1.1359	1.0541	1.1419	1.0541	
2	0.1189	0.1065	74.2	65.6	102.0	125.8	20.8	0.9267	0.2008	0.4618	0.3007	1.1574	1.0547	1.1560	1.0547	
3	0.1054	0.0817	112.9	109.3	111.5	111.4	17.7	0.7996	0.1575	0.4540	0.3288	1.1746	1.0529	1.1711	1.0529	
4	0.0715	0.0660	113.6	112.2	112.4	100.6	14.9	0.7311	0.1317	0.4401	0.3297	1.1777	1.0513	1.1735	1.0513	
5	0.0636	0.0443	139.4	108.3	109.8	107.4	96.3	13.9	0.6551	0.1287	0.4034	0.3137	1.1715	1.0499	1.1682	1.0499
6	0.0372	0.0404	135.3	107.6	109.0	106.5	80.2	14.8	0.6342	0.1379	0.3940	0.3113	1.1711	1.0507	1.1689	1.0507
7	0.0336	0.0366	135.1	108.4	109.6	107.4	79.1	15.3	0.6255	0.1417	0.3931	0.3137	1.1730	1.0520	1.1715	1.0520
8	0.0293	0.0320	135.6	109.9	109.9	108.8	79.4	5.9	0.6257	0.1481	0.3939	0.3178	1.1759	1.0542	1.1752	1.0542
9	0.0233	0.0253	134.4	110.5	107.9	109.7	80.2	16.5	0.6390	0.1436	0.3900	0.3188	1.1774	1.0571	1.1776	1.0571
10	0.0143	0.0157	132.8	109.6	104.5	107.6	82.0	19.2	0.6653	0.1765	0.3845	0.3158	1.1766	1.0610	1.1790	1.0610
11	0.0054	0.0061	130.6	104.5	98.4	102.9	84.4	18.1	0.7033	0.1744	0.3765	0.3001	1.1692	1.0653	1.1797	1.0653

SL	INCS	INCH	DEV	TWRN	RHOVM-1	RHOVM-2	D-FAC	CMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	PACIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT
1	0.1242	0.2065	0.2806	0.8571	13.37	23.31	0.5702	0.1324	0.0274	0.7823	71.48	72.01
2	0.0948	0.1841	0.2435	0.7199	23.94	26.68	0.4881	0.1167	0.0258	0.8841	77.42	77.93
3	0.1169	0.1123	0.1813	0.6422	27.46	29.40	0.4190	0.0709	0.0173	0.9906	87.48	87.76
4	0.0276	0.0732	0.1460	0.5991	28.67	29.78	0.3929	0.0565	0.0145	0.9929	91.17	91.36
5	0.0819	0.0306	0.1311	0.5264	28.32	28.44	0.3669	0.0512	0.0149	0.9946	91.03	91.23
6	0.1013	0.0170	0.1342	0.4964	28.20	28.20	0.3550	0.0525	0.0142	0.9947	90.00	90.23
7	0.1112	0.0107	0.1355	0.4838	28.37	28.40	0.3482	0.0536	0.0177	0.9944	89.03	89.28
8	0.1152	0.0101	0.1375	0.4805	28.44	28.76	0.3458	0.0603	0.0193	0.9939	87.17	87.46
9	0.1127	0.0163	0.1419	0.4855	27.93	28.82	0.3406	0.0524	0.0178	0.9948	83.47	84.25
10	0.1217	0.0109	0.1766	0.4688	27.00	28.37	0.3428	0.0601	0.0211	0.9942	78.98	79.47
11	0.1366	0.0036	0.2141	0.5245	25.62	28.91	0.3849	0.1158	0.0418	0.9922	74.09	74.69

WCOMP	TO/TD	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
RAD/SEC	%	%	%	%	%	%	%	%
550.39	1.0547	1.1710	84.35	84.48	1.0547	0.9921	84.35	84.35

ROTOR 2

																RJM NO413, SPEED C3DE 63, POINT NO 13			
SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2			
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC			
1	0.1444	0.0976	83.8	169.3	81.4	119.0	15.7	107.5	0.2005	0.7281	0.2391	0.4595	124.4	132.5	0.3887	0.3404	135.0	121.6	
2	0.3993	0.0705	105.9	156.2	103.9	126.0	20.3	99.9	0.1915	0.5906	0.3050	0.4475	135.2	141.0	0.4476	0.3636	155.0	126.9	
3	0.3754	0.0549	117.5	152.0	116.3	122.0	16.4	90.7	0.1424	0.6370	0.3404	0.4357	145.3	149.6	0.5029	0.3884	173.6	135.5	
4	0.3555	0.0410	117.3	146.6	116.4	121.6	14.3	81.8	0.1192	0.5911	0.3400	0.4201	156.1	158.9	0.5329	0.4129	183.8	144.0	
5	0.3174	0.0111	112.3	134.6	111.4	112.4	14.2	73.8	0.1258	0.5801	0.3254	0.3849	180.7	181.4	0.5805	0.4454	200.3	155.8	
6	0.0003	0.0045	112.3	129.7	111.3	109.2	14.9	67.9	0.1334	0.5694	0.3251	0.3706	189.3	189.6	0.5992	0.4628	206.9	162.0	
7	0.0327	0.0019	113.7	127.9	112.6	108.7	15.4	67.4	0.1379	0.5548	0.3290	0.3640	197.8	197.6	0.6198	0.4944	214.2	169.8	
8	0.0409	0.0005	114.6	127.7	113.4	109.8	16.7	65.2	0.1445	0.5358	0.3310	0.3639	209.4	208.6	0.6458	0.5146	223.6	180.7	
9	0.0001	0.0001	113.5	128.0	111.9	108.4	19.3	64.1	0.1709	0.5689	0.3273	0.3638	217.4	216.9	0.6557	0.5231	227.5	186.1	
10	0.0001	0.0004	108.4	122.0	106.9	103.6	18.0	64.6	0.1659	0.5517	0.3116	0.3458	225.1	225.1	0.6705	0.5411	233.3	191.0	

SL	INCH	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	PACIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0131	0.1345	0.2830	0.7142	21.23	32.03	0.2792	-0.0785	-0.0187	1.1552	105.75	105.86	0.9204	0.2042	-107.7	-25.0	1.3134
2	0.0636	0.0455	0.1832	0.5055	27.23	32.49	0.3306	0.0201	0.0053	1.1335	97.79	97.75	0.8332	0.3278	-115.0	-61.1	1.3195
3	0.0762	0.0229	0.1642	0.3867	30.63	33.54	0.3458	0.0719	0.0183	1.1217	98.07	98.72	0.8350	0.4483	-128.8	-58.9	1.3216
4	0.0500	0.0387	0.1358	0.3196	30.69	33.67	0.3286	0.0475	0.0119	1.1206	93.14	93.83	0.8840	0.5644	-142.2	-77.2	1.3188
5	0.3032	0.0787	0.0884	0.2188	29.36	31.33	0.3242	0.0596	0.0146	1.1162	89.94	89.78	0.9810	0.7838	-164.5	-107.7	1.3070
6	0.3164	0.0724	0.0915	0.1722	29.33	30.42	0.3116	0.0638	0.0152	1.1096	88.26	88.08	1.0029	0.8308	-174.4	-119.6	1.3064
7	0.2333	0.0649	0.0943	0.1411	29.67	30.24	0.2964	0.0656	0.0155	1.1056	84.93	84.74	1.0171	0.8760	-182.2	-130.4	1.2998
8	0.3193	0.0580	0.0641	0.1217	29.79	30.53	0.2753	0.0584	0.0138	1.1052	87.45	87.27	1.0388	0.9171	-192.7	-143.4	1.3044
9	0.3261	0.0629	0.0571	0.1155	29.29	30.04	0.2760	0.0630	0.0149	1.1080	86.58	86.39	1.0546	0.9411	-198.1	-148.8	1.3036
13	0.3481	0.0870	0.0973	0.0578	27.84	28.58	0.2638	0.0541	0.0127	1.1077	87.45	87.27	1.0947	0.9977	-207.3	-168.5	1.2945

TO/T0	PO/PO	EFF-AD	EFF-P	MC/AL	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			STAGF	
		%	%	SQM			%	%
1.0919	1.3077	86.72	87.22	118.96	1.0352	1.1168	90.57	91.11

STATOR 2

																RJM NO413, SPEED C3DE 63, POINT NO 13			
SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO2/			
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE			
1	0.1233	0.1419	148.5	119.9	104.7	119.9	105.5	1.2	0.7861	0.0133	0.4247	0.3404	1.2943	1.0960	1.1385	1.0397			
2	0.3904	0.0977	149.6	126.8	113.3	126.4	57.8	-0.5	0.7105	-0.0041	0.4282	0.3614	1.3125	1.0939	1.1271	1.0373			
3	0.0671	0.0478	148.9	127.5	113.6	127.5	89.8	-2.4	0.6479	-0.0148	0.4267	0.3635	1.3179	1.0907	1.1185	1.0367			
4	0.0504	0.0474	145.9	124.0	111.8	124.0	80.3	-2.7	0.5827	-0.0215	0.4182	0.3536	1.3142	1.0882	1.1167	1.0355			
5	0.0263	0.0212	135.8	115.4	114.6	115.4	72.8	-3.5	0.5660	-0.0299	0.3985	0.3287	1.3024	1.0877	1.1123	1.0355			
6	0.0202	0.0155	131.1	111.6	111.4	111.5	69.1	-4.6	0.5552	-0.0408	0.3747	0.3177	1.2966	1.0873	1.1062	1.0342			
7	0.0155	0.0116	129.3	110.3	110.6	110.2	66.9	-3.3	0.5436	-0.0297	0.3690	0.3137	1.2947	1.0889	1.1017	1.0335			
8	0.0304	0.0078	128.9	111.0	111.3	111.0	65.1	-2.7	0.5290	-0.0256	0.3674	0.3152	1.2940	1.0927	1.1006	1.0333			
9	0.3355	0.0039	129.1	112.3	105.8	112.4	68.0	1.6	0.5542	0.0146	0.3670	0.3151	1.2979	1.0979	1.1032	1.0344			
10	0.0012	0.0005	123.1	104.4	104.9	104.3	64.5	2.3	0.5515	0.0221	0.3489	0.2948	1.2852	1.1017	1.0997	1.0340			

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.1015	0.1589	0.7757	28.40	33.31	0.3390	0.1245	0.0252	0.9855	95.00	95.10
2	-0.0540	0.1363	0.7147	31.11	35.55	0.2990	0.0451	0.0101	0.9947	93.31	93.43
3	-0.0961	0.1258	0.6567	33.01	35.95	0.2884	0.0237	0.0055	0.9972	88.56	88.75
4	-0.1444	0.1275	0.6042	32.74	35.06	0.2930	0.0303	0.0077	0.9966	90.19	90.34
5	-0.1570	0.1284	0.5559	31.86	32.62	0.3120	0.0338	0.0097	0.9967	86.90	87.10
6	-0.1669	0.1214	0.5461	30.98	31.51	0.3180	0.0319	0.0095	0.9970	85.60	85.81
7	-0.1732	0.1371	0.5733	30.75	31.10	0.3167	0.0333	0.0123	0.9965	83.65	83.87
9	-0.2082	0.1524	0.5536	30.90	31.22	0.3127	0.0470	0.0155	0.9958	83.48	83.71
9	-0.2275	0.2112	0.5366	30.39	31.45	0.3068	0.0497	0.0171	0.9956	82.61	82.86
13	-0.2935	0.2442	0.5294	28.91	29.05	0.3322	0.0897	0.0315	0.9928	81.04	81.30

NECOR	NCORR	TO/T0	PO/PO	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGF
RAD/SEC	KG/SEC			%	%			%
550.39	36.8	1.0919	1.3014	85.11	85.65	1.0352	0.9952	86.93

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.9 Mach Number at Sonic-Inlet Throat)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VP-1	VP-2	PO1/PO	VP-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	10.848	5.176	411.2	116.5	477.2	475.2	0.9860	606.5	0.0	51.8	0.4353	0.6936	400.0	477.5	0.5081	0.4540	622.7	504.3
2	5.305	7.451	512.8	167.0	512.6	527.9	0.9870	528.5	0.0	44.9	0.4700	0.6719	467.5	475.4	0.6230	0.4769	681.5	530.2
3	7.023	6.682	522.1	181.2	527.1	533.5	0.9941	455.1	0.0	40.4	0.4781	0.6288	501.2	525.8	0.6628	0.4825	723.7	530.1
4	6.248	5.522	522.5	151.7	522.5	526.1	0.9953	396.4	0.0	37.0	0.4789	0.5892	550.4	565.7	0.6953	0.4955	759.2	554.0
5	3.345	4.979	162.2	505.9	516.2	487.5	0.9920	295.3	0.0	32.7	0.4757	0.5200	661.2	670.9	0.7698	0.5403	840.9	607.2
6	2.837	4.563	516.3	502.9	512.1	484.9	0.9904	285.0	0.0	31.2	0.4725	0.5003	714.6	721.3	0.8069	0.5751	881.5	647.3
7	2.335	2.150	506.6	555.6	582.6	481.1	0.9864	278.5	0.0	30.5	0.4691	0.4956	748.7	752.6	0.8363	0.5974	907.4	673.1
8	1.804	1.691	502.3	546.5	582.3	473.9	0.9826	276.3	0.0	30.3	0.4692	0.4854	818.5	818.5	0.8700	0.6373	940.4	720.2
10	1.132	1.064	487.4	536.2	467.4	461.5	0.9790	276.9	0.0	31.0	0.4651	0.4750	859.6	855.6	0.9023	0.6560	988.2	743.3
11	0.534	0.503	455.5	517.3	455.5	430.5	0.9580	277.6	0.0	32.5	0.4150	0.4551	894.3	894.0	0.9162	0.6644	1005.2	755.3

SL	INCS	INCM	CEV	PLAN	PHOV-1	PHOV-2	D-FAC	OMEGA-B	LCSS-P	PO2/	REFF-P	REFF-A	B-1	B-2	VP-1	VP-2	PC/PC
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.23	6.78	11.34	24.45	32.13	32.68	3.4272	0.2329	0.0516	1.2712	83.51	83.35	39.97	-19.48	-480.0	169.0	1.2479
2	0.22	5.63	12.76	46.55	39.84	37.90	0.4239	0.1312	0.0333	1.2756	89.07	89.65	41.10	-5.25	-447.5	49.1	1.2806
3	0.65	5.43	12.21	36.31	35.58	39.49	0.4324	0.0830	0.0228	1.2687	91.91	91.67	43.86	7.54	-501.2	-70.7	1.2815
4	1.06	6.18	12.66	26.27	35.58	39.65	0.4257	0.0611	0.0172	1.2563	93.16	92.55	46.49	18.23	-550.4	-172.4	1.2705
5	0.94	5.49	6.05	15.99	35.36	37.85	0.4041	0.0604	0.0173	1.2320	91.07	90.80	51.07	35.87	-661.2	-355.7	1.2453
6	1.27	5.26	5.55	13.01	35.10	37.75	0.3840	0.0558	0.0150	1.2361	91.61	91.36	54.18	41.17	-714.6	-426.0	1.2659
7	2.43	5.27	5.23	11.65	34.62	37.69	0.3722	0.0500	0.0133	1.2405	92.29	92.00	55.62	43.93	-748.7	-466.7	1.2470
8	3.24	5.54	4.88	16.46	34.51	37.49	0.3524	0.0483	0.0126	1.2448	92.29	92.04	56.97	46.45	-782.2	-506.5	1.2477
9	3.79	6.03	4.65	5.61	34.60	36.97	0.3506	0.0570	0.0147	1.2494	90.80	90.51	58.48	48.46	-818.5	-542.3	1.2675
10	4.72	6.54	5.20	6.83	32.69	35.99	0.3004	0.0467	0.0164	1.2586	89.28	88.92	60.45	51.62	-859.6	-582.7	1.2655
11	5.65	8.11	6.46	6.09	30.68	33.95	0.3032	0.0715	0.0172	1.2685	88.68	88.38	62.79	54.70	-894.3	-616.4	1.2348

T02/T01	P02/P01	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LHM/SEC	INLET	INLET	STAGE	INLET
1.0737	1.2531	50.39	90.69	34.44	1.0737	1.2531	90.39	50.69

STATOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VP-1	VP-2	VP-1	VP-2	B-1	B-2	M-1	M-2	U-1	U-2	U-1	U-2	T02/T01	P02/P01	REFF-A	REFF-P
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC	INLET	INLET	TOT-STG	TOT-STG
1	10.785	7.443	103.6	495.5	404.6	488.2	571.1	84.6	54.4	9.7	0.6267	0.4339	1.2070	1.0852	1.2292	1.0852				
2	6.805	4.953	106.0	545.6	450.7	540.0	505.5	77.3	45.5	1.2	0.6338	0.4407	1.2544	1.0813	1.2496	1.0813				
3	4.265	3.259	655.3	546.2	520.2	544.0	436.7	67.7	39.5	7.1	0.6134	0.4662	1.2647	1.0767	1.2518	1.0767				
4	2.836	2.407	655.1	535.5	531.5	531.9	383.0	60.4	35.7	6.5	0.5857	0.4723	1.2577	1.0723	1.2436	1.0723				
5	1.255	1.368	552.7	502.5	507.0	500.6	308.8	57.1	31.3	6.5	0.5287	0.4453	1.2347	1.0679	1.24	1.0679				
6	0.890	1.073	522.4	501.7	504.7	497.8	290.6	62.8	29.9	7.2	0.5180	0.4432	1.2323	1.0644	1.24	1.0644				
7	0.728	0.916	577.6	455.2	503.6	495.5	282.0	60.7	29.2	7.0	0.5131	0.4408	1.2302	1.0691	1.234	1.0691				
8	0.617	0.803	572.5	494.1	501.6	492.4	275.6	60.5	28.8	7.0	0.5083	0.4376	1.2275	1.0703	1.2252	1.0703				
9	0.492	0.664	567.2	494.5	490.6	492.7	274.1	60.7	28.9	7.0	0.5027	0.4375	1.2279	1.0728	1.2300	1.0728				
10	0.255	0.357	555.7	455.6	467.1	490.7	275.6	69.3	29.5	8.0	0.4948	0.4359	1.2272	1.0765	1.2404	1.0765				
11	0.050	0.135	540.3	466.7	463.5	461.2	277.1	83.3	30.9	10.2	0.4762	0.4107	1.2099	1.0748	1.2436	1.0748				

SL	INCS	INCM	CEV	PLAN	PHOV-1	PHOV-2	D-FAC	OMEGA-B	LCSS-P	PO2/	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	1.73	6.44	15.05	44.71	25.23	37.26	0.4382	0.1410	0.0293	0.9670	71.32	72.15
2	-1.82	3.25	10.60	37.34	36.38	42.11	0.2626	0.0867	0.0193	0.9794	80.94	81.54
3	-5.30	0.17	6.44	22.47	35.44	42.89	0.3277	0.0583	0.0140	0.9869	86.51	86.93
4	-7.72	-1.54	7.28	25.27	40.14	42.08	0.3065	0.0460	0.0118	0.9905	88.95	89.33
5	-10.89	-4.45	6.64	24.83	38.84	39.52	0.2741	0.0492	0.0143	0.9915	87.02	87.38
6	-12.64	-5.44	6.56	22.75	38.87	39.24	0.2592	0.0657	0.0202	0.9890	86.47	86.85
7	-12.96	-5.97	6.62	22.26	38.50	39.01	0.2578	0.0824	0.0263	0.9885	86.06	86.45
8	-13.68	-6.49	6.57	21.76	38.62	38.70	0.2579	0.0983	0.0324	0.9841	85.37	85.49
9	-14.18	-6.79	6.56	21.67	38.42	38.64	0.2536	0.0989	0.0337	0.9843	83.81	84.28
10	-15.55	-7.49	6.04	21.47	37.64	38.35	0.2452	0.0950	0.0335	0.9854	83.05	83.56
11	-17.41	-8.69	12.51	21.61	35.73	35.60	0.2636	0.1387	0.0500	0.9801	80.58	81.17

ACCRN	ACCRN	T02/T01	P02/P01	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	STAGE	INLET
0.07	170.81	1.0737	1.2536	84.27	84.73	1.0737	0.9853	84.27	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.9 Mach Number at Sonic-Inlet Throat)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	LPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC					FT/SEC	FT/SEC	
1	10.010	5.150	475.2	492.7	470.2	470.3	0.9678	576.1	0.0	50.0	0.4373	0.4402	407.2	445.4	0.5739	0.4306	629.0	488.1		
2	9.110	7.321	511.2	525.3	511.2	519.9	0.9879	505.7	0.0	44.1	0.4677	0.4513	456.0	468.1	0.6267	0.4671	685.0	520.2		
3	7.540	6.174	523.0	601.7	523.0	526.0	0.9965	437.4	0.0	35.6	0.4790	0.4612	510.3	535.4	0.6692	0.4811	733.7	537.0		
4	6.230	5.070	523.0	647.3	523.0	520.4	0.9977	385.0	0.0	36.5	0.4756	0.4585	560.4	566.1	0.7025	0.4867	767.0	555.8		
5	4.224	3.305	515.0	578.1	515.0	490.4	0.9955	306.2	0.0	32.0	0.4759	0.4543	673.1	663.1	0.7787	0.5502	850.5	618.5		
6	3.453	2.603	515.0	566.4	515.0	480.6	0.9927	238.3	0.0	31.0	0.4718	0.4776	727.5	724.3	0.8161	0.5821	891.7	655.7		
7	2.950	2.304	516.7	552.0	510.7	475.2	0.9895	260.9	0.0	30.6	0.4672	0.4894	762.2	766.7	0.8354	0.6023	917.5	679.2		
8	2.501	1.937	516.7	525.3	506.2	468.9	0.9861	275.3	0.0	30.5	0.4629	0.4610	796.4	759.2	0.8629	0.6222	943.6	702.8		
9	1.971	1.543	516.7	531.7	500.1	463.9	0.9823	273.9	0.0	30.6	0.4571	0.4762	823.4	823.4	0.8889	0.6424	971.9	726.7		
10	1.424	1.050	485.6	534.1	485.6	456.3	0.9728	277.6	0.0	31.3	0.4414	0.4798	875.2	875.2	0.9127	0.6628	959.9	751.9		
11	0.551	0.418	457.8	512.7	457.8	427.4	0.9577	282.0	0.0	33.5	0.4171	0.4502	910.5	910.5	0.9286	0.6870	1019.2	754.6		

SL	INCS	INCP	LEV	TURN	RMV-1	RMV-2	D-FAC	MEGA-B	LCSS-P	PO2/	BEFF-P	BEFF-A	B-1	B-2	VE-1	VE-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.54	7.14	15.37	55.78	32.30	33.21	0.4474	0.1540	0.0349	1.2792	88.90	88.90	40.33	-15.45	-407.3	130.6	1.2568
2	0.85	6.25	16.14	32.65	34.71	34.17	0.4324	0.0671	0.0171	1.2860	94.28	94.07	41.73	-1.93	-456.0	17.6	1.2897
3	1.11	6.25	16.15	33.83	35.64	39.46	0.4325	0.0337	0.0092	1.2777	56.43	96.50	44.31	10.45	-510.3	-98.0	1.2926
4	1.54	6.68	14.56	26.45	35.70	35.93	0.4244	0.0185	0.0051	1.2676	97.51	97.42	46.97	20.52	-560.4	-195.1	1.2839
5	1.42	5.58	5.33	4.61	35.42	38.39	0.3939	0.0100	0.0043	1.2486	57.66	97.59	52.36	42.67	-727.5	-446.0	1.2618
6	1.80	5.78	7.10	11.83	35.64	37.42	0.3751	0.0209	0.0055	1.2494	56.80	96.70	54.70	42.67	-727.5	-446.0	1.2591
7	3.01	5.85	6.53	10.54	34.72	37.48	0.3707	0.0224	0.0058	1.2529	56.48	96.36	56.20	45.62	-762.2	-485.4	1.2586
8	3.85	6.15	6.11	5.36	34.35	37.01	0.3643	0.0276	0.0070	1.2563	95.57	95.42	57.56	48.22	-796.4	-523.9	1.2576
9	4.37	6.61	6.13	6.70	33.88	36.70	0.3603	0.0348	0.0087	1.2630	96.37	96.18	59.05	50.34	-633.4	-559.4	1.2595
10	5.35	7.57	6.21	6.44	32.85	36.07	0.3596	0.0423	0.0104	1.2777	93.26	93.02	61.08	52.64	-875.2	-597.6	1.2616
11	6.41	8.43	6.21	7.54	30.77	33.70	0.3655	0.0603	0.0144	1.2860	90.63	90.28	63.31	55.72	-910.5	-627.6	1.2503

TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET
1	1	1	1
SCFT	SCFT	SCFT	SCFT
1.0736	1.2662	94.85	95.03
34.39			
1.0736	1.2662	94.85	95.03

STATOR 1

SL	EPSI-1	LPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC					FT/SEC	FT/SEC
1	11.023	7.752	671.5	476.1	400.5	471.0	544.4	82.1	53.6	9.8	0.6026	0.4188	1.2118	1.0874	1.2339	1.0824				
2	7.196	5.380	682.5	530.7	483.4	524.4	483.8	81.6	45.0	8.8	0.6113	0.4674	1.2599	1.0794	1.2568	1.0794				
3	4.710	2.775	675.6	537.8	510.7	533.3	419.9	69.2	39.1	7.4	0.5951	0.4749	1.2741	1.0752	1.2593	1.0752				
4	2.479	2.875	140.0	527.5	540.7	524.5	372.1	64.9	35.5	7.1	0.5715	0.4662	1.2699	1.0717	1.2518	1.0717				
5	1.755	1.868	85.1	494.4	502.4	492.5	299.9	62.5	30.8	7.2	0.5208	0.4386	1.2653	1.0672	1.2393	1.0672				
6	1.401	1.579	571.7	493.3	442.4	489.4	283.6	61.6	29.7	7.2	0.5081	0.4356	1.2474	1.0680	1.2377	1.0680				
7	1.190	1.369	655.5	492.2	453.4	488.1	277.0	62.8	29.3	7.3	0.5024	0.4343	1.2469	1.0691	1.2412	1.0691				
8	0.569	1.135	555.5	490.7	480.3	486.6	272.2	63.7	29.1	7.5	0.4965	0.4327	1.2462	1.0706	1.2448	1.0706				
9	0.713	0.857	571.5	492.3	467.3	487.5	271.7	68.1	29.1	8.0	0.4939	0.4335	1.2474	1.0734	1.2511	1.0734				
10	0.395	0.500	582.2	492.4	482.8	485.8	276.1	79.9	29.8	9.3	0.4912	0.4326	1.2473	1.0780	1.2631	1.0780				
11	0.124	0.194	536.5	465.0	456.4	457.6	282.0	82.8	31.7	10.3	0.4720	0.4069	1.2296	1.0827	1.2650	1.0827				

SL	INCS	INCP	LEV	TURN	RMV-1	RMV-2	D-FAC	MEGA-B	LCSS-P	PO2/	BEFF-A	BEFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.90	5.61	15.14	42.82	25.29	36.44	0.4330	0.1642	0.0341	0.9642	75.02	75.76
2	-2.35	2.77	11.28	36.17	36.30	41.43	0.3544	0.1016	0.0226	0.9773	95.37	85.55
3	-5.77	-0.30	6.74	31.70	39.42	42.63	0.3142	0.0672	0.0162	0.9457	90.64	90.45
4	-7.93	-2.15	7.67	28.48	40.11	42.01	0.2970	0.0544	0.0139	0.9892	93.22	93.44
5	-11.40	-4.95	6.27	23.60	35.21	39.52	0.2694	0.0388	0.0171	0.9901	93.98	93.29
6	-12.41	-5.63	6.57	22.50	38.88	39.23	0.2573	0.0577	0.0178	0.9907	92.53	92.75
7	-12.65	-5.50	6.57	21.94	38.49	39.10	0.2519	0.0587	0.0187	0.9907	92.26	92.44
8	-13.36	-6.17	7.02	21.63	38.39	38.92	0.2469	0.0582	0.0192	0.9910	91.53	91.80
9	-13.93	-6.54	7.51	21.18	38.44	38.92	0.2427	0.0625	0.0213	0.9904	90.14	90.45
10	-15.33	-7.74	8.24	20.42	37.64	38.63	0.2402	0.0749	0.0263	0.9886	88.56	88.94
11	-16.55	-8.83	12.54	21.45	35.81	36.09	0.2691	0.1164	0.0420	0.9835	94.09	94.61

NCLIN	NCLIN	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET
1	1	1	1	1	1
RPM	LBM/SEC	SCFT	SCFT	SCFT	SCFT
6540	170.55	1.0736	1.2662	87.30	89.64
		1.0736	0.9867		89.30

ROTOR 2

RUN NO 412, SPEED CODE 90, POINT NO 51																		
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	WO-1	WO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	0.661	5.511	422.3	715.0	525.7	594.1	79.7	375.0	10.5	33.9	0.3811	0.6264	506.6	535.4	0.5286	0.4308	605.2	609.1
2	0.372	4.534	315.3	715.9	525.7	609.9	77.2	375.0	8.3	31.4	0.4719	0.6255	550.8	574.4	0.4264	0.5606	710.5	641.6
3	4.630	3.534	315.3	686.1	544.4	605.8	65.9	366.4	8.8	24.4	0.4895	0.6018	551.7	609.1	0.6727	0.5667	760.4	668.5
4	2.003	2.525	247.8	691.3	544.1	584.0	63.9	388.2	4.6	26.2	0.4852	0.5655	635.5	647.2	0.4990	0.5995	790.1	685.6
5	1.031	0.664	220.7	575.3	516.7	522.5	61.3	260.7	6.8	24.7	0.4600	0.5013	735.8	738.9	0.7521	0.6291	849.6	721.9
6	0.494	0.132	212.4	545.6	512.6	499.1	61.4	220.5	6.9	23.8	0.4500	0.4767	771.1	771.5	0.7739	0.6471	875.1	743.8
7	0.109	-0.160	212.4	545.6	512.6	499.1	61.4	220.5	7.0	22.5	0.4524	0.4751	805.5	805.5	0.7953	0.6794	900.3	780.9
8	-0.305	-0.520	211.0	535.0	506.2	493.7	70.4	206.1	7.9	22.6	0.4505	0.4663	852.7	845.6	0.8214	0.7040	931.8	811.1
9	-0.431	-0.619	205.2	531.8	494.1	485.9	80.1	214.1	9.1	24.0	0.4445	0.4604	885.2	883.4	0.8329	0.7142	947.2	825.3
10	-0.325	-0.634	177.7	461.9	476.5	434.4	82.3	216.8	9.9	26.1	0.4183	0.4216	917.6	916.5	0.8396	0.7110	958.7	826.2

SL	INCS	INCP	DEV	TLAN	AMCV-1	AMCV-2	D-FAC	OMEGA-B	LCSS-P	P02/	REFF-P	REFF-A	B-1	B-2	WO-1	WO-2	PC/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.32	-0.34	17.15	32.08	33.68	46.94	0.1384	0.0367	0.0087	1.1892	96.39	96.30	44.67	12.59	-426.9	-134.4	1.4437
2	-9.71	-3.45	5.71	23.70	42.04	49.46	0.2144	0.1079	0.0268	1.1627	85.45	85.34	41.69	17.95	-473.6	-190.4	1.4736
3	-8.52	-2.45	4.42	18.75	43.66	49.94	0.2201	0.0802	0.0202	1.1527	87.12	86.85	43.68	24.93	-525.8	-282.7	1.4681
4	-7.07	-1.59	1.58	14.91	43.22	48.72	0.2139	0.0557	0.0141	1.1441	89.64	89.44	46.45	31.54	-572.8	-359.1	1.4404
5	-3.48	0.39	4.55	6.91	41.02	43.86	0.2240	0.0724	0.0177	1.1205	83.15	82.87	52.54	43.63	-674.5	-498.2	1.3983
6	-2.45	0.82	1.50	6.29	40.70	41.85	0.2152	0.0819	0.0194	1.1041	76.44	76.14	54.14	47.65	-709.2	-551.4	1.3793
7	-1.31	1.07	4.41	5.86	40.33	42.35	0.1935	0.0587	0.0140	1.1070	83.35	83.10	55.63	45.77	-763.1	-596.2	1.3793
8	-1.33	0.90	3.34	4.55	40.09	41.31	0.1855	0.0650	0.0155	1.0996	79.56	79.68	57.09	52.50	-782.4	-643.5	1.3717
9	-0.96	1.26	1.28	4.27	35.40	40.46	0.1652	0.0741	0.0176	1.0599	77.61	77.29	58.20	53.93	-805.1	-667.1	1.3697
10	0.64	2.67	4.28	2.73	36.68	36.21	0.1964	0.1010	0.0224	1.0513	69.41	69.23	60.61	57.87	-835.3	-699.7	1.3400

T02/T01	PC/PO	EFF-AD	EFF-P	MCL/AL	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LMP/SEC			ROTOR	ROTOR
		%	%	SCFT			%	%
1.1176	1.4062	87.05	87.06	32.53	1.0410	1.1254	83.90	84.18

STATOR 2

RUN NO 413, SPEED CODE 90, POINT NO 51																
SL	EPSI-1	EPSI-2	V-1	V-2	VP-1	VP-2	WO-1	WO-2	B-1	B-2	M-1	M-2	P02/PO	T02/T01	PC/PO	T02/T01
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	6.926	7.968	652.5	625.2	517.4	625.2	397.6	1.0	37.3	0.1	0.5648	0.5357	1.4103	1.1393	1.1608	1.0527
2	5.028	5.467	681.2	657.4	574.2	657.3	366.4	-8.7	32.4	-0.8	0.5930	0.5710	1.4544	1.1330	1.1470	1.0513
3	3.724	3.878	672.4	635.2	551.5	639.0	319.2	-17.0	28.3	-1.5	0.5872	0.5564	1.4450	1.1246	1.1355	1.0474
4	2.775	4.756	448.0	610.1	583.0	610.0	282.7	-14.8	25.8	-1.4	0.5665	0.5316	1.4226	1.1170	1.1253	1.0436
5	1.501	1.362	515.7	531.3	525.1	537.2	236.9	-7.4	24.1	-0.8	0.5054	0.4667	1.3654	1.1097	1.0942	1.0396
6	1.175	1.039	551.3	526.1	506.5	520.0	217.6	-10.3	23.3	-1.1	0.4798	0.4515	1.3528	1.1078	1.0887	1.0365
7	1.013	0.855	551.4	506.6	510.7	508.4	207.8	-12.3	22.1	-1.4	0.4799	0.4412	1.3446	1.1000	1.0791	1.0354
8	0.885	0.805	546.4	504.6	455.6	504.6	205.3	1.1	22.4	0.1	0.4691	0.4369	1.3424	1.1113	1.0760	1.0345
9	0.608	0.631	536.5	504.1	451.7	503.7	215.7	20.2	23.7	2.3	0.4648	0.4353	1.3426	1.1164	1.0779	1.0357
10	0.316	0.316	456.4	466.7	446.7	467.9	216.5	27.8	25.9	3.4	0.4474	0.4027	1.3189	1.1222	1.0740	1.0365

SL	INCH	DEV	TLAN	AMCV-1	AMCV-2	D-FAC	OMEGA-B	LCSS-P	P02/	REFF-A	REFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-13.51	8.60	37.26	42.31	50.60	0.1686	0.1203	0.0254	0.9765	82.55	82.92
2	-11.36	7.25	32.20	47.44	54.28	0.1575	0.0610	0.0137	0.9871	77.85	78.28
3	-13.77	6.77	25.81	45.22	53.24	0.1663	0.0689	0.0164	0.9857	78.02	78.42
4	-15.81	7.15	27.23	42.71	51.04	0.1722	0.0822	0.0208	0.9840	78.65	79.02
5	-17.30	6.28	24.91	44.29	44.76	0.1937	0.1334	0.0399	0.9779	75.75	76.19
6	-18.14	6.16	24.59	42.16	43.28	0.1808	0.1176	0.0354	0.9829	64.32	64.73
7	-15.27	6.13	23.53	42.76	42.24	0.2028	0.1715	0.0537	0.9750	62.07	62.49
8	-15.65	16.27	22.27	41.70	41.81	0.1913	0.1523	0.0503	0.9787	61.27	61.68
9	-21.10	12.54	41.19	40.82	41.55	0.1384	0.1450	0.0497	0.9799	60.75	61.17
10	-22.56	14.12	22.46	36.72	38.24	0.1931	0.1343	0.0477	0.9840	56.45	56.90

NCORR	MCL/P	T02/T01	PC/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RPM	LBP/SEC			%	%			%	%
6523	170.55	1.1176	1.3796	81.95	82.75	1.0410	0.9811	78.17	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.9 Mach Number at Sonic-Inlet Throat)**

U. S. CUSTOMARY UNITS

ROTOR 1

RUN NO 413, SPEED CODE 90, POINT NO 52																			
SL	EPSt-1	EPSt-2	V-1	V-2	VH-1	VH-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	R1-1	R1-2	V1-1	V1-2	PC/PO
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE				FT/SEC	FT/SEC			FT/SEC	FT/SEC	INLET
1	10.509	9.132	495.5	771.1	479.5	472.4	0.9877	609.5	0.0	52.1	0.4376	0.6930	415.4	454.3	0.5789	0.4469	636.4	497.3	1.2608
2	8.081	7.386	511.3	745.8	511.3	516.1	0.9877	546.0	0.0	46.4	0.4678	0.6727	465.0	467.8	0.6323	0.4649	691.1	518.1	1.3033
3	7.191	6.735	522.5	707.0	522.5	523.9	0.9905	474.7	0.0	42.1	0.4785	0.6323	520.4	546.0	0.6754	0.4729	737.5	528.7	1.2999
4	6.032	5.600	522.5	667.1	522.5	516.9	0.9978	421.8	0.0	39.2	0.4785	0.5950	571.5	551.6	0.7091	0.4852	774.3	544.0	1.2999
5	4.215	3.760	518.2	555.0	518.2	489.7	0.9955	365.0	0.0	35.5	0.4764	0.5275	686.5	666.6	0.7874	0.5310	806.1	598.9	1.2999
6	3.528	3.088	514.7	582.9	514.7	481.7	0.9929	330.0	0.0	34.4	0.4710	0.5166	741.9	748.9	0.8265	0.5649	833.0	630.4	1.2999
7	3.070	2.667	510.4	575.1	510.4	479.4	0.9897	324.9	0.0	34.1	0.4669	0.5117	777.3	781.4	0.8587	0.5849	829.9	662.0	1.2999
8	2.593	2.202	506.3	566.2	506.2	475.5	0.9862	321.5	0.0	34.1	0.4630	0.5063	812.2	815.1	0.8752	0.6044	857.0	683.3	1.2999
9	1.991	1.691	502.4	565.4	502.4	470.1	0.9823	321.4	0.0	34.4	0.4575	0.5011	849.9	849.9	0.9016	0.6225	906.3	707.3	1.2999
10	1.420	1.014	498.1	560.5	498.1	456.7	0.9787	324.5	0.0	35.4	0.4419	0.4916	892.6	892.6	0.9269	0.6391	1015.4	730.6	1.2999
11	0.551	0.438	458.2	538.2	458.2	427.3	0.9578	327.1	0.0	37.4	0.4174	0.4702	928.6	928.6	0.9433	0.6444	1035.5	737.6	1.2999

SL	INCS	INCH	CEV	TLAN	RMCV-1	RMCV-2	O-FAC	OMEGA-B	LCSS-P	PO2/	SEFF-P	SEFF-A	B1-1	B1-2	VO1-1	VO1-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	2.12	7.67	12.73	56.56	32.31	32.96	0.4590	0.2072	0.0463	1.2915	85.86	85.34	48.86	-18.10	-415.4	155.2	1.2608
2	1.38	6.74	12.48	47.35	34.72	47.53	0.4555	0.1263	0.0321	1.2997	89.85	89.58	42.26	-5.09	-465.0	44.2	1.3033
3	1.67	6.55	12.40	37.14	35.61	39.30	0.4628	0.0800	0.0241	1.2927	91.82	91.58	44.88	7.74	-520.4	-71.3	1.3077
4	2.15	7.27	12.61	25.40	35.64	39.48	0.4592	0.0710	0.0200	1.2834	92.57	92.30	47.58	18.18	-571.5	-169.0	1.2999
5	2.05	6.61	8.16	17.00	35.36	37.87	0.4382	0.0727	0.0199	1.2658	90.65	90.33	52.98	35.98	-686.5	-351.7	1.2799
6	2.38	6.36	5.65	14.25	35.06	37.91	0.4219	0.0689	0.0185	1.2741	90.70	90.38	55.28	41.03	-741.5	-618.9	1.2840
7	3.55	6.39	4.53	13.12	34.70	37.86	0.4145	0.0681	0.0181	1.2820	90.65	90.31	56.74	43.62	-777.3	-456.5	1.2800
8	4.35	6.65	4.48	12.00	34.36	37.65	0.4095	0.0716	0.0188	1.2497	90.02	89.66	58.08	46.08	-812.2	-493.5	1.2912
9	4.84	7.08	4.15	11.16	33.50	37.28	0.4081	0.0807	0.0210	1.2679	88.68	88.25	59.52	48.36	-849.9	-528.5	1.2943
10	5.00	8.02	4.66	10.35	32.67	36.20	0.4112	0.0940	0.0239	1.3109	86.54	86.43	61.53	51.19	-892.6	-567.7	1.2944
11	6.84	5.06	6.38	5.15	30.79	33.77	0.4186	0.1079	0.0260	1.3196	85.21	84.62	63.74	54.59	-928.6	-601.1	1.2830

TO/TO	FL/FD	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC			ROTOR	ROTOR
1.0848	1.2500	89.01	89.40	34.41	1.0848	1.2900	89.01	89.40

STATOR 1

RUN NO 413, SPEED CODE 90, POINT NO 52																			
SL	EPSt-1	EPSt-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	TO/TO	TO2/			
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1			
1	11.202	7.946	655.1	456.0	396.2	448.3	576.0	83.4	55.4	10.4	0.6230	0.3975	1.2243	1.0889	1.2467	1.0889			
2	7.392	5.618	704.5	513.4	475.4	506.7	520.0	82.3	47.5	9.2	0.6287	0.4499	1.2736	1.0871	1.2713	1.0871			
3	4.897	3.993	684.3	522.3	505.9	517.3	456.3	71.8	41.8	7.9	0.6194	0.4588	1.2885	1.0834	1.2743	1.0834			
4	3.505	3.100	657.8	512.9	515.9	503.9	408.1	64.0	38.3	7.2	0.5861	0.4509	1.2856	1.0803	1.2693	1.0803			
5	1.940	2.035	661.4	487.6	457.6	483.7	337.8	61.5	34.2	7.2	0.5336	0.4285	1.2782	1.0771	1.2560	1.0771			
6	1.549	1.678	553.2	485.8	455.2	485.8	326.1	64.0	33.0	7.5	0.5273	0.4301	1.2745	1.0792	1.2617	1.0792			
7	1.361	1.486	553.6	493.1	500.2	488.4	320.0	67.7	32.6	7.9	0.5254	0.4326	1.2745	1.0813	1.2682	1.0813			
8	1.134	1.266	552.1	494.5	455.6	489.7	317.5	68.8	32.4	8.0	0.5232	0.4334	1.2758	1.0839	1.2739	1.0839			
9	0.890	0.997	550.7	491.6	457.6	492.5	318.4	70.7	32.6	8.2	0.5209	0.4354	1.2781	1.0876	1.2816	1.0876			
10	0.546	0.624	555.6	456.2	448.5	490.6	322.9	86.8	31.5	10.0	0.5149	0.4349	1.2787	1.0929	1.2943	1.0929			
11	0.200	0.242	565.5	472.0	461.5	464.7	326.4	82.5	35.2	10.1	0.4952	0.4103	1.2614	1.0975	1.2974	1.0975			

SL	INCS	INCH	CEV	TLAN	RMCV-1	RMCV-2	O-FAC	OMEGA-B	LCSS-P	PO2/	SEFF-A	SEFF-P	TO2/STG
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	TOT-STG
1	2.13	7.44	15.80	45.00	24.84	35.13	0.4927	0.1507	0.0313	0.9652		73.20	74.02
2	0.21	5.33	11.43	36.35	35.45	40.50	0.4090	0.0936	0.0208	0.9781		81.55	82.16
3	-3.04	2.43	5.25	33.92	38.72	41.81	0.3716	0.0651	0.0156	0.9855		86.95	86.58
4	-5.13	0.65	1.97	31.17	35.61	41.29	0.3540	0.0543	0.0139	0.9867		87.94	88.34
5	-8.06	-1.61	7.38	26.92	38.76	39.26	0.3228	0.0396	0.0115	0.9930		87.56	87.96
6	-9.15	-2.27	7.30	25.49	35.68	39.37	0.3124	0.0535	0.0165	0.9908		86.79	87.22
7	-9.59	-2.60	7.54	24.71	35.23	39.56	0.3057	0.0602	0.0192	0.9897		86.42	86.87
8	-10.02	-2.83	7.54	24.45	35.25	39.60	0.3040	0.0692	0.0227	0.9882		85.43	85.92
9	-10.46	-3.07	7.73	24.44	35.08	39.73	0.3013	0.0736	0.0250	0.9876		83.90	84.44
10	-11.63	-4.04	10.04	23.43	38.31	39.40	0.2926	0.0746	0.0262	0.9877		82.39	83.02
11	-13.02	-5.29	12.34	25.18	36.88	37.04	0.3233	0.1091	0.0394	0.9822		79.25	80.00

NCDRA	NCCRA	TO/TO	PC/FD	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
APM	LBW/SEC	1.0848	1.2726	84.11	84.65	1.0848	0.9865	84.11	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	W-1	W-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	U-1	U-2	U-1	U-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	8.540	5.794	414.2	654.5	466.2	557.1	81.0	414.6	11.2	36.3	0.3601	0.4011	516.7	550.1	0.5179	0.4963	595.7	573.4				
2	6.192	4.454	218.0	408.2	512.1	571.7	77.9	381.4	8.6	33.5	0.4543	0.5957	561.7	585.0	0.6178	0.5263	704.5	607.1				
3	4.812	3.515	237.2	444.3	539.0	571.9	80.0	437.9	7.5	30.5	0.4728	0.5765	608.5	621.2	0.6648	0.5538	755.5	638.2				
4	3.521	2.555	232.0	436.3	526.5	555.4	81.3	298.2	6.6	28.2	0.4486	0.5470	648.5	660.1	0.6958	0.5752	790.0	662.9				
5	1.055	0.578	211.0	381.8	565.2	503.0	82.0	250.5	6.9	26.5	0.4515	0.4858	750.3	753.5	0.7535	0.6153	856.2	711.5				
6	0.587	0.308	214.2	335.1	518.0	482.9	85.7	230.4	7.3	25.5	0.4521	0.4621	780.3	787.2	0.7762	0.6366	862.9	737.1				
7	0.344	0.205	214.5	336.8	510.4	486.5	88.0	217.1	7.6	24.0	0.4521	0.4599	821.5	821.5	0.7991	0.6698	910.0	775.8				
8	0.039	-0.055	212.4	332.1	512.4	483.5	93.3	209.6	8.1	23.1	0.4534	0.4585	867.4	866.4	0.8257	0.7065	947.2	819.9				
9	-0.069	-0.156	214.5	326.7	507.9	479.8	88.6	224.5	9.7	25.1	0.4459	0.4550	902.7	900.7	0.8397	0.7121	961.0	829.1				
10	-0.058	-0.102	211.7	321.7	488.8	451.6	82.0	218.6	9.7	25.8	0.4253	0.4289	935.8	934.7	0.8532	0.7237	980.4	846.6				

SL	INCS	INCM	LEV	TRN	RMCVP-1	RMCVM-2	D-FAC	MEGA-B	LCSS-P	P02/	REFF-P	REFF-A	B-1	B-2	W-1	W-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-5.14	1.78	18.06	33.31	32.27	45.63	0.1380	0.0345	-0.0082	1.2122	103.09	103.16	46.81	13.50	-435.7	-135.4	1.4066
2	-8.15	-1.89	11.28	23.71	41.10	47.89	0.2592	0.0763	0.0188	1.1781	90.40	90.17	43.25	19.54	-483.8	-204.4	1.5098
3	-7.14	-1.47	5.75	16.81	37.88	48.70	0.2592	0.0532	0.0133	1.1706	52.05	91.87	45.06	26.26	-535.5	-283.3	1.5091
4	-5.53	-0.45	8.40	14.94	40.50	47.00	0.2522	0.0287	0.1071	1.1638	95.07	94.56	47.90	33.04	-587.1	-361.9	1.4927
5	-2.52	1.35	6.27	1.49	40.52	45.59	0.2453	0.0388	0.0393	1.1415	91.45	91.28	53.50	45.01	-649.3	-503.2	1.4509
6	-1.91	1.40	4.72	2.65	40.57	41.84	0.2317	0.0439	0.0102	1.1247	89.02	88.82	54.71	45.06	-720.7	-556.8	1.4325
7	-1.05	1.33	5.28	4.72	40.56	42.19	0.2081	0.0236	0.0354	1.1237	93.48	93.27	55.84	51.16	-753.4	-604.3	1.4331
8	-1.17	1.05	4.58	3.90	40.59	42.37	0.1845	0.0138	0.0032	1.1221	95.82	95.74	57.24	53.34	-796.7	-657.8	1.4345
9	-1.04	1.18	3.54	3.48	40.44	41.32	0.1941	0.0273	0.0064	1.1218	91.84	91.75	58.12	54.64	-816.1	-676.2	1.4335
10	0.60	2.63	6.17	2.80	36.11	38.59	0.1739	0.0346	0.0077	1.1218	89.70	89.53	60.56	57.76	-853.8	-716.1	1.4135

TO/TD	PC/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	ROTOR
1.1309	1.4584	86.97	87.64	32.12	1.0425	1.1460	93.37	93.49

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	W-1	W-2	B-1	B-2	M-1	M-2	U-1	U-2	U-1	U-2	U-1	U-2	U-1	U-2	U-1	U-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	6.907	7.954	434.4	582.0	489.5	581.6	407.1	4.1	39.6	0.4	0.5475	0.4981	1.4607	1.1485	1.1900	1.0547						
2	4.587	5.359	456.5	606.9	544.5	608.9	372.8	-3.8	36.5	-0.4	0.5678	0.5240	1.4969	1.1432	1.1673	1.0529						
3	3.653	3.761	451.2	595.9	561.2	599.8	330.3	-12.3	30.4	-1.2	0.5644	0.5176	1.4965	1.1358	1.1613	1.0498						
4	2.884	2.850	428.8	574.4	556.4	574.2	292.5	-15.6	27.7	-1.5	0.5454	0.4960	1.4781	1.1292	1.1531	1.0464						
5	1.307	1.173	461.8	516.8	510.5	516.7	246.3	-12.0	25.8	-1.3	0.4904	0.4454	1.4328	1.1235	1.1271	1.0418						
6	0.958	0.834	446.8	496.8	450.7	496.4	227.2	-19.0	24.8	-2.2	0.4673	0.4278	1.4175	1.1218	1.1127	1.0380						
7	0.790	0.668	436.1	496.0	452.2	490.7	215.4	-10.0	23.6	-2.0	0.4647	0.4224	1.4125	1.1225	1.1075	1.0362						
8	0.639	0.576	432.6	485.6	454.2	489.6	209.0	-3.9	22.9	-0.8	0.4624	0.4204	1.4110	1.1266	1.1036	1.0350						
9	0.498	0.471	432.5	481.2	484.2	491.1	223.9	11.2	24.8	1.3	0.4583	0.4207	1.4118	1.1330	1.1050	1.0364						
10	0.215	0.213	406.0	465.6	457.2	469.2	218.3	19.5	25.5	2.4	0.4333	0.4005	1.3966	1.1385	1.1034	1.0373						

SL	INCM	LEV	TRN	RMCVP-1	RMCVM-2	D-FAC	MEGA-B	LCSS-P	P02/	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-11.27	6.51	35.18	41.21	49.37	0.2176	0.0495	0.0202	0.9824	93.82	93.19
2	-9.33	7.65	34.83	46.81	52.54	0.2007	0.0441	0.0099	0.9513	85.37	85.69
3	-11.63	7.11	31.61	48.89	52.24	0.2018	0.0386	0.0091	0.9926	87.67	87.93
4	-13.55	7.03	25.22	47.52	50.21	0.2078	0.0481	0.0122	0.9912	89.55	89.75
5	-15.67	7.74	21.05	44.10	45.03	0.2181	0.0725	0.0209	0.9890	83.08	83.37
6	-16.54	7.10	21.05	42.40	43.19	0.2178	0.0717	0.0215	0.9901	81.46	81.73
7	-17.83	6.35	24.76	42.67	42.61	0.2190	0.1049	0.0329	0.9856	81.77	82.03
8	-19.31	10.03	23.04	42.68	42.34	0.2164	0.1206	0.0399	0.9826	81.55	81.84
9	-19.98	12.57	23.54	42.61	42.26	0.2169	0.1114	0.0382	0.9850	79.30	79.79
10	-22.90	15.11	23.14	38.59	40.06	0.2133	0.0987	0.0351	0.9880	80.01	80.30

NCORP	NCLAK	T0/TD	PC/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
6652	170.65	1.1309	1.4411	84.06	84.96	1.0425	0.9881	85.03	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VM-2	B-1	H-2	M-1	M-2	RUN NO	13. SPEED	CODE	80. POINT	NO 50	V-1	V-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE		FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	10.314	9.117	436.5	732.6	454.5	464.4	0.9703	565.7	0.0	30.4	3.4158	0.6593	345.4	421.5	0.5442	0.4378	597.5	486.5	
2	3.565	7.202	436.7	711.2	484.9	509.7	0.9900	496.5	0.0	44.1	0.4465	0.6395	431.5	461.9	0.5955	0.4589	652.1	510.4	
3	6.505	3.052	436.1	670.6	454.1	517.7	0.9970	429.5	0.0	39.9	3.4552	0.6034	482.9	506.6	0.6340	0.4458	693.8	519.5	
4	5.055	4.955	494.7	621.6	453.7	510.7	0.9984	374.1	0.0	36.1	3.4557	3.5652	530.3	549.9	0.6653	0.4694	727.9	560.1	
5	3.588	3.173	465.7	543.9	435.7	479.7	0.9977	257.4	0.0	31.9	0.4529	0.5024	637.0	646.4	0.7374	0.5278	807.1	592.5	
5	2.876	2.519	492.7	451.3	432.7	474.5	0.9961	283.8	0.0	30.5	0.4531	0.4974	688.4	694.9	0.7733	0.5602	846.6	629.8	
7	2.417	2.127	489.5	444.6	449.5	471.6	0.9940	272.3	0.0	30.0	0.4473	0.4639	721.3	725.0	0.7960	0.5810	971.7	653.8	
4	1.457	1.711	486.5	539.2	447.5	447.3	0.9919	266.9	0.0	29.7	3.4442	0.4777	753.6	756.3	0.8190	0.6006	897.0	676.7	
7	1.439	1.275	483.1	531.5	453.1	462.2	0.9897	267.5	0.0	30.7	3.4410	0.4727	788.6	789.6	0.8441	0.6178	924.8	697.3	
13	0.879	0.751	470.3	525.6	470.8	452.7	0.9832	264.8	0.0	30.7	3.4293	0.4668	828.2	828.2	0.8687	0.6356	952.7	719.2	
11	0.377	0.313	443.5	501.4	443.5	421.6	0.9684	264.5	0.0	37.6	3.4025	0.4406	861.6	861.6	0.9218	0.6399	969.0	726.6	

SL	INCS	INCH	DEV	TORN	RM-VM-1	RM-VM-2	D-FAC	MEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VM-1	VM-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.34	6.94	13.35	57.39	31.11	32.57	0.4174	0.1759	0.0797	1.2577	87.48	87.07	40.12	-17.27	-385.4	145.2	1.2292
2	3.50	5.71	14.20	45.25	33.57	37.05	0.4170	0.0966	0.0246	1.2563	91.80	91.53	41.39	-3.87	-431.5	34.6	1.2567
3	3.84	6.16	14.17	45.58	34.31	32.25	0.4741	0.0455	0.0183	1.2471	93.48	92.27	44.09	8.51	-462.9	-77.1	1.2544
4	1.32	6.44	13.52	27.66	34.39	34.73	0.4108	0.0375	0.0105	1.2370	95.74	95.61	46.75	19.09	-530.3	-176.8	1.2479
5	1.17	5.75	8.24	18.05	24.20	37.01	0.3938	0.0460	0.0125	1.2162	93.36	93.17	52.12	36.06	-637.0	-348.8	1.2261
5	1.57	5.50	5.94	14.50	23.98	36.46	0.3742	0.0445	0.0123	1.2199	93.14	92.94	54.42	41.12	-688.4	-414.1	1.2268
7	2.93	5.50	5.15	12.91	23.73	36.74	0.3640	0.0424	0.0114	1.2219	92.20	92.00	55.85	43.84	-721.3	-452.8	1.2273
4	3.83	5.73	4.72	10.84	33.50	36.47	0.3576	0.0474	0.0124	1.2247	92.29	92.06	57.16	46.33	-753.6	-489.4	1.2275
13	6.65	6.87	4.73	10.02	33.23	36.09	0.3571	0.0605	0.0157	1.2284	90.07	89.78	58.52	48.49	-788.6	-522.1	1.2285
11	3.47	6.04	5.32	9.22	30.31	32.76	0.3456	0.0792	0.0193	1.2357	87.65	87.28	60.39	51.06	-828.2	-599.4	1.2277

TQ/T01	PO2/PO1	EFF-AD	EFF-P	WGL/AL	TQ2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC				
1.0676	1.2325	91.16	91.42	32.30	1.0676	1.2325	91.16	91.42

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	B-1	H-2	M-1	M-2	RUN NO	13. SPEED	CODE	80. POINT	NO 50	PO/PO	TQ/T01	PO/PO	TQ/T01
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE		FT/SEC	FT/SEC	FT/SEC	FT/SEC	INLET	INLET	STAGE	T01
1	10.314	9.117	664.7	402.1	474.1	535.5	73.9	57.0	8.7	0.5984	0.4236	1.1913	1.0767	1.2149	1.0767						
2	7.071	5.187	674.9	429.3	478.4	524.1	474.6	73.7	44.7	8.0	3.5533	0.4674	1.2351	1.0737	1.2347	1.0737					
3	4.470	3.463	682.2	523.5	485.7	525.7	411.4	63.5	39.1	6.9	3.5837	0.4645	1.2433	1.0697	1.2338	1.0697					
4	3.059	2.671	625.4	518.0	511.9	511.9	359.3	56.3	35.0	6.3	3.5594	0.4541	1.2358	1.0654	1.2249	1.0654					
5	1.611	1.721	570.4	464.1	490.1	461.5	261.5	54.1	30.7	4.4	3.5085	0.4303	1.2149	1.0618	1.2070	1.0618					
6	1.273	1.453	541.4	444.8	435.7	481.1	276.3	54.9	27.5	7.1	3.4968	0.4289	1.2160	1.0627	1.2082	1.0627					
7	1.107	1.282	585.7	443.3	447.5	490.7	268.7	54.4	28.4	7.0	3.4983	0.4279	1.2157	1.0634	1.2103	1.0634					
4	0.934	1.104	552.5	442.8	445.7	475.1	264.1	54.1	28.4	7.0	3.4910	0.4286	1.2153	1.0648	1.2125	1.0648					
3	0.733	0.863	543.6	444.0	442.0	440.4	264.5	54.3	28.4	7.0	3.4878	0.4272	1.2163	1.0676	1.2164	1.0676					
13	0.472	0.546	546.8	443.6	474.1	477.7	247.5	73.0	29.4	8.3	3.4823	0.4252	1.2157	1.0715	1.2235	1.0715					
11	0.140	0.219	520.4	445.4	445.9	469.0	249.0	74.9	31.1	10.2	3.4593	0.3975	1.1975	1.0746	1.2241	1.0746					

SL	INCS	INCH	DEV	TORN	RM-VM-1	RM-VM-2	D-FAC	MEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VM-1	VM-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.34	6.94	14.21	45.65	35.21	37.41	0.4231	0.1437	0.0277	1.2491	84.37	84.34	74.61	75.30			
2	2.50	2.51	10.41	35.75	35.22	41.30	0.3462	0.0787	0.0176	1.2498	84.37	84.34	84.37	84.34			
3	3.76	-0.25	8.24	22.26	38.10	41.53	0.3150	0.0531	0.0121	1.2497	84.37	84.34	84.37	84.34			
4	3.43	-2.55	7.08	23.77	38.57	46.58	0.2947	0.0433	0.0125	1.2497	84.37	84.34	84.37	84.34			
5	11.50	-5.05	6.52	24.74	37.77	58.22	0.2659	0.0469	0.0137	1.2497	84.37	84.34	84.37	84.34			
6	12.00	-5.85	6.96	22.35	37.90	78.06	0.2556	0.0557	0.0174	1.2497	84.37	84.34	84.37	84.34			
7	13.34	-6.42	6.70	21.81	37.77	77.77	0.2512	0.0614	0.0195	1.2497	84.37	84.34	84.37	84.34			
8	13.90	-6.71	6.50	21.52	37.64	77.45	0.2491	0.0655	0.0215	1.2490	84.37	84.34	84.37	84.34			
9	14.32	-6.93	6.59	21.71	37.37	77.47	0.2475	0.0662	0.0226	1.2491	84.37	84.34	84.37	84.34			
13	13.20	-6.09	6.34	21.06	36.75	77.53	0.2422	0.0671	0.0237	1.2491	84.37	84.34	84.37	84.34			
11	17.18	-7.41	12.43	20.57	34.34	34.75	0.2422	0.0735	0.0355	1.2498	84.37	84.34	84.37	84.34			

ACORR	WOPR	TQ/T01	PO/PO	EFF-AD	EFF-P	TQ2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
6.73	165.11	1.0676	1.2144	85.99	85.35	1.0676	1.2144	85.99	85.35

ROTOR 2

SL	FPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	A-1	A-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
IN/SEC	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	8.722	5.990	442.6	707.8	426.2	410.9	71.6	357.4	7.5	30.0	0.4275	0.4207	479.4	510.4	0.5219	0.5523	595.8	629.8
2	6.453	4.122	534.5	707.0	528.9	425.4	69.6	329.0	7.5	27.6	0.44715	0.4217	521.2	543.5	0.6147	0.5817	695.5	681.6
3	4.999	1.437	544.4	677.9	541.5	415.6	60.1	283.9	6.3	24.7	0.4429	0.5956	559.9	576.4	0.6532	0.5998	736.9	681.6
4	3.927	2.337	535.1	535.1	535.1	535.1	54.4	247.9	5.8	22.4	0.4758	0.5626	601.7	612.5	0.6783	0.6097	764.2	693.1
5	0.791	0.096	513.8	523.8	507.6	526.1	57.1	194.4	6.4	20.6	0.4530	0.4934	696.2	699.2	0.7237	0.6374	816.2	726.7
6	1.171	-0.234	506.4	527.8	504.3	458.7	55.4	172.8	6.7	19.1	0.4493	0.4674	729.6	730.4	0.7426	0.6554	838.2	744.1
7	-0.194	-0.451	507.3	524.6	498.7	401.5	56.8	153.9	6.7	17.1	0.4447	0.4600	762.2	762.2	0.7633	0.6913	862.3	788.3
8	-0.557	-0.800	510.5	518.6	496.3	458.6	61.5	142.8	7.1	16.0	0.4422	0.4542	806.9	804.0	0.7912	0.7252	895.8	828.1
9	-0.744	-0.943	493.1	512.1	487.9	489.2	71.2	156.5	8.3	17.6	0.4365	0.4672	837.6	835.7	0.9007	0.7317	908.5	837.8
10	-0.553	-0.949	462.3	499.1	455.5	426.4	79.7	170.3	9.9	21.9	0.4060	0.3983	868.3	867.2	0.9000	0.7088	911.0	811.0

SL	INCS	INCH	DEV	TURN	PHOVN-1	PHOVN-2	D-FAC	CFGA-R	LOSS-P	P02/	YEFF-P	YEFF-A	B-1	B-2	VB-1	VB-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	8.722	-2.34	19.45	71.98	33.92	44.94	0.0724	0.0574	0.0135	1.1532	93.36	94.23	42.75	13.89	-405.8	-153.0	1.3734
2	-11.002	-4.75	10.52	21.55	44.51	44.31	0.1532	0.1058	0.0259	1.1326	93.85	87.56	40.38	16.80	-451.6	-214.5	1.4024
3	-9.300	-3.83	9.31	17.33	42.45	47.24	0.1437	0.0720	0.0181	1.1232	96.55	86.32	42.65	25.32	-499.8	-292.5	1.3940
4	-7.140	-2.72	7.12	14.02	41.83	47.61	0.1767	0.0579	0.0145	1.1139	87.31	87.21	45.72	31.68	-547.3	-364.5	1.3718
5	-5.245	-0.67	4.31	7.35	39.79	47.70	0.1707	0.0692	0.0170	1.0352	79.79	79.54	51.54	43.55	-639.1	-500.8	1.3198
6	-3.551	-0.22	5.44	4.70	32.44	46.98	0.1576	0.0757	0.0173	1.0545	72.67	72.42	53.09	48.19	-670.3	-557.4	1.2946
7	-2.227	0.10	5.14	4.16	34.12	46.67	0.1232	0.0416	0.0097	1.0840	82.20	82.04	54.65	50.50	-703.4	-608.3	1.2929
8	-1.110	0.12	4.71	3.34	38.85	46.32	0.1105	0.0316	0.0075	1.0536	84.13	83.99	56.31	52.97	-745.4	-661.2	1.2880
9	-1.004	0.58	3.71	3.15	38.05	39.25	0.1143	0.0452	0.0108	1.0574	78.22	78.05	57.52	54.36	-766.4	-680.9	1.2826
10	0.003	2.26	6.45	1.44	35.37	33.83	0.1447	0.1113	0.0242	1.0432	51.91	51.62	60.00	58.54	-789.0	-646.9	1.2472

TO2/T01	P02/P01	EFF-AD	EFF-P	W1/W1	TO2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
%	%	%	%	%	%	%	%	%
1.0556	1.3245	84.49	85.10	31.21	1.0370	1.0967	82.08	82.27

STATOR 2

SL	FPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	A-1	A-2	M-1	M-2	U-1	U-2	P0/P0	T0/T0	PO/PO	TO2/
IN/SEC	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	INLET	INLET	STAGE	TO1
1	6.584	3.037	635.7	656.9	530.1	656.9	350.9	0.0	33.2	0.0	0.5534	0.5730	1.3268	1.1237	1.1109	1.0438		
2	5.144	5.609	670.1	691.4	587.9	691.3	321.4	-14.1	28.6	-1.2	0.5869	0.6071	1.3749	1.1176	1.1083	1.0425		
3	3.886	4.059	661.7	664.5	610.7	664.4	277.5	-15.3	24.8	-1.3	0.5813	0.5841	1.3584	1.1094	1.0951	1.0389		
4	2.939	2.924	636.9	634.2	553.5	634.1	248.1	-12.9	22.4	-1.2	0.5601	0.5577	1.3353	1.1020	1.0857	1.0356		
5	1.641	1.472	567.3	544.5	522.8	544.5	194.7	1.9	20.1	0.2	0.4978	0.4861	1.2747	1.0934	1.0481	1.0293		
6	1.272	1.126	534.9	536.2	507.4	536.7	169.9	-2.6	19.5	-0.3	0.4590	0.4702	1.2622	1.0896	1.0381	1.0248		
7	1.090	0.920	530.2	519.2	507.9	519.2	152.5	1.4	16.7	0.2	0.4651	0.4541	1.2498	1.0877	1.0285	1.0217		
8	0.304	0.874	523.6	512.7	503.8	512.6	144.7	12.8	15.8	1.4	0.4596	0.4498	1.2469	1.0894	1.0231	1.0196		
9	0.859	0.820	516.5	507.8	492.7	506.9	155.0	30.2	17.5	3.4	0.4512	0.4434	1.2447	1.0940	1.0237	1.0207		
10	0.443	0.501	465.6	473.6	433.5	472.0	170.1	39.6	21.4	4.7	0.4042	0.4112	1.2234	1.0999	1.0229	1.0235		

SL	INCH	DEV	TURN	PHOVN-1	PHOVN-2	D-FAC	CFGA-R	LOSS-P	P02/	YEFF-P	YEFF-A	B-1	B-2	VB-1	VB-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-17.54	8.51	33.31	47.26	50.07	0.0816	0.1315	0.0383	0.2559					64.66	70.12	
2	-15.23	6.87	27.75	47.24	53.98	0.0799	0.0932	0.0210	0.9806					70.04	70.48	
3	-17.29	4.77	26.06	49.46	57.70	0.0994	0.1178	0.0285	0.9755					67.60	68.02	
4	-19.23	7.38	23.56	47.55	50.03	0.1037	0.1302	0.0321	0.9752					66.63	67.02	
5	-21.35	7.26	19.84	43.05	43.55	0.1139	0.2072	0.0597	0.9677					46.10	46.46	
6	-22.85	7.02	18.80	40.95	42.19	0.0965	0.1789	0.0535	0.9750					43.36	43.67	
7	-24.70	9.71	16.56	41.05	40.73	0.1131	0.2409	0.0755	0.9566					37.13	37.39	
8	-26.42	11.57	14.10	40.65	40.22	0.1026	0.2370	0.0783	0.9682					36.18	36.41	
9	-27.33	14.67	14.05	39.41	39.63	0.1039	0.2237	0.0787	0.9686					35.37	35.61	
10	-26.99	17.40	15.75	34.31	36.56	0.0885	0.1937	0.0652	0.9799					27.61	27.84	

NCOP4	WCOP4	TO/T0	PO/PO	EFF-AD	EFF-P	TO2/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
APM	LHM/SEC	%	%	%	%	%	%	%	%
617.5	165.11	1.0956	1.2958	75.79	76.65	1.0300	0.9723	54.74	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.8 Mach Number at Sonic Inlet Throat)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL		EPI-1		EPI-2		V-1		V-2		VN-1		VN-2		PO1/PO		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-2		V-1		V-2	
DEGREE		DEGREE		FT/SEC		FT/SEC		FT/SEC		FT/SEC		PLENUM		FT/SEC		DEGREE		DEGREE		N-1		N-2		FT/SEC		FT/SEC		N-1		N-2		FT/SEC		FT/SEC			
1	9.479	9.139	477.7	764.2	477.7	448.0	0.9688	394.3	0.0	52.8	0.4359	0.6688	394.8	431.8	0.5655	0.4282	619.8	476.5																			
2	7.662	7.447	505.7	719.9	535.7	495.8	0.9920	521.9	0.0	46.3	0.4624	0.6461	442.0	473.2	0.6147	0.4471	671.7	498.2																			
3	6.112	6.990	501.3	682.4	501.3	508.1	0.9977	455.5	0.0	41.9	0.4582	0.6109	494.7	519.0	0.6431	0.4584	704.3	512.1																			
4	5.265	5.711	492.9	647.0	492.9	505.3	0.9960	404.0	0.0	38.6	0.4502	0.5778	543.3	562.3	0.6761	0.4729	733.5	529.5																			
5	4.233	3.491	483.3	575.7	483.3	474.0	0.9961	324.7	0.0	34.6	0.4432	0.5115	652.4	662.2	0.7112	0.5159	812.1	580.7																			
6	3.823	2.677	482.8	563.6	482.8	471.8	0.9942	306.3	0.0	33.2	0.4407	0.4999	705.3	711.9	0.7301	0.5508	854.7	620.9																			
7	3.365	2.195	482.8	556.8	482.8	469.3	0.9925	299.6	0.0	32.4	0.4407	0.4934	738.9	742.8	0.8056	0.5719	902.7	645.5																			
8	2.873	1.710	482.8	549.2	482.8	464.8	0.9905	293.8	0.0	32.4	0.4407	0.4859	772.0	774.8	0.8511	0.5913	916.6	668.5																			
9	2.188	1.236	481.5	543.5	481.5	458.0	0.9880	291.6	0.0	32.4	0.4394	0.4800	807.9	807.9	0.8583	0.6089	940.5	689.4																			
10	1.350	0.644	470.6	535.3	470.6	447.1	0.9808	294.3	0.0	33.4	0.4292	0.4714	848.5	848.5	0.8847	0.6272	976.3	712.1																			
11	0.573	0.226	446.9	507.4	446.9	412.4	0.9674	295.8	0.0	35.6	0.4067	0.4451	882.7	882.4	0.9005	0.6291	989.3	717.2																			

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	3.71	6.26	10.99	59.28	32.24	31.39	0.4650	0.2060	0.0443	1.2683	85.81	85.32	39.45	-19.83	-394.8	162.4	1.2430
2	3.17	5.57	12.48	46.63	34.57	34.08	0.4613	0.1410	0.0358	1.2655	88.20	87.80	41.04	-5.59	-442.0	48.7	1.2700
3	1.35	6.43	12.78	37.43	34.51	38.02	0.4544	0.0908	0.0249	1.2636	91.44	91.15	44.55	7.12	-494.7	-63.5	1.2750
4	2.33	7.45	11.83	30.37	34.04	38.44	0.426	0.0653	0.0185	1.2579	93.16	92.94	47.76	17.39	-543.3	-158.3	1.2700
5	2.57	7.13	7.48	18.21	33.46	34.80	0.4208	0.0693	0.0191	1.2383	90.79	90.71	53.51	35.30	-452.6	-355.5	1.2478
6	2.74	6.72	5.37	15.09	33.37	34.89	0.4018	0.0612	0.0166	1.2435	91.48	91.21	55.64	40.55	-705.3	-403.6	1.2507
7	3.69	6.53	4.67	13.51	33.31	34.82	0.3925	0.0591	0.0158	1.2472	91.48	91.20	56.88	43.37	-738.9	-443.1	1.2522
8	4.27	6.57	4.43	11.97	33.25	34.48	0.3875	0.0643	0.0169	1.2501	90.44	90.15	58.01	46.04	-772.0	-481.0	1.2526
9	4.54	6.78	4.16	10.85	33.08	34.06	0.3871	0.0756	0.0197	1.2544	88.63	88.25	59.23	48.38	-807.9	-515.3	1.2540
10	5.26	7.48	4.78	9.89	32.23	35.20	0.3884	0.0880	0.0224	1.2638	86.79	86.34	60.99	51.10	-848.5	-554.2	1.2530
11	6.15	8.47	6.68	8.15	30.47	32.33	0.3992	0.1093	0.0262	1.2657	83.75	83.19	63.15	54.90	-882.7	-586.8	1.2586

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBN/SEC			ROTOR	ROTOR
%	%	%	%	%			%	%
1.0753	1.2540	89.08	89.43	33.21	1.0753	1.2540	89.08	89.43

STATOR 1

SL		EPI-1		EPI-2		V-1		V-2		VN-1		VN-2		VO-1		VO-2		B-1		B-2		M-1		M-2		PO/PO		TO/TO		PO/PO		TO2/	
DEGREE		DEGREE		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		FT/SEC		DEGREE		DEGREE		N-1		N-2		FT/SEC		FT/SEC		INLET		STAGE		TO1	
1	11.027	7.698	684.0	440.0	390.4	454.8	561.4	69.2	55.1	8.6	0.6104	0.4024	1.2016	1.0824	1.2261	1.0824	701																
2	7.093	5.212	683.5	512.3	464.6	507.1	499.4	73.0	44.9	8.1	0.6108	0.4505	1.2445	1.0794	1.2424	1.0794	701																
3	4.495	3.536	665.2	518.5	501.0	514.6	437.5	63.8	41.1	7.0	0.5943	0.4570	1.2583	1.0759	1.2468	1.0759	701																
4	3.118	2.685	641.0	508.5	508.1	504.6	390.8	63.6	37.5	7.2	0.5721	0.4485	1.2540	1.0729	1.2421	1.0729	701																
5	1.637	1.702	581.7	481.2	485.8	477.7	317.9	58.2	33.4	6.9	0.5171	0.4242	1.2364	1.0695	1.2271	1.0695	701																
6	1.285	1.415	573.5	480.2	486.8	476.7	303.2	58.3	31.9	7.0	0.5092	0.4231	1.2357	1.0704	1.2285	1.0704	701																
7	1.127	1.265	569.3	479.8	486.6	476.0	295.5	60.1	31.3	7.2	0.5050	0.4225	1.2355	1.0715	1.2306	1.0715	701																
8	0.989	1.123	564.6	478.0	484.1	474.2	290.4	60.3	31.0	7.2	0.5002	0.4205	1.2347	1.0730	1.2321	1.0730	701																
9	0.815	0.934	561.6	480.0	480.9	476.2	290.1	60.9	31.1	7.3	0.4968	0.4218	1.2343	1.0759	1.2349	1.0759	701																
10	0.584	0.630	557.3	481.0	474.2	474.6	292.7	78.0	31.7	9.3	0.4918	0.4218	1.2372	1.0801	1.2464	1.0801	701																
11	0.222	0.276	531.0	452.8	441.6	445.8	295.0	79.1	33.7	10.1	0.4667	0.3956	1.2200	1.0838	1.2468	1.0838	701																

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT
1	2.43	7.14	13.93	46.57	28.31	35.24	0.4753	0.1495	0.0312	0.9667	72.81	73.58
2	-0.43	4.69	10.60	38.75	34.62	40.07	0.3885	0.0815	0.0182	0.9818	80.69	81.28
3	-3.75	1.72	8.41	34.05	37.83	41.07	0.3546	0.0428	0.0151	0.9866	85.75	86.19
4	-5.92	-0.14	7.98	30.37	38.79	40.39	0.3360	0.0632	0.0162	0.9874	87.67	88.04
5	-8.86	-2.62	7.08	24.41	37.61	38.21	0.3037	0.0546	0.0159	0.9909	86.71	87.10
6	-10.23	-3.45	6.76	24.94	37.89	38.10	0.2948	0.0736	0.0227	0.9881	86.04	86.44
7	-10.93	-3.94	6.84	24.07	37.96	38.01	0.2896	0.0831	0.0265	0.9867	85.52	85.94
8	-11.68	-4.30	6.81	23.72	37.81	37.81	0.2884	0.0910	0.0300	0.9857	84.20	84.64
9	-11.97	-4.58	6.84	23.82	37.56	37.90	0.2852	0.0912	0.0311	0.9858	82.52	83.04
10	-13.41	-5.82	9.34	22.35	37.00	37.66	0.2739	0.0899	0.0316	0.9852	81.19	81.76
11	-14.52	-6.79	12.33	23.69	34.29	35.13	0.2962	0.1077	0.0389	0.9851	77.71	78.40

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGP	
RPH	LBN/SEC	%	%	%	%			%	%
6324	161.69	1.0753	1.2370	83.29	83.78	1.0753	0.9858	83.29	

ROTOR 2

RUN NO413, SPEED CODE 80, POINT NO 51																		
SL	EP51-1	EP51-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	0.637	3.047	422.2	695.5	410.8	583.3	67.3	370.8	9.1	32.7	0.2604	0.6059	491.1	522.0	0.5107	0.5234	594.5	600.8
2	0.320	0.429	510.7	693.1	514.0	585.1	49.8	355.2	7.7	30.7	0.4566	0.6052	533.9	556.8	0.4097	0.5487	602.5	628.4
3	0.862	3.400	534.5	646.2	530.9	590.0	61.5	309.3	6.6	27.6	0.4718	0.5622	573.6	590.5	0.4812	0.5712	737.7	653.6
4	3.484	2.357	520.0	630.8	525.2	560.0	61.8	274.4	6.7	25.7	0.4673	0.5512	616.4	627.4	0.4750	0.5844	763.0	668.8
5	0.860	0.263	504.0	555.8	501.5	508.7	57.6	228.8	6.5	23.7	0.4450	0.4839	713.3	716.3	0.7289	0.6165	825.5	700.1
6	0.324	-0.064	501.9	528.5	498.4	487.7	59.0	200.4	6.8	22.7	0.4420	0.4596	747.5	748.3	0.7498	0.6358	849.9	731.1
7	-0.041	-0.320	497.0	525.0	493.4	489.2	59.9	190.4	6.9	21.3	0.4380	0.4565	780.9	780.9	0.7700	0.6444	873.4	766.6
8	-0.403	-0.604	497.0	514.8	492.8	481.2	64.1	183.0	7.4	20.8	0.4371	0.4467	824.7	823.6	0.7984	0.6952	908.0	801.2
9	-0.457	-0.621	492.5	512.5	484.3	472.2	78.0	199.2	9.1	22.9	0.4322	0.4435	858.1	856.2	0.8048	0.7001	919.3	809.1
10	-0.300	-0.393	464.4	475.6	457.6	431.0	78.6	201.1	9.7	25.0	0.4261	0.4495	889.6	888.5	0.8144	0.6986	931.3	811.3

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-S	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.70	0.26	18.26	31.59	32.72	44.07	0.1316	0.0290	0.0069	1.1757	96.99	96.92	45.29	13.70	-423.9	-144.1	1.4159
2	-0.43	-3.16	10.31	23.38	40.75	48.15	0.2085	0.1017	0.0252	1.1513	84.13	85.85	41.97	18.59	-444.2	-201.6	1.4430
3	-0.30	-2.63	8.88	18.52	42.12	48.48	0.2113	0.0679	0.0171	1.1428	88.01	88.60	43.00	25.39	-512.1	-201.2	1.4372
4	-4.96	-1.90	7.26	14.72	41.63	47.14	0.2090	0.0428	0.0100	1.1347	91.04	91.69	44.53	31.01	-554.6	-353.1	1.4107
5	-3.44	0.43	5.42	8.52	39.73	42.40	0.2132	0.0652	0.0159	1.1005	83.89	83.65	52.58	44.06	-655.7	-492.5	1.3699
6	-2.53	0.78	5.81	5.94	39.48	40.61	0.2014	0.0705	0.0164	1.0932	79.99	79.73	54.10	48.16	-688.4	-544.7	1.3510
7	-1.33	1.06	4.99	5.26	39.07	40.77	0.1789	0.0482	0.0113	1.0935	84.97	84.76	55.61	50.35	-721.0	-590.2	1.3496
8	-1.29	0.93	4.32	4.04	38.95	39.96	0.1682	0.0537	0.0125	1.0858	81.57	81.35	57.12	53.08	-762.6	-640.6	1.3427
9	-1.10	1.13	3.64	3.77	38.34	39.03	0.1726	0.0674	0.0150	1.0857	77.58	77.31	58.06	54.29	-780.1	-657.0	1.3411
10	0.59	2.82	6.32	2.65	35.87	35.29	0.1834	0.0940	0.0200	1.0802	69.51	69.16	60.56	57.91	-811.0	-687.4	1.3161

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	SOFT			%	%
1.1147	1.3770	83.62	84.35	31.75	1.0367	1.1139	85.27	85.50

STATOR 2

RUN NO413, SPEED CODE 80, POINT NO 51																	
SL	EP51-1	EP51-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	STAGE	TO1
1	6.970	8.000	630.8	613.2	509.4	613.2	372.0	0.6	35.9	0.1	0.5459	0.5299	1.3844	1.1351	1.1489	1.0488	
2	5.087	5.310	659.7	644.5	561.1	644.5	347.0	-8.0	31.6	-0.7	0.5741	0.5601	1.4262	1.1291	1.1374	1.0476	
3	3.780	3.915	651.6	624.9	577.1	624.7	302.5	-15.7	27.6	-1.4	0.5686	0.5460	1.4164	1.1214	1.1267	1.0436	
4	2.825	2.790	628.3	596.3	567.8	596.2	269.1	-18.8	25.3	-1.8	0.5489	0.5196	1.3960	1.1145	1.1172	1.0398	
5	1.513	1.370	560.4	525.5	515.4	525.4	220.0	-7.9	23.1	-0.9	0.4801	0.4564	1.3418	1.1079	1.0858	1.0354	
6	1.190	1.063	534.3	538.4	493.1	508.3	200.9	-10.9	22.1	-1.2	0.4649	0.4415	1.3298	1.1056	1.0760	1.0321	
7	0.999	0.880	530.2	485.0	493.3	494.9	189.1	-12.0	20.9	-1.4	0.4612	0.4293	1.3205	1.1053	1.0697	1.0304	
8	0.863	0.784	519.6	490.3	486.2	490.3	183.4	2.7	20.7	0.3	0.4510	0.4246	1.3177	1.1084	1.0656	1.0293	
9	0.639	0.602	516.7	489.9	476.9	489.5	198.9	19.2	22.6	2.2	0.4472	0.4232	1.3179	1.1197	1.0649	1.0308	
10	0.288	0.286	480.9	456.6	437.0	455.8	200.8	27.0	24.7	3.4	0.4143	0.3927	1.2966	1.1187	1.0640	1.0322	

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-R	LOSS-P	PO2/	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-14.91	8.57	35.89	41.56	49.32	0.1504	0.1225	0.0258	0.9775	82.84	83.17
2	-12.16	7.33	32.35	44.18	52.85	0.1430	0.0578	0.0130	0.9884	78.72	79.10
3	-14.44	6.85	29.06	47.76	51.66	0.1534	0.0488	0.0164	0.9865	79.64	79.84
4	-16.33	6.73	27.14	47.16	49.49	0.1642	0.0800	0.0204	0.9851	80.73	81.03
5	-18.30	8.21	23.48	42.82	43.44	0.1785	0.1265	0.0365	0.9810	67.17	67.55
6	-19.29	8.07	23.31	41.13	42.00	0.1677	0.1116	0.0336	0.9846	65.85	66.21
7	-20.53	8.17	22.20	41.19	40.82	0.1852	0.1583	0.0496	0.9785	63.83	64.20
8	-21.57	10.46	20.36	0.20	40.33	0.1711	0.1419	0.0469	0.9815	62.50	62.84
9	-22.14	13.51	20.39	3.72	40.10	0.1731	0.1346	0.0462	0.9826	60.73	61.10
10	-23.73	16.12	21.29	35.71	37.02	0.1807	0.1340	0.0476	0.9850	55.54	55.94

NCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBM/SEC			%	%			%
6324	164.69	1.1147	1.3545	78.97	79.86	1.0367	0.9831	71.59

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(0.8 Mach Number at Sonic-Inlet Throat)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		PO1/PO		VM-2		B-1		B-2		M-1		M-2		U-1		U-2		V'-1		V'-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	5.817	5.812	462.3	752.7	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	0.0	0.0	53.0	0.4214	0.6770	403.7	441.5	0.5574	0.5313	613.9	480.1					
2	7.774	7.208	457.6	722.9	457.6	457.6	457.6	457.6	457.6	457.6	457.6	457.6	457.6	457.6	457.6	457.6	0.0	0.0	47.1	0.4547	0.6573	452.0	483.9	0.6143	0.5488	672.2	500.4					
3	6.095	6.403	452.0	692.3	452.0	452.0	452.0	452.0	452.0	452.0	452.0	452.0	452.0	452.0	452.0	452.0	0.0	0.0	42.8	0.4532	0.6193	505.9	530.7	0.6473	0.5473	708.4	511.3					
4	5.187	5.643	452.1	652.2	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1	0.0	0.0	39.6	0.4505	0.5845	555.5	575.0	0.6786	0.4718	742.8	528.9					
5	3.958	3.305	450.3	581.8	450.3	450.3	450.3	450.3	450.3	450.3	450.3	450.3	450.3	450.3	450.3	450.3	0.0	0.0	35.8	0.4479	0.5214	667.3	677.1	0.7503	0.5161	828.1	581.8					
6	3.474	2.498	450.0	575.5	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	450.0	0.0	0.0	35.0	0.4475	0.5044	722.1	727.9	0.7962	0.5402	871.9	617.1					
7	3.049	2.038	448.7	565.0	448.7	448.7	448.7	448.7	448.7	448.7	448.7	448.7	448.7	448.7	448.7	448.7	0.0	0.0	34.6	0.4463	0.5034	755.6	759.5	0.8217	0.5081	899.9	640.4					
8	2.501	1.569	447.7	552.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	0.0	0.0	34.6	0.4453	0.4974	789.4	792.2	0.8473	0.5446	927.9	662.5					
9	1.917	1.102	445.8	552.2	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	0.0	0.0	34.9	0.4435	0.4915	826.1	826.1	0.8750	0.6016	958.4	683.2					
10	1.160	0.588	445.8	552.0	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	445.8	0.0	0.0	36.1	0.4340	0.4826	867.6	867.6	0.9026	0.6160	989.5	702.0					
11	0.523	0.228	444.5	525.7	444.5	444.5	444.5	444.5	444.5	444.5	444.5	444.5	444.5	444.5	444.5	444.5	0.0	0.0	38.5	0.4096	0.4595	902.5	902.5	0.9181	0.6185	1008.5	707.7					

SL	INCS	INCM	DEV	TLRN	RMCVP-1	RMCVP-2	D-FAC	OMEGA-B	LCSS-P	PO2/	PEFF-A	PEFF-A	B'-1	B'-2	VM'-1	VM'-2	FC/PC	TOTAL		TOTAL		TOTAL		TOTAL		TOTAL	
																		TOT	DEGREE	FT/SEC	FT/SEC	TOT	DEGREE	FT/SEC	FT/SEC	TOT	DEGREE
1	2.27	7.62	11.27	66.90	31.34	31.58	0.4272	0.2217	0.0491	1.2768	85.15	84.63	41.01	-19.55	-603.7	161.5	1.2489	1.2768	85.15	84.63	41.01	-19.55	-603.7	161.5	1.2489		
2	1.27	6.67	11.64	46.25	34.10	35.14	0.4644	0.1588	0.0403	1.2780	87.34	86.80	42.15	-6.20	-452.0	54.3	1.2814	1.2779	1.2778	90.84	90.52	45.50	-4.72	-505.4	-59.9	1.2870	
3	2.29	7.57	12.25	31.77	34.15	34.01	0.4644	0.1015	0.0279	1.2778	90.84	90.52	45.50	-4.72	-505.4	-59.9	1.2870	1.2721	1.2701	92.06	91.78	48.37	17.31	-555.5	-167.5	1.2810	
4	2.94	8.06	11.75	16.74	32.88	37.10	0.4383	0.0466	0.0234	1.2527	89.37	89.01	33.70	34.97	-667.1	-333.4	1.2629	1.2577	1.2577	91.78	91.78	48.37	17.31	-555.5	-167.5	1.2810	
5	2.77	7.33	7.45	16.74	32.88	37.10	0.4383	0.0466	0.0234	1.2527	89.37	89.01	33.70	34.97	-667.1	-333.4	1.2629	1.2577	1.2577	91.78	91.78	48.37	17.31	-555.5	-167.5	1.2810	
6	2.93	6.51	4.55	16.74	32.88	37.10	0.4383	0.0466	0.0234	1.2527	89.37	89.01	33.70	34.97	-667.1	-333.4	1.2629	1.2577	1.2577	91.78	91.78	48.37	17.31	-555.5	-167.5	1.2810	
7	3.94	4.78	4.23	16.74	32.88	37.10	0.4383	0.0466	0.0234	1.2527	89.37	89.01	33.70	34.97	-667.1	-333.4	1.2629	1.2577	1.2577	91.78	91.78	48.37	17.31	-555.5	-167.5	1.2810	
8	4.58	6.66	3.51	12.40	33.53	36.55	0.4461	0.0456	0.0254	1.2676	86.73	86.27	58.31	45.51	-789.4	-472.6	1.2705	1.2676	1.2676	86.73	86.27	58.31	45.51	-789.4	-472.6	1.2705	
9	4.67	7.11	3.70	11.64	32.34	36.10	0.4461	0.1081	0.0284	1.2720	84.83	84.30	59.55	47.01	-826.1	-507.0	1.2724	1.2720	1.2720	84.83	84.30	59.55	47.01	-826.1	-507.0	1.2724	
10	5.53	7.75	4.40	10.53	32.56	34.99	0.4228	0.1300	0.0333	1.2810	81.90	81.25	61.26	50.73	-867.6	-543.5	1.2726	1.2810	1.2810	81.90	81.25	61.26	50.73	-867.6	-543.5	1.2726	
11	6.61	8.63	6.20	5.09	30.45	32.32	0.4328	0.1474	0.0357	1.2872	79.80	79.06	63.51	54.41	-902.6	-575.5	1.2599	1.2872	1.2872	79.80	79.06	63.51	54.41	-902.6	-575.5	1.2599	

T0/TU	F1/FU	EFF-AD	EFF-P	WCI/AL	T02/TU1	PO2/PO1	E1-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
%	%	%	%	%	%	%	%	%
1.0849	1.2700	86.29	86.75	33.53	1.0819	1.2700	96.29	86.75

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		PO1/PO		VM-2		B-1		B-2		M-1		M-2		U-1		U-2		V'-1		V'-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	11.197	7.917	487.1	731.8	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	0.0	0.0	55.9	0.46132	0.3872	1.7052	1.0855	1.2166	1.0855							
2	7.360	5.562	487.1	695.9	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	487.1	0.0	0.0	48.0	0.46176	0.4383	1.2553	1.0438	1.2535	1.0838							
3	4.872	3.932	472.6	505.9	472.6	472.6	472.6	472.6	472.6	472.6	472.6	472.6	472.6	472.6	472.6	472.6	0.0	0.0	42.3	0.46002	0.4482	1.2659	1.0804	1.2610	1.0804							
4	3.524	3.086	447.7	501.0	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	0.0	0.0	38.6	0.45773	0.4407	1.2669	1.0773	1.2563	1.0773							
5	2.171	2.220	453.5	475.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	0.0	0.0	34.5	0.45272	0.4180	1.2520	1.0745	1.2510	1.0746							
6	1.844	1.950	452.6	477.9	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	0.0	0.0	33.5	0.45198	0.4197	1.2544	1.0769	1.2459	1.0769							
7	1.635	1.741	454.0	481.8	454.0	454.0	454.0	454.0	454.0	454.0	454.0	454.0	454.0	454.0	454.0	454.0	0.0	0.0	32.1	0.45164	0.4224	1.2573	1.0787	1.2514	1.0787							
8	1.406	1.503	451.0	483.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	451.0	0.0	0.0	32.9	0.45140	0.4235	1.2597	1.0810	1.2560	1.0810							
9	1.117	1.195	455.3	485.9	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	0.0	0.0	33.1	0.45111	0.4254	1.2617	1.0845	1.2610	1.0845							
10	0.700	0.761	475.1	486.3	475.1	475.1	475.1	475.1	475.1	475.1	475.1	475.1	475.1	475.1	475.1	475.1	0.0	0.0	34.4	0.45050	0.4247	1.2625	1.0900	1.2698	1.0900							
11	0.277	0.308	452.6	452.2	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	452.6	0.0	0.0	36.1	0.44840	0.3984	1.2448	1.0546	1.2716	1.0946							

SL	INCS	INCM	DEV	TLRN	RMCVP-1	RMCVP-2	D-FAC	OMEGA-B	LCSS-P	PO2/	PEFF-A	PEFF-P	B'-1	B'-2	VM'-1	VM'-2	FC/PC	TOTAL		TOTAL		TOTAL		TOTAL		TOTAL	
																		TOT	DEGREE	FT/SEC	FT/SEC	TOT	DEGREE	FT/SEC	FT/SEC	TOT	DEGREE
1	3.20	7.91	15.78	45.49	27.54	34.13	0.5009	0.1408	0.0292	0.9084	73.21	74.00															
2	0.65	5.61	11.45	32.97	34.26	39.33	0.4170	0.0800	0.0191	0.94005	79.64	80.29															
3	-2.56	4.91	6.50	34.76	37.62	40.70	0.3795	0.0607	0.0146	0.9666	85.27	85.74															
4	-4.85	0.93	7.56	31.46	38.31	40.18	0.3613	0.0557	0.0143	0.9887	87.25	87.66															
5	-7.74	-1.29	7.22	27.34	37.59	38.14	0.3354	0.0497	0.0145	0.9914	85.57	86.02															
6	-8.62	-1.84	7.22	28.05	38.10	38.27	0.3236	0.0																			

ROTOR 2

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
LEGABE	LEGABE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	0.353	5.770	402.6	475.9	354.5	365.1	76.7	408.4	11.2	36.4	0.3504	0.3453	502.2	534.6	0.5090	0.4854	570.0	500.0
2	4.200	4.225	503.0	472.3	453.3	539.5	74.2	172.6	8.4	33.5	0.4420	0.5235	545.9	509.4	0.6020	0.5148	496.2	503.1
3	4.836	3.450	223.0	436.7	515.7	501.1	83.4	248.7	6.4	20.7	0.4508	0.5050	586.6	603.8	0.6490	0.5425	737.4	674.9
4	3.555	2.552	514.2	411.1	514.8	562.7	80.4	293.9	6.7	28.4	0.4588	0.5351	630.2	641.6	0.6768	0.5599	767.4	644.5
5	1.034	0.950	459.7	591.7	445.1	495.3	59.0	243.0	6.8	26.1	0.4398	0.4778	729.2	732.4	0.7336	0.6030	833.5	696.3
6	0.530	0.250	501.4	545.2	451.5	476.9	84.1	224.2	7.3	25.3	0.4411	0.4942	764.3	765.2	0.7553	0.6226	858.9	719.9
7	0.269	0.114	502.1	523.4	466.1	47.2	66.7	211.5	7.6	23.8	0.4420	0.4929	798.4	768.4	0.7779	0.6552	885.5	757.6
8	-0.025	-0.115	504.1	521.5	500.8	480.2	72.9	203.4	8.3	23.0	0.4436	0.4931	845.2	842.2	0.8065	0.6898	920.6	799.1
9	-0.104	-0.188	502.3	514.7	450.0	471.3	85.5	216.5	9.0	24.7	0.4400	0.4463	877.4	875.5	0.8169	0.6971	934.5	810.1
10	-0.074	-0.125	475.6	485.1	466.6	441.6	81.2	210.4	9.3	25.5	0.4141	0.4189	907.6	908.5	0.8286	0.7075	951.8	826.0

SL	INCS	INCM	DEV	PLAN	RH-VP-1	RHCVM-2	D-FAC	OMEGA-B	LCSS-P	PUZ/	REFF-P	REFF-A	B-1	B-2	VM-1	VM-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PU1	TUT	TUT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-5.18	1.74	1.44	33.73	31.29	44.33	0.1460	0.0215	-0.0051	1.2001	101.92	101.97	46.01	13.05	-423.5	-128.3	1.6534
2	-4.09	-1.65	10.56	24.07	24.88	40.48	0.2291	0.0372	0.0215	1.1676	89.04	88.78	43.91	19.24	-471.7	-196.7	1.6745
3	-7.09	-1.41	5.52	15.06	41.69	47.35	0.2504	0.0415	0.0154	1.1602	90.74	90.53	45.12	24.03	-523.1	-275.1	1.6740
4	-5.62	-0.54	4.64	15.44	41.27	46.27	0.2533	0.0390	0.0097	1.1540	93.33	93.19	47.89	32.60	-569.9	-347.7	1.6587
5	-2.56	1.34	6.01	8.84	31.74	42.54	0.2410	0.0388	0.0099	1.1339	91.38	91.23	53.47	44.65	-669.7	-489.4	1.6209
6	-2.02	1.29	6.37	2.85	31.44	40.76	0.2285	0.0455	0.0106	1.1170	88.45	88.26	54.01	48.72	-700.2	-541.0	1.6031
7	-1.21	1.17	5.41	4.96	34.51	41.18	0.2349	0.0203	0.1041	1.1158	92.71	92.59	55.73	50.77	-731.8	-587.0	1.6043
8	-1.38	0.84	4.30	3.92	35.57	41.49	0.1865	0.0172	0.1040	1.1128	94.67	94.58	57.03	53.06	-772.5	-638.7	1.6044
9	-1.22	1.00	3.77	3.91	37.43	40.22	0.1387	0.0276	0.1025	1.1120	91.51	91.37	57.94	54.62	-792.0	-659.0	1.6029
10	0.53	2.74	6.65	2.82	36.58	37.39	0.1481	0.0335	0.1075	1.1119	89.66	89.51	60.50	57.88	-828.4	-698.1	1.5825

TU/TU	FC/FC	EFF-AC	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-B
INLET	INLET	INLET	INLET	LBM/SEC	%	%	STAGE	%
1.1495	1.4260	85.16	85.37	31.50	1.0403	1.1367	92.48	92.62

STATOR 2

SL	EPST-1	EPST-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TU	PO/PO	TOZ
LEGABE	LEGABE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	T01
1	6.914	7.950	625.4	576.6	475.0	570.6	399.0	4.2	49.0	0.6	0.5374	0.4896	1.4284	1.1424	1.1703	1.0524
2	4.966	5.368	643.0	545.3	530.0	598.3	364.2	-3.4	34.4	-0.4	0.5565	0.5154	1.4633	1.1374	1.1500	1.0507
3	3.633	3.754	621.1	581.5	550.5	580.3	321.4	-13.1	30.2	-1.3	0.5535	0.5085	1.4618	1.1304	1.1411	1.0476
4	2.657	2.624	615.6	544.4	544.4	504.0	280.3	-15.9	27.9	-1.6	0.5449	0.4879	1.4449	1.1242	1.1438	1.0445
5	1.481	1.254	556.7	501.0	502.8	504.7	239.0	-15.1	25.4	-1.7	0.4823	0.4393	1.4025	1.1187	1.1190	1.0396
6	0.939	0.820	520.6	485.6	482.5	489.2	221.3	-17.4	24.6	-2.1	0.4593	0.4223	1.3882	1.1170	1.1047	1.0360
7	0.731	0.633	514.0	483.8	485.7	483.6	209.6	-11.4	23.3	-1.3	0.4576	0.4170	1.3834	1.1174	1.0990	1.0342
8	0.631	0.573	515.5	480.4	484.6	480.3	203.7	-3.3	22.8	-0.4	0.4537	0.4133	1.3804	1.1211	1.0937	1.0328
9	0.504	0.462	511.8	481.3	473.0	481.2	215.9	10.5	24.4	1.2	0.4450	0.4130	1.3808	1.1271	1.0947	1.0337
10	0.227	0.228	453.1	454.7	442.5	459.3	210.1	19.5	25.2	2.4	0.4226	0.3930	1.3663	1.1223	1.0988	1.0343

SL	INCM	DEV	PLAN	RH-VP-1	RHCVM-2	D-FAC	OMEGA-R	LCSS-P	PUZ/	REFF-A	REFF-P	T02/T01	P02/P01	EFF-AD	EFF-B
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PU1	STAGE	STAGE	%	%	STAGE	%
1	-11.26	6.53	34.18	40.04	47.98	0.2165	0.0978	0.0206	0.9825	91.51	91.71				
2	-4.41	7.27	34.76	44.27	51.12	0.1969	0.0407	0.0092	0.9524	84.35	84.68				
3	-11.84	7.01	31.49	40.76	50.70	0.2000	0.0392	0.0033	0.9227	86.15	86.43				
4	-13.78	6.53	24.50	46.41	48.78	0.2063	0.0482	0.0122	0.9115	87.80	88.03				
5	-16.00	7.37	21.12	43.03	43.84	0.2158	0.0777	0.0224	0.9086	82.30	82.58				
6	-16.74	7.20	24.73	44.30	42.11	0.2127	0.0756	0.0227	0.9054	80.19	80.48				
7	-18.08	8.21	24.86	41.45	41.50	0.2163	0.1124	0.0352	0.9050	79.86	80.13				
8	-19.43	8.75	23.21	41.47	41.14	0.2161	0.1295	0.0424	0.9030	79.98	79.25				
9	-20.34	10.51	23.40	40.46	40.98	0.2137	0.1402	0.0412	0.9044	77.66	77.94				
10	-23.22	12.14	22.76	37.75	38.13	0.2066	0.1016	0.0361	0.9082	79.36	79.63				

MCORR	MCORR	TU/TU	FC/FC	EFF-AC	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-B
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
0466	105.29	1.1455	1.4047	82.13	82.90	1.0423	0.9880	83.67	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-1	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE				FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	9.722	8.968	471.0	730.0	471.0	436.8	0.9876	594.9	0.0	33.1	0.4295	0.6549	400.7	438.2	0.5139	0.4134	618.4	460.8
2	7.861	7.345	447.2	708.2	447.2	481.7	0.9885	519.2	2.0	47.0	0.4943	0.6248	448.5	485.2	0.6119	0.4330	669.6	483.3
3	6.130	7.528	496.9	671.1	496.9	495.8	0.9842	432.3	0.0	42.4	0.4540	0.5909	502.0	526.7	0.6454	0.4481	704.3	501.3
4	5.263	6.249	491.9	636.0	491.9	492.7	0.9953	402.3	0.0	39.3	0.4493	0.5672	551.3	570.6	0.6749	0.4443	738.8	520.6
5	4.274	3.789	484.5	569.4	484.5	485.3	0.9932	328.2	0.0	35.2	0.4423	0.5043	662.2	672.0	0.7490	0.5134	820.3	578.5
6	3.807	2.919	484.2	562.2	484.2	467.7	0.9912	311.9	0.0	33.7	0.4420	0.4981	715.4	722.4	0.7887	0.5116	864.0	622.2
7	3.321	2.373	484.8	559.3	484.8	469.4	0.9898	304.2	0.0	33.0	0.4420	0.4952	749.8	753.7	0.8151	0.5154	892.9	650.0
8	2.758	1.789	485.4	554.5	485.4	467.3	0.9882	298.4	0.0	32.4	0.4432	0.4903	783.4	786.2	0.8414	0.5173	921.6	675.5
9	1.987	1.208	485.3	549.6	485.3	461.5	0.9863	293.4	0.0	32.9	0.4430	0.4850	819.8	819.8	0.8677	0.5145	952.7	694.3
10	1.079	0.557	475.3	542.2	475.3	453.1	0.9799	302.4	0.0	33.9	0.4335	0.4770	861.0	861.0	0.8971	0.5112	983.4	717.3
11	0.391	0.140	455.1	514.4	455.1	413.9	0.9687	305.5	0.0	36.4	0.4145	0.4507	895.7	895.4	0.9150	0.5112	1004.7	720.6

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-b	LOSS-P	PO2/	TEFF-P	TEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.54	7.69	12.35	58.75	31.84	31.05	0.4852	0.1632	0.0364	1.2776	88.53	88.14	40.28	-18.47	-400.7	146.7	1.2521
2	1.08	6.48	13.46	46.56	33.97	35.51	0.4812	0.1382	0.0268	1.2790	91.36	91.03	41.95	-4.61	-448.5	39.0	1.2809
3	2.02	7.30	14.19	36.70	34.15	37.51	0.4704	0.0623	0.0171	1.2748	94.16	93.94	45.23	8.53	-502.0	-74.3	1.2787
4	2.80	7.92	13.31	29.35	33.92	37.87	0.4582	0.0447	0.0125	1.2676	95.32	95.16	48.23	18.88	-551.3	-168.3	1.2789
5	2.91	7.67	8.64	17.37	33.43	36.49	0.4298	0.0470	0.0128	1.2520	93.92	93.72	53.84	36.47	-662.2	-343.8	1.2605
6	3.05	7.03	6.11	14.67	33.35	36.95	0.4079	0.0360	0.0094	1.2615	95.07	94.90	58.96	41.28	-715.6	-410.4	1.2675
7	3.98	6.80	5.39	13.37	33.33	37.23	0.3960	0.0309	0.0082	1.2682	95.62	95.47	57.15	43.78	-749.8	-449.6	1.2723
8	4.31	6.81	4.63	12.01	33.31	37.17	0.3889	0.0343	0.0090	1.2721	94.99	94.82	58.24	46.23	-783.4	-487.8	1.2750
9	4.71	6.95	4.28	10.90	33.24	36.74	0.3901	0.0507	0.0137	1.2772	92.50	92.24	59.39	48.50	-819.8	-521.4	1.2769
10	5.27	7.59	4.81	9.96	32.47	35.80	0.3948	0.0716	0.0182	1.2857	89.48	89.10	61.10	51.14	-861.0	-558.6	1.2770
11	6.17	8.39	8.73	8.12	30.98	32.77	0.4093	0.1033	0.0248	1.2843	84.96	84.42	43.07	54.94	-895.7	-589.6	1.2610

TO/T0	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC			ROTOR	ROTOR
		%	%	% SQFT			%	%
1.0772	1.2771	91.97	92.24	33.28	1.0772	1.2710	91.97	92.24

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/T0	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	11.218	7.910	671.4	442.7	381.1	435.4	552.8	80.3	55.4	10.3	0.5984	0.3869	1.2131	1.0823	1.2372	1.0623
2	7.353	5.317	672.7	492.2	492.7	489.1	446.7	77.7	47.5	9.0	0.4003	0.4348	1.2570	1.0803	1.2564	1.0803
3	4.816	3.826	653.1	503.6	486.8	500.0	435.4	62.8	41.8	7.1	0.5826	0.4434	1.2706	1.0767	1.2612	1.0767
4	3.399	2.909	625.4	495.1	464.3	491.5	389.7	59.9	38.2	6.9	0.5609	0.4540	1.2676	1.0759	1.2565	1.0759
5	1.819	1.825	575.2	470.6	476.9	466.8	321.6	59.3	34.0	7.2	0.5107	0.4143	1.2529	1.0708	1.2443	1.0708
6	1.432	1.513	571.3	474.2	482.2	470.6	304.5	58.4	32.4	7.1	0.5067	0.4172	1.2555	1.0723	1.2492	1.0723
7	1.662	1.652	571.5	477.4	486.4	473.8	299.8	60.1	31.6	7.2	0.5066	0.4201	1.2577	1.0736	1.2536	1.0736
8	1.121	1.205	569.8	479.0	487.7	475.1	296.7	61.2	31.1	7.3	0.5064	0.4210	1.2590	1.0751	1.2568	1.0751
9	0.934	1.003	567.7	472.3	484.7	478.3	295.6	62.5	31.4	7.5	0.5018	0.4234	1.2616	1.0785	1.2619	1.0785
10	0.624	0.679	563.8	482.8	477.0	476.8	300.5	75.8	32.2	9.0	0.4970	0.4229	1.2622	1.0834	1.2702	1.0834
11	0.264	0.292	537.6	454.4	442.8	448.0	304.8	79.4	14.5	10.0	0.4718	0.3968	1.2648	1.0878	1.2677	1.0878

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-M	LOSS-P	PO2/	TEFF-P	TEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	2.67	7.38	15.70	45.04	27.99	34.20	0.4853	0.1473	0.0304	0.9682	86.82	86.82	76.24	76.24	76.95	76.95	1.0772
2	0.22	5.34	11.43	36.57	34.17	39.13	0.4019	0.0380	0.0185	0.9820	89.80	89.80	84.03	84.03	84.54	84.54	1.0772
3	3.66	2.41	8.51	34.84	37.16	40.42	0.3651	0.0526	0.0127	0.9892	90.99	90.99	89.43	89.43	89.77	89.77	1.0772
4	5.24	0.55	7.74	31.30	38.13	34.87	0.3469	0.0473	0.0121	0.9909	91.31	91.31	91.60	91.60	91.60	91.60	1.0772
5	8.23	-1.79	7.38	26.75	37.30	37.87	0.3141	0.0374	0.0109	0.9939	91.07	91.07	91.34	91.34	91.34	91.34	1.0772
6	9.70	-2.42	6.89	25.35	37.93	38.15	0.3045	0.0381	0.0119	0.9907	90.91	90.91	90.91	90.91	90.91	90.91	1.0772
7	10.56	-3.57	6.88	24.41	38.38	38.60	0.2986	0.0703	0.0224	0.9887	89.75	89.75	89.75	89.75	89.75	89.75	1.0772
8	11.31	-4.12	6.91	23.80	38.54	38.67	0.2951	0.0779	0.0257	0.9874	89.29	89.29	89.29	89.29	89.29	89.29	1.0772
9	11.64	-4.30	7.01	23.93	38.29	38.65	0.2911	0.0755	0.0257	0.9881	87.41	87.41	87.41	87.41	87.41	87.41	1.0772
10	12.88	-5.29	9.04	23.17	37.62	38.39	0.2853	0.0763	0.0269	0.9881	84.48	84.48	84.48	84.48	84.48	84.48	1.0772
11	13.72	-5.99	12.32	24.20	36.73	35.79	0.3075	0.0916	0.0331	0.9870	74.90	74.90	74.90	74.90	74.90	74.90	1.0772

MC1/A1	MCUP	TO/T0	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
PPH	LBW/SEC			%	%			%	%
6417.	1.25.06	1.0772	1.2559	87.72	87.63	1.0772	0.9881	87.72	87.63

ROTOR 2

														RUN NO413, SPEED CODE 77, POINT NO 11							
SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC			
1	0.571	5.005	423.0	676.2	396.2	543.5	70.0	402.3	11.1	36.2	0.3519	0.5870	490.4	530.6	0.5035	0.4848	577.6	556.4			
2	4.211	6.439	500.7	670.8	495.6	558.7	72.5	371.1	8.3	33.4	0.4399	0.5032	541.8	565.0	0.5995	0.5162	602.3	591.4			
3	4.805	3.482	514.8	648.7	516.2	560.4	59.2	325.8	6.5	30.1	0.4500	0.5641	582.1	599.2	0.6477	0.5426	736.8	623.6			
4	3.477	2.444	514.8	616.2	511.3	542.6	58.5	292.2	6.5	28.3	0.4540	0.5362	625.5	626.7	0.6736	0.5592	763.4	647.7			
5	3.845	0.271	486.2	551.6	492.6	493.8	70.1	245.7	6.7	26.4	0.4375	0.4784	723.8	726.8	0.7303	0.5980	820.3	689.4			
6	3.294	-0.975	487.5	522.9	484.6	472.8	59.0	223.5	6.8	25.3	0.4384	0.4530	758.5	759.3	0.7544	0.6191	856.3	714.6			
7	-0.953	-0.174	487.3	515.6	483.4	449.5	64.8	212.9	7.0	24.4	0.4379	0.4463	792.4	792.4	0.7771	0.6456	882.4	745.8			
8	-0.129	-0.254	489.8	514.4	482.7	472.3	64.5	202.4	7.4	23.2	0.4391	0.4443	836.8	835.8	0.8078	0.6826	919.4	789.7			
9	-0.154	-0.244	486.7	512.3	480.8	445.8	74.3	215.0	8.0	24.9	0.4354	0.4415	876.8	868.8	0.8185	0.6915	935.4	802.3			
10	-0.485	-0.129	489.2	485.3	442.5	435.1	79.0	215.0	9.7	26.3	0.4406	0.4165	902.7	901.6	0.8247	0.6976	944.7	812.8			

SL	INCS	INCH	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-P	TEFF-A	0-1	0-2	VO-1	VO-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-5.46	1.48	17.47	33.79	31.41	44.43	0.1040	0.0324	-0.0077	1.1990	102.92	102.99	44.51	12.11	-420.4	-128.3	1.4560
2	-8.67	-1.81	16.73	29.32	39.78	46.47	0.2548	0.0730	0.0180	1.1789	98.88	90.47	43.33	19.01	-449.2	-193.9	1.4802
3	-4.91	-1.23	9.40	19.39	41.53	47.55	0.2544	0.0496	0.0124	1.1636	92.59	92.43	45.30	25.91	-522.9	-273.4	1.4790
4	-5.58	-0.56	7.81	15.56	41.13	46.50	0.2515	0.0236	0.0059	1.1500	96.00	95.10	47.93	32.37	-567.0	-344.5	1.4644
5	-2.55	1.32	5.80	9.23	39.61	42.06	0.2472	0.0378	0.0092	1.1373	91.00	91.44	53.48	44.25	-665.7	-481.1	1.4264
6	-1.86	1.49	6.23	6.19	39.72	40.76	0.2350	0.0491	0.0115	1.1191	87.81	87.40	54.77	48.58	-699.5	-535.9	1.4067
7	-0.94	1.44	5.62	5.02	39.73	40.49	0.2196	0.0458	0.0106	1.1147	87.70	87.50	56.00	50.98	-731.7	-579.4	1.4029
8	-1.64	1.18	4.50	4.11	39.77	40.65	0.1999	0.0361	0.0084	1.1121	89.35	89.19	57.37	53.26	-774.4	-632.9	1.4033
9	-6.87	1.35	3.92	3.71	39.24	39.85	0.2003	0.0455	0.0106	1.1123	86.70	86.49	58.29	54.57	-794.4	-653.8	1.4028
10	0.72	4.95	6.04	3.65	36.71	37.02	0.1990	0.0463	0.0103	1.1135	86.49	86.27	60.68	57.64	-823.7	-686.6	1.3845

TO/TU	PO/PO	EFF-AD	EFF-P	WCI/AI	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%				%	%
1.1215	1.4300	88.61	89.17	31.27	1.0411	1.1387	91.85	92.01

STATOR 2

														RUN NO413, SPEED CODE 77, POINT NO 11							
SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/					
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01					
1	0.913	7.924	619.3	568.3	477.0	568.2	395.1	2.4	39.4	0.3	0.5347	0.4084	1.4322	1.1382	1.1778	1.0517					
2	4.974	5.263	641.3	597.9	528.7	597.8	362.7	8.9	34.3	-0.9	0.5560	0.5163	1.4689	1.1334	1.1612	1.0506					
3	3.651	3.768	635.6	586.2	530.0	586.0	318.6	-13.7	30.0	-1.3	0.5525	0.5673	1.4657	1.1265	1.1537	1.0476					
4	2.712	2.671	614.6	562.4	543.7	561.9	286.7	-16.2	27.8	-1.6	0.5348	0.4669	1.4441	1.1204	1.1465	1.0444					
5	1.377	1.237	556.5	507.1	561.3	506.9	241.7	-13.3	25.7	-1.5	0.4930	0.4383	1.4074	1.1152	1.1220	1.0465					
6	1.895	0.906	527.8	486.1	479.7	485.7	220.1	-18.2	24.6	-2.1	0.4574	0.4200	1.3922	1.1129	1.1073	1.0369					
7	0.810	0.711	520.9	474.2	475.6	474.1	211.5	-9.9	24.0	-1.2	0.4508	0.4093	1.3835	1.1134	1.0991	1.0360					
8	0.674	0.665	516.4	473.5	476.6	473.5	203.1	0.1	23.1	0.0	0.4478	0.4080	1.3827	1.1168	1.0956	1.0346					
9	0.518	0.480	515.4	474.1	468.6	473.9	214.7	12.4	24.6	1.5	0.4443	0.4074	1.3829	1.1225	1.0967	1.0357					
10	0.230	0.228	484.5	452.4	439.9	452.0	214.7	19.7	26.0	2.5	0.4202	0.3874	1.3685	1.1272	1.1007	1.0361					

SL	INCH	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-A	TEFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-11.42	8.80	39.14	40.09	48.02	0.2143	0.0969	0.7204	0.9829	92.61	92.78
2	-9.47	7.19	35.19	44.84	51.33	0.1967	0.0409	0.0092	0.9822	86.18	86.47
3	-12.62	6.95	31.38	46.94	50.74	0.2001	0.0436	0.0104	0.9919	87.63	87.88
4	-13.88	6.89	29.42	46.62	48.83	0.2078	0.0540	0.0137	0.9905	89.74	89.94
5	-15.69	7.57	27.23	43.12	43.92	0.2197	0.0808	0.0233	0.9881	82.42	82.71
6	-16.73	7.14	26.79	41.26	42.04	0.2143	0.0700	0.0210	0.9906	80.07	80.38
7	-17.44	8.39	25.15	40.92	40.93	0.2222	0.1059	0.0332	0.9862	76.08	76.40
8	-19.16	10.15	23.08	40.95	40.75	0.2154	0.1147	0.0379	0.9853	76.36	76.67
9	-20.17	12.76	23.12	40.68	40.59	0.2158	0.1103	0.0378	0.9860	74.86	75.19
10	-22.40	15.22	23.52	37.37	38.45	0.2181	0.1063	0.0357	0.9889	76.86	77.17

MCURR	MCURR	TC/TU	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBM/SEC			%	%			%
6417.0	165.06	1.1215	1.4133	85.55	86.24	1.0411	0.9883	83.41

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	FT/SEC	FT/SEC
1	10.883	9.177	438.3	702.1	438.5	418.1	0.9739	544.1	0.0	53.3	0.3989	0.6288	400.3	437.8	0.5401	0.3911	593.7	436.7
2	9.428	7.595	469.8	685.8	469.8	459.6	0.9916	509.0	0.0	47.8	0.4284	0.6134	448.1	479.7	0.5920	0.4119	649.3	440.5
3	7.777	7.104	477.4	646.2	477.4	472.9	0.9972	443.4	0.0	43.1	0.4334	0.5785	501.6	526.2	0.4310	0.4284	692.5	440.1
4	6.168	6.027	475.4	616.3	475.4	470.6	0.9973	397.9	0.0	40.2	0.4337	0.5488	550.8	570.1	0.4637	0.4463	727.6	501.2
5	3.643	3.795	471.7	554.4	471.7	441.4	0.9970	326.0	0.0	36.0	0.4302	0.4914	661.6	671.4	0.7610	0.5017	812.5	546.0
6	2.833	2.987	469.3	541.4	469.3	443.1	0.9960	311.2	0.0	35.1	0.4278	0.4798	715.8	721.7	0.7798	0.5343	855.2	604.0
7	2.288	2.532	466.3	539.8	466.3	444.1	0.9943	306.8	0.0	34.7	0.4250	0.4770	749.1	753.1	0.8043	0.5564	882.4	629.6
8	1.750	2.059	463.2	536.9	463.2	442.2	0.9924	304.4	0.0	34.5	0.4221	0.4737	782.7	785.5	0.8288	0.5766	909.5	653.5
9	1.244	1.535	458.8	532.3	458.8	436.4	0.9901	304.8	0.0	34.9	0.4188	0.4687	819.1	819.1	0.8553	0.5939	936.8	676.5
10	0.789	0.998	449.0	528.4	449.0	427.7	0.9853	310.4	0.0	36.0	0.4088	0.4639	860.2	860.2	0.8833	0.6115	970.3	696.6
11	0.277	0.382	426.8	510.0	426.8	402.8	0.9725	312.8	0.0	37.8	0.3872	0.4462	894.9	894.9	0.9007	0.6190	991.1	707.6

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
1	3.65	9.20	14.10	59.12	30.20	30.25	0.4965	0.1608	0.0362	1.2687	84.16	88.78	42.39	-16.73	-400.3	126.3	1.2476
2	2.79	8.19	14.44	47.29	32.56	34.44	0.4964	0.0903	0.0230	1.2778	92.85	92.59	43.67	-3.63	-448.1	29.3	1.2794
3	3.23	8.51	15.59	36.50	33.18	36.37	0.4865	0.0422	0.0115	1.2750	96.16	96.02	46.43	9.93	-301.6	-82.8	1.2838
4	3.79	8.91	14.54	29.11	33.86	36.77	0.4747	0.0206	0.0057	1.2722	97.90	97.83	49.22	20.10	-350.8	-172.2	1.2811
5	3.59	8.15	9.80	16.90	32.84	35.71	0.4389	0.0265	0.0071	1.2580	96.61	96.50	54.52	37.62	-461.6	-345.4	1.2684
6	3.83	7.81	7.66	13.90	32.67	35.47	0.4229	0.0364	0.0096	1.2605	95.05	94.88	56.73	42.83	-715.0	-410.5	1.2677
7	4.92	7.76	6.46	12.96	32.44	35.65	0.4129	0.0383	0.0099	1.2675	94.72	94.53	58.11	45.16	-799.1	-446.3	1.2725
8	5.66	7.96	5.82	11.97	32.20	35.57	0.4071	0.0466	0.0120	1.2735	93.46	93.23	59.39	47.43	-782.7	-481.1	1.2761
9	6.07	8.31	5.48	11.06	31.87	35.12	0.4066	0.0631	0.0160	1.2784	91.88	90.78	60.75	49.69	-819.1	-514.3	1.2780
10	6.70	8.92	5.80	10.31	31.14	34.39	0.4109	0.0867	0.0218	1.2875	87.84	87.40	62.44	52.12	-860.2	-549.8	1.2809
11	7.65	9.87	9.09	9.24	29.44	32.30	0.4170	0.1026	0.0243	1.2945	85.77	85.24	64.54	55.31	-894.9	-581.8	1.2724

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	ROTOR
1.0773	1.2735	92.60	92.85	32.07	1.0773	1.2735	92.60	92.65

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
1	11.309	8.142	638.6	603.4	351.6	396.5	533.1	74.5	56.5	10.5	0.5681	0.3921	1.2074	1.0793	1.2288	1.0793
2	7.678	5.974	646.8	660.8	426.3	453.9	486.2	79.2	48.7	9.9	0.5758	0.4039	1.2498	1.0785	1.2501	1.0785
3	5.246	4.386	628.7	678.4	461.6	473.5	421.8	87.7	42.8	8.1	0.5599	0.4205	1.2687	1.0753	1.2604	1.0753
4	3.801	3.418	609.1	675.3	472.0	471.3	385.0	66.9	39.2	7.4	0.5620	0.4181	1.2701	1.0730	1.2612	1.0730
5	2.159	2.251	561.0	652.4	461.3	466.9	319.4	57.3	36.7	7.3	0.4976	0.3980	1.2579	1.0703	1.2496	1.0703
6	1.742	1.887	551.1	652.6	458.6	448.3	305.7	62.3	33.7	7.9	0.4880	0.3977	1.2584	1.0719	1.2509	1.0719
7	1.516	1.453	551.9	656.9	462.0	452.3	302.1	64.1	33.2	8.1	0.4883	0.4012	1.2615	1.0739	1.2542	1.0739
8	1.286	1.407	551.7	660.4	462.7	455.6	300.4	66.1	33.0	8.3	0.4874	0.4039	1.2641	1.0764	1.2612	1.0764
9	1.005	1.098	549.4	661.8	459.0	456.8	301.9	67.5	33.3	8.4	0.4865	0.4065	1.2654	1.0800	1.2657	1.0800
10	0.616	0.680	547.8	664.9	452.8	458.0	308.4	79.9	34.3	9.9	0.4818	0.4063	1.2675	1.0855	1.2737	1.0855
11	0.232	0.265	531.2	642.4	429.8	435.7	312.1	76.4	36.0	9.9	0.4655	0.3851	1.2537	1.0898	1.2755	1.0898

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P	TOY-STG	TOY-STG
1	3.86	8.27	15.90	46.02	26.31	31.60	0.5161	0.1608	0.0334	0.9483	76.52	77.20	83.91	84.42
2	1.42	6.52	12.31	38.88	32.57	36.77	0.4270	0.1080	0.0240	0.9782	83.91	84.42	90.93	91.22
3	-2.10	3.37	9.49	34.63	35.84	38.79	0.3770	0.0603	0.0145	0.9883	93.95	94.15	93.56	93.76
4	-4.27	1.51	8.17	31.84	37.01	38.77	0.3565	0.0488	0.0125	0.9911	91.92	92.18	91.14	91.43
5	-7.52	-1.08	7.41	27.42	36.64	36.96	0.3298	0.0450	0.0131	0.9930	89.76	90.10	87.00	87.51
6	-8.45	-1.68	7.70	25.78	36.55	36.87	0.3155	0.0463	0.0142	0.9930	83.81	84.36	80.18	80.85
7	-9.02	-2.03	7.71	25.11	36.89	37.18	0.3102	0.0557	0.0177	0.9916				
8	-9.45	-2.26	7.82	24.75	36.98	37.40	0.3061	0.0614	0.0202	0.9908				
9	-9.74	-2.34	7.97	24.93	36.88	37.40	0.3057	0.0662	0.0225	0.9902				
10	-10.83	-3.24	9.90	24.36	36.12	37.35	0.2996	0.0705	0.0248	0.9896				
11	-12.28	-4.55	12.22	26.04	34.18	35.28	0.3298	0.1047	0.0385	0.9853				

NCORR	NCORR	TC/TC	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
6411.	159.03	1.0773	1.2589	88.02	88.41	1.0773	0.9885	88.02	88.02

ROTOR 2

SL	EPI-1		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		M ^o -1		M ^o -2		V ^o -1		V ^o -2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	0.411	5.685	364.6	652.6	357.4	497.1	72.3	422.8	11.4	40.0	0.3175	0.5649	497.9	530.1	0.4840	0.4402	555.8	508.6																
2	5.984	4.321	465.2	640.8	459.1	506.8	75.5	392.2	9.3	37.5	0.4079	0.5550	541.3	564.5	0.5734	0.4636	654.0	535.3																
3	4.661	3.460	493.9	622.6	489.8	513.0	63.7	352.8	7.4	34.4	0.4347	0.5397	581.6	598.6	0.6275	0.4932	712.8	568.9																
4	3.493	2.610	492.4	595.1	488.9	504.5	58.3	315.6	6.8	32.0	0.4338	0.5158	624.9	636.1	0.6594	0.5180	748.4	597.7																
5	1.233	0.812	473.4	538.4	469.7	461.3	59.5	277.6	7.2	31.0	0.4168	0.4651	723.1	726.2	0.7158	0.5558	813.0	643.4																
6	0.753	0.497	475.0	515.8	470.8	446.3	62.9	256.7	7.6	30.1	0.4179	0.4451	757.8	758.6	0.7384	0.5782	839.4	670.2																
7	0.508	0.373	478.8	510.4	474.3	446.3	65.2	247.8	7.8	29.0	0.4207	0.4400	791.7	791.7	0.7625	0.6064	867.6	703.5																
8	0.259	0.217	481.0	510.3	476.1	451.4	68.7	238.3	8.2	27.8	0.4217	0.4391	838.1	835.0	0.7932	0.6437	904.7	748.3																
9	0.141	0.114	487.6	512.3	475.9	447.2	80.1	230.3	9.6	29.2	0.4222	0.4395	870.0	868.0	0.8066	0.6541	922.2	782.6																
10	0.060	0.054	459.7	492.8	453.3	427.8	75.9	244.6	9.5	29.8	0.4006	0.4210	901.9	900.8	0.8212	0.6691	942.2	783.3																

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B ^o -1	B ^o -2	V ^o -1	V ^o -2	PO/PO	TOTAL	
																		P01	TOT
1	-2.21	4.75	16.58	37.75	28.00	41.77	0.2542	-0.0589	-0.0140	1.2200	104.59	104.72	49.78	12.62	-425.6	-187.3	1.4754		
2	-9.12	0.15	10.37	26.63	37.32	43.39	0.3186	0.0672	0.0164	1.1853	92.57	92.39	45.28	18.66	-445.8	-172.3	1.4912		
3	-5.68	-0.00	9.00	21.01	40.01	44.40	0.3196	0.0681	0.0171	1.1755	91.05	90.84	46.53	25.51	-517.9	-245.9	1.4965		
4	-4.33	0.75	7.82	16.81	39.94	44.30	0.3057	0.0404	0.0101	1.1709	93.92	93.77	49.19	32.38	-546.7	-320.5	1.4852		
5	-1.32	2.55	5.55	10.51	38.35	48.04	0.3803	0.0490	0.0119	1.1594	91.17	90.97	54.71	44.19	-443.6	-448.6	1.4582		
6	-0.75	2.57	5.00	7.44	38.43	39.55	0.2845	0.0497	0.0117	1.1448	90.04	89.84	55.88	48.25	-494.9	-499.9	1.4450		
7	-0.06	2.30	5.27	4.23	38.48	39.56	0.2845	0.0439	0.0102	1.1431	90.44	90.27	56.84	50.63	-526.5	-543.9	1.4442		
8	-0.17	2.05	4.12	5.36	38.69	39.99	0.2447	0.0313	0.0073	1.1440	92.64	92.51	58.24	52.88	-769.3	-596.7	1.4478		
9	-0.23	1.99	3.65	4.83	38.52	39.44	0.2442	0.0404	0.0095	1.1449	90.53	90.34	58.92	54.89	-789.8	-617.7	1.4513		
10	1.27	3.50	5.31	4.34	36.45	37.53	0.2425	0.0402	0.0091	1.1487	90.56	90.37	61.24	56.90	-826.0	-654.1	1.4389		

TC/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	ROTOR
%	%	%	%	%	%	%	%	%
1.1282	1.4624	89.51	90.06	30.16	1.0472	1.1617	92.57	92.73

STATOR 2

SL	EPI-1		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		PO/PO	TO/TO	PC/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC				
1	6.991	8.025	601.6	502.4	435.4	502.4	415.2	5.2	43.4	0.6	0.5183	0.4293	1.4484	1.3395	1.1976	1.0558										
2	5.067	5.456	612.9	533.1	477.9	533.1	383.7	-1.7	38.7	-0.2	0.5294	0.4574	1.4816	1.1356	1.1769	1.0537										
3	3.697	3.776	609.7	531.7	502.5	531.5	345.3	-11.3	34.4	-1.2	0.5279	0.4574	1.4871	1.1298	1.1698	1.0518										
4	2.735	2.639	592.3	512.6	504.7	512.4	310.0	-13.8	31.5	-1.5	0.5132	0.4413	1.4763	1.1249	1.1643	1.0491										
5	1.360	1.166	543.1	470.8	469.0	476.5	273.9	-15.5	30.3	-1.9	0.4694	0.4047	1.4488	1.1218	1.1520	1.0473										
6	1.014	0.836	521.7	453.8	455.1	453.5	255.2	-16.5	29.3	-2.1	0.4504	0.3899	1.4374	1.1205	1.1406	1.0442										
7	0.785	0.638	516.3	449.7	453.9	449.5	246.1	-11.9	28.5	-1.5	0.4452	0.3859	1.4345	1.1222	1.1352	1.0431										
8	0.535	0.440	516.0	454.4	457.8	454.4	238.0	-4.2	27.5	-0.5	0.4440	0.3893	1.4372	1.1266	1.1356	1.0424										
9	0.299	0.244	517.4	454.4	453.1	458.3	249.8	9.9	28.9	1.2	0.4439	0.3917	1.4391	1.1332	1.1355	1.0436										
10	0.076	0.058	497.9	432.7	433.8	432.4	244.3	14.3	29.4	1.9	0.4255	0.3681	1.4217	1.1387	1.1351	1.0447										

SL	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B ^o -1	B ^o -2	V ^o -1	V ^o -2	PO/PO	TO/TO	PC/PO	TO2/	
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC			STAGE	T01	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1	-7.42	9.10	42.84	37.46	44.18	0.3062	0.1096	0.0231	0.9817									94.72	94.86	
2	-5.15	7.85	38.85	41.46	47.54	0.2702	0.0379	0.0085	0.9934									88.61	88.87	
3	-7.61	7.08	35.66	43.94	47.83	0.2655	0.0265	0.0061	0.9954									88.39	88.65	
4	-10.13	7.00	33.07	44.37	46.29	0.2711	0.0339	0.0046	0.9944									90.47	90.68	
5	-11.14	7.19	32.16	41.43	42.46	0.2861	0.0403	0.0116	0.9944									87.23	87.49	
6	-12.09	7.21	31.37	40.23	40.88	0.2867	0.0594	0.0118	0.9949									86.69	86.94	
7	-12.95	8.04	29.98	40.15	40.44	0.2856	0.0537	0.0168	0.9932									85.54	85.80	
8	-14.77	9.61	28.01	40.46	40.75	0.2744	0.0587	0.0194	0.9926									87.20	87.43	
9	-15.92	12.50	27.63	39.90	40.87	0.2733	0.0657	0.0225	0.9917									84.64	84.93	
10	-19.03	14.61	27.50	37.98	38.25	0.2955	0.1016	0.0361	0.9881									82.45	82.76	

MCORR	MCORR	TC/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
RPM	LBM/SEC	%	%	%	%	%	%	%	%
6411.	159.03	1.1282	1.4512	87.60	88.24	1.0472	0.9923	87.72	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	9.421	9.533	426.8	426.8	426.8	426.8	401.9	0.9738	546.4	0.0	54.5	0.3179	0.6214	401.2	438.7	0.5324	0.5779	565.7	421.7
2	7.424	7.737	455.7	455.7	455.7	455.7	444.7	0.9904	515.5	0.0	49.1	0.4150	0.6082	449.1	480.8	0.5827	0.3985	639.8	446.1
3	6.570	6.313	458.4	458.4	458.4	458.4	465.4	0.9956	451.0	0.0	44.0	0.4176	0.5779	502.4	527.3	0.6198	0.4206	680.3	471.6
4	5.761	5.368	457.5	457.5	457.5	457.5	464.7	0.9961	404.4	0.0	41.0	0.4168	0.5482	552.0	571.3	0.6531	0.4394	716.9	493.8
5	4.571	3.701	458.1	458.1	458.1	458.1	439.4	0.9954	330.9	0.0	37.0	0.4174	0.4872	667.0	672.8	0.7341	0.4990	805.9	556.7
6	4.438	2.906	458.1	458.1	458.1	458.1	440.0	0.9943	315.1	0.0	35.6	0.4174	0.4785	716.5	723.3	0.7748	0.5367	850.5	600.2
7	3.521	2.350	457.0	457.0	457.0	457.0	441.0	0.9928	311.5	0.0	35.2	0.4163	0.4768	750.7	754.7	0.8066	0.5521	876.9	625.2
8	2.818	1.740	455.3	455.3	455.3	455.3	438.2	0.9912	310.9	0.0	35.4	0.4167	0.4737	784.4	787.2	0.8260	0.5706	906.9	647.3
9	2.001	1.138	451.9	451.9	451.9	451.9	427.7	0.9890	312.1	0.0	34.1	0.4115	0.4657	820.8	820.8	0.8532	0.5845	937.0	664.6
10	1.151	0.517	442.1	442.1	442.1	442.1	416.6	0.9840	317.9	0.0	37.3	0.4025	0.4594	862.0	862.0	0.8815	0.6067	968.8	685.3
11	0.472	0.142	421.3	421.3	421.3	421.3	385.5	0.9738	324.2	0.0	40.1	0.3828	0.4397	896.8	896.5	0.9002	0.6024	990.8	690.0

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-P	LOSS-P	P02/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	4.35	9.54	13.26	43.45	29.54	29.07	0.5127	0.1987	0.6445	1.2637	87.17	86.73	43.09	-17.56	-401.2	127.7	1.2437
2	3.60	9.01	13.62	48.93	31.78	33.78	0.5090	0.1230	0.0313	1.2754	90.82	90.49	44.48	-4.45	-449.1	34.7	1.2766
3	4.38	9.66	14.96	38.29	32.05	35.77	0.4872	0.0549	0.0150	1.2782	95.43	95.27	47.59	9.30	-502.4	-76.3	1.2841
4	4.91	10.13	16.16	30.59	32.00	36.33	0.4752	0.0249	0.0075	1.2761	97.42	97.33	50.34	16.75	-552.0	-107.0	1.2846
5	4.47	9.02	16.08	17.56	32.01	35.11	0.4458	0.0249	0.0072	1.2631	96.70	96.59	55.40	37.90	-663.0	-341.9	1.2707
6	4.55	8.53	7.68	14.49	31.97	35.41	0.4250	0.6234	0.7462	1.2785	96.91	96.80	57.45	42.84	-716.5	-488.2	1.2747
7	3.52	8.36	6.64	13.56	31.88	35.41	0.4175	0.0244	0.0067	1.2785	96.46	96.33	58.71	45.15	-750.7	-443.2	1.2824
8	4.14	8.44	5.74	12.70	31.71	35.45	0.4154	0.6387	0.0095	1.2847	94.71	94.52	59.89	47.39	-784.4	-476.3	1.2849
9	6.50	6.73	5.74	11.23	31.45	34.40	0.4199	0.6628	0.0150	1.2873	91.34	91.02	61.18	49.95	-820.8	-508.7	1.2847
10	7.12	6.34	6.24	10.29	30.72	33.47	0.4253	0.0890	0.0219	1.2957	87.82	87.36	62.85	52.54	-862.0	-544.1	1.2886
11	7.94	10.16	9.82	8.80	29.19	31.03	0.4397	0.1197	0.0278	1.2994	83.91	83.31	64.83	56.04	-896.8	-572.3	1.2788

TO/T0	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LB/SEC	%	%	ROTOR	ROTOR
%	%	%	%	SOFT	%	%	%	%
1.0789	1.2790	92.40	92.64	31.41	1.0789	1.2790	92.40	92.64

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/T0	TO/TO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	11.196	8.067	378.4	331.7	371.6	335.3	70.2	56.2	10.6	0.5596	0.3297	1.2673	1.0798	1.2275	1.0798	
2	7.375	5.881	438.1	432.0	400.3	424.7	492.0	79.2	51.4	10.5	0.5675	0.3777	1.2440	1.0797	1.2447	1.0797
3	4.986	4.352	422.8	455.8	447.1	454.9	433.7	67.0	44.1	8.4	0.5540	0.4035	1.2673	1.0767	1.2590	1.0767
4	3.596	3.383	403.6	462.3	455.8	458.5	391.0	59.2	40.4	7.3	0.5364	0.4061	1.2719	1.0743	1.2636	1.0743
5	2.256	2.146	553.5	443.0	448.3	439.3	324.6	57.0	35.9	7.4	0.4903	0.3891	1.2622	1.0716	1.2547	1.0716
6	1.757	1.643	548.4	443.6	452.7	439.2	309.5	62.4	34.4	8.1	0.4852	0.3893	1.2631	1.0730	1.2546	1.0730
7	1.640	1.702	550.5	449.0	457.4	444.9	306.4	64.4	33.8	8.2	0.4867	0.3943	1.2673	1.0751	1.2627	1.0751
8	1.687	1.527	552.0	454.5	459.0	453.1	306.5	65.7	33.7	8.2	0.4873	0.3995	1.2712	1.0781	1.2687	1.0781
9	1.232	1.246	547.3	453.2	451.8	456.4	308.9	64.7	34.4	8.2	0.4820	0.3982	1.2727	1.0820	1.2725	1.0820
10	0.823	0.825	545.0	455.7	444.4	449.0	315.5	78.1	35.4	9.9	0.4787	0.3976	1.2731	1.0875	1.2794	1.0875
11	0.357	0.359	526.7	434.0	415.8	427.3	323.3	75.7	37.9	10.0	0.4606	0.3771	1.2607	1.0927	1.2862	1.0932

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-P	LOSS-P	P02/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	5.47	10.19	15.95	47.59	24.81	29.81	0.5513	0.1492	0.0309	0.9713	75.64	76.34
2	3.10	8.21	12.96	39.90	31.06	34.51	0.4665	0.1239	0.0275	0.9756	81.09	81.67
3	-0.73	4.74	9.73	25.75	34.78	37.39	0.4041	0.0746	0.0179	0.9858	89.13	89.48
4	-3.10	2.68	8.16	33.02	36.17	37.88	0.3754	0.0565	0.0165	0.9899	93.09	93.32
5	-6.32	0.13	7.53	28.51	35.78	36.34	0.3410	0.0461	0.0134	0.9930	93.60	93.80
6	-7.78	-1.01	7.88	26.28	36.31	36.30	0.3305	0.0674	0.0207	0.9900	92.49	92.73
7	-8.37	-1.39	7.86	25.59	36.76	36.76	0.3239	0.0761	0.0242	0.9886	91.80	92.07
8	-8.71	-1.52	7.80	25.50	36.91	37.14	0.3207	0.0810	0.0266	0.9878	90.19	90.52
9	-8.71	-1.31	7.73	26.19	36.28	37.08	0.3210	0.0767	0.0261	0.9887	87.05	87.49
10	-9.72	-2.13	9.88	25.50	35.62	36.79	0.3185	0.0934	0.0293	0.9879	83.39	83.96
11	-10.39	-2.67	12.32	27.82	33.17	34.75	0.3483	0.1086	0.0392	0.9853	78.52	79.23

MCORR	MCORR	TO/T0	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	STAGE
RPM	LB/SEC	%	%	%	%	%	%	%	%
4425	155.74	1.0789	1.2790	87.45	87.86	1.0789	0.9873	87.45	87.86

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	8.203	5.551	346.0	447.0	339.2	473.9	48.3	430.9	11.3	41.9	0.3010	0.5530	499.0	531.2	0.4769	0.4103	546.3	484.4
2	5.545	4.042	439.1	426.1	434.6	484.3	75.1	400.0	9.8	39.3	0.3841	0.5426	542.4	565.7	0.5571	0.4421	636.6	511.8
3	4.230	3.204	476.4	412.1	474.3	493.0	62.5	362.9	7.5	36.2	0.4206	0.5293	582.8	599.9	0.6187	0.4730	704.1	547.0
4	3.149	2.429	476.2	588.5	474.9	469.2	56.2	327.1	6.7	33.7	0.4206	0.5088	626.3	637.5	0.6526	0.5010	741.9	579.4
5	0.998	0.635	461.6	536.4	457.8	451.3	59.4	295.1	7.4	33.2	0.4058	0.4639	724.7	727.7	0.7099	0.5381	807.5	624.4
6	0.542	0.326	466.6	517.7	460.3	436.6	63.2	278.2	7.8	32.5	0.4082	0.4456	759.4	760.3	0.7333	0.5599	854.6	650.4
7	0.349	0.251	476.7	511.4	444.2	437.1	64.7	265.5	7.9	31.3	0.4131	0.4395	793.3	793.3	0.7592	0.5890	885.0	685.3
8	0.160	0.143	472.7	512.0	440.1	444.8	65.7	253.4	8.0	29.7	0.4139	0.4391	839.9	839.9	0.7919	0.6299	904.7	739.4
9	0.065	0.051	472.6	513.0	440.0	437.5	78.6	267.9	9.6	21.5	0.4127	0.4385	871.8	869.4	0.8033	0.6381	920.0	744.7
10	0.025	0.022	451.0	491.7	444.4	417.9	75.3	259.2	9.6	21.8	0.3922	0.4185	903.8	902.7	0.8177	0.6531	940.3	767.3

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-R	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.42	0.53	16.36	39.78	27.44	40.11	0.2940	0.0464	-0.0111	1.2253	103.40	103.50	51.57	11.80	-430.7	-160.4	1.4821
2	-4.35	1.97	10.47	28.3	35.25	41.74	0.3439	0.0560	0.0141	1.1939	94.08	93.93	47.05	18.75	-467.3	-165.7	1.4967
3	-4.65	1.63	9.07	21.98	28.92	43.11	0.3494	0.0850	0.0215	1.1793	89.29	89.03	47.56	25.58	-520.4	-237.0	1.5016
4	-3.35	1.73	7.79	17.62	36.99	43.22	0.3300	0.0534	0.0134	1.1774	92.44	92.26	50.17	32.34	-570.0	-310.4	1.4958
5	-0.57	3.33	5.21	11.61	27.60	46.13	0.3266	0.0458	0.0161	1.1689	89.13	88.88	55.46	43.85	-645.2	-432.6	1.4753
6	-0.10	3.21	5.48	8.70	37.80	36.93	0.3123	0.0694	0.0165	1.1569	87.38	87.11	56.53	47.83	-696.2	-482.1	1.4640
7	0.45	2.63	5.91	7.01	38.25	39.00	0.2932	0.0659	0.0155	1.1517	86.99	86.72	57.39	50.37	-728.7	-527.8	1.4629
8	0.42	2.64	3.90	6.18	38.26	39.65	0.2691	0.0525	0.0124	1.1533	88.85	88.62	58.83	52.66	-774.2	-583.2	1.4674
9	0.40	2.65	3.34	5.58	37.92	38.84	0.2729	0.0626	0.0148	1.1551	86.87	86.54	59.56	53.08	-793.2	-602.0	1.4765
10	1.61	4.04	5.41	4.78	35.91	36.87	0.2647	0.0568	0.0129	1.1572	87.75	87.50	61.78	57.00	-828.5	-643.5	1.4572

TO/T0	PG/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	STAGE	%
1.1336	1.4770	86.26	80.89	29.46	1.0507	1.1497	90.25	90.46

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TC/TC
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	T01
1	7.630	8.033	593.2	473.5	415.8	473.4	423.1	7.4	45.3	0.9	0.5100	0.4033	1.4546	1.1421	1.2026	1.0577
2	5.993	5.410	601.8	5.404	457.1	504.4	291.4	2.0	46.5	0.2	0.5186	0.4313	1.4859	1.1386	1.1844	1.0552
3	3.713	3.743	599.4	36.94	482.8	508.9	255.2	-9.2	36.3	-1.0	0.5177	0.4344	1.4959	1.1337	1.1750	1.0540
4	2.147	2.637	585.0	443.9	488.9	493.8	321.3	-11.6	33.3	-1.3	0.5056	0.4238	1.4887	1.1290	1.1721	1.0517
5	1.396	1.217	542.3	457.6	457.4	477.6	291.3	-13.2	37.5	-1.7	0.4675	0.3922	1.4668	1.1272	1.1621	1.0511
6	1.150	0.884	522.9	444.1	445.2	441.7	274.3	-17.6	31.6	-2.3	0.4503	0.3785	1.4587	1.1264	1.1508	1.0485
7	0.816	0.681	517.0	439.4	444.7	434.2	263.6	-12.9	30.7	-1.7	0.4445	0.3758	1.4549	1.1285	1.1457	1.0474
8	0.571	0.484	517.5	445.2	451.1	445.1	253.5	-5.6	29.3	-0.7	0.4439	0.3799	1.4585	1.1336	1.1462	1.0470
9	0.384	0.257	518.0	451.1	443.6	445.9	267.4	11.2	31.1	1.4	0.4429	0.3830	1.4611	1.1408	1.1478	1.0466
10	0.057	0.042	494.8	426.2	424.1	420.0	258.8	15.0	31.4	2.0	0.4230	0.3561	1.4413	1.1466	1.1447	1.0487

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-R	LOSS-P	P02/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-1.56	9.40	44.41	35.97	42.11	0.3471	0.1161	0.7241	0.9814		93.75	93.91
2	-3.33	8.27	40.24	39.87	45.46	0.3058	0.0637	0.6098	0.9927		89.69	89.94
3	-5.77	7.25	37.22	42.46	46.29	0.2940	0.0213	0.9051	0.9965		87.28	87.57
4	-8.38	7.26	34.56	43.25	45.10	0.2979	0.0276	0.0070	0.9956		89.78	89.99
5	-8.43	7.41	34.15	40.88	41.77	0.3174	0.0363	0.0105	0.9950		85.74	86.04
6	-4.75	6.99	33.45	39.64	40.28	0.3226	0.0372	0.0112	0.9957		84.28	84.70
7	-10.76	7.87	32.24	35.40	39.96	0.3176	0.0440	0.0138	0.9944		83.20	83.52
8	-1.99	9.42	37.60	40.12	40.36	0.3051	0.0491	0.0163	0.9938		84.57	84.87
9	-17.71	12.60	29.66	39.29	40.56	0.3010	0.0505	0.0172	0.9937		82.65	82.99
10	-17.62	14.77	24.55	37.34	37.53	0.3287	0.0697	0.0392	0.9992		80.87	81.23

NCORR	MCORR	TO/T0	PG/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
84.0	155.74	1.1336	1.4474	86.63	87.33	1.0507	0.9932	86.24	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		V-1		V-2		VM-1		VM-2		V0-1		V0-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE
1	10.563	9.112	469.4	753.2	469.4	475.1	0.9643	584.5	0.0	50.7	0.4280	0.6775	402.0	439.6	0.5635	0.4468	618.0	496.7																
2	9.047	7.191	506.3	730.7	506.3	519.9	0.9987	513.5	0.0	44.5	0.4631	0.6565	450.0	481.7	0.6195	0.4680	677.4	528.8																
3	7.449	5.576	514.5	690.9	514.5	526.7	0.9928	447.1	0.0	40.2	0.4709	0.6191	507.6	528.4	0.6589	0.4776	720.0	533.0																
4	6.193	4.863	517.0	651.4	517.0	518.8	0.9948	393.9	0.0	37.2	0.4733	0.5822	553.1	572.5	0.6930	0.4904	757.1	548.7																
5	4.555	3.165	515.5	581.7	515.5	486.5	0.9940	318.0	0.0	32.3	0.4718	0.5172	644.3	674.1	0.7696	0.5355	840.9	602.3																
6	3.269	2.552	512.3	570.0	512.3	482.0	0.9918	304.3	0.0	32.0	0.4687	0.5058	718.0	724.7	0.8070	0.5675	882.0	639.6																
7	2.760	2.184	509.1	564.1	509.1	479.1	0.9894	297.8	0.0	31.9	0.4657	0.5000	752.2	756.2	0.8308	0.5876	908.3	668.0																
8	2.269	1.796	505.7	550.1	505.7	474.4	0.9868	294.0	0.0	31.8	0.4624	0.4939	785.9	788.7	0.8546	0.6065	934.6	685.4																
9	1.711	1.375	500.6	554.5	500.6	469.4	0.9835	295.1	0.0	32.2	0.4576	0.4897	822.5	822.5	0.8801	0.6235	962.8	706.0																
10	1.026	0.816	486.1	546.0	486.1	458.1	0.9753	297.0	0.0	33.0	0.4438	0.4808	863.7	863.7	0.9049	0.6417	991.1	728.7																
11	0.429	0.338	461.0	522.8	461.0	430.3	0.9611	296.8	0.0	34.6	0.4201	0.4587	898.6	898.6	0.9202	0.6490	1009.9	739.6																

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.80	7.35	13.95	57.41	31.63	33.33	0.4278	0.1450	0.3326	1.2829	89.84	89.48	40.54	-16.87	-402.0	144.9	1.2505
2	0.74	6.14	14.59	45.09	34.40	37.91	0.4299	0.3807	0.0205	1.2829	93.21	92.96	41.62	-3.47	-450.0	31.7	1.2857
3	1.19	6.47	14.41	35.65	35.05	39.48	0.4341	0.0425	0.0116	1.2778	95.88	95.72	44.40	8.75	-503.6	-81.3	1.2885
4	1.51	6.63	13.40	27.98	35.25	39.53	0.4306	0.0321	0.0090	1.2659	96.43	96.30	46.96	18.96	-553.1	-178.6	1.2790
5	1.28	5.84	8.31	16.09	35.14	37.81	0.4117	0.0441	0.0120	1.2452	93.90	93.70	52.21	34.13	-664.3	-355.2	1.2571
6	1.61	5.59	5.92	13.41	34.89	37.68	0.3573	0.0452	0.0122	1.2505	93.42	93.20	54.51	41.10	-718.0	-420.4	1.2597
7	2.74	5.58	5.05	12.19	34.63	37.57	0.3893	0.0463	0.0123	1.2553	93.12	92.88	55.93	43.74	-752.2	-458.3	1.2615
8	3.52	5.83	4.61	11.05	34.36	37.26	0.3847	0.0529	0.0139	1.2599	91.99	91.72	57.26	44.21	-785.9	-494.7	1.2628
9	4.00	6.24	4.12	10.35	33.96	36.91	0.3847	0.0651	0.0170	1.2689	90.12	89.78	58.68	48.34	-822.5	-527.4	1.2655
10	4.90	7.12	4.73	9.58	32.88	36.00	0.3855	0.0775	0.0197	1.2771	88.33	87.91	60.64	51.25	-863.7	-566.7	1.2650
11	5.94	8.16	8.20	8.42	31.06	33.72	0.3896	0.0883	0.0214	1.2833	86.81	86.34	62.84	54.42	-898.6	-601.5	1.2572

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AI	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBH/SEC	%	%	ROTOR	ROTOR
%	%	%	%	SQFT	%	%	%	%
1.0759	1.2659	91.84	92.12	34.27	1.0759	1.2659	91.84	92.12

STATOR 1

SL	EPI-1		V-1		V-2		VM-1		VM-2		V0-1		V0-2		B-1		B-2		M-1		M-2		U-1		U-2		M*-1		M*-2		V*-1		V*-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE		
1	11.140	7.820	685.6	476.4	406.2	469.6	552.3	80.4	53.6	9.6	0.6119	0.4172	1.2154	1.0825	1.2411	1.0825																		
2	7.322	5.464	689.1	526.7	483.5	521.5	491.1	74.1	45.4	8.0	0.6162	0.4677	1.2620	1.0796	1.2600	1.0796																		
3	4.785	3.827	670.2	531.4	514.5	527.6	429.0	84.0	39.8	6.9	0.5992	0.4689	1.2741	1.0758	1.2636	1.0758																		
4	3.379	2.556	662.9	517.9	518.1	514.6	380.7	58.4	36.3	6.5	0.5741	0.4572	1.2677	1.0724	1.2547	1.0724																		
5	1.884	2.003	587.3	487.4	457.4	484.7	312.3	54.8	32.1	6.5	0.5225	0.4700	1.2487	1.0690	1.2365	1.0690																		
6	1.533	1.717	580.3	489.6	467.2	485.9	299.2	59.8	31.0	7.0	0.5155	0.4316	1.2501	1.0707	1.2409	1.0707																		
7	1.329	1.514	577.3	490.5	457.0	487.1	293.8	61.0	30.6	7.1	0.5123	0.4324	1.2515	1.0723	1.2453	1.0723																		
8	1.116	1.289	574.2	491.4	495.2	487.6	290.7	61.2	30.4	7.2	0.5089	0.4325	1.2523	1.0743	1.2493	1.0743																		
9	0.853	0.999	573.3	494.8	493.0	490.9	292.6	62.2	30.7	7.2	0.5071	0.4349	1.2550	1.0780	1.2563	1.0780																		
10	0.481	0.591	567.8	495.1	486.5	488.8	295.5	78.6	31.4	9.1	0.5310	0.4342	1.2553	1.0823	1.2670	1.0823																		
11	0.154	0.216	566.2	485.4	458.4	458.4	246.2	80.5	32.8	10.0	0.4802	0.4066	1.2362	1.0857	1.2668	1.0857																		

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	0.92	5.63	14.97	44.01	29.63	36.44	0.4464	0.1462	0.0304	0.9673	77.20	77.89			85.85	86.31	
2	1.92	3.20	10.49	37.36	36.07	41.31	0.3698	0.0797	0.0178	0.9823	91.23	91.52			92.61	92.85	
3	5.07	0.40	8.27	32.88	39.03	42.25	0.3373	0.0515	0.0124	0.9889	92.61	92.85			90.63	90.91	
4	7.17	-1.40	7.27	29.83	39.66	41.45	0.3219	0.0436	0.0112	0.9913	89.99	90.30			89.54	89.87	
5	-10.11	-3.56	6.60	25.66	38.56	38.84	0.2979	0.0410	0.0119	0.9930	88.41	88.77			86.48	86.92	
6	-11.10	-4.72	6.81	24.02	38.69	38.98	0.2841	0.0452	0.0139	0.9925	85.03	85.32			81.64	82.25	
7	-11.61	-4.43	6.78	23.45	38.74	39.05	0.2790	0.0483	0.0154	0.9911							
8	-12.53	-4.64	6.72	23.26	38.63	39.04	0.2766	0.0507	0.0167	0.9911							
9	-12.38	-4.99	6.77	23.48	38.44	39.22	0.2747	0.0518	0.0177	0.9917							
10	-13.73	-6.14	9.14	22.22	37.76	38.91	0.2640	0.0496	0.0174	0.9922							
11	-15.42	-7.69	12.24	22.68	35.62	36.23	0.2923	0.0890	0.0321	0.9870							

NCORR	WCI/AI	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
RPM	LBH/SEC	INLET	INLET	INLET	INLET	%	%	STAGE
%	%	%	%	%	%	%	%	%
4438.	169.92	1.0354	1.2523	87.48	87.88	1.0759	0.9892	87.48

ROTOR 2

RUN N0413, SPEED CODE 77, POINT NO 15																
SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V*-1	V*-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC		
1	0.471	5.932	433.7	704.1	426.6	585.5	78.1	391.1	10.3	33.4	0.3787	0.6134	500.0	532.3	0.5239	0.5247
2	4.392	4.565	530.1	704.2	525.6	602.8	69.4	356.2	7.5	30.4	0.4671	0.6114	543.5	566.8	0.6237	0.5576
3	4.944	3.553	546.0	673.1	542.5	597.9	60.9	399.2	6.4	27.3	0.4825	0.5884	584.0	601.1	0.6640	0.5816
4	3.565	2.506	537.9	636.8	534.9	576.6	56.2	270.4	6.0	25.1	0.4758	0.5566	627.5	638.8	0.6926	0.5980
5	C.803	0.231	514.6	544.7	511.4	519.5	57.3	221.5	6.4	23.1	0.4547	0.4921	729.2	729.2	0.7440	0.6329
6	C.217	-0.143	513.8	534.3	510.2	496.0	60.3	198.6	6.7	21.8	0.4536	C.450	761.8	0.7652	0.6533	866.8
7	-0.121	-0.371	511.8	530.7	508.2	457.5	60.8	184.8	6.8	20.4	0.4513	7.17	794.9	0.7874	0.6849	892.9
8	-0.406	-0.585	513.2	522.2	509.1	492.4	65.0	173.9	7.3	19.4	0.4515	J.4534	838.5	0.8168	0.7182	928.5
9	-0.458	-0.617	507.8	521.8	501.7	486.3	78.8	189.2	8.5	21.3	0.4457	0.4517	873.6	871.6	0.8249	0.7257
10	-0.319	-0.416	477.8	480.8	471.0	440.4	80.0	192.9	9.6	23.6	0.4178	0.414	905.6	904.5	0.8312	0.7209

SL	INCS	IACH	DEV	TURN	RPOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VB*-1	VB*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.49	-C.53	17.95	31.11	33.60	46.60	0.1370	0.0160	0.0038	1.1833	98.35	98.31	44.50	13.39	-421.9	-141.1	1.4406
2	-9.45	-3.19	10.85	22.81	41.81	49.17	0.2109	0.0931	0.0230	1.1568	87.14	86.86	41.95	19.14	-476.1	-210.6	1.4676
3	-8.32	-2.64	9.43	17.95	43.19	49.57	0.2124	0.0589	0.0167	1.1486	90.17	89.97	43.89	25.94	-523.1	-291.9	1.4621
4	-6.66	-1.58	7.97	14.33	42.54	48.30	0.2094	0.0316	0.0079	1.1416	93.93	93.81	46.86	32.52	-571.3	-360.3	1.4427
5	-3.43	0.44	5.69	8.26	40.63	43.75	0.2058	0.0413	0.0100	1.1166	89.51	89.34	52.59	44.33	-648.8	-507.7	1.3951
6	-2.69	0.62	6.28	5.31	40.55	41.72	0.1925	0.0484	0.0113	1.0973	85.49	85.29	53.94	46.62	-700.7	-563.1	1.3729
7	-1.63	0.75	5.45	4.50	40.38	41.86	0.1709	0.0313	0.0073	1.0951	89.54	89.40	55.31	50.81	-734.2	-610.2	1.3710
8	-1.67	0.55	4.70	3.29	40.36	41.28	0.1544	0.0295	0.0068	1.0871	88.81	88.67	56.74	53.46	-776.6	-664.6	1.3646
9	-1.42	C.80	3.87	3.21	39.66	40.58	0.1544	0.0371	0.0087	1.0885	86.35	86.18	57.73	54.52	-794.7	-682.4	1.3640
10	0.32	2.55	6.65	2.05	37.01	36.38	0.1687	0.0690	0.0151	1.0816	75.46	75.19	60.29	58.74	-825.6	-711.6	1.3351

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	%	%	ROTOR	ROTOR
1.1150	1.4007	87.92	88.48	32.37	1.0363	1.1185	89.55	89.72

STATOR 2

RUN N3413, SPEED CODE 77, POINT NO 15																	
SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	TO/TO	PO/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	STAGE	TO1
1	6.929	7.587	639.7	622.2	511.6	622.2	384.1	1.0	36.7	0.1	0.5537	0.5377	1.4050	1.1366	1.1532	1.0501	
2	5.024	5.462	667.4	656.7	569.5	636.6	348.0	-10.3	31.3	-0.9	0.5809	0.5710	1.4510	1.1304	1.1432	1.0486	
3	3.708	3.862	659.3	636.7	586.0	636.5	302.2	-17.5	27.2	-1.6	0.5756	0.5548	1.4404	1.1222	1.1321	1.0445	
4	2.742	2.722	635.4	608.6	577.4	608.4	265.2	-17.1	24.6	-1.6	0.5553	0.5307	1.4191	1.1150	1.1238	1.0408	
5	1.483	1.346	570.0	536.5	526.7	536.5	218.0	-7.5	22.5	-0.8	0.4969	0.4664	1.3609	1.1080	1.0890	1.0355	
6	1.162	1.029	539.9	519.3	503.3	519.1	195.4	-10.4	21.2	-1.2	0.4701	0.4513	1.3483	1.1053	1.0775	1.0312	
7	C.973	0.853	535.9	506.3	503.0	506.2	183.1	-8.9	20.0	-1.0	0.4664	0.4396	1.3389	1.1054	1.0694	1.0293	
8	0.825	0.748	526.5	502.3	496.8	502.3	174.2	4.6	19.3	0.5	0.4572	0.4354	1.3364	1.1083	1.0646	1.0273	
9	C.632	C.598	525.1	502.5	489.9	502.1	189.0	20.7	21.1	2.4	0.4548	C.4346	1.3369	1.1135	1.0668	1.0284	
10	C.304	0.305	485.3	468.0	445.4	467.2	192.6	28.1	23.4	3.4	0.4182	0.4028	1.3139	1.1184	1.0643	1.0301	

SL	INCH	DEV	TURN	RPOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-14.16	8.61	36.4C	42.67	50.32	0.1521	C.1328	0.0280	0.9750	82.94	83.29
2	-12.47	7.15	32.23	47.26	54.19	C.1356	0.0548	0.0123	0.9888	80.14	80.52
3	-14.82	6.71	28.81	48.92	52.98	0.1474	0.0687	0.0164	0.9862	81.05	81.38
4	-17.02	6.93	26.25	48.39	50.63	0.1519	0.0810	0.0205	0.9848	83.01	83.29
5	-18.94	8.27	23.28	44.20	44.60	0.1715	0.1479	0.0426	0.9771	89.56	89.93
6	-20.15	8.12	22.4C	42.21	43.15	0.1530	0.1224	0.0388	0.9828	89.14	89.48
7	-21.44	8.55	20.99	42.27	41.99	0.1675	0.1680	0.0527	0.9767	85.95	86.28
8	-22.91	10.66	18.81	41.56	41.55	0.1522	0.1539	0.0509	0.9794	86.18	86.48
9	-23.69	13.62	18.74	40.79	41.37	0.1550	0.1500	0.0514	0.9800	85.51	85.83
10	-25.03	16.17	19.94	38.73	38.15	0.1580	0.1410	0.0501	0.9839	59.57	59.93

NCORR	NCORP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	STAGE
6438.	169.92	1.1150	1.3747	82.80	83.56	1.0363	0.9814	74.36	74.36

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(77 Percent of Design Speed)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		PO1/PO		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		N-1		N-2		V-1		V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	10.733	9.154	498.3	775.3	498.3	491.4	0.9602	599.7	0.0	50.5	0.4553	0.4985	402.4	440.3	0.5054	0.4654	640.4	516.4																		
2	9.301	7.255	537.1	753.0	537.1	541.1	0.9854	523.7	0.0	43.9	0.4925	0.6778	450.7	482.5	0.6429	0.4885	701.2	542.4																		
3	7.692	5.928	538.5	709.5	538.5	547.9	0.9887	494.8	0.0	39.4	0.4939	0.6368	504.5	529.2	0.6767	0.4968	737.9	553.4																		
4	6.300	4.819	531.1	648.9	531.1	541.4	0.9855	392.8	0.0	35.9	0.4867	0.5990	554.0	573.4	0.7033	0.5110	767.4	570.7																		
5	3.844	3.074	530.9	592.8	530.9	540.7	0.9871	317.4	0.0	32.4	0.4865	0.5277	665.4	675.3	0.7801	0.5478	831.2	615.4																		
6	3.104	2.539	526.8	578.4	526.8	493.3	0.9853	302.4	0.0	31.5	0.4826	0.5138	719.2	725.9	0.8167	0.5777	891.3	630.4																		
7	2.605	2.211	515.6	570.4	515.6	488.2	0.9783	295.0	0.0	31.2	0.4719	0.5090	753.5	757.4	0.8356	0.5964	913.0	672.4																		
8	2.053	1.809	506.2	563.1	506.2	482.5	0.9716	290.3	0.0	31.0	0.4629	0.4987	787.3	790.1	0.8559	0.6153	936.8	694.7																		
9	1.430	1.313	500.4	559.1	500.4	478.5	0.9669	289.2	0.0	31.2	0.4578	0.4943	823.8	823.8	0.8808	0.6343	963.7	717.5																		
10	0.776	0.709	497.9	550.9	497.9	468.9	0.9667	289.1	0.0	31.7	0.4550	0.4858	865.2	865.2	0.9123	0.6550	990.2	742.8																		
11	0.290	0.271	472.6	523.7	472.6	437.2	0.9520	288.4	0.0	33.4	0.4310	0.4661	900.1	899.8	0.9271	0.6603	1216.4	751.4																		

SL	INCS DEGREE	INCH DEGREE	DEV DEGREE	TURN DEGREE	RNDVN-1	RNDVN-2	D-FAC	OMEGA-B		LOSS-P	PO2/PO1	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
								TOTAL	TOTAL									
1	0.19	5.74	12.94	36.81	33.05	33.82	0.4227	0.1689	0.0378	1.2835	87.67	87.22	38.93	-17.88	-402.6	159.4	1.2629	
2	-0.86	4.54	13.74	44.34	35.97	38.82	0.4213	0.0996	0.0254	1.2827	91.25	90.93	40.81	-4.33	-450.7	-41.2	1.2953	
3	-0.05	5.23	13.79	35.93	36.15	46.47	0.4212	0.0478	0.0131	1.2786	95.20	95.02	43.16	8.13	-504.5	-78.4	1.2955	
4	0.80	5.92	12.85	27.82	35.65	40.71	0.4091	0.0112	0.0032	1.2728	98.77	98.72	46.23	18.42	-554.0	-180.6	1.2854	
5	6.50	5.06	7.74	15.88	35.70	34.36	0.4028	0.0482	0.0132	1.2421	93.15	92.94	51.44	35.55	-665.4	-357.9	1.2564	
6	0.89	4.87	5.50	13.12	35.40	38.00	0.3907	0.0541	0.0146	1.2445	91.93	91.68	53.80	40.68	-719.2	-423.9	1.2566	
7	2.44	5.28	4.77	12.10	34.56	37.78	0.3812	0.0447	0.0119	1.2536	93.24	93.02	55.64	43.46	-753.5	-462.4	1.2567	
8	3.54	5.84	4.41	11.25	33.85	37.34	0.3741	0.0406	0.0107	1.2625	93.88	93.58	57.27	46.02	-787.3	-499.8	1.2570	
9	4.07	6.31	3.96	10.58	33.38	37.08	0.3707	0.0454	0.0119	1.2710	93.01	92.76	58.75	48.18	-823.8	-534.6	1.2594	
10	4.35	6.57	4.53	9.22	33.22	36.33	0.3727	0.0722	0.0185	1.2709	88.73	88.33	60.89	50.86	-865.2	-576.1	1.2586	
11	5.40	7.42	8.22	7.86	31.40	33.74	0.3785	0.0873	0.0211	1.2740	86.48	86.01	62.38	54.43	-900.1	-611.4	1.2429	

TO/TO INLET	PO/PO INLET	EFF-AD %	EFF-P %	MC1/A1 LBM/SEC	TO2/TO1	PO2/PO1	EFF-AD ROTOR %	EFF-P ROTOR %
1.0755	1.2650	92.10	92.37	34.98	1.0755	1.2650	92.10	92.37

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		N-1		N-2		V-1		V-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	10.909	7.666	706.6	501.1	420.9	494.7	566.8	79.8	53.3	9.1	0.6308	0.4391	1.2203	1.0848	1.2400	1.0848																				
2	7.181	5.309	710.8	551.4	504.5	546.0	500.7	77.1	44.7	8.0	0.6346	0.4861	1.2697	1.0812	1.2576	1.0812																				
3	4.645	3.686	688.7	552.4	536.1	549.0	432.3	61.1	38.9	6.3	0.6167	0.4881	1.2799	1.0765	1.2631	1.0765																				
4	3.252	2.856	660.6	537.1	540.8	534.0	379.4	57.4	35.0	6.1	0.5910	0.4749	1.2715	1.0722	1.2592	1.0722																				
5	1.797	1.989	598.6	501.7	511.6	498.6	310.8	55.8	31.3	6.4	0.5331	0.4431	1.2472	1.0688	1.2350	1.0688																				
6	1.435	1.693	588.7	561.9	508.2	498.1	297.1	61.9	30.3	7.1	0.5234	0.4430	1.2475	1.0704	1.2354	1.0704																				
7	1.219	1.475	583.5	501.2	505.8	497.5	291.1	60.8	29.9	7.0	0.5182	0.4420	1.2474	1.0718	1.2442	1.0718																				
8	1.008	1.241	579.1	499.5	502.9	495.9	287.1	60.4	29.7	6.9	0.5136	0.4401	1.2465	1.0734	1.2519	1.0734																				
9	0.767	0.968	577.6	501.8	501.3	498.1	282.9	60.9	29.8	7.0	0.5115	0.4414	1.2483	1.0764	1.2600	1.0764																				
10	0.454	0.611	572.0	500.9	494.3	494.4	287.8	60.3	30.2	9.2	0.5053	0.4399	1.2479	1.0803	1.2599	1.0803																				
11	0.167	0.255	546.1	470.8	464.1	464.7	287.9	75.7	31.8	9.3	0.4807	0.4120	1.2286	1.0834	1.2595	1.0834																				

SL	INCS DEGREE	INCH DEGREE	DEV DEGREE	TURN DEGREE	RNDVN-1	RNDVN-2	D-FAC	OMEGA-B		LOSS-P	PO2/PO1	SEFF-A	SEFF-P
								TOTAL	TOTAL				
1	0.64	5.35	14.43	44.28	30.19	37.78	0.4317	0.1437	0.0299	0.9862	74.80	75.36	
2	-2.58	2.53	10.45	36.76	37.88	42.63	0.3563	0.0819	0.0183	0.9804	83.44	83.97	
3	-5.99	-0.52	7.70	32.52	40.67	43.38	0.3264	0.0330	0.0128	0.9880	90.32	90.64	
4	-8.43	-2.65	6.94	28.91	40.85	42.22	0.3106	0.0300	0.0128	0.9895	94.38	94.96	
5	-10.95	-4.51	6.52	24.89	39.08	39.43	0.2899	0.0418	0.0122	0.9927	89.69	89.99	
6	-11.83	-5.05	6.88	23.25	38.97	39.35	0.2711	0.0423	0.0130	0.9928	88.53	88.87	
7	-12.28	-5.29	6.61	22.95	38.83	39.28	0.2676	0.0448	0.0142	0.9925	89.83	90.14	
8	-12.72	-5.53	6.51	22.78	38.64	39.07	0.2671	0.0505	0.0166	0.9917	90.14	90.45	
9	-13.29	-5.90	6.53	22.81	38.53	39.17	0.2653	0.0541	0.0184	0.9912	89.20	89.55	
10	-14.89	-7.29	9.23	20.98	37.96	38.76	0.2531	0.0541	0.0190	0.9913	85.06	85.54	
11	-16.45	-8.73	11.53	22.55	35.49	34.18	0.2799	0.0779	0.0282	0.9886	81.78	82.36	

MCORR INLET RPM	MCORR INLET LBM/SEC	TO/TO INLET	PO/PO INLET	EFF-AD %	EFF-P %	TO2/TO1	PO2/PO1	EFF-AD STAGE %	EFF-P STAGE %
644.8	173.49	1.0755	1.2508	87.53	87.91	1.0755	0.9887	87.52	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.748	5.994	458.1	722.3	451.5	630.8	77.5	372.8	9.7	30.2	0.4002	0.6402	500.8	539.2	0.5407	0.5692	618.9	651.1
2	6.532	4.590	354.8	729.2	549.9	645.7	72.0	339.0	7.4	27.5	0.4893	0.6395	544.4	567.8	0.6396	0.6007	725.0	685.0
3	5.635	3.522	367.8	697.7	564.8	635.5	58.3	287.8	5.9	24.3	0.5026	0.6124	585.0	602.1	0.6836	0.6223	772.2	709.0
4	3.630	2.455	358.3	656.6	555.5	676.5	55.8	251.6	5.7	22.5	0.4948	0.5762	628.8	639.8	0.7072	0.6310	797.9	720.1
5	0.864	0.222	529.0	577.7	525.7	541.2	58.9	202.0	6.4	20.5	0.4681	0.5051	727.3	730.4	0.7575	0.6614	850.4	756.4
6	0.249	-0.170	525.9	545.3	522.4	515.9	61.0	176.5	6.7	18.9	0.4649	0.4762	762.2	763.1	0.7720	0.6823	874.4	781.2
7	-0.123	-0.419	520.5	539.7	517.0	516.1	60.0	156.0	6.6	17.0	0.4595	0.4715	796.3	796.3	0.7962	0.7170	899.7	820.8
8	-0.521	-0.748	519.6	534.5	515.5	512.8	64.7	150.8	7.2	16.4	0.4577	0.4662	843.0	839.9	0.8223	0.7492	933.5	859.0
9	-0.680	-0.902	512.4	530.7	506.1	502.9	79.6	169.6	8.9	16.6	0.4503	0.4616	875.0	873.1	0.8286	0.7521	942.8	864.8
10	-0.506	-0.633	481.4	476.8	475.5	444.1	75.2	179.4	9.0	21.3	0.4215	0.4118	907.1	906.0	0.8391	0.7401	958.2	856.8

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-9.31	-2.06	18.72	28.82	35.03	48.56	0.0771	0.0379	0.0090	1.1668	95.65	95.55	42.98	14.16	-423.3	-161.2	1.4268
2	-10.83	-4.57	11.10	21.16	43.11	51.08	0.1582	0.0973	0.0243	1.1421	85.01	84.72	40.57	19.39	-472.5	-228.8	1.4570
3	-9.27	-3.59	9.71	16.72	44.29	51.13	0.1678	0.0677	0.0169	1.1323	87.21	86.98	42.94	26.22	-526.6	-314.3	1.4666
4	-7.66	-2.50	8.01	13.28	43.52	49.28	0.1723	0.0497	0.0124	1.1222	89.15	88.96	45.85	32.57	-572.8	-380.2	1.4213
5	-4.22	-0.35	5.67	7.50	41.11	44.14	0.1698	0.0351	0.0133	1.0943	83.72	83.50	51.81	44.31	-668.4	-528.6	1.3650
6	-3.31	-0.00	6.32	4.65	40.85	42.01	0.1554	0.0587	0.0137	1.0743	78.46	78.43	53.31	48.67	-701.2	-586.6	1.3404
7	-2.02	3.37	5.68	3.88	40.41	42.05	0.1294	0.0310	0.0072	1.0725	86.79	86.45	54.92	51.04	-736.3	-638.2	1.3366
8	-1.94	0.28	4.58	3.13	40.24	41.64	0.1124	0.0280	0.0065	1.0666	86.47	86.34	56.47	53.33	-778.3	-689.1	1.3317
9	-1.63	0.60	3.79	3.09	39.41	40.59	0.1211	0.0441	0.0103	1.0665	80.31	80.12	57.53	54.44	-795.4	-703.5	1.3280
10	0.28	7.51	7.18	1.47	36.82	35.36	0.1485	0.1079	0.0233	1.0514	55.10	54.79	60.25	58.77	-831.9	-732.6	1.2896

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBH/SEC	%	%	ROTOR	ROTOR
		%	%				%	%
1.1099	1.3734	86.37	86.96	33.09	1.0320	1.0981	84.56	84.78

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	6.995	8.094	656.7	678.9	545.8	678.9	365.3	-4.9	33.6	-0.4	0.5696	0.5902	1.3727	1.2358	1.1223	1.0471
2	5.176	5.700	690.1	717.0	605.5	716.9	331.1	-12.4	28.6	-1.0	0.6026	0.6280	1.4287	1.1285	1.1197	1.0455
3	3.916	4.131	680.6	687.6	619.6	687.3	281.5	-18.3	24.4	-1.5	0.5963	0.6036	1.4092	1.1192	1.1035	1.0413
4	2.963	2.956	656.1	653.9	605.7	653.8	246.9	-11.4	22.2	-1.0	0.5737	0.5737	1.3829	1.1112	1.0925	1.0375
5	1.640	1.449	583.8	571.0	548.9	571.0	198.7	1.8	19.9	0.2	0.5108	0.4991	1.3152	1.1027	1.0943	1.0310
6	1.300	1.112	552.4	533.6	524.3	533.6	173.8	-2.9	18.3	-0.3	0.4827	0.4839	1.3028	1.0995	1.0442	1.0262
7	1.084	0.915	545.8	534.6	522.8	534.6	156.7	-0.6	16.7	-0.1	0.4771	0.4668	1.2891	1.0981	1.0344	1.0233
8	0.965	0.850	539.8	530.4	518.3	530.2	150.9	11.3	16.2	1.2	0.4710	0.4624	1.2871	1.1005	1.0309	1.0215
9	0.817	0.761	535.5	527.5	508.1	526.7	149.3	28.8	18.4	3.1	0.4659	0.4586	1.2861	1.1056	1.0323	1.0232
10	0.439	0.443	483.3	492.6	451.2	491.2	173.1	37.1	21.0	4.3	0.4176	0.4260	1.2628	1.1119	1.0292	1.0263

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT
1	-17.24	8.10	34.03	43.72	51.74	0.0834	0.1924	0.0406	0.9620	71.07	71.34
2	-15.22	7.05	29.57	48.93	56.02	0.0723	0.0883	0.0198	0.9808	72.11	72.56
3	-17.66	6.76	25.93	50.29	54.19	0.0930	0.1166	0.0278	0.9751	69.05	69.48
4	-19.50	7.54	23.16	49.26	51.77	0.0982	0.1316	0.0333	0.9738	68.24	68.64
5	-21.52	9.25	19.72	44.60	45.01	0.1187	0.2164	0.0624	0.9647	49.20	49.58
6	-23.04	8.99	18.64	42.56	43.66	0.0941	0.1889	0.0568	0.9722	47.37	47.69
7	-24.73	9.49	16.75	42.48	42.10	0.1110	0.2457	0.0770	0.9645	41.69	41.98
8	-26.00	11.37	15.01	41.98	41.68	0.1025	0.2374	0.0785	0.9665	40.53	40.80
9	-26.36	14.39	15.30	40.90	41.24	0.1091	0.2318	0.0794	0.9675	39.50	39.79
10	-27.42	17.04	16.68	35.83	38.08	0.0850	0.1876	0.0666	0.9783	31.43	31.71

WCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	STAGE
RPM	LBH/SEC			%	%			%	%
6448	173.19	1.1099	1.3328	77.87	78.75	1.0320	0.9705	87.22	87.22

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(63 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		PO1/PO		V0-2		B-1	B-2	M-1	M-2	RUN NO413, SPEED CODE 63, POINT NO 1		U-1	U-2	M-1	M-2	V0-1	V0-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC												
1	10.297	9.067	383.9	639.1	383.9	397.7	0.9814	500.3	0.0	51.4	0.3479	0.3747	328.3	359.1	0.4578	0.3794	305.1	422.0										
2	8.776	7.099	410.3	618.1	410.2	439.5	0.9949	434.6	0.0	44.5	0.3725	0.3554	367.6	393.5	0.5001	0.3966	350.9	441.4										
3	7.204	5.967	413.5	581.8	413.5	446.8	0.9992	372.7	0.0	39.8	0.3755	0.3218	411.4	431.6	0.5297	0.4042	393.3	450.6										
4	5.886	4.777	413.3	548.6	413.3	443.0	0.9987	372.7	0.0	36.1	0.3753	0.4913	451.8	467.6	0.5560	0.4171	412.3	465.7										
5	3.318	2.848	409.9	488.8	409.9	414.0	0.9976	258.9	0.0	32.1	0.3721	0.4361	542.7	550.7	0.6174	0.4514	480.1	505.9										
6	2.434	2.150	407.6	477.6	407.6	410.7	0.9944	744.6	0.0	30.8	0.3700	0.4257	586.5	592.0	0.6483	0.4791	714.2	537.6										
7	1.909	1.735	406.2	471.6	406.2	408.0	0.9955	236.5	0.0	30.1	0.3687	0.4200	614.5	617.7	0.6685	0.4973	736.6	558.4										
8	1.456	1.310	404.1	464.7	404.1	403.5	0.9943	230.4	0.0	29.7	0.3667	0.4135	642.0	644.3	0.6884	0.5144	758.6	578.1										
9	0.977	0.897	399.8	459.5	399.8	399.0	0.9923	227.9	0.0	29.7	0.3627	0.4084	671.8	671.8	0.7093	0.5305	781.8	596.8										
10	0.491	0.464	392.4	452.7	392.4	390.5	0.9899	229.1	0.0	30.4	0.3559	0.4017	705.6	705.6	0.7321	0.5466	807.4	616.0										
11	0.164	0.164	374.4	432.2	374.4	365.2	0.9811	231.1	0.0	32.3	0.3391	0.3825	734.0	735.8	0.7463	0.5488	824.0	621.3										

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	V0-1	V0-2	PO/PO	INLET
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	INLET
1	1.75	7.30	11.38	59.93	27.14	28.39	0.4060	0.2231	0.0494	1.1808	84.74	84.37	40.49	-19.45	-328.3	161.2	1.1669	1.1669
2	0.95	6.35	12.75	47.14	29.17	32.28	0.4037	0.1231	0.0313	1.1828	89.81	89.58	41.82	-5.32	-367.6	41.1	1.1850	1.1850
3	1.65	6.92	13.15	37.36	29.44	33.46	0.4063	0.0701	0.0192	1.1783	93.16	93.00	44.85	7.49	-411.4	-58.9	1.1843	1.1843
4	2.11	7.23	12.40	29.56	29.45	33.57	0.3974	0.0435	0.0127	1.1710	95.10	95.00	47.54	17.97	-451.8	-143.9	1.1770	1.1770
5	2.01	6.56	7.26	17.86	29.20	31.77	0.3863	0.0563	0.0156	1.1553	91.86	91.70	52.94	35.08	-542.7	-290.8	1.1605	1.1605
6	2.30	6.28	5.07	14.95	29.03	31.61	0.3704	0.0541	0.0147	1.1567	91.58	91.41	55.20	40.25	-586.5	-347.4	1.1596	1.1596
7	3.35	6.19	4.36	13.48	28.92	31.50	0.3603	0.0533	0.0143	1.1578	91.36	91.18	56.54	43.06	-614.5	-381.2	1.1606	1.1606
8	4.08	6.38	4.13	12.08	28.76	31.11	0.3535	0.0584	0.0159	1.1582	90.19	89.97	57.82	45.73	-642.0	-413.9	1.1595	1.1595
9	4.57	6.90	3.84	11.19	28.43	30.85	0.3501	0.0667	0.0175	1.1604	88.59	88.36	59.25	48.06	-671.8	-443.9	1.1595	1.1595
10	5.18	7.40	4.34	10.25	27.88	30.17	0.3518	0.0844	0.0217	1.1634	85.52	85.21	60.92	50.67	-705.6	-476.5	1.1585	1.1585
11	6.08	8.30	7.78	9.98	26.54	28.12	0.3627	0.1088	0.0266	1.1633	81.55	81.15	62.98	54.00	-734.0	-502.6	1.1492	1.1492

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.0499	1.1649	89.41	89.64	28.57	1.0499	1.1649	89.41	89.64

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		V0-1		V0-2		B-1	B-2	M-1	M-2	RUN NO413, SPEED CODE 63, POINT NO 1		U-1	U-2	M-1	M-2	V0-1	V0-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC												
1	10.840	7.526	587.5	426.4	348.7	421.5	472.8	64.1	53.5	8.9	0.5255	0.3765	1.1401	1.0577	1.1534	1.0577												
2	6.815	5.024	587.9	465.7	415.8	461.9	415.5	59.3	44.9	7.3	0.5286	0.4130	1.1712	1.0549	1.1680	1.0549												
3	4.269	3.418	567.8	461.4	441.2	458.7	357.4	50.0	39.0	4.2	0.5085	0.4097	1.1740	1.0515	1.1680	1.0515												
4	3.023	2.691	543.7	448.5	445.0	445.9	312.5	47.8	35.1	4.1	0.4867	0.3985	1.1682	1.0485	1.1617	1.0485												
5	1.793	1.875	494.6	423.3	424.0	420.8	254.6	45.9	31.0	4.2	0.4415	0.3759	1.1551	1.0460	1.1499	1.0460												
6	1.440	1.555	486.4	422.6	422.6	420.1	240.7	45.9	29.7	4.2	0.4337	0.3752	1.1551	1.0465	1.1513	1.0465												
7	1.238	1.344	481.9	421.5	421.7	418.9	233.4	47.4	29.0	4.4	0.4296	0.3741	1.1549	1.0469	1.1521	1.0469												
8	1.041	1.136	476.5	419.1	418.4	418.1	228.0	50.2	28.6	4.9	0.4244	0.3717	1.1539	1.0477	1.1525	1.0477												
9	0.819	0.896	472.5	417.6	414.9	414.5	226.1	51.2	28.6	7.0	0.4204	0.3701	1.1535	1.0493	1.1546	1.0493												
10	0.495	0.565	467.5	414.9	408.1	410.8	228.0	58.6	29.2	8.1	0.4152	0.3672	1.1524	1.0519	1.1572	1.0519												
11	0.179	0.228	447.2	389.9	383.0	384.9	230.7	62.3	31.1	9.2	0.3961	0.3441	1.1398	1.0545	1.1560	1.0545												

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	INLET	INLET	STAGE	STAGE
1	0.82	5.53	13.91	44.97	25.34	32.18	0.4168	0.1348	0.0281	0.9749	72.20	72.75				
2	-2.41	2.70	9.72	37.63	30.98	35.82	0.3415	0.0693	0.0153	0.9882	83.21	83.57				
3	-5.88	-0.41	7.57	32.77	33.25	35.81	0.3186	0.0529	0.0127	0.9915	88.19	88.44				
4	-8.41	-2.63	6.92	28.95	33.80	34.90	0.2981	0.0513	0.0132	0.9923	90.35	90.55				
5	-11.25	-4.81	6.36	24.75	32.47	32.92	0.2670	0.0372	0.0108	0.9953	88.66	88.89				
6	-12.48	-5.70	6.02	23.44	32.45	32.86	0.2549	0.0385	0.0119	0.9953	88.40	88.63				
7	-13.24	-6.25	6.10	22.51	32.43	32.75	0.2488	0.0410	0.0131	0.9951	88.08	88.31				
8	-13.86	-6.67	6.44	21.70	32.19	32.51	0.2441	0.0421	0.0139	0.9951	86.92	87.17				
9	-14.48	-7.09	6.60	21.55	31.92	32.34	0.2430	0.0448	0.0153	0.9949	85.19	85.47				
10	-15.91	-8.31	6.12	21.07	31.37	31.98	0.2406	0.0476	0.0168	0.9947	82.18	82.54				
11	-17.20	-9.47	11.46	21.87	29.35	29.80	0.2657	0.0781	0.0283	0.9920	76.71	77.17				

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
RPM	LBM/SEC	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
525%	141.67	1.0499	1.1562	84.95	85.26	1.0499	0.9926	84.95	85.26

ROTOR 2

														RUN NO413, SPEED CODE 63, POINT NO 1				
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.704	5.930	292.1	614.8	387.1	539.2	62.2	295.4	9.1	28.4	0.3455	0.5426	408.4	434.8	0.4976	0.4915	519.3	556.9
2	6.387	4.486	467.6	614.9	464.3	551.5	55.5	271.9	4.8	26.1	0.4149	0.5639	444.0	463.0	0.5372	0.5163	605.4	583.7
3	4.843	3.395	473.1	589.8	470.7	540.5	48.1	235.9	5.8	23.5	0.4207	0.5219	477.0	491.0	0.5662	0.5289	636.8	597.7
4	3.304	2.259	465.4	557.3	463.1	517.5	46.5	206.8	5.7	21.7	0.4142	0.4931	512.6	521.8	0.5846	0.5361	657.0	605.9
5	0.525	-0.100	444.2	492.6	441.9	466.2	45.4	159.2	5.9	18.8	0.3950	0.4350	593.1	595.7	0.6258	0.5639	703.7	638.7
6	-0.070	-0.501	441.0	462.7	436.5	442.3	46.3	135.9	6.0	17.1	0.3919	0.4023	621.6	622.3	0.6429	0.5811	723.4	657.4
7	-0.391	-0.720	435.6	454.5	432.8	437.3	49.8	123.6	6.4	15.8	0.3869	0.4011	649.4	649.4	0.6567	0.6036	739.4	683.8
8	-0.699	-0.971	430.5	446.7	427.2	431.4	52.8	116.0	7.0	15.0	0.3817	0.3939	687.4	684.9	0.6784	0.6296	765.1	714.0
9	-0.799	-1.053	422.8	437.0	418.6	419.3	59.0	123.3	8.0	16.4	0.3743	0.3845	713.6	712.0	0.6879	0.6359	777.0	722.8
10	-0.546	-0.667	396.9	392.7	392.1	370.2	61.8	131.0	9.0	19.5	0.3504	0.3439	739.8	738.8	0.6914	0.6232	783.1	711.7

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B'-1	B'-2	V0'-1	V0'-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-10.36	-3.41	18.88	27.31	29.88	41.23	0.0522	0.0305	0.0072	1.1089	96.03	95.97	41.62	14.32	-346.2	-139.4	1.2669
2	-11.59	-5.23	10.70	20.82	36.09	42.98	0.1360	0.0815	0.0201	1.0963	86.40	86.22	39.81	18.99	-388.5	-191.1	1.2870
3	-9.93	-4.26	8.66	17.10	36.57	42.60	0.1472	0.0490	0.0123	1.0923	90.21	90.08	42.27	25.17	-428.9	-255.1	1.2802
4	-8.36	-3.28	6.72	13.88	35.96	-1.06	0.1529	0.0740	0.0086	1.0852	92.15	92.06	45.15	31.28	-466.1	-315.0	1.2644
5	-4.93	-1.06	4.46	7.99	34.32	37.08	0.1509	0.0481	0.0119	1.0624	84.19	84.05	51.10	43.11	-547.7	-436.5	1.2272
6	-3.95	-0.64	5.27	4.97	34.07	35.14	0.1372	0.0552	0.0131	1.0465	77.69	76.92	52.68	47.71	-575.3	-486.3	1.2088
7	-2.76	-0.36	4.88	3.93	33.64	34.76	0.1139	0.0337	0.0079	1.0432	85.20	83.09	54.18	50.25	-599.6	-525.7	1.2038
8	-2.37	-0.15	4.66	3.22	33.18	34.20	0.0987	0.0280	0.0066	1.0391	83.70	83.60	56.05	52.82	-634.7	-568.9	1.1985
9	-1.76	0.47	3.49	2.86	32.45	33.08	0.1027	0.0448	0.0105	1.0366	75.16	75.03	57.40	54.54	-654.6	-588.7	1.1925
10	-0.01	2.22	7.06	1.30	30.26	28.94	0.1280	0.1002	0.0217	1.0265	48.34	48.14	59.96	58.65	-677.9	-607.8	1.1685

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	50FT			ROTOR	ROTOR
		%	%	%			%	%
1.0720	1.2302	64.78	85.23	28.88	1.0210	1.0640	85.00	85.14

STATOR 2

														RUN NO413, SPEED CODE 63, POINT NO 1			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	TO/TO	TO/TO	TO/TO
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	STAGE	STAGE
1	6.980	8.033	552.6	577.3	470.4	577.3	290.1	1.5	31.5	0.1	0.4850	0.9077	1.2354	1.0906	1.0812	1.0317	
2	5.122	5.455	583.5	605.5	519.4	605.3	265.7	-11.4	27.0	-1.1	0.5150	0.5351	1.2687	1.0859	1.0807	1.0308	
3	3.854	3.983	576.8	581.3	528.6	581.1	230.8	-17.5	23.5	-1.7	0.5099	0.5142	1.2562	1.0798	1.0723	1.0282	
4	2.899	2.885	555.8	555.9	517.5	555.6	202.7	-17.5	21.4	-1.8	0.4917	0.4919	1.2411	1.0743	1.0707	1.0255	
5	1.660	1.491	490.5	495.1	471.4	495.1	155.7	-4.1	18.3	-0.5	0.4786	0.4282	1.1955	1.0677	1.0630	1.0205	
6	1.309	1.164	468.4	469.2	449.0	469.2	133.4	-2.4	16.5	-0.3	0.4136	0.4143	1.1865	1.0600	1.0272	1.0168	
7	1.092	0.957	439.4	450.0	442.8	450.0	122.5	-1.6	15.5	-0.2	0.4056	0.3971	1.1756	1.0628	1.0188	1.0146	
8	0.972	0.876	450.9	440.7	435.7	440.7	115.9	4.9	14.9	0.6	0.3977	0.3884	1.1711	1.0638	1.0154	1.0132	
9	0.842	0.799	440.7	424.2	423.1	433.8	123.4	17.5	16.3	2.3	0.3878	0.3800	1.1689	1.0668	1.0155	1.0138	
10	0.459	0.473	398.3	405.2	376.2	404.5	130.9	24.7	19.2	3.5	0.3689	0.3551	1.1538	1.0709	1.0133	1.0156	

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-19.27	8.65	31.34	36.09	43.80	0.0640	0.1679	0.0354	0.9751	72.16	72.48
2	-16.71	6.97	28.06	41.11	46.73	0.0690	0.0851	0.0191	0.9859	72.84	73.14
3	-15.51	6.56	25.27	41.90	45.13	0.0930	0.1101	0.0262	0.9821	71.47	71.76
4	-20.24	6.74	23.16	41.98	43.32	0.0979	0.1155	0.0292	0.9825	71.94	72.20
5	-2.15	8.88	18.76	37.29	37.70	0.1152	0.1956	0.0566	0.9757	48.29	48.52
6	-24.63	9.10	16.94	35.59	36.50	0.0859	0.1639	0.0493	0.9818	45.83	46.04
7	-25.95	9.25	15.66	35.12	34.98	0.1052	0.2170	0.0680	0.9767	36.55	36.73
8	-27.25	10.78	14.25	34.48	34.21	0.1046	0.2203	0.0728	0.9728	33.16	33.31
9	-28.45	13.58	13.94	33.32	33.98	0.1012	0.2056	0.0708	0.9794	31.97	32.14
10	-29.73	16.23	13.68	29.34	31.10	0.0820	0.1564	0.0563	0.9868	24.40	24.59

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LB/SEC			%	%			%
5254	101.67	1.0720	1.2059	76.36	76.99	1.0210	0.9802	57.39

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(63 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	POI/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	11.130	7.222	365.1	617.8	355.1	366.8	0.9971	496.9	0.0	53.4	0.3305	0.5543	327.7	358.4	0.4441	0.3519	490.6	392.1
2	9.700	7.363	385.0	599.7	381.0	405.4	0.9953	440.5	0.0	47.2	0.3471	0.5368	366.9	392.8	0.4807	0.3660	530.4	408.5
3	8.123	5.995	395.7	582.3	385.7	408.3	0.9958	385.9	0.0	43.4	0.3479	0.5029	410.6	430.8	0.5093	0.3674	562.0	410.7
4	6.672	4.914	393.1	570.5	385.1	404.1	0.9984	343.7	0.0	40.3	0.3472	0.4737	450.9	484.7	0.5362	0.3772	591.7	422.4
5	5.970	4.181	392.3	472.4	379.3	381.1	0.9957	274.1	0.0	34.2	0.3442	0.4233	541.6	549.4	0.5994	0.4158	641.5	467.3
6	2.340	2.472	377.3	483.4	377.3	382.3	0.9929	242.2	0.0	34.4	0.3424	0.4119	595.3	590.3	0.6312	0.4482	694.7	504.3
7	2.135	2.073	377.1	457.4	377.1	383.1	0.9926	254.3	0.0	33.6	0.3416	0.4085	613.3	614.5	0.6522	0.4683	720.0	527.2
8	1.500	1.957	375.3	481.6	375.9	379.0	0.9923	249.8	0.0	33.4	0.3405	0.4028	640.8	643.1	0.6730	0.4847	742.9	546.1
9	1.012	1.047	374.3	447.3	374.0	372.0	0.9918	248.4	0.0	33.7	0.3387	0.3944	670.5	670.5	0.6954	0.4987	767.8	562.7
10	0.946	0.997	361.7	437.4	361.7	358.5	0.9974	251.3	0.0	35.0	0.3274	0.3871	704.2	704.2	0.7165	0.5107	791.7	577.6
11	0.142	0.247	339.3	417.6	339.3	331.1	0.9785	254.4	0.0	37.5	0.3067	0.3682	732.4	732.4	0.7299	0.5126	807.4	591.6

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	CHLJA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VB-1	VB-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	3.19	8.74	10.23	42.52	26.11	26.48	0.4485	0.2595	0.0593	1.1748	82.37	81.96	41.93	-20.59	-327.7	138.5	1.1690
2	2.96	8.34	11.38	50.51	27.47	30.06	0.4475	0.1445	0.0366	1.1831	88.92	88.65	43.81	-6.69	-366.9	47.8	1.1680
3	3.79	9.07	11.93	40.83	27.53	30.84	0.4619	0.0910	0.0250	1.1924	91.98	91.79	46.99	6.17	-410.6	-44.2	1.1679
4	4.20	9.34	11.34	32.79	27.47	30.90	0.4589	0.0636	0.0180	1.1788	93.64	93.48	49.69	16.91	-450.9	-123.0	1.1638
5	4.34	8.60	7.54	19.61	27.22	29.58	0.4358	0.0593	0.0155	1.1690	92.81	92.64	54.97	35.36	-541.6	-270.5	1.1720
6	4.26	8.24	5.93	16.45	27.08	29.83	0.4097	0.0439	0.0119	1.1727	92.92	93.79	57.16	40.71	-585.3	-328.9	1.1746
7	5.23	8.07	4.71	15.02	27.02	29.97	0.3766	0.0418	0.0112	1.1752	93.96	93.82	58.42	43.40	-617.3	-362.2	1.1769
8	5.67	8.14	4.45	13.54	26.93	29.69	0.3916	0.0530	0.0140	1.1758	92.09	91.90	59.61	46.06	-640.8	-393.2	1.1771
9	6.17	8.41	4.40	12.24	26.80	29.15	0.3922	0.0728	0.0184	1.1759	89.92	89.65	60.86	48.62	-670.5	-422.2	1.1766
10	7.08	9.30	5.31	11.17	25.89	28.05	0.3985	0.0970	0.0244	1.1792	85.29	84.94	62.81	51.64	-704.2	-452.9	1.1747
11	8.25	10.47	9.07	9.86	24.23	25.84	0.4107	0.1199	0.0284	1.1816	82.10	81.67	65.15	55.28	-732.6	-477.9	1.1665

TU/TU	PO/PO	EFF-AD	EFF-P	WCI/AL	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	POTOR	POTOR	
		%	%	LBM/SEC		%	%	
1.0532	1.1766	84.46	84.73	26.71	1.0532	1.1766	89.49	

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	T02/T01	PO/PO	T02/T01
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	UFGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	STAGE	T01
1	14.12	7.804	543.7	371.0	312.1	365.7	467.6	67.0	56.2	4.9	0.5035	0.3266	1.1428	1.0572	1.1475	1.0572	1.0572	
2	7.444	5.624	545.1	416.6	376.7	412.9	421.2	60.2	48.2	4.3	0.5093	0.3641	1.1729	1.0557	1.1685	1.0557	1.0557	
3	4.303	3.991	545.0	437.9	390.9	434.7	371.0	51.7	47.9	7.1	0.4868	0.3694	1.1787	1.0535	1.1732	1.0535	1.0535	
4	3.446	3.101	523.3	403.1	404.3	401.1	332.2	47.5	39.6	6.9	0.4867	0.3620	1.1758	1.0515	1.1709	1.0515	1.0515	
5	1.843	1.554	477.1	344.4	371.3	372.6	273.4	47.2	35.0	6.9	0.4286	0.3455	1.1868	1.0493	1.1658	1.0493	1.0493	
6	1.254	1.513	469.7	390.6	354.8	347.3	257.7	44.3	33.1	7.1	0.4193	0.3458	1.1871	1.0497	1.1658	1.0497	1.0497	
7	1.151	1.344	465.7	393.7	374.7	387.7	247.0	46.4	32.0	7.1	0.4136	0.3463	1.1874	1.0515	1.1661	1.0515	1.0515	
8	0.457	1.122	460.6	392.6	389.2	384.5	241.3	47.1	32.3	7.2	0.4085	0.3460	1.1873	1.0535	1.1666	1.0535	1.0535	
9	0.030	0.751	452.5	394.4	374.4	384.4	241.6	54.6	33.4	6.1	0.4014	0.3423	1.1870	1.0567	1.1711	1.0567	1.0567	
10	0.251	0.314	434.2	365.4	352.2	360.7	251.6	59.2	35.8	9.2	0.3833	0.3212	1.1563	1.0598	1.1713	1.0598	1.0598	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	CHLJA-B	LOSS-P	PO2/	EFF-A	EFF-P	T02/T01	PO2/PO1	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	STAGE	STAGE	
1	3.00	8.35	14.39	45.82	23.11	24.42	0.4904	0.1404	0.0292	0.2771	70.16	70.73	81.80	82.19	87.36	
2	3.84	5.76	10.71	33.90	24.35	32.47	0.4044	0.0763	0.0170	0.2878	81.80	82.19	87.36	87.66	89.53	
3	4.67	3.50	8.45	35.79	20.39	32.48	0.3735	0.0520	0.0125	0.2954	89.97	90.19	89.85	90.00	89.23	
4	4.07	1.71	7.74	32.45	21.01	32.77	0.2561	0.0487	0.0175	0.2932	89.53	89.77	87.26	87.51	84.23	
5	7.27	-0.43	7.08	21.01	20.30	30.80	0.3198	0.0373	0.0109	0.2954	84.23	84.50	81.49	81.91	77.27	
6	7.00	-2.23	6.97	25.04	20.71	30.91	0.3093	0.0559	0.0175	0.2935	89.85	90.00	89.23	89.46	87.26	
7	3.97	-3.33	6.44	25.24	20.64	30.85	0.2046	0.0684	0.0214	0.2923	89.23	89.46	87.26	87.51	84.23	
8	10.41	-3.22	6.44	24.92	20.79	30.76	0.3022	0.0743	0.0244	0.2919	87.26	87.51	84.23	84.50	81.49	
9	10.75	-3.34	6.40	25.08	20.35	30.62	0.3309	0.0729	0.0244	0.2921	81.49	81.91	77.27	77.48	77.27	
10	11.00	-4.00	6.09	25.35	20.46	30.37	0.2968	0.0640	0.0225	0.2933	77.27	77.48	77.27	77.48	77.27	
11	12.40	-4.75	11.44	25.62	20.13	28.35	0.3217	0.0927	0.0328	0.2911	77.27	77.48	77.27	77.48	77.27	

WCI/AL	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET
LBM/SEC			%	%
224.0	132.47	1.1069	84.46	84.17

ROTOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	M-1	M-2	M-1	M-2	U-1	U-2	U-1	U-2	M-1	M-1	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	0.023	5.039	317.7	506.4	322.3	455.1	60.2	323.3	10.2	34.5	0.2967	0.4968	407.6	434.0	407.6	434.0	0.4224	0.4193	480.7	478.0
2	0.374	4.541	419.6	510.4	415.4	475.0	56.8	297.4	7.7	31.9	0.3709	0.4921	443.1	462.1	443.1	462.1	0.5017	0.4414	567.6	502.7
3	0.922	3.941	429.7	510.6	426.8	473.1	49.5	261.6	6.1	28.8	0.3824	0.4749	476.1	490.1	476.1	490.1	0.5363	0.4615	603.3	525.3
4	0.971	2.939	429.3	513.5	422.8	456.4	46.1	236.9	6.5	27.2	0.2768	0.4519	511.6	520.8	511.6	520.8	0.5557	0.4732	627.3	538.8
5	1.232	0.493	409.0	460.8	406.2	416.1	47.6	198.1	6.7	25.4	0.2622	0.4040	592.0	594.5	592.0	594.5	0.6017	0.5038	679.4	574.7
6	0.467	0.128	407.0	437.2	405.1	398.4	47.7	179.7	6.7	24.3	0.3611	0.3830	620.4	621.1	620.4	621.1	0.6210	0.5209	701.3	596.7
7	0.180	-0.041	409.4	429.8	402.6	395.4	48.0	168.6	6.9	23.1	0.3587	0.3763	648.1	648.1	648.1	648.1	0.6394	0.5461	722.7	621.5
8	-0.163	-0.203	402.4	423.5	396.3	391.9	49.9	160.5	7.1	22.3	0.3555	0.3703	686.1	683.6	686.1	683.6	0.6635	0.5715	751.1	653.6
9	-0.180	-0.257	394.6	421.0	394.8	367.3	55.0	164.9	7.9	21.1	0.3515	0.3673	712.2	710.6	712.2	710.6	0.6761	0.5839	766.7	669.1
10	-0.180	-0.179	376.0	394.3	371.5	358.1	57.9	164.9	8.9	24.7	0.3327	0.3430	738.3	737.4	738.3	737.4	0.6818	0.5874	775.3	679.3

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	Ω-FAC	ΩEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-3.94	1.05	17.78	42.87	26.06	31.97	0.1532	-0.0254	-0.0099	1.1314	102.27	102.70	46.09	13.22	-347.4	-110.6	1.2946
2	-8.04	-2.35	10.72	43.75	32.33	38.54	0.2321	0.0760	0.0198	1.1115	89.84	89.68	42.79	19.00	-486.4	-164.7	1.3079
3	-7.24	-1.81	9.18	19.54	39.71	38.54	0.2310	0.0599	0.0100	1.1083	93.61	93.51	44.92	-5.69	-426.6	-228.4	1.3079
4	-5.49	-0.91	7.45	15.67	39.27	37.50	0.2318	0.0231	0.0058	1.1031	95.77	95.71	47.62	32.00	-463.5	-285.9	1.2956
5	-2.73	1.12	4.97	9.67	32.09	34.33	0.2311	0.0289	0.2095	1.0899	90.94	90.84	53.28	43.61	-544.6	-396.4	1.2714
6	-1.45	1.40	5.57	6.80	32.71	32.87	0.2198	0.0692	0.0116	1.0783	87.14	87.00	54.72	47.92	-572.5	-441.4	1.2590
7	-3.74	1.58	5.13	5.25	31.81	32.61	0.2022	0.0337	0.0093	1.0754	88.35	88.21	56.15	50.49	-600.1	-479.5	1.2590
8	-0.54	-1.64	4.39	4.33	31.45	32.27	0.1859	0.0347	0.0081	1.0735	88.85	88.72	57.48	53.14	-636.2	-523.0	1.2591
9	-0.15	2.07	3.36	4.37	31.05	31.78	0.1847	0.0420	0.0098	1.0731	84.44	84.28	59.00	54.43	-657.2	-545.7	1.2591
10	1.39	2.62	6.36	3.39	29.08	29.22	0.1860	0.0493	0.0109	1.0717	93.91	93.75	61.36	57.97	-680.4	-572.5	1.2383

TO/T0	PO/PO	EFF-AD	EFF-P	Ω-1/Ω	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	Ω SOFT	INLET	INLET	INLET	INLET
1.0922	1.2728	86.90	97.34	26.90	1.0275	1.0908	91.37	91.48

STATOR 2

SL	EPS1-1	EPS1-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/T0	PO/PO	TO2/T01	TO2/T01
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	INLET	STAGE	STAGE
1	0.422	5.000	516.9	445.7	467.9	488.7	317.5	-2.2	37.7	-0.3	7.4515	0.4255	1.2778	1.0943	1.1164	1.0351	
2	0.053	5.505	535.2	532.5	449.3	512.4	290.9	-11.6	32.9	-1.3	0.4690	0.4483	1.3021	1.0908	1.1094	1.0361	
3	3.727	3.858	510.1	490.0	464.7	498.6	255.2	-21.8	28.8	-2.3	3.4458	0.4370	1.2977	1.0862	1.1016	1.0317	
4	2.784	2.677	513.3	476.0	459.6	477.5	230.6	-21.2	26.7	-2.5	0.4407	0.4187	1.2967	1.0821	1.0962	1.0297	
5	1.393	1.152	466.2	421.8	423.4	429.4	195.2	-13.9	24.7	-1.9	0.4099	0.3758	1.2991	1.0781	1.0791	1.0273	
6	1.042	0.814	442.4	413.3	405.4	412.9	177.1	-17.9	23.5	-2.9	0.3879	0.3613	1.2901	1.0702	1.0706	1.0249	
7	0.607	0.622	434.3	400.5	400.4	430.3	187.3	-14.2	22.7	-2.0	0.3804	0.3500	1.2431	1.0762	1.0648	1.0236	
8	0.603	0.415	426.9	395.4	395.7	387.2	160.1	-12.3	22.0	-1.5	0.3793	0.3451	1.2403	1.0784	1.0626	1.0231	
9	0.463	0.299	423.4	356.7	360.7	386.3	164.6	2.7	22.9	0.4	0.3696	0.3453	1.2408	1.0821	1.0639	1.0237	
10	0.147	0.176	397.3	372.0	361.5	371.9	164.7	3.6	24.5	1.5	0.3456	0.3232	1.2285	1.0892	1.0633	1.0239	

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	Ω-FAC	ΩEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT
1	-13.16	8.25	37.56	33.10	36.53	0.1842	0.1003	0.0211	0.9869	91.00	91.23
2	-10.64	4.74	34.19	34.65	42.01	0.1644	0.0317	0.3071	0.9956	86.05	86.24
3	-13.23	5.36	31.15	38.04	41.11	0.1817	0.0414	0.0099	0.9863	88.34	88.51
4	-14.93	6.03	29.22	37.56	39.48	0.1911	0.0497	0.0129	0.9930	89.42	89.56
5	-16.67	7.21	26.81	34.93	35.45	0.2069	0.0841	0.0742	0.9909	80.64	80.86
6	-17.74	4.91	26.05	33.37	34.08	0.1979	0.0579	0.0204	0.9933	79.16	79.37
7	-18.76	7.42	24.64	32.30	32.98	0.2085	0.1057	0.0381	0.9900	75.91	76.13
8	-20.20	3.65	23.53	32.57	32.49	0.2056	0.1106	0.0345	0.9895	75.72	75.93
9	-21.92	11.04	22.48	31.98	32.47	0.1962	0.0993	0.0341	0.9910	75.24	75.47
10	-23.91	14.21	21.31	29.67	30.30	0.2032	0.0934	0.0354	0.9921	74.06	74.31

WOPR	WOPR	TO/T0	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
5.249	132.67	1.0922	1.2623	86.91	97.34	1.0275	0.9917	92.55

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Approach Configuration
(63 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-1	M-1	B-2	M-1	M-2	U-1	U-2	M-1	M-1	V1-1	V1-2
1	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PO1/PO	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	11.261	7.249	318.4	343.9	318.4	318.4	0.9881	469.3	0.0	58.9	0.2875	0.5059	328.2	359.9	0.4128	0.2991	457.2	334.4
2	10.037	7.491	337.7	354.2	337.1	343.3	0.9987	433.5	0.0	51.3	0.3047	0.4951	367.4	395.3	0.4506	0.3105	496.6	347.6
3	8.318	6.314	346.0	372.4	346.0	346.0	0.9981	379.7	0.0	45.8	0.3111	0.4724	411.2	431.4	0.4848	0.3225	536.1	372.6
4	6.768	5.123	348.5	382.5	348.5	348.5	0.9988	341.1	0.0	42.7	0.3152	0.4478	451.5	467.4	0.5158	0.3476	570.4	390.2
5	5.002	3.140	348.6	401.4	348.6	348.6	0.9957	282.4	0.0	38.9	0.3152	0.3990	547.4	550.4	0.5931	0.3910	644.7	440.4
6	2.733	2.381	349.3	436.0	349.0	344.1	0.9947	267.7	0.0	37.9	0.3123	0.3865	586.2	591.7	0.6150	0.4191	680.2	472.6
7	2.309	1.951	342.3	439.4	342.3	344.0	0.9941	263.6	0.0	37.5	0.3095	0.3839	614.1	617.3	0.6356	0.4371	703.1	493.4
8	1.441	1.487	339.1	432.2	339.1	342.2	0.9938	264.0	0.0	37.7	0.3065	0.3824	641.7	644.0	0.6560	0.4524	725.7	511.3
9	0.916	1.012	335.1	426.7	335.1	336.0	0.9927	265.7	0.0	38.5	0.3024	0.3770	671.5	671.5	0.6762	0.4641	750.4	525.5
10	0.462	0.560	327.1	419.4	327.1	320.1	0.9906	271.0	0.0	40.2	0.2955	0.3696	705.2	705.2	0.7022	0.4754	777.4	539.5
11	0.205	0.266	307.9	410.5	307.9	302.4	0.9881	277.5	0.0	42.6	0.2779	0.3608	733.6	733.4	0.7180	0.4808	795.6	547.0

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	CFGA-M	LOSS-P	PO2/	EFF-P	EFF-A	M-1	M-2	VO-1	VO-2	PO/PO
1	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC		FT/SEC	TOTAL	TOTAL	PO1	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	7.15	12.71	11.53	45.04	21.10	23.21	0.5146	0.3036	0.0674	1.1625	91.74	61.34	45.90	-19.19	-328.2	110.4	1.1568
2	6.05	12.05	11.45	44.15	24.45	25.18	0.5295	0.1434	0.0480	1.1759	96.21	66.61	47.53	-6.62	-367.4	40.2	1.1779
3	6.45	12.23	13.52	42.15	24.38	28.31	0.5016	0.0791	0.0214	1.1830	93.78	97.62	50.15	7.96	-411.2	-51.7	1.1967
4	6.95	12.04	13.30	33.53	25.29	28.66	0.4929	0.0478	0.0134	1.1815	95.54	94.44	52.39	18.86	-451.5	-126.3	1.1658
5	5.35	10.92	9.55	19.81	25.27	27.52	0.4447	0.0470	0.0125	1.1744	94.35	94.24	57.29	37.47	-542.4	-267.9	1.1776
6	6.62	10.60	9.10	16.25	25.01	27.21	0.4451	0.0571	0.0135	1.1756	93.25	97.09	49.53	43.28	-586.2	-324.0	1.1777
7	7.00	10.50	7.11	15.07	24.82	27.24	0.4353	0.0574	0.0147	1.1748	92.34	92.16	60.88	45.81	-614.1	-353.7	1.1802
8	5.42	10.72	9.19	14.15	24.55	27.13	0.4127	0.0719	0.0183	1.1826	90.25	90.02	62.15	48.00	-641.7	-379.9	1.1832
9	3.60	11.04	6.36	12.32	24.31	26.47	0.4369	0.0974	0.0242	1.1839	86.64	86.31	63.48	50.55	-671.5	-405.8	1.1836
10	9.38	11.60	7.27	11.51	23.73	25.34	0.4458	0.1117	0.0317	1.1862	81.96	81.52	65.11	53.60	-705.2	-434.2	1.1834
11	10.34	12.56	10.23	10.79	22.30	23.89	0.4573	0.1525	0.0351	1.1926	79.55	79.03	67.23	56.44	-733.6	-455.8	1.1819

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AT	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR
\$	\$	\$	\$	\$	\$	\$	\$	\$
1.0547	1.1903	84.69	88.94	24.37	1.0547	1.1903	88.69	88.74

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	M-1	M-2	M-1	M-2	U-1	U-2	M-1	M-1	TO2/	TO2/
1	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	TO1	TO1
1	11.260	6.123	512.9	510.2	507.5	294.8	443.5	59.3	59.0	10.7	0.4457	0.2637	1.1359	1.0541	1.1419	1.0541	1.0541	
2	7.738	6.100	514.5	511.7	512.6	334.8	412.8	63.4	62.8	11.5	0.4618	0.3007	1.1374	1.0547	1.1540	1.0547	1.0547	
3	5.832	4.491	405.7	470.5	470.5	365.9	365.7	53.1	45.8	9.0	0.3140	0.3254	1.1746	1.0529	1.1711	1.0529	1.0529	
4	4.007	3.774	494.3	372.4	344.0	369.4	330.0	43.0	41.9	7.6	0.4401	0.3290	1.1777	1.0513	1.1735	1.0513	1.0513	
5	2.512	2.651	454.2	354.4	360.2	352.4	274.6	45.4	37.5	7.4	0.4034	0.3137	1.1715	1.0499	1.1682	1.0499	1.0499	
6	1.113	2.313	444.0	352.9	357.7	349.6	261.0	44.5	36.3	7.9	0.3940	0.3113	1.1711	1.0507	1.1689	1.0507	1.0507	
7	1.424	2.035	443.4	355.8	350.5	352.2	259.5	50.2	35.8	8.1	0.3931	0.3137	1.1730	1.0520	1.1715	1.0520	1.0520	
8	1.631	1.812	444.4	360.7	360.5	356.9	260.4	62.2	35.4	8.3	0.3937	0.3178	1.1759	1.0542	1.1752	1.0542	1.0542	
9	1.333	1.452	441.1	352.4	354.1	359.4	263.1	54.0	34.7	8.4	0.3930	0.3149	1.1774	1.0571	1.1776	1.0571	1.0571	
10	0.616	0.700	435.8	353.6	347.9	354.0	269.0	63.2	34.1	10.1	0.3445	0.3159	1.1764	1.0610	1.1790	1.0610	1.0610	
11	0.211	0.257	427.8	342.8	326.1	327.6	274.9	59.5	40.3	10.0	0.3765	0.3091	1.1692	1.0643	1.1797	1.0653	1.0653	

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	CFGA-M	LOSS-P	PO2/	EFF-A	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
1	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC		FT/SEC	TOTAL	TOTAL	PO1	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC
1	7.15	11.83	16.07	49.11	17.37	23.21	0.5702	0.1374	0.0774	0.7222	71.48	72.01	77.42	77.88	87.48	87.48
2	5.45	10.75	13.75	41.25	21.94	24.48	0.4981	0.1157	0.0258	0.9841	77.42	77.88	87.48	87.48	91.17	91.38
3	3.77	6.44	10.33	36.80	27.46	24.40	0.4150	0.0739	0.0170	0.3904	87.48	87.48	91.17	91.38	91.01	91.23
4	1.58	4.20	8.36	33.33	24.67	25.78	0.4929	0.0565	0.0145	0.9979	91.17	91.38	91.01	91.23	90.00	90.22
5	2.40	1.75	7.51	30.16	28.32	24.44	0.3659	0.0512	0.0143	0.3946	89.03	89.28	87.48	87.48	87.48	87.48
6	3.41	0.57	7.59	24.44	28.20	24.20	0.3550	0.0525	0.0162	0.9447	87.48	87.48	87.48	87.48	87.48	87.48
7	3.30	0.62	7.76	27.72	28.37	24.40	0.3482	0.0556	0.0174	0.3944	87.48	87.48	87.48	87.48	87.48	87.48
8	3.00	0.59	7.48	27.53	28.44	24.78	0.3438	0.0609	0.0194	0.3939	87.48	87.48	87.48	87.48	87.48	87.48
9	3.00	0.93	8.1	24.06	27.93	24.82	0.3406	0.0524	0.0174	0.3948	87.48	87.48	87.48	87.48	87.48	87.48
10	2.37	0.62	10.12	24.00	27.70	24.37	0.3428	0.0601	0.0211	0.3942	87.48	87.48	87.48	87.48	87.48	87.48
11	2.95	0.21	12.26	31.34	25.62	24.51	0.3449	0.1154	0.0418	0.3982	87.48	87.48	87.48	87.48	87.48	87.48

WCI/PR	WCI/PR	TO2/TO	PO2/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR
KPM	KPM	\$	\$	\$	\$	\$	\$	\$	\$
120.85	120.85	1.0547	1.1710	84.35	84.64	1.0547	1.1710	84.35	84.64

ROTOR 2

SL	W-1	W-2	V-1	V-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2
INLET	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	4.286	5.581	277.7	575.0	266.7	390.1	56.7	352.4	11.5	41.7	3.2391	0.4595	408.2	426.6	0.7887	0.3494	443.0	398.8		
2	5.067	4.042	347.4	512.4	341.0	293.2	64.5	327.9	11.0	39.6	0.2058	0.6475	443.7	462.0	0.4476	0.3636	508.6	416.3		
3	4.813	3.141	385.4	459.6	381.6	400.7	56.1	297.4	8.0	36.5	0.3404	0.6357	476.8	490.8	0.5029	0.3894	549.5	446.6		
4	3.173	2.352	385.7	497.4	292.0	379.0	65.8	294.4	6.8	33.9	0.3400	0.6201	512.3	521.5	0.5329	0.4129	603.0	472.5		
5	0.994	1.634	365.5	441.6	365.5	357.4	46.6	242.1	7.3	33.2	0.2254	0.3849	592.8	595.3	0.5635	0.4454	657.2	511.1		
6	3.472	0.260	365.3	425.8	365.1	359.4	49.0	229.4	7.6	32.6	0.3251	0.3706	621.2	621.9	0.5992	0.4629	678.0	531.5		
7	3.243	0.109	375.0	417.6	369.5	356.7	51.3	221.0	7.9	31.8	0.3293	0.3650	649.0	649.0	0.6198	0.4864	702.7	557.1		
8	3.052	0.031	376.0	413.7	372.0	360.4	55.9	213.9	8.4	30.7	0.3210	0.3639	687.1	684.5	0.6458	0.5144	733.5	592.7		
9	1.305	0.004	372.5	423.0	367.0	355.5	63.4	225.4	7.6	32.1	0.3173	0.3639	713.2	711.6	0.6557	0.5231	746.3	606.0		
10	-0.017	-0.021	355.7	400.4	350.8	339.8	59.1	211.9	9.5	32.0	0.3116	0.3458	739.4	738.4	0.6705	0.5411	765.4	626.6		

SL	INCS	INCP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	MEGA-H	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	VB-1	VB-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	3.75	7.70	16.25	41.03	21.23	32.03	0.2742	-0.0795	-0.0187	1.1552	105.75	105.86	52.74	11.70	-353.5	-81.9	1.3134
2	-3.66	2.61	10.50	29.96	27.23	32.69	0.3306	0.0201	3.0050	1.1335	97.79	97.75	47.74	18.78	-377.3	-134.9	1.3195
3	-4.37	1.31	7.18	22.15	25.43	33.54	0.3458	0.0719	0.0180	1.2217	70.87	90.72	47.84	25.69	-422.7	-193.3	1.3216
4	-2.84	2.22	7.75	19.21	20.55	33.67	0.3296	0.0675	0.0113	1.1206	93.14	93.03	50.65	32.34	-466.5	-253.1	1.3188
5	0.19	4.05	5.07	12.49	29.36	31.33	0.3242	0.0596	0.0146	1.1162	89.94	89.78	56.21	43.72	-546.2	-353.2	1.3070
6	3.09	6.15	5.25	5.87	29.35	30.62	0.3116	0.0639	0.0152	1.1095	88.26	88.08	57.46	47.40	-572.2	-342.5	1.3084
7	1.33	3.72	4.93	9.04	29.67	30.25	0.2964	0.0655	0.0155	1.1056	86.93	86.74	58.28	50.19	-597.7	-428.8	1.2993
8	1.13	3.35	5.79	6.57	29.75	30.53	0.2793	0.0584	0.0135	1.1052	87.45	87.27	59.52	52.55	-632.2	-470.6	1.3014
9	1.38	3.60	5.27	5.87	29.25	30.04	0.2760	0.0637	0.0149	1.1080	86.58	86.39	60.54	53.92	-649.8	-488.2	1.3036
10	2.75	4.93	5.57	5.56	27.84	28.58	0.2618	0.0511	0.0127	1.1077	87.45	87.27	62.72	57.16	-680.3	-526.5	1.2965

TC/T0	PI/P0	EFF-AD	EFF-P	NC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	R	R	ROTOR	ROTOR
1.0319	1.3077	96.72	87.22	26.38	1.0352	1.1168	90.57	91.11

STATOR 2

SL	W-1	W-2	V-1	V-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2	W-1	W-2
INLET	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	7.303	8.124	437.7	393.3	343.4	339.3	345.2	4.1	65.0	0.6	0.4247	0.3694	1.2743	1.0960	1.1385	1.0397				
2	5.203	5.593	431.3	415.1	371.4	416.1	320.9	-1.7	40.7	-0.2	0.4292	0.3610	1.3125	1.0939	1.1271	1.0373				
3	3.347	3.694	434.7	413.2	367.3	416.7	291.4	-7.9	35.5	-1.1	0.4267	0.3635	1.3179	1.0907	1.1185	1.0367				
4	2.847	2.714	479.7	406.8	373.5	406.7	283.4	-8.4	33.4	-1.2	0.4182	0.3576	1.3142	1.0882	1.1167	1.0355				
5	1.510	1.215	465.5	379.6	376.1	374.4	239.0	-11.3	32.4	-1.7	0.3895	0.3247	1.3024	1.0877	1.1123	1.0355				
6	1.157	0.897	430.1	366.1	365.5	365.8	226.7	-14.9	31.8	-2.3	0.3747	0.3177	1.2566	1.0873	1.1062	1.0342				
7	3.079	0.665	424.1	361.9	363.0	361.7	219.4	-10.7	31.1	-1.7	0.3693	0.3137	1.2947	1.0869	1.1017	1.0335				
8	3.079	0.664	423.1	364.2	365.2	364.1	213.5	-9.0	30.3	-1.4	0.3674	0.3152	1.2950	1.0827	1.1006	1.0333				
9	3.313	0.272	423.6	368.4	369.2	368.4	222.4	5.4	31.5	0.8	0.3573	0.3131	1.2979	1.0979	1.1032	1.0344				
10	0.097	0.031	434.0	342.4	344.1	347.3	211.7	7.6	31.3	1.3	0.3499	0.2948	1.2852	1.1017	1.0997	1.0340				

SL	INCS	INCP	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	MEGA-H	LOSS-P	P02/	EFF-P	EFF-A	B-1	B-2	VB-1	VB-2	PO/PO	
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-5.42	9.30	44.45	29.60	37.31	0.3330	0.1245	0.0252	3.2755								95.00	95.10
2	-3.09	7.31	43.55	31.11	35.45	0.2890	0.0651	0.0171	0.3947								93.31	93.43
3	-4.91	7.21	37.63	37.01	35.95	0.2986	0.0737	0.0054	3.2372								94.56	94.75
4	-4.71	7.31	34.82	37.74	35.06	0.2830	0.0333	0.0077	3.2966								90.19	90.34
5	-3.74	7.45	34.14	31.88	32.82	0.2120	0.0311	0.0197	3.2967								86.90	87.10
6	-2.56	4.35	34.12	30.59	31.51	0.3140	0.0219	0.0095	3.2970								85.60	85.81
7	-10.27	7.24	32.45	30.75	31.10	0.3167	0.0343	0.0123	3.2965								83.65	83.87
8	-11.99	8.73	31.72	30.90	31.27	0.3127	0.0670	0.0155	3.2958								83.48	83.71
9	-13.03	12.10	30.92	30.39	31.45	0.3068	0.0447	0.0171	3.2956								82.61	82.86
10	-16.42	13.93	30.33	29.91	29.65	0.3322	0.0447	0.0316	3.2928								81.06	81.30

TC/T0	PI/P0	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	R	R	STAGE	R
1.0319	1.3074	95.71	95.55	1.0352	0.9952	96.93	

**UNIFORM INLET FLOW DATA – SONIC INLET, TAKEOFF CONFIGURATION
(Complete Acoustic Treatment)**

- **Overall Performance and Stall Summary**
- **Overall Performance and Blade-Element Data**

FAN OVERALL PERFORMANCE - SONIC INLET, TAKEOFF CONFIGURATION

	N _{COARR} (rpm)	W _{COARR} (kg/sec)	W _{COARR} (lbm/sec)	Local				Cumulative Fan Alone				Cumulative System					
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	P ₀ /P ₀	η _{ad} (%)	η _p (%)			
414-10-41																	
Sonic Inlet	7637	89.5	197.40		0.9818									0.9818			
Rotor 1	7637	91.2	201.07	1.1020	1.3622	90.56	90.96	1.1020	1.3622	90.56	90.96	1.3374	84.91	85.52			
Stator 1					0.9822				1.3379	85.07	85.68	1.3136	75.46	80.24			
Rotor 2				1.0537	1.1488	75.22	75.70	1.1612	1.5370	81.07	82.18	1.5090	77.19	78.66			
Stator 2					0.9549				1.4677	71.89	73.36	1.4410	68.27	69.84			
414-10-42																	
Sonic Inlet	7773	89.5	197.50		0.9774									0.9774			
Rotor 1	7773	91.6	202.06	1.1117	1.3952	89.44	89.93	1.1117	1.3952	89.44	89.93	1.3637	82.97	83.70			
Stator 1					0.9812				1.3690	84.11	84.81	1.3381	77.69	78.59			
Rotor 2				1.0611	1.2097	91.38	91.61	1.1795	1.6560	86.32	87.25	1.6186	82.17	83.34			
Stator 2					0.9849				1.6309	83.52	84.61	1.5940	79.38	80.69			
414-10-44																	
Sonic Inlet	7991	89.7	197.80		0.9719									0.9719			
Rotor 1	7991	92.3	203.52	1.1276	1.4460	87.14	87.79	1.1276	1.4460	87.14	87.79	1.4054	80.03	80.97			
Stator 1					0.9662				1.3971	78.62	79.61	1.3578	71.57	72.77			
Rotor 2				1.0650	1.2368	96.20	96.32	1.2008	1.7280	84.20	85.36	1.6794	79.51	80.95			
Stator 2					0.9865				1.7046	81.94	83.23	1.6567	77.27	78.82			
414-10-46																	
Sonic Inlet	7887	89.5	197.50		0.9725									0.9725			
Rotor 1	7887	92.1	203.08	1.1158	1.4047	88.08	88.64	1.1158	1.4047	88.08	88.64	1.3661	80.50	81.35			
Stator 1					0.9829				1.3807	83.39	84.14	1.3427	75.86	76.84			
Rotor 2				1.0651	1.2328	94.46	94.63	1.1885	1.7021	87.04	87.96	1.6553	82.16	83.38			
Stator 2					0.9882				1.6820	84.96	86.01	1.6357	80.08	81.41			
414-10-47																	
Sonic Inlet	7908	89.7	197.80		0.9746									0.9746			
Rotor 1	7908	92.0	202.95	1.1189	1.4254	89.69	90.20	1.1189	1.4254	89.69	90.20	1.3892	82.82	83.60			
Stator 1					0.9805				1.3976	84.46	85.18	1.3621	77.64	78.59			
Rotor 2				1.0662	1.2401	95.62	95.76	1.1929	1.7332	88.15	89.03	1.6892	83.77	84.92			
Stator 2					0.9896				1.7152	86.35	87.34	1.6716	81.97	83.22			
414-80-41																	
Sonic Inlet	7276	86.4	190.60		0.9776									0.9776			
Rotor 1	7276	88.4	194.6	1.0968	1.3507	92.71	93.02	1.0968	1.3507	92.71	93.02	1.3204	85.38	85.94			
Stator 1					0.9857				1.3314	88.09	88.56	1.3016	80.81	81.51			
Rotor 2				1.0433	1.1226	77.43	77.80	1.1443	1.4946	84.31	85.17	1.4611	79.30	80.37			
Stator 2					0.9575				1.4311	74.73	75.97	1.3990	69.77	71.17			
414-80-43																	
Sonic Inlet	7437	86.3	190.40		0.9872									0.9872			
Rotor 1	7437	87.4	192.87	1.1059	1.3722	89.35	89.82	1.1059	1.3722	89.35	89.82	1.3546	85.54	86.16			
Stator 1					0.9857				1.3509	84.72	85.36	1.3336	80.95	81.71			
Rotor 2				1.0560	1.1998	95.21	95.74	1.1679	1.6207	88.09	88.87	1.6000	85.60	86.52			
Stator 2					0.9879				1.6011	85.71	86.63	1.5806	83.23	84.28			
414-80-44																	
Sonic Inlet	7485	86.3	190.40		0.9884									0.9884			
Rotor 1	7485	87.3	192.64	1.1086	1.3722	87.16	87.73	1.1086	1.3722	87.16	87.73	1.3563	83.77	84.46			
Stator 1					0.9845				1.3509	82.66	83.39	1.3352	79.28	80.11			
Rotor 2				1.0571	1.2113	98.42	98.46	1.1719	1.6364	87.86	88.67	1.6174	85.67	86.60			
Stator 2					0.9890				1.6183	85.74	86.67	1.5995	83.55	84.60			
414-80-45																	
Sonic Inlet	7584	86.5	190.70		0.9849									0.9849			
Rotor 1	7584	87.8	193.63	1.1128	1.3963	88.72	89.24	1.1128	1.3963	88.72	89.24	1.3752	84.49	85.17			
Stator 1					0.9840				1.3739	84.23	84.92	1.3532	80.02	80.86			
Rotor 2				1.0628	1.2341	98.40	98.45	1.1828	1.6955	89.06	89.84	1.6699	86.31	87.26			
Stator 2					0.9909				1.6800	87.39	88.28	1.6546	84.65	85.70			

OVERALL STALL POINT DATA

	W _{COARR} Sonic Inlet (lbm/sec)	W _{COARR} Sonic Inlet (kg/sec)	W _{COARR} Rotor 1 (lbm/sec)	W _{COARR} Rotor 1 (kg/sec)	P ₀ /P ₀ (fan)	P ₀ /P ₀ (system)
414-80	190.8	86.5	193.5	87.7	1.697	1.673
-10	197.5	89.5	202.4	91.8	1.750	1.708

SPEED CODE

10
80

IDENTIFICATION

Sonic Inlet Throat Mach No. = 1.0
Sonic Inlet Throat Mach No. = 0.8

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1043	0.1687	181.4	273.8	161.4	171.6	0.9535	213.4	0.0	0.8916	0.5488	0.8098	145.3	158.9	0.7682	0.5324	232.5	180.0
2	0.1307	0.1306	192.9	244.2	192.9	185.4	0.9834	188.3	0.0	0.7913	0.5859	0.7795	162.7	174.2	0.7665	0.5406	252.4	186.7
3	0.1372	0.1879	193.4	249.3	193.4	188.5	0.9878	183.1	0.0	0.7122	0.5875	0.7325	182.1	191.0	0.8070	0.5680	265.6	190.5
4	0.1163	0.0902	194.5	235.7	154.5	188.2	0.9909	144.5	0.0	0.6593	0.5910	0.6982	200.0	207.0	0.8477	0.5752	278.9	196.4
5	0.0795	0.0642	196.2	209.7	196.2	176.4	0.9946	113.1	0.0	0.5697	0.5966	0.6183	240.2	243.7	0.9431	0.6395	310.1	219.7
6	0.0647	0.0534	196.5	203.5	196.5	174.3	0.9942	105.0	0.0	0.5427	0.5976	0.5910	259.6	262.0	0.9902	0.6813	325.6	234.6
7	0.0563	0.0470	196.2	199.9	196.2	172.4	0.9919	101.1	0.0	0.5305	0.5966	0.5797	272.0	273.4	1.0198	0.7069	335.4	243.7
8	0.0484	0.0398	196.0	157.4	196.0	172.0	0.9893	97.3	0.0	0.5150	0.5959	0.5725	284.2	285.2	1.0496	0.7381	345.2	254.7
9	0.0380	0.0315	195.4	196.2	195.4	171.4	0.9857	95.4	0.0	0.5089	0.5961	0.5676	297.4	297.4	1.0817	0.7663	355.8	264.8
10	0.0237	0.0194	189.9	196.9	189.9	169.8	0.9716	95.7	0.0	0.5132	0.5761	0.5624	312.3	312.3	1.1089	0.7941	365.5	275.3
11	0.0181	0.0080	179.8	185.2	179.8	157.9	0.9465	96.9	0.0	0.5585	0.5435	0.5314	324.9	324.8	1.1227	0.7953	371.3	277.2

SL	INCS	INCR	DEV	TURN	RHOVW-1	RHOVW-2	D-FAC	OMEGA-B	LOSS-P	P02/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0013	0.0956	0.2318	0.5810	37.52	37.40	0.4484	0.2193	0.0491	1.3851	84.01	83.26	0.6749	0.3661	-145.3	54.4	1.3453
2	0.0129	0.0815	0.2398	0.7761	40.37	42.09	0.4565	0.1581	0.0482	1.3841	86.58	85.93	0.7088	0.0756	-162.7	14.1	1.3864
3	0.0819	0.0940	0.2456	0.8092	40.57	45.16	0.4518	0.0992	0.0272	1.3825	88.55	90.11	0.7559	0.1468	-182.1	-27.9	1.3911
4	0.0772	0.0565	0.2263	0.4786	40.86	45.79	0.4475	0.0778	0.0218	1.3787	91.65	91.27	0.8001	0.3234	-200.0	-62.5	1.3835
5	0.0823	0.0773	0.1518	0.2493	41.23	44.98	0.4129	0.0825	0.0178	1.3380	91.49	91.13	0.8866	0.6373	-248.2	-138.7	1.3595
6	0.0801	0.0696	0.1194	0.1898	41.24	44.85	0.3927	0.0580	0.0154	1.3376	91.53	91.17	0.9234	0.7336	-259.6	-157.0	1.3546
7	0.0181	0.0676	0.1101	0.1618	41.10	44.59	0.3815	0.0557	0.0145	1.3396	91.58	91.22	0.9465	0.7854	-272.0	-172.3	1.3534
8	0.0296	0.0659	0.1038	0.1375	40.96	44.71	0.3666	0.0471	0.0121	1.3454	92.64	92.32	0.9675	0.8380	-288.4	-187.9	1.3598
9	0.0354	0.0764	0.0556	0.1224	40.73	44.72	0.3576	0.0462	0.0117	1.3543	92.65	92.32	0.9897	0.8673	-297.4	-201.9	1.3598
10	0.0519	0.0687	0.0573	0.1187	39.33	44.38	0.3518	0.0424	0.0106	1.3785	93.34	93.03	1.0266	0.9859	-312.3	-216.6	1.3643
11	0.0724	0.1132	0.1583	0.1889	38.94	41.00	0.3414	0.0365	0.0134	1.3910	91.37	90.95	1.0854	0.9649	-324.9	-227.9	1.3410

TO2/TO1	PO2/PO1	EFF-AD	EFF-P	WCL/AI	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	INLET	INLET
1.1020	1.3622	90.56	90.96	197.85	1.1020	1.3622	90.56	90.96

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO2/TO1	PO2/PO1	TO2/TO1
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	INLET	INLET
1	0.1827	0.1353	248.3	167.0	144.9	163.8	201.7	33.0	0.9466	0.1965	0.7259	0.4748	1.2791	1.1172	1.3171	1.1172
2	0.1237	0.0919	248.7	185.3	171.7	182.4	179.9	32.6	0.8078	0.1799	0.7283	0.5305	1.2452	1.1134	1.2432	1.1134
3	0.0775	0.0610	241.1	188.6	183.7	186.3	156.2	29.4	0.7042	0.1540	0.7062	0.5420	1.3678	1.1073	1.3592	1.1073
4	0.0502	0.0430	232.4	186.0	186.0	183.9	139.4	28.4	0.6425	0.1532	0.6798	0.5353	1.3650	1.1030	1.3519	1.1030
5	0.0196	0.0220	212.2	177.5	181.1	175.8	110.7	24.7	0.5487	0.1394	0.6183	0.5113	1.3415	1.0950	1.2741	1.0950
6	0.0124	0.0161	207.4	177.8	179.8	176.1	103.4	24.7	0.5218	0.1391	0.6032	0.5123	1.3411	1.0952	1.3246	1.0952
7	0.0066	0.0124	204.5	177.2	178.5	175.5	99.8	24.6	0.5096	0.1390	0.5941	0.5103	1.3385	1.0955	1.3252	1.0955
8	0.0062	0.0101	202.9	175.3	178.6	173.6	96.3	24.3	0.4945	0.1393	0.5891	0.5044	1.3326	1.0961	1.3227	1.0961
9	0.0051	0.0086	202.2	175.8	178.8	174.0	94.7	24.8	0.4874	0.1413	0.5862	0.5053	1.3332	1.0983	1.3282	1.0983
10	0.0034	0.0045	201.8	177.1	177.9	174.9	95.3	27.6	0.4917	0.1565	0.5835	0.5081	1.3382	1.1034	1.3506	1.1034
11	0.0013	0.0031	192.9	168.2	166.8	165.1	96.7	32.0	0.5254	0.1914	0.5545	0.4802	1.3126	1.1089	1.3625	1.1089

SL	INCS	INCR	DEV	TURN	RHOVW-1	RHOVW-2	C-FAC	OMEGA-B	LOSS-P	P02/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT
1	0.0270	0.1093	0.2905	0.7502	33.44	41.36	0.4664	0.1658	0.0343	0.9509	69.88	71.03
2	0.0181	0.0712	0.2188	0.6319	40.88	47.35	0.3856	0.0992	0.0220	0.9704	77.44	78.55
3	0.0786	0.0169	0.1198	0.5483	46.78	49.15	0.3432	0.0591	0.0141	0.9832	85.46	86.07
4	0.1162	0.0153	0.1672	0.4893	46.05	48.76	0.3201	0.0481	0.0123	0.9872	87.40	87.93
5	0.1882	0.0758	0.1418	0.4093	45.91	46.49	0.2798	0.0434	0.0126	0.9902	87.94	88.41
6	0.2137	0.0955	0.1355	0.3827	45.96	46.75	0.2593	0.0454	0.0140	0.9901	87.89	88.36
7	0.2269	0.1050	0.1328	0.3704	45.81	46.52	0.2508	0.0526	0.0167	0.9889	87.73	88.21
8	0.2444	0.1209	0.1317	0.3551	46.03	45.92	0.2537	0.0830	0.0273	0.9826	86.67	87.19
9	0.2443	0.1353	0.1376	0.3461	46.15	45.94	0.2493	0.0959	0.0326	0.9801	85.96	86.52
10	0.2493	0.1628	0.1364	0.3332	45.94	46.01	0.2419	0.1005	0.0353	0.9793	86.76	87.31
11	0.3169	0.1821	0.2311	0.3341	42.81	43.02	0.2503	0.1098	0.0365	0.9793	86.89	85.53

NGCR	TO2/TO1	PO2/PO1	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
RAD/SEC	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
749.71	1.1020	1.3379	85.07	85.68	1.1020	0.9822	85.07	85.68

ROTOR 2

																RUN NO414, SPEED CODE 10, POINT NO 41			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V*-1	V*-2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIUM	RADIUM			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1496	0.1010	155.5	265.1	152.1	219.0	32.1	140.2	0.2064	0.5072	0.4406	0.7519	100.0	102.5	0.6021	0.6360	212.7	224.2	
2	0.1083	0.0751	100.0	259.6	107.4	220.3	31.0	137.3	0.1630	0.3542	0.3049	0.7374	100.5	204.9	0.7174	0.6545	230.1	230.4	
3	0.0825	0.0562	107.1	269.2	105.0	217.9	29.2	121.0	0.1434	0.3051	0.3002	0.7000	211.1	217.5	0.7709	0.6775	267.6	250.2	
4	0.0584	0.0372	105.0	235.4	103.0	210.0	27.4	108.5	0.1403	0.4407	0.5054	0.6804	226.9	230.9	0.0034	0.0030	270.2	254.0	
5	0.0151	0.0034	107.7	204.7	104.1	185.6	24.5	86.4	0.1307	0.4250	0.5424	0.5701	242.5	245.0	0.0754	0.0720	302.2	256.0	
6	0.0065	0.0018	106.3	197.3	104.7	181.1	24.5	78.3	0.1310	0.4082	0.5301	0.5503	275.1	275.4	0.0091	0.0073	311.3	267.7	
7	0.0009	0.0027	102.7	194.7	101.1	180.0	24.4	74.1	0.1328	0.3903	0.5271	0.5504	287.4	287.4	0.0216	0.0207	319.5	270.2	
8	0.0112	0.0145	101.6	193.6	179.0	176.6	25.3	72.3	0.1305	0.3025	0.5229	0.5405	304.3	303.2	0.0554	0.0520	332.0	292.5	
9	0.0169	0.0223	100.5	192.1	178.3	176.5	28.2	75.0	0.1347	0.4094	0.5101	0.5404	315.0	315.1	0.0714	0.0705	338.4	297.4	
10	0.0133	0.0162	170.6	170.6	167.6	150.3	31.9	80.2	0.1000	0.4001	0.6073	0.6107	327.4	327.0	0.0704	0.0651	339.0	299.0	

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-S	LOSS-P	POZ/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RACIAN	RACIAN	RACIAN	RACIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIUM	RADIUM	M/SEC	M/SEC	INLET
1	-0.1368	0.0154	0.2750	0.3744	35.02	50.67	0.0961	0.0290	0.0671	1.2543	97.17	97.00	0.1706	0.1962	-140.7	-44.3	1.0100
2	-0.1755	0.0462	0.1511	0.4250	40.73	50.01	0.1991	0.1404	0.0351	1.2105	82.16	81.67	0.7215	0.2057	-165.4	-67.4	1.0432
3	-0.1591	0.0400	0.1204	0.3374	50.07	50.73	0.2105	0.1161	0.0290	1.1945	82.50	84.14	0.7321	0.4147	-182.0	-96.7	1.0347
4	-0.1340	0.0401	0.1033	0.2652	50.54	57.45	0.2106	0.0900	0.0230	1.1701	83.04	83.44	0.7902	0.5340	-199.5	-124.4	1.0035
5	-0.0700	0.0032	0.0079	0.1440	48.69	51.17	0.2231	0.1322	0.0324	1.1300	69.52	64.99	0.9071	0.7623	-230.1	-177.2	1.5159
6	-0.0527	0.0050	0.0004	0.1001	48.36	50.04	0.2031	0.1106	0.0204	1.1163	68.02	68.33	0.9356	0.8275	-250.6	-197.1	1.4960
7	-0.0257	0.0199	0.0762	0.0902	47.41	49.01	0.1851	0.0903	0.0230	1.1104	72.41	71.97	0.9601	0.8700	-263.2	-213.4	1.4902
8	-0.0215	0.0173	0.0507	0.0003	47.00	49.57	0.1737	0.0957	0.0220	1.1156	71.50	71.05	0.9900	0.9097	-279.0	-230.9	1.4870
9	-0.0164	0.0224	0.0513	0.0008	46.53	48.39	0.1771	0.1115	0.0266	1.1133	67.42	64.92	1.0161	0.9353	-287.7	-239.3	1.4832
10	0.0002	0.0471	0.1233	0.0311	43.43	40.46	0.2007	0.1031	0.0397	1.0045	48.18	47.60	1.0549	1.0237	-295.5	-246.0	1.4201

TO/TO	PO/PO	EFF-AD	EFF-P	WCL/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		S	S	S			S	S
1.1612	1.5370	01.07	02.10	177.07	1.0537	1.1400	75.22	75.70

STATOR 2

																RUN NO414, SPEED CODE 10, POINT NO 41			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/			
	RACIAN	RACIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIUM	RADIUM			INLET	INLET	STAGE	TO1			
1	0.1220	0.1017	239.7	236.2	190.5	237.9	145.6	-11.1	0.6492	-0.0463	0.6730	0.6682	1.5335	1.1953	1.1929	1.0700			
2	0.0910	0.1011	245.5	241.1	205.6	240.9	136.2	-9.7	0.5767	-0.0401	0.6934	0.6801	1.5049	1.1805	1.1555	1.0683			
3	0.0707	0.0795	242.2	233.3	211.4	233.1	118.2	-10.4	0.5094	-0.0447	0.6870	0.6596	1.534	1.1748	1.1336	1.0630			
4	0.0553	0.0566	233.4	225.5	200.7	225.3	104.5	-10.5	0.4639	-0.0465	0.6831	0.6390	1.5327	1.1640	1.1277	1.0574			
5	0.0301	0.0277	206.5	199.5	190.2	199.4	85.0	-2.9	0.4244	-0.0144	0.5048	0.5636	1.4521	1.1500	1.0825	1.0512			
6	0.0224	0.0198	199.5	195.0	184.0	195.0	77.3	1.4	0.3978	-0.0071	0.5649	0.5537	1.4420	1.1464	1.0761	1.0464			
7	0.0181	0.0198	196.7	182.5	187.7	182.5	73.5	2.3	0.3830	0.0124	0.5566	0.5298	1.4173	1.1452	1.0636	1.0451			
8	0.0161	0.0144	195.3	187.0	181.5	186.9	72.1	5.3	0.3782	0.0201	0.5517	0.5270	1.4156	1.1404	1.0614	1.0447			
9	0.0138	0.0129	193.4	185.7	178.0	185.5	75.0	8.3	0.4028	0.0400	0.5442	0.5213	1.4125	1.1356	1.0590	1.0465			
10	0.0076	0.0077	172.2	166.5	152.5	166.6	80.1	9.4	0.4030	0.0501	0.4800	0.4644	1.3622	1.1635	1.0399	1.0411			

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-S	LOSS-P	POZ/	SEFF-A	SEFF-P
	RACIAN	RACIAN	RACIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.2304	0.1022	0.4954	51.11	40.71	0.1426	0.1900	0.0617	0.9082	73.66	74.31
2	-0.1070	0.1002	0.6100	55.71	62.82	0.1405	0.1805	0.0370	0.9537	60.80	61.57
3	-0.2246	0.0990	0.5941	57.76	61.52	0.1622	0.1855	0.0641	0.9407	57.95	58.49
4	-0.2032	0.1026	0.5104	57.29	60.04	0.1569	0.1687	0.0426	0.9870	60.61	61.27
5	-0.2504	0.1639	0.4387	51.07	53.15	0.1566	0.1904	0.0567	0.9594	44.74	45.35
6	-0.3243	0.1693	0.3900	50.63	52.20	0.1531	0.1820	0.0550	0.9644	43.57	44.13
7	-0.3590	0.1792	0.3704	50.32	49.91	0.1503	0.2575	0.0807	0.9511	39.41	39.94
8	-0.3590	0.2031	0.3501	49.96	49.50	0.1554	0.2517	0.0858	0.9515	38.39	38.91
9	-0.3791	0.2412	0.3580	48.63	48.91	0.1639	0.2640	0.0905	0.9514	36.04	36.56
10	-0.3612	0.2782	0.4277	40.91	43.23	0.1821	0.2827	0.1005	0.9500	22.00	23.20

W CORR	W CORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			S	S			S
75.71	91.8	1.1612	1.4677	71.09	73.96	1.0537	0.9549	49.07

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1799	0.1692	182.0	275.4	182.0	169.4	0.9452	217.2	0.0	0.9045	0.5506	0.8134	147.9	161.8	0.7096	0.5263	234.5	178.2
2	0.1527	0.1384	192.0	266.9	192.0	181.8	0.9716	195.4	0.0	0.8197	0.5831	0.7858	165.6	177.3	0.7699	0.5380	253.6	182.7
3	0.1318	0.1167	194.7	250.9	194.7	194.9	0.9852	169.4	0.0	0.7412	0.5918	0.7355	185.3	194.4	0.8171	0.5469	268.8	186.5
4	0.1136	0.0946	195.5	237.7	195.5	184.5	0.9892	149.8	0.0	0.6817	0.5943	0.6945	203.5	210.7	0.8579	0.5677	282.2	194.3
5	0.0825	0.0681	197.0	213.9	197.0	176.8	0.9908	120.5	0.0	0.5984	0.5993	0.6212	244.5	248.1	0.9551	0.6332	314.0	218.1
6	0.0606	0.0539	197.7	208.3	197.7	174.5	0.9894	113.7	0.0	0.5776	0.6017	0.6031	264.2	266.7	1.0094	0.6722	330.0	232.1
7	0.0597	0.0481	197.9	206.6	197.9	174.4	0.9870	110.3	0.0	0.5645	0.6023	0.5976	276.8	278.3	1.0356	0.7004	340.3	242.2
8	0.0507	0.0392	198.2	203.8	198.2	173.1	0.9844	107.4	0.0	0.5566	0.6031	0.5884	289.2	290.3	1.0670	0.7265	350.8	251.6
9	0.0389	0.0299	198.0	201.6	198.0	171.3	0.9808	106.4	0.0	0.5563	0.6025	0.5808	302.7	302.7	1.1006	0.7502	361.7	260.5
10	0.0239	0.0179	194.3	199.3	194.3	168.3	0.9703	107.1	0.0	0.5669	0.5993	0.5723	317.9	317.9	1.1321	0.7739	372.5	269.7
11	0.0168	0.0076	183.0	189.4	183.0	155.7	0.9420	108.1	0.0	0.6267	0.5540	0.5407	330.7	330.6	1.1441	0.7747	378.0	271.5

SL	INCS	INCH	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B*-1	B*-2	WB*-1	WB*-2	PD/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0055	0.1024	0.2231	0.5465	37.26	36.90	0.4648	0.2117	0.0473	1.4056	84.93	84.19	0.6017	0.3149	-147.9	55.4	1.3593
2	0.0024	0.0919	0.2164	0.8100	39.85	41.85	0.4778	0.1522	0.0586	1.4146	87.64	87.04	0.7110	0.0989	-165.4	18.1	1.4062
3	0.0070	0.0591	0.2324	0.6275	40.68	44.33	0.4784	0.1212	0.0332	1.3984	88.85	88.31	0.7610	0.1335	-185.3	-24.6	1.4095
4	0.0133	0.1026	0.2213	0.4878	40.93	45.91	0.4663	0.0907	0.0255	1.3886	90.65	90.20	0.8062	0.3184	-204.5	-60.9	1.4053
5	0.0064	0.0840	0.1401	0.2677	41.18	45.32	0.4324	0.0640	0.0181	1.3701	91.57	91.19	0.8934	0.6257	-244.5	-127.4	1.3888
6	0.0057	0.0752	0.1064	0.2087	41.20	45.23	0.4179	0.0439	0.0171	1.3749	91.35	90.95	0.9291	0.7204	-264.2	-153.1	1.3917
7	0.0224	0.0718	0.0966	0.1848	41.12	45.25	0.4179	0.0439	0.0171	1.3847	92.13	91.76	0.9508	0.7659	-274.6	-167.8	1.3982
8	0.0327	0.0730	0.0885	0.1579	41.05	45.36	0.3964	0.0573	0.0150	1.3900	91.82	91.43	0.9706	0.8126	-289.2	-182.7	1.3999
9	0.0374	0.0785	0.0818	0.1384	40.87	45.02	0.3822	0.0646	0.0166	1.3976	90.65	90.19	0.9918	0.8535	-302.7	-194.2	1.4024
10	0.0464	0.0884	0.0886	0.1252	39.88	44.26	0.3915	0.0750	0.0190	1.4151	89.23	88.69	1.0224	0.8972	-317.9	-210.8	1.4048
11	0.0723	0.1110	0.1535	0.1052	37.23	40.72	0.4000	0.0839	0.0200	1.4320	88.28	87.67	1.0453	0.9601	-330.7	-222.5	1.3800

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		Σ	Σ	SQR			Σ	Σ
1.1117	1.3952	89.44	89.93	198.83	1.1117	1.3952	89.44	89.93

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	INLET	INLET	INLET	STAGE
1	0.1940	0.1400	248.2	155.7	135.7	152.5	205.2	31.4	0.9723	0.2011	0.7242	0.4403	1.2865	1.1214	1.3306	1.1214	1.214	
2	0.1289	0.0992	249.6	175.5	165.8	172.0	184.6	34.8	0.8435	0.1988	0.7292	0.4993	1.3517	1.1198	1.3624	1.1198	1.198	
3	0.0834	0.0687	241.0	181.8	177.9	176.4	162.6	29.8	0.7403	0.1642	0.7036	0.5198	1.3824	1.1139	1.3713	1.1139	1.139	
4	0.0556	0.0496	233.0	181.5	182.7	179.3	144.7	28.4	0.6694	0.1570	0.6797	0.5200	1.3872	1.1090	1.3706	1.1090	1.090	
5	0.0247	0.0271	216.2	176.4	181.1	174.4	118.1	27.0	0.5775	0.1537	0.6283	0.5062	1.3753	1.1032	1.3567	1.1032	1.032	
6	0.0170	0.0202	212.4	177.5	180.5	175.4	111.8	27.4	0.5545	0.1549	0.6159	0.5090	1.3774	1.1048	1.3609	1.1048	1.048	
7	0.0134	0.0165	211.8	177.8	181.6	175.9	109.0	25.9	0.5407	0.1460	0.6136	0.5095	1.3776	1.1063	1.3644	1.1063	1.063	
8	0.0112	0.0140	210.0	176.4	181.0	174.5	106.5	25.4	0.5317	0.1445	0.6076	0.5048	1.3730	1.1080	1.3634	1.1080	1.080	
9	0.0093	0.0116	208.0	177.1	180.2	175.2	105.6	25.7	0.5301	0.1457	0.6029	0.5062	1.3745	1.1115	1.3700	1.1115	1.115	
10	0.0062	0.0079	207.7	178.3	178.3	176.0	106.5	28.8	0.5386	0.1624	0.5977	0.5084	1.3773	1.1176	1.3873	1.1176	1.176	
11	0.0025	0.0034	198.8	169.6	167.0	166.0	107.9	34.5	0.5736	0.2047	0.5687	0.4809	1.3532	1.1235	1.4046	1.1235	1.235	

SL	INCS	INCH	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0526	0.1349	0.2949	0.7712	32.34	39.00	0.5170	0.1798	0.0372	0.9468	70.67	71.25
2	0.0176	0.1069	0.2415	0.6447	39.64	45.07	0.4318	0.1279	0.0283	0.9618	77.10	78.06
3	0.0425	0.0529	0.1881	0.5760	43.55	47.86	0.3779	0.0676	0.0162	0.9807	83.02	83.76
4	0.0292	0.0116	0.1710	0.5125	45.49	48.21	0.3485	0.0480	0.0122	0.9872	86.54	87.13
5	0.1595	0.0470	0.1561	0.4238	46.24	47.04	0.3057	0.0415	0.0120	0.9903	88.26	88.76
6	0.1810	0.0628	0.1513	0.3996	46.45	47.26	0.2873	0.0460	0.0141	0.9896	87.85	88.37
7	0.1958	0.0739	0.1398	0.3947	46.54	47.33	0.2860	0.0659	0.0209	0.9852	87.37	87.92
8	0.2092	0.0837	0.1369	0.3871	46.94	46.84	0.2881	0.0870	0.0286	0.9808	85.79	86.40
9	0.2217	0.0927	0.1380	0.3844	46.78	46.90	0.2830	0.0916	0.0311	0.9801	84.47	85.15
10	0.2484	0.1159	0.1625	0.3762	46.26	46.89	0.2746	0.0911	0.0320	0.9805	83.42	84.17
11	0.2687	0.1339	0.2444	0.3689	43.02	43.79	0.2282	0.1088	0.0362	0.9802	82.54	83.35

NCCRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	Σ
RAD/SEC			Σ	Σ			Σ	Σ
814.01	1.1117	1.3690	84.11	84.81	1.1117	0.9812	84.11	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1467	0.0995	143.7	244.0	140.4	192.1	30.6	150.4	0.2130	0.6581	0.4052	0.6035	184.0	195.9	0.5865	0.5530	207.9	197.4
2	0.1032	0.0746	179.5	240.2	176.4	196.1	33.2	141.5	0.1851	0.6264	0.5114	0.6740	200.0	208.6	0.6919	0.5762	242.8	205.4
3	0.0788	0.0578	190.4	233.9	188.3	196.3	27.9	127.3	0.1465	0.5735	0.5462	0.6576	214.9	221.2	0.7615	0.6115	265.4	217.6
4	0.0573	0.0411	190.4	222.7	188.4	190.7	27.8	115.0	0.1462	0.5418	0.5475	0.6261	230.9	235.1	0.7967	0.6336	277.1	225.3
5	0.0186	0.0101	186.1	199.4	184.1	175.7	27.2	98.5	0.1465	0.5157	0.5353	0.5592	247.2	248.4	0.8701	0.6806	302.5	242.9
6	0.0118	0.0063	185.5	190.3	184.1	167.8	26.4	89.7	0.1425	0.4911	0.5363	0.5322	280.0	280.3	0.9005	0.7102	313.4	253.9
7	0.0083	0.0049	183.9	187.0	182.1	167.0	25.3	84.2	0.1380	0.4671	0.5276	0.5226	292.5	292.5	0.9280	0.7461	323.4	267.0
8	0.0025	0.0005	183.9	188.0	182.1	168.4	26.1	83.6	0.1422	0.4606	0.5265	0.5240	309.7	308.6	0.9648	0.7831	337.0	281.0
9	0.0007	0.0002	184.0	188.5	181.6	167.1	29.4	87.1	0.1674	0.4804	0.5252	0.5232	321.5	320.8	0.9819	0.7976	344.0	287.3
10	0.0002	0.0002	175.0	179.4	171.5	154.2	34.4	91.7	0.1811	0.5365	0.4969	0.4952	333.3	332.9	0.9784	0.7902	344.6	286.2

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B ² -1	B ² -2	VO ² -1	VO ² -2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0811	0.0403	0.3091	0.5947	36.43	52.72	0.2074	-0.0925	-0.0219	1.3054	107.70	107.99	0.8262	0.2295	-153.4	-45.5	1.6842
2	0.1418	0.0325	0.1859	0.4248	46.35	54.82	0.2826	0.0461	0.0114	1.2549	94.65	94.47	0.7553	0.3305	-166.9	-67.1	1.7139
3	0.1306	0.0315	0.1565	0.3359	49.89	56.70	0.2895	0.0542	0.0136	1.2405	92.57	92.34	0.7636	0.4447	-187.0	-93.9	1.7222
4	0.1115	0.0228	0.1324	0.2613	49.99	55.95	0.2833	0.0339	0.0085	1.2292	94.68	94.52	0.8225	0.5612	-203.2	-120.1	1.7029
5	0.0614	0.0062	0.0999	0.1421	48.98	51.59	0.2784	0.0569	0.0138	1.1983	88.89	88.40	0.9165	0.7744	-240.1	-169.9	1.6445
6	0.0063	0.0125	0.1058	0.0941	48.56	49.89	0.2620	0.0602	0.0140	1.1785	84.83	84.52	0.9431	0.8490	-253.6	-190.6	1.6241
7	0.0212	0.0203	0.1034	0.0775	48.39	49.72	0.2416	0.0454	0.0105	1.1780	89.33	89.08	0.9726	0.8951	-267.3	-208.3	1.6182
8	0.0196	0.0152	0.0770	0.0720	48.22	50.05	0.2312	0.0466	0.0108	1.1824	88.79	88.52	0.9999	0.9280	-283.6	-225.0	1.6255
9	0.0180	0.0208	0.0659	0.0646	47.90	49.43	0.2325	0.0580	0.0136	1.1834	86.14	85.80	1.0145	0.9499	-292.1	-233.7	1.6290
10	0.0030	0.0419	0.1015	0.0477	44.83	45.20	0.2380	0.0612	0.0137	1.1862	85.73	85.38	1.0496	1.0020	-298.8	-241.2	1.6027

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SGM			%	%
1.1795	1.6540	86.32	87.25	174.67	1.0611	1.2097	91.38	91.61

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1223	0.1404	224.1	193.8	188.5	193.8	147.8	2.6	0.7166	0.0134	0.6233	0.5339	1.6439	1.2034	1.2737	1.0731
2	0.0891	0.0942	229.7	203.1	183.3	203.1	138.4	0.7	0.6443	0.0032	0.6419	0.5627	1.6927	1.1970	1.2378	1.0737
3	0.0654	0.1474	229.1	202.8	192.3	202.8	124.5	-2.7	0.5738	-0.0135	0.6430	0.5642	1.7035	1.1871	1.2272	1.0683
4	0.0479	0.0471	221.4	194.4	190.7	194.4	112.8	-2.8	0.5337	-0.0146	0.6230	0.5419	1.6807	1.1777	1.2138	1.0639
5	0.0233	0.0209	200.8	175.7	175.8	175.7	97.0	-2.6	0.5041	-0.0147	0.5628	0.4888	1.6225	1.1697	1.1785	1.0594
6	0.0175	0.0154	191.7	168.9	170.1	168.8	88.7	-4.5	0.4988	-0.0265	0.5363	0.4696	1.6021	1.1668	1.1625	1.0551
7	0.0166	0.0128	188.6	165.6	169.0	165.6	83.6	-1.2	0.4992	-0.0075	0.5272	0.4601	1.5921	1.1670	1.1593	1.0537
8	0.0119	0.0108	189.7	168.3	170.3	168.3	83.5	1.1	0.4560	0.0064	0.5287	0.4683	1.5988	1.1740	1.1628	1.0554
9	0.0089	0.0085	189.9	168.8	168.8	168.7	87.1	5.0	0.4764	0.0295	0.5275	0.4661	1.5996	1.1822	1.1622	1.0574
10	0.0040	0.0039	181.3	160.0	156.5	159.8	91.6	8.1	0.5296	0.0507	0.5007	0.4396	1.5748	1.1894	1.1655	1.0585

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN						TOTAL	TOTAL	TOT-STG	TOT-STG
								PO1			
1	-0.1710	0.1620	0.7031	47.96	56.51	0.2695	0.1044	0.0220	0.9760	97.70	97.78
2	-0.1158	0.1436	0.6416	52.80	60.41	0.2493	0.0529	0.0119	0.9872	88.76	89.10
3	-0.1602	0.1311	0.5873	56.04	61.15	0.2453	0.0411	0.0098	0.9901	88.09	88.43
4	-0.1534	0.1345	0.5482	56.06	58.99	0.2524	0.0519	0.0131	0.9881	88.97	89.27
5	-0.2189	0.1435	0.5188	52.08	53.17	0.2670	0.0758	0.0219	0.9854	88.77	81.21
6	-0.2434	0.1357	0.5053	50.45	51.04	0.2639	0.0717	0.0215	0.9873	79.74	80.17
7	-0.2637	0.1593	0.4667	50.21	49.95	0.2627	0.0937	0.0294	0.9838	80.27	80.67
8	-0.2813	0.1834	0.4496	50.48	50.52	0.2563	0.0959	0.0317	0.9794	79.38	79.81
9	-0.3053	0.2261	0.4465	49.77	50.33	0.2602	0.1036	0.0355	0.9821	76.39	76.88
10	-0.3155	0.2728	0.4788	45.74	47.20	0.2817	0.1109	0.0394	0.9825	76.38	76.88

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
814.01	91.6	1.1795	1.6309	83.52	86.61	1.0611	0.9849	83.88

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1938	0.1767	169.8	268.6	169.8	146.2	0.9217	225.3	0.0	0.9942	0.5118	0.7877	152.1	166.3	0.6871	0.4623	227.9	157.7
2	0.1799	0.1585	184.6	262.7	184.6	141.8	0.9559	207.0	0.0	0.9071	0.5589	0.7679	170.2	182.3	0.7604	0.4783	251.1	163.7
3	0.1636	0.1403	191.8	253.6	191.8	136.5	0.9773	186.1	0.0	0.8129	0.5825	0.7398	190.5	199.9	0.8210	0.5111	270.4	175.2
4	0.1475	0.1260	197.2	244.5	197.2	130.3	0.9981	166.8	0.0	0.7419	0.5998	0.7109	209.2	216.6	0.8766	0.5459	287.5	187.6
5	0.1098	0.0598	200.7	224.6	200.7	129.7	0.9863	134.7	0.0	0.6444	0.6114	0.6499	251.3	255.1	0.9797	0.6260	321.6	216.3
6	0.0885	0.0781	201.1	218.8	201.1	127.7	0.9782	127.6	0.0	0.6240	0.6125	0.6309	271.6	274.2	1.0295	0.6643	337.9	230.3
7	0.0747	0.0667	203.0	217.0	203.0	127.7	0.9787	126.5	0.0	0.6123	0.6189	0.6248	284.6	286.1	1.0657	0.6914	349.6	240.1
8	0.0614	0.0549	204.7	214.8	204.7	127.0	0.9793	121.6	0.0	0.6027	0.6254	0.6172	297.3	298.4	1.1012	0.7189	361.0	250.2
9	0.0474	0.0428	205.0	211.0	205.0	123.1	0.9768	120.6	0.0	0.6090	0.6256	0.6044	311.2	311.2	1.1369	0.7374	372.6	257.4
10	0.0301	0.0270	200.5	209.8	200.5	121.4	0.9630	120.9	0.0	0.6146	0.6108	0.5986	326.8	326.8	1.1678	0.7644	383.4	267.9
11	0.0131	0.0119	196.4	206.8	196.4	117.0	0.9499	121.9	0.0	0.6305	0.5973	0.5876	340.0	339.9	1.1940	0.7804	392.6	274.6

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	C*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0546	0.1514	0.1550	1.1136	34.68	30.91	0.5409	0.3709	0.0808	1.3846	76.37	73.26	0.7307	-0.3829	-152.1	59.0	1.3131
2	0.0333	0.1276	0.1636	0.8985	38.22	36.22	0.5588	0.3059	0.0772	1.3944	77.54	76.46	0.7468	-0.1918	-170.2	24.8	1.3715
3	0.0306	0.1227	0.1855	0.8940	39.54	41.05	0.5328	0.2190	0.0603	1.4094	81.99	81.09	0.7846	0.0907	-190.5	-15.8	1.4115
4	0.0250	0.1194	0.1830	0.5378	41.08	43.99	0.5096	0.1641	0.0467	1.4115	84.68	83.92	0.8179	0.2801	-209.2	-51.7	1.4307
5	0.0101	0.0857	0.1080	0.3076	41.39	46.26	0.4629	0.0855	0.0240	1.4252	90.30	89.80	0.8991	0.5915	-251.3	-120.4	1.4463
6	0.0117	0.0812	0.0769	0.2443	41.19	46.46	0.4476	0.0633	0.0174	1.4463	92.40	91.99	0.9351	0.6908	-271.6	-146.6	1.4557
7	0.0240	0.0735	0.0634	0.2136	41.46	46.85	0.4387	0.0615	0.0168	1.4554	92.38	91.96	0.9524	0.7388	-284.6	-161.5	1.4656
8	0.0309	0.0711	0.0593	0.1835	41.67	47.00	0.4308	0.0644	0.0173	1.4614	91.76	91.31	0.9687	0.7854	-297.3	-176.8	1.4725
9	0.0343	0.0734	0.0620	0.1550	41.60	46.11	0.4317	0.0814	0.0214	1.4644	89.41	88.82	0.9887	0.8337	-311.2	-190.5	1.4718
10	0.0478	0.0866	0.0681	0.1439	40.41	45.81	0.4271	0.0798	0.0207	1.4945	89.71	89.11	1.0206	0.8767	-326.8	-205.9	1.4809
11	0.0539	0.0627	0.1104	0.1299	39.37	44.62	0.4288	0.0889	0.0225	1.5143	88.65	87.97	1.0469	0.9170	-340.0	-218.0	1.4800

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
				SQM				
1.1276	1.4460	87.14	87.79	200.27	1.1276	1.4460	87.14	87.79

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	STAGE	TO1
1	0.1889	0.1330	241.5	128.4	114.0	125.6	213.0	26.3	1.0780	0.2038	0.7001	0.3595	1.2666	1.1295	1.3373	1.1295
2	0.1106	0.0846	263.2	149.1	141.9	145.7	197.4	31.7	0.9459	0.2131	0.7048	0.4193	1.3173	1.1304	1.3418	1.1304
3	0.0882	0.0586	242.3	167.8	165.6	164.9	176.9	30.7	0.8176	0.1837	0.7033	0.4748	1.3698	1.1273	1.3682	1.1273
4	0.0423	0.0381	239.2	176.7	178.3	174.2	159.4	29.8	0.7291	0.1694	0.6944	0.5022	1.3971	1.1234	1.3785	1.1234
5	0.0153	0.0179	227.7	180.1	185.5	178.2	152.0	26.0	0.6183	0.1447	0.6596	0.5134	1.4075	1.1187	1.3889	1.1187
6	0.0095	0.0128	224.6	183.2	186.3	181.1	125.4	27.9	0.5925	0.1527	0.6491	0.5222	1.4152	1.1209	1.4060	1.1209
7	0.0067	0.0058	224.1	184.9	187.4	182.6	122.8	29.0	0.5798	0.1575	0.6469	0.5269	1.4194	1.1232	1.4096	1.1232
8	0.0051	0.0077	223.2	185.1	188.0	182.9	120.3	28.2	0.5691	0.1529	0.6434	0.5268	1.4190	1.1295	1.4083	1.1255
9	0.0029	0.0049	226.5	185.7	185.3	183.6	119.6	27.9	0.5731	0.1506	0.6337	0.5276	1.4196	1.1299	1.4127	1.1299
10	0.0002	0.0010	220.2	187.5	184.4	184.7	120.3	32.5	0.5778	0.1741	0.6306	0.5313	1.4229	1.1367	1.4364	1.1367
11	0.0015	0.0008	217.8	180.5	180.7	177.2	121.6	34.3	0.5925	0.1915	0.6214	0.5088	1.4008	1.1434	1.4340	1.1434

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	TOY-STG	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	STAGE	TOY-STG
1	0.1583	0.2406	0.2976	0.8742	25.51	32.23	0.6281	0.1230	0.0254	0.9656	66.88	68.21	68.21	68.21
2	0.1200	0.2093	0.2558	0.7328	32.96	37.97	0.5385	0.1299	0.0286	0.9632	67.21	68.54	68.54	68.54
3	0.0348	0.1303	0.2075	0.6339	39.81	43.75	0.4532	0.1026	0.0245	0.9710	73.72	74.86	74.86	74.86
4	0.0296	0.0713	0.1835	0.5597	43.94	46.71	0.3989	0.0851	0.0217	0.9766	77.87	78.86	78.86	78.86
5	0.0186	0.0661	0.1471	0.4736	47.44	48.08	0.3443	0.1062	0.0308	0.9731	82.57	83.35	83.35	83.35
6	0.0130	0.0247	0.1451	0.4358	48.18	48.81	0.3186	0.1130	0.0347	0.9721	84.60	85.32	85.32	85.32
7	0.0156	0.0347	0.1514	0.4223	48.78	49.17	0.3089	0.1290	0.0409	0.9684	89.70	84.47	84.47	84.47
8	0.0171	0.0462	0.1453	0.4162	49.17	49.14	0.3073	0.1497	0.0491	0.9636	81.94	82.80	82.80	82.80
9	0.0178	0.0496	0.1428	0.4225	48.52	49.13	0.3001	0.1497	0.0508	0.9646	79.87	80.83	80.83	80.83
10	0.0209	0.0766	0.1742	0.4037	48.39	49.14	0.2909	0.1672	0.0586	0.9607	79.77	80.78	80.78	80.78
11	0.0249	0.1150	0.2312	0.4010	47.37	46.66	0.3181	0.2335	0.0840	0.9465	75.69	76.89	76.89	76.89

NCUR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			STAGE	STAGE
RAD/SEC								
836.83	1.1276	1.3971	78.62	79.61	1.1276	0.9662	78.62	78.62

ROTOR 2

RUN NO414, SPEED CODE 10, POINT NO 44

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1410	0.C936	124.4	233.6	121.7	173.0	25.7	157.1	0.2046	0.7305	0.3482	0.6449	189.2	201.4	0.5703	0.4944	203.8	178.6
2	0.0801	0.0420	140.6	229.5	157.6	176.9	30.7	146.2	0.1939	0.6866	0.4531	0.6362	205.6	214.5	0.6644	0.5256	235.5	189.6
3	0.C439	0.C439	140.8	224.8	178.3	174.6	30.0	135.2	0.1661	0.6431	0.5140	0.6242	220.9	227.4	0.7426	0.5605	261.2	201.8
4	0.0448	0.0328	187.1	217.3	184.9	180.3	28.8	121.3	0.1541	0.5913	0.5338	0.6044	237.4	241.7	0.7952	0.6028	278.8	216.8
5	0.0122	0.0065	189.9	200.8	188.1	172.7	26.6	102.5	0.1404	0.5357	0.5430	0.5572	274.7	275.9	0.8900	0.6796	311.4	244.7
6	0.C067	0.0032	191.4	187.4	189.2	167.0	28.5	95.5	0.1497	0.5194	0.5466	0.5331	287.9	288.2	0.9169	0.7067	321.0	255.0
7	0.C057	0.0030	191.2	188.7	189.0	167.0	28.3	87.9	0.1487	0.4886	0.5452	0.5231	300.7	300.7	0.9458	0.7497	331.6	270.5
8	0.0017	0.C005	191.3	191.9	189.3	170.6	27.9	87.8	0.1463	0.4749	0.5441	0.5295	318.4	317.2	0.9866	0.7897	346.7	285.9
9	0.C009	0.0024	192.5	193.6	189.6	169.3	33.1	93.8	0.1729	0.5058	0.5460	0.5325	330.5	329.8	1.0004	0.7989	352.7	290.4
10	0.C011	0.0021	184.1	184.7	180.8	158.8	34.4	94.3	0.1877	0.5358	0.5193	0.5051	342.6	342.2	1.0083	0.8051	357.4	294.4

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VB'-1	VB'-2	PD/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0194	0.1409	0.3272	0.6792	31.37	48.76	0.2992	-0.1559	-0.0368	1.3560	111.12	111.61	0.9268	0.2476	-163.4	-44.3	1.7262
2	0.0627	0.0466	0.2208	0.4690	41.05	51.15	0.3457	-0.0150	-0.0037	1.2998	101.54	101.59	0.8344	0.3654	-175.0	-68.2	1.7511
3	0.0936	0.0054	0.1843	0.3451	46.99	52.99	0.3533	0.0440	0.0109	1.2655	94.46	94.21	0.8175	0.4724	-190.9	-92.2	1.7634
4	0.0893	0.C006	0.1588	0.2573	48.98	54.10	0.3271	0.0188	0.0046	1.2560	97.24	97.14	0.8448	0.5874	-208.6	-120.3	1.7594
5	0.0557	0.0118	0.1129	0.1348	50.13	52.58	0.2985	0.0384	0.0092	1.2250	92.82	92.61	0.9221	0.7873	-248.1	-173.4	1.7905
6	0.0479	0.C098	0.1177	0.0836	50.44	50.93	0.2803	0.0383	0.0089	1.2038	91.96	91.75	0.9404	0.8568	-259.3	-192.7	1.7076
7	0.0297	0.0120	0.1137	0.0588	50.34	51.10	0.2506	0.0145	0.0033	1.1988	96.67	96.58	0.9642	0.9054	-272.4	-212.8	1.7013
8	0.0263	0.0125	0.0802	0.0620	50.17	52.06	0.2406	0.0180	0.0042	1.2086	95.79	95.68	0.9932	0.9312	-290.5	-229.5	1.7160
9	0.0294	0.0054	0.0643	0.0547	50.06	51.41	0.2453	0.0322	0.0075	1.2115	92.61	92.41	1.0030	0.9683	-297.4	-236.0	1.7243
10	0.0064	0.0325	0.1006	0.0393	47.27	47.79	0.2456	0.0347	0.0078	1.2138	92.08	91.88	1.0403	1.0010	-308.3	-247.9	1.6973

TC/TO	PD/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
		%	%	%			%	%
1.2008	1.7280	84.20	85.36	173.61	1.0650	1.2368	96.20	96.32

STATOR 2

RUN NO414, SPEED CODE 10, POINT NO 44

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1227	0.1405	217.9	174.9	153.9	174.8	154.3	3.1	0.7832	0.0175	0.6002	0.4755	1.6797	1.2213	1.3191	1.0813
2	0.0901	0.0959	221.6	184.5	169.2	184.5	143.1	3.7	0.7001	0.0201	0.6125	0.5044	1.7244	1.2153	1.2772	1.0762
3	0.0459	0.0462	221.6	188.0	177.8	188.0	132.3	-1.0	0.6387	0.0053	0.6148	0.5163	1.7469	1.2070	1.2523	1.0733
4	0.0469	0.0446	217.1	184.5	181.5	184.4	119.0	-2.8	0.5797	0.0149	0.6036	0.5079	1.7418	1.1985	1.2430	1.0684
5	0.0223	0.0194	201.7	173.1	174.7	173.1	101.0	-4.2	0.5242	0.0241	0.5601	0.4767	1.7083	1.1915	1.2086	1.0637
6	0.0166	0.0142	193.4	167.1	169.0	167.1	94.1	-4.3	0.5082	0.0259	0.5363	0.4600	1.6900	1.1886	1.1911	1.0586
7	0.0129	0.0110	190.1	165.1	169.0	165.1	87.0	-2.1	0.4753	0.0129	0.5269	0.4548	1.6839	1.1867	1.1866	1.0547
8	0.0099	0.0087	193.1	149.3	172.0	169.3	87.7	0.9	0.4717	0.0054	0.5332	0.4645	1.6939	1.1972	1.1930	1.0583
9	0.0061	0.0055	194.6	171.3	170.4	171.2	93.8	6.9	0.5033	0.0402	0.5353	0.4686	1.6983	1.2049	1.1931	1.0609
10	0.0019	0.0017	185.5	159.7	159.9	159.5	94.2	7.8	0.5324	0.0486	0.5075	0.4360	1.6634	1.2145	1.1897	1.0618

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
							%	%	%	%	%
1	-0.1044	0.1661	0.7657	44.58	52.50	0.3415	0.1251	0.0264	0.9730	101.09	101.05
2	-0.0644	0.1604	0.6801	49.61	56.38	0.3070	0.0730	0.0157	0.9843	96.77	96.95
3	-0.C933	0.1394	0.6440	52.78	58.27	0.2930	0.0415	0.0099	0.9907	90.37	90.67
4	-0.1474	0.1341	0.5946	54.48	57.64	0.2901	0.0436	0.0110	0.9905	92.90	93.12
5	-0.1988	0.1342	0.5483	53.05	54.15	0.2911	0.0579	0.0167	0.9889	87.16	87.50
6	-0.2140	0.1363	0.5341	51.44	52.22	0.2887	0.0542	0.0163	0.9904	87.25	87.57
7	-0.2475	0.1539	0.4882	51.63	51.63	0.2780	0.0623	0.0155	0.9893	91.51	91.71
8	-0.2656	0.1824	0.4643	52.38	52.55	0.2717	0.0757	0.0250	0.9867	88.52	88.80
9	-0.2784	0.2367	0.4631	51.66	52.76	0.2730	0.0859	0.0295	0.9848	84.74	85.12
10	-0.3126	0.2767	0.4838	48.04	48.58	0.3050	0.1230	0.0437	0.9802	82.12	82.55

NCORR	NCORR	TO/TO	PD/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
RAD/SEC	KG/SEC			%	%			%	%
838.83	92.95	1.2008	1.7076	81.94	83.23	1.0650	0.9865	89.85	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1925	0.1674	173.4	270.4	173.4	142.8	0.9204	216.0	0.0	0.9229	0.5232	0.7964	150.1	164.2	0.6920	0.5030	229.3	170.8
2	0.1742	0.1393	191.4	244.2	191.4	175.9	0.9692	197.2	0.0	0.8407	0.5811	0.7759	168.0	179.9	0.7732	0.5192	254.7	176.8
3	0.1527	0.1161	196.1	250.7	196.1	181.4	0.9779	173.1	0.0	0.7615	0.5963	0.7336	188.1	197.3	0.8262	0.5353	271.7	183.0
4	0.1313	0.1002	199.1	239.3	199.1	183.3	0.9826	153.4	0.0	0.6985	0.6060	0.6904	204.5	213.8	0.8732	0.5625	286.9	192.8
5	0.0663	0.0722	202.4	217.2	202.4	178.9	0.9866	123.2	0.0	0.6037	0.6168	0.6304	248.1	251.7	0.9758	0.6392	320.1	220.3
6	0.0477	0.0588	202.3	211.6	202.3	176.8	0.9863	116.3	0.0	0.5822	0.6165	0.6123	248.1	270.6	1.0236	0.6791	355.8	234.7
7	0.0563	0.0568	201.3	209.2	201.3	176.0	0.9872	113.1	0.0	0.5717	0.6134	0.6045	280.9	282.4	1.0529	0.7055	345.6	244.2
8	0.0456	0.0422	200.4	204.3	200.4	174.8	0.9801	110.4	0.0	0.5636	0.6102	0.5963	293.5	296.5	1.0822	0.7322	355.4	253.9
9	0.0341	0.0325	199.0	205.0	199.0	173.3	0.9765	109.6	0.0	0.5641	0.6059	0.5897	307.1	307.1	1.1141	0.7559	366.0	262.8
10	0.0209	0.0199	195.2	203.1	195.2	170.7	0.9679	110.0	0.0	0.5722	0.5932	0.5821	322.5	322.5	1.1459	0.7815	377.0	272.7
11	0.0092	0.0088	183.6	194.3	183.6	159.8	0.9404	110.5	0.0	0.6051	0.5559	0.5538	335.6	335.6	1.1580	0.7865	382.5	275.9

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0376	0.1345	0.2210	1.0207	35.42	35.04	0.4815	0.2919	0.0564	1.3972	82.70	81.87	0.7137	0.3669	150.1	51.8	1.3353
2	0.0081	0.1024	0.2177	0.8192	39.58	40.00	0.5065	0.2198	0.0558	1.3350	82.28	81.43	0.7216	0.0977	168.0	17.3	1.3903
3	0.0122	0.1044	0.2312	0.6339	40.57	43.07	0.4995	0.1552	0.0426	1.3987	86.01	85.33	0.7663	0.1324	188.1	-24.2	1.4065
4	0.0124	0.1019	0.2184	0.4900	41.14	44.89	0.4833	0.1106	0.0311	1.3972	88.77	88.22	0.8055	0.3155	204.5	-59.8	1.4117
5	0.0014	0.0782	0.1378	0.2642	41.71	45.73	0.4388	0.0488	0.0189	1.3845	91.31	90.90	0.8875	0.6233	248.1	-128.5	1.4045
6	0.0018	0.0713	0.1042	0.2069	41.65	45.71	0.4221	0.0486	0.0184	1.3881	90.81	90.37	0.9252	0.7182	280.9	-154.4	1.4077
7	0.0012	0.0707	0.0909	0.1833	41.40	45.78	0.4109	0.0449	0.0172	1.3963	91.11	90.68	0.9496	0.7662	280.9	-169.2	1.4114
8	0.0044	0.0746	0.0855	0.1405	41.15	45.68	0.4009	0.0447	0.0169	1.4033	90.94	90.49	0.9722	0.8117	293.5	-184.1	1.4143
9	0.0047	0.0807	0.0795	0.1449	40.83	45.38	0.3562	0.0736	0.0190	1.4118	89.61	89.09	0.9960	0.8511	307.1	-197.6	1.4176
10	0.0040	0.0928	0.0856	0.1326	39.91	44.76	0.3937	0.0853	0.0216	1.4277	88.02	87.40	1.0268	0.8942	322.5	-212.6	1.4209
11	0.00771	0.1158	0.1465	0.1170	37.24	41.69	0.3984	0.0898	0.0216	1.4475	87.69	87.03	1.0701	0.9531	335.6	-224.9	1.3997

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.1158	1.4047	88.08	88.64	199.83	1.1158	1.4047	88.08	88.64

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	INLET	INLET	STAGE	T01
1	0.1558	0.1406	242.8	145.1	131.4	142.0	204.1	29.9	0.9573	0.2051	0.7065	0.4091	1.2737	1.1225	1.3359	1.1225
2	0.1294	0.1012	246.4	164.6	159.0	160.8	188.2	35.4	0.8687	0.2156	0.7177	0.4665	1.3319	1.1227	1.3378	1.1227
3	0.0858	0.0722	240.4	177.2	174.0	174.4	166.3	31.3	0.7624	0.1775	0.7010	0.5049	1.3770	1.1183	1.3698	1.1183
4	0.0578	0.0522	235.1	181.0	182.1	178.8	148.8	28.6	0.6849	0.1584	0.6848	0.5174	1.3937	1.1138	1.3794	1.1138
5	0.0267	0.0289	220.5	178.3	164.4	176.1	120.9	27.5	0.5800	0.1550	0.6406	0.5108	1.3894	1.1073	1.3697	1.1073
6	0.0195	0.0226	216.8	179.6	184.2	177.4	114.4	27.8	0.5555	0.1553	0.6286	0.5144	1.3930	1.1087	1.3735	1.1087
7	0.0157	0.0187	215.4	180.7	184.4	178.5	111.6	28.2	0.5441	0.1565	0.6241	0.5172	1.3959	1.1104	1.3807	1.1104
8	0.0127	0.0153	214.1	179.8	184.2	177.7	109.2	27.5	0.5351	0.1535	0.6190	0.5142	1.3933	1.1123	1.3825	1.1123
9	0.0098	0.0120	213.1	180.5	183.4	178.3	108.6	28.5	0.5348	0.1583	0.6149	0.5154	1.3949	1.1164	1.3893	1.1164
10	0.0060	0.0075	212.1	182.0	181.8	179.2	109.4	31.7	0.5417	0.1750	0.6100	0.5181	1.3983	1.1225	1.4047	1.1225
11	0.0021	0.0029	204.2	173.2	171.8	169.6	110.3	35.2	0.5705	0.2045	0.5839	0.4907	1.3734	1.1282	1.4209	1.1282

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0776	0.1599	0.2989	0.7921	30.07	36.21	0.5503	0.1593	0.0329	0.9547	70.43	71.61
2	0.0428	0.1320	0.2583	0.6531	37.56	41.84	0.4692	0.1400	0.0308	0.9592	70.72	71.89
3	0.0204	0.0751	0.2013	0.5649	42.18	46.27	0.3991	0.0727	0.0174	0.9794	79.67	80.55
4	0.0138	0.0271	0.1724	0.5265	44.97	47.91	0.3611	0.0472	0.0120	0.9873	84.65	85.34
5	0.0157	0.0445	0.1574	0.4250	46.86	47.50	0.3145	0.0446	0.0129	0.9893	87.72	88.26
6	0.0180	0.0618	0.1517	0.4002	47.19	47.82	0.2952	0.0445	0.0136	0.9856	87.36	87.91
7	0.0124	0.0705	0.1503	0.3876	47.43	48.06	0.2857	0.0483	0.0153	0.9889	87.49	88.05
8	0.0205	0.0802	0.1459	0.3816	47.50	47.76	0.2813	0.0649	0.0213	0.9852	86.34	86.95
9	0.0269	0.0879	0.1506	0.3766	47.36	47.76	0.2819	0.0715	0.0243	0.9839	84.66	85.36
10	0.0245	0.1128	0.1751	0.3667	46.93	47.79	0.2727	0.0716	0.0251	0.9841	83.28	84.07
11	0.0218	0.1370	0.2442	0.3660	44.12	44.80	0.2861	0.0902	0.0324	0.9814	82.39	83.25

NCCMR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	%
RAC/SEC	%	%	%	%			%	%
825.97	1.1158	1.3807	83.39	84.14	1.1158	0.9829	83.39	

ROTOR 2

														RUN NO414, SPEED CODE 10, POINT NO 44									
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2					
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC					
1	0.1442	0.0579	134.9	239.4	131.8	180.3	29.1	157.5	0.2157	0.7113	0.3797	0.6672	186.7	198.8	0.5781	0.5196	205.4	185.0					
2	0.0567	0.0766	170.1	234.7	166.7	184.0	33.8	145.7	0.1990	0.6662	0.4829	0.6549	203.0	211.7	0.6741	0.5453	237.5	195.4					
3	0.0724	0.0539	187.4	225.8	185.0	188.1	29.5	131.9	0.1578	0.6094	0.5358	0.6425	218.1	224.5	0.7555	0.5804	264.2	209.7					
4	0.0524	0.0390	190.3	220.4	188.3	186.1	27.3	118.1	0.1440	0.5643	0.5459	0.6169	234.3	238.5	0.8028	0.6206	279.9	221.7					
5	0.0169	0.0101	187.6	201.0	185.6	172.0	27.4	106.0	0.1466	0.5437	0.5389	0.5608	271.1	272.3	0.8800	0.6714	306.4	240.6					
6	0.0107	0.0065	188.2	191.9	186.1	166.2	27.9	95.9	0.1486	0.5235	0.5401	0.5347	284.2	284.5	0.9090	0.7003	316.7	251.3					
7	0.0079	0.0054	187.2	188.5	185.2	166.9	27.5	87.6	0.1475	0.4832	0.5366	0.5255	296.8	296.4	0.9369	0.7462	326.8	267.7					
8	0.0021	0.0004	187.4	190.8	185.2	168.1	28.8	90.2	0.1542	0.4921	0.5357	0.5298	314.3	313.1	0.9728	0.7753	340.3	279.2					
9	0.0008	0.0025	187.9	192.4	185.2	167.4	32.0	94.8	0.1713	0.5153	0.5351	0.5320	326.2	325.5	0.9912	0.7882	347.6	285.0					
10	0.0012	0.0021	178.6	182.8	175.1	154.9	35.2	97.1	0.1983	0.5599	0.5064	0.5028	338.2	337.8	0.9927	0.7870	349.9	286.2					

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VM'-1	VM'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0366	0.0848	0.3018	0.6485	33.99	50.27	0.2678	-0.1286	-0.0305	1.3404	109.60	110.70	0.8708	0.2222	-157.6	-41.3	1.7127
2	0.1072	0.0021	0.1973	0.4480	43.47	52.70	0.3164	-0.0077	-0.0019	1.2861	100.77	100.79	0.7899	0.3419	-169.2	-66.0	1.7376
3	0.1182	0.0189	0.1674	0.3377	48.80	55.12	0.3245	0.0426	0.0106	1.2578	94.40	94.21	0.7932	0.4555	-188.5	-92.6	1.7512
4	0.1022	0.0136	0.1449	0.2583	49.86	55.42	0.3074	0.0205	0.0051	1.2478	96.89	96.78	0.8318	0.5735	-207.0	-120.5	1.7398
5	0.0580	0.0096	0.1000	0.1455	49.39	51.94	0.3009	0.0492	0.0119	1.2224	91.00	90.74	0.9199	0.7744	-243.7	-168.3	1.7008
6	0.0456	0.0122	0.1051	0.0946	49.54	50.28	0.2831	0.0508	0.0119	1.2016	89.64	89.37	0.9428	0.8482	-256.3	-188.5	1.6764
7	0.0253	0.0163	0.1057	0.0711	49.25	50.73	0.2487	0.0167	0.0038	1.1992	96.25	96.15	0.9685	0.8974	-249.3	-209.2	1.6714
8	0.0243	0.0145	0.0734	0.0708	49.07	50.90	0.2481	0.0336	0.0079	1.2084	92.42	92.23	0.9952	0.9244	-285.5	-222.9	1.6830
9	0.0236	0.0153	0.0490	0.0255	48.89	50.42	0.2527	0.0509	0.0120	1.2091	88.76	88.45	1.0089	0.9430	-294.2	-230.7	1.6909
10	0.0002	0.0391	0.0983	0.0481	45.79	46.28	0.2553	0.0517	0.0116	1.2126	88.75	88.44	1.7489	0.9988	-303.0	-240.6	1.6627

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.1885	1.7021	87.04	87.98	174.38	1.0651	1.2328	94.46	94.63

STATOR 2

														RUN NO414, SPEED CODE 10, POINT NO 44			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TOT	
1	0.1224	0.1406	221.7	180.2	158.9	180.2	154.7	4.6	0.7886	0.0254	0.6140	0.4929	1.6686	1.2114	1.3058	1.0792	
2	0.0889	0.0954	225.3	191.2	174.5	191.2	147.5	3.7	0.6831	0.0191	0.6266	0.5262	1.7198	1.2043	1.2704	1.0737	
3	0.0649	0.0660	225.5	193.4	185.0	193.4	129.0	-0.9	0.6080	-0.0047	0.6298	0.5346	1.7386	1.1957	1.2485	1.0714	
4	0.0474	0.0458	219.6	187.6	186.5	187.4	115.9	-2.6	0.5556	-0.0138	0.6145	0.5197	1.7255	1.1864	1.2379	1.0672	
5	0.0228	0.0200	202.1	172.5	174.2	172.5	102.4	-2.1	0.5316	-0.0123	0.5641	0.4773	1.6803	1.1796	1.2074	1.0646	
6	0.0171	0.0146	193.2	165.8	168.5	165.8	94.6	-4.1	0.5116	-0.0245	0.5387	0.4589	1.6607	1.1762	1.1901	1.0597	
7	0.0143	0.0123	190.0	163.2	169.1	163.2	86.7	-1.0	0.4736	-0.0062	0.5299	0.4519	1.6533	1.1731	1.1863	1.0551	
8	0.0119	0.0106	192.4	167.1	169.9	167.1	90.2	0.4	0.4878	0.0021	0.5343	0.4610	1.6633	1.1841	1.1921	1.0598	
9	0.0080	0.0074	193.7	168.8	168.9	168.7	94.7	5.7	0.5110	0.0336	0.5358	0.4640	1.6673	1.1937	1.1925	1.0629	
10	0.0031	0.0029	184.5	158.0	157.0	157.9	97.0	6.8	0.5535	0.0428	0.5076	0.4714	1.6359	1.1705	1.1931	1.0639	

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-0.1190	0.1739	0.7432	45.70	53.78	0.3275	0.1149	0.0242	0.9742	99.77	99.78
2	-0.0815	0.1594	0.6644	50.85	58.22	0.2883	0.0463	0.0104	0.9892	95.86	96.00
3	-0.1261	0.1600	0.6126	54.61	59.73	0.2778	0.0286	0.0068	0.9933	91.59	91.84
4	-0.1715	0.1352	0.5695	55.60	58.36	0.2805	0.0335	0.0085	0.9925	93.41	93.62
5	-0.1914	0.1459	0.5439	52.46	53.62	0.2948	0.0541	0.0156	0.9895	85.49	85.87
6	-0.2106	0.1377	0.5360	50.86	51.52	0.2949	0.0494	0.0149	0.9912	85.26	85.62
7	-0.2493	0.1606	0.4798	51.29	50.78	0.2855	0.0636	0.0199	0.9889	90.75	90.97
8	-0.2494	0.1792	0.4857	51.31	51.63	0.2852	0.0678	0.0224	0.9880	85.97	86.32
9	-0.2707	0.2302	0.4774	50.75	51.74	0.2865	0.0775	0.0266	0.9862	81.84	82.28
10	-0.2516	0.2649	0.5107	46.78	47.91	0.3180	0.0995	0.0354	0.9839	80.82	81.29

NCORR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
825.97	91.11	1.1885	1.6820	84.96	86.01	1.0651	0.9882	88.95

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	PO1/PO	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1915	0.1679	167.7	265.5	167.7	158.3	0.9303	213.1	0.0	0.9299	0.5057	0.7806	150.5	164.6	0.6787	0.4889	225.3	165.6
2	0.1725	0.1405	188.3	259.9	188.3	172.4	0.9730	194.5	0.0	0.8439	0.5711	0.7621	168.5	180.4	0.7663	0.5073	252.7	173.0
3	0.1913	0.1156	193.5	249.1	193.5	180.9	0.9844	171.2	0.0	0.7573	0.5878	0.7287	188.6	197.8	0.8207	0.5350	270.2	182.9
4	0.1304	0.1034	196.1	237.9	196.1	182.8	0.9842	152.3	0.0	0.6948	0.5963	0.6942	207.1	214.7	0.8672	0.5631	285.2	193.0
5	0.0887	0.0751	201.7	215.8	201.7	175.9	0.9888	125.0	0.0	0.6183	0.6145	0.6253	248.7	252.7	0.9757	0.6294	320.2	217.2
6	0.0712	0.0622	203.3	212.3	203.3	175.0	0.9972	120.3	0.0	0.6029	0.6198	0.6134	268.6	271.3	1.0275	0.6677	337.0	231.1
7	0.0601	0.0539	203.1	211.2	203.1	175.1	0.9846	118.0	0.0	0.5936	0.6192	0.6091	281.6	283.1	1.0586	0.6941	347.2	240.7
8	0.0490	0.0445	202.8	208.8	202.8	173.8	0.9818	115.7	0.0	0.5877	0.6181	0.6010	294.3	295.3	1.0893	0.7193	357.4	249.9
9	0.0366	0.0339	201.9	206.6	201.9	171.8	0.9775	115.2	0.0	0.5909	0.6154	0.5936	307.9	307.9	1.1222	0.7409	364.2	256.2
10	0.0221	0.0203	197.7	204.1	197.7	168.1	0.9664	115.8	0.0	0.6032	0.6014	0.5832	323.4	323.4	1.1531	0.7634	379.0	267.1
11	0.0095	0.0087	187.2	194.7	187.2	156.3	0.9400	116.0	0.0	0.6384	0.5673	0.5533	336.4	336.4	1.1670	0.7678	385.0	270.2

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	V0'-1	V0'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0553	0.1522	0.2417	1.0277	34.62	34.67	0.4916	0.2331	0.0524	1.4027	84.54	83.78	0.7315	-0.2962	-150.5	48.0	1.3389
2	0.0174	0.1117	0.2340	0.8121	39.40	39.81	0.5124	0.2094	0.0533	1.3960	83.35	82.54	0.7308	-0.0813	-168.5	14.1	1.3937
3	0.0202	0.1123	0.2444	0.6284	40.44	43.67	0.4948	0.1339	0.0367	1.4064	88.12	87.54	0.7742	0.1458	-186.6	-21.6	1.4205
4	0.0213	0.167	0.2299	0.4472	40.87	45.49	0.4770	0.0818	0.0229	1.4096	91.80	91.40	0.8142	0.3270	-207.1	-62.0	1.4263
5	0.0017	0.0813	0.1470	0.2631	41.72	45.39	0.4494	0.0591	0.0162	1.3588	92.69	92.33	0.8906	0.6276	-248.7	-127.4	1.4189
6	0.0004	0.0703	0.0588	0.2115	41.90	45.90	0.4383	0.0627	0.0169	1.4101	91.88	91.48	0.9242	0.7126	-268.8	-151.0	1.4312
7	0.0183	0.0679	0.0810	0.1903	41.72	46.25	0.4284	0.0588	0.0152	1.4246	92.55	92.10	0.9467	0.7564	-281.6	-165.1	1.4406
8	0.0301	0.0703	0.0760	0.1658	41.52	46.14	0.4207	0.0569	0.0150	1.4343	92.37	91.97	0.9679	0.8021	-294.3	-179.6	1.4449
9	0.0363	0.0753	0.0714	0.1473	41.23	45.73	0.4182	0.0672	0.0175	1.4445	90.90	90.44	0.9906	0.8431	-307.9	-192.7	1.4487
10	0.0495	0.0883	0.0819	0.1310	41.16	44.77	0.4178	0.0794	0.0202	1.4627	89.35	88.76	1.0223	0.8904	-323.4	-207.6	1.4503
11	0.0701	0.1088	0.1670	0.1095	37.71	41.46	0.4232	0.0862	0.0208	1.4804	88.65	88.00	1.0631	0.9536	-356.4	-220.3	1.4278

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.1189	1.4254	84.69	85.20	199.71	1.1189	1.4154	89.69	90.20

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1947	0.1397	237.2	139.0	125.3	136.1	201.4	28.7	1.0132	0.2052	0.6890	0.3918	1.2847	1.1212	1.3484	1.1212
2	0.1273	0.0997	240.6	157.9	153.0	154.2	185.6	34.1	0.8807	0.2166	0.6996	0.4470	1.3385	1.1213	1.3445	1.1213
3	0.0857	0.0725	237.6	173.5	171.4	170.8	164.6	30.7	0.7649	0.1776	0.6916	0.4941	1.3895	1.1174	1.3760	1.1174
4	0.0592	0.0536	232.6	178.1	180.0	175.9	147.3	28.1	0.6858	0.1584	0.6770	0.5388	1.4078	1.1130	1.3914	1.1130
5	0.0285	0.0306	218.2	175.0	180.6	172.9	122.5	27.1	0.5960	0.1552	0.6328	0.5004	1.4024	1.1090	1.3825	1.1090
6	0.0212	0.0243	217.0	177.1	182.0	175.0	118.2	27.6	0.5761	0.1564	0.6279	0.5061	1.4081	1.1126	1.3870	1.1126
7	0.0178	0.0209	217.3	179.1	183.5	177.0	116.4	27.4	0.5650	0.1534	0.6281	0.5113	1.4136	1.1154	1.3976	1.1154
8	0.0151	0.0179	216.3	179.6	183.6	177.3	114.4	28.3	0.5570	0.1583	0.6243	0.5121	1.4151	1.1179	1.4044	1.1179
9	0.0117	0.0140	215.5	181.1	182.8	178.8	114.2	28.3	0.5583	0.1571	0.6203	0.5155	1.4192	1.1226	1.4131	1.1226
10	0.0070	0.0086	214.0	181.9	180.4	175.0	115.1	32.2	0.5679	0.1779	0.6136	0.5164	1.4211	1.1291	1.4326	1.1291
11	0.0025	0.0033	205.6	172.4	169.9	168.8	115.8	35.3	0.5981	0.2062	0.5863	0.4869	1.3942	1.1348	1.4458	1.1348

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0935	0.1758	0.2991	0.8080	29.13	35.35	0.5639	0.1449	0.0299	0.9604	73.58	74.67
2	0.0348	0.1441	0.2553	0.6642	36.75	40.81	0.4830	0.1388	0.0297	0.9624	72.78	73.89
3	0.0179	0.0775	0.2014	0.5873	42.31	46.07	0.4061	0.0757	0.0181	0.9791	81.49	82.29
4	0.0129	0.0280	0.1725	0.5274	45.27	47.94	0.3658	0.0493	0.0126	0.9869	87.65	88.21
5	0.0110	0.0285	0.1576	0.4408	46.58	47.31	0.3254	0.0490	0.0142	0.9884	88.95	89.45
6	0.0095	0.0412	0.1527	0.4197	47.32	47.80	0.3129	0.0672	0.0206	0.9843	87.03	87.62
7	0.0115	0.0456	0.1472	0.4116	47.94	48.30	0.3070	0.0799	0.0254	0.9814	87.02	87.63
8	0.0188	0.0583	0.1507	0.3987	48.10	48.31	0.3016	0.0889	0.0291	0.9795	86.45	87.09
9	0.0194	0.0644	0.1494	0.4013	47.92	48.58	0.2963	0.0892	0.0302	0.9796	85.17	85.83
10	0.0219	0.0885	0.1780	0.3900	47.25	48.39	0.2576	0.0896	0.0314	0.9798	83.78	84.79
11	0.0244	0.1094	0.2459	0.3919	44.27	45.16	0.3044	0.1171	0.0408	0.9768	82.40	83.29

NCCRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	%
RAD/SEC			%	%				
828.12	1.1189	1.3576	84.46	85.18	1.1189	0.9805	84.46	

ROTOR 2

RUN NO414, SPEED CODE 10, POINT NO 47																				
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2		
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1437	C.0577	129.4	234.8	126.3	172.9	27.9	158.9	0.2158	0.7388	0.3638	0.6532	187.2	199.3			0.5717	0.4938	203.3	177.5
2	0.0955	C.0698	163.9	230.1	160.6	176.3	32.6	147.9	0.1993	0.6941	0.4667	0.6406	203.5	212.2	0.6649	0.5225	234.5	187.7		
3	C.0727	C.0549	183.5	225.4	181.1	180.5	29.1	135.0	0.1988	0.6402	0.5243	0.6287	218.6	225.1	0.7492	0.5626	262.2	201.7		
4	0.0941	0.0420	186.2	217.7	184.3	180.6	26.9	121.6	0.1498	0.5917	0.5338	0.6079	234.9	239.1	0.7966	0.6017	278.0	215.5		
5	0.0185	C.0124	184.6	199.3	182.6	189.4	27.1	104.9	0.1474	0.5544	0.5290	0.5567	271.9	271.0	0.8751	0.6642	305.4	238.7		
6	0.0111	0.0073	186.2	190.5	184.2	184.7	27.3	95.7	0.1473	0.5243	0.5327	0.5294	284.9	281.2	0.9063	0.6977	316.7	251.1		
7	0.0080	C.0059	186.7	186.4	184.6	184.2	27.9	88.3	0.1501	0.4944	0.5380	0.5180	297.6	297.6	0.9543	0.7393	326.8	266.1		
8	0.0034	0.0024	188.2	189.7	186.1	187.0	28.5	90.0	0.1518	0.4944	0.5367	0.5250	315.1	313.9	0.9743	0.7730	341.7	279.3		
9	0.0011	0.0001	188.3	191.7	185.5	186.3	32.6	95.4	0.1740	0.5209	0.5354	C.5284	327.1	326.3	0.9894	0.7844	348.0	284.5		
10	0.0000	0.0006	178.3	185.0	174.8	154.9	35.3	97.4	0.1992	0.5614	0.5042	0.5016	339.1	338.6	0.9910	0.7859	350.5	286.7		

SL	INCS	INCM	DEV	TURN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PO	
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC
1	0.0107	C.1107	0.3061	0.6702	33.16	49.24	0.2942	-0.1164	-0.0277	1.3447	108.34	108.70	0.8966	0.2265	-159.3	-40.4	1.7327	
2	0.0835	C.0258	0.2030	0.4659	42.41	51.56	0.3450	0.0053	0.0013	1.2916	99.43	99.41	0.8136	0.3476	-170.9	-64.4	1.7570	
3	0.1047	C.0057	0.1729	0.3454	48.66	53.94	0.3545	0.0700	0.0174	1.2579	91.15	90.85	0.8064	0.4610	-189.5	-90.0	1.7713	
4	0.0888	C.0001	0.1477	0.2685	49.69	54.90	0.3293	0.0324	0.0080	1.2562	95.36	95.21	0.8452	0.5763	-208.1	-117.6	1.7678	
5	0.0681	0.0194	0.1068	0.1485	49.30	52.28	0.3062	0.0339	0.0082	1.2345	93.99	93.81	0.9297	0.7812	-244.7	-168.1	1.7948	
6	0.0383	0.0155	0.1161	0.0946	49.69	50.90	0.2839	0.0312	0.0072	1.2125	93.71	93.53	0.9500	0.8552	-257.6	-189.5	1.7114	
7	0.0233	C.0184	0.1140	0.0648	45.77	50.31	0.2538	0.0076	0.0017	1.2044	98.34	98.30	0.9705	0.9057	-269.7	-209.4	1.7038	
8	0.0247	C.0141	0.0789	0.0650	49.99	51.56	0.2510	0.0257	0.0060	1.2107	94.23	94.07	0.9948	0.9298	-286.6	-223.9	1.7189	
9	0.0238	C.0150	0.0627	0.0619	49.60	51.10	0.2547	0.0379	0.0089	1.2162	91.68	91.45	1.0086	0.9467	-294.5	-230.9	1.7285	
10	0.0020	C.0409	0.0096	0.0467	46.28	47.24	0.2552	0.0330	0.0074	1.2234	92.86	92.66	1.0487	1.0000	-303.8	-241.2	1.7028	

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.1929	1.7332	88.15	89.03	172.40	1.0662	1.2401	95.42	95.76

STATOR 2

RUN NO414, SPEED CODE 10, POINT NO 47																
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1234	C.1411	218.0	170.6	152.2	170.6	156.1	2.8	C.7944	0.0161	0.6029	0.4653	1.6882	1.2121	1.3087	1.0811
2	0.0897	C.0958	221.1	182.2	167.2	182.2	144.6	2.8	0.7114	0.0154	0.6137	0.5000	1.7371	1.2057	1.2747	1.0761
3	0.0651	C.0657	221.4	186.3	177.7	186.3	132.1	-0.8	0.6385	0.0040	0.6168	0.5134	1.7615	1.1976	1.2510	1.0742
4	0.0466	0.0445	217.0	182.2	181.2	182.2	119.4	-3.4	C.5819	-0.0186	0.6059	0.5039	1.7546	1.1893	1.2472	1.0734
5	0.0215	C.0184	200.5	169.5	171.9	169.5	103.3	-2.6	0.5409	-0.0151	0.5584	0.4479	1.7173	1.1840	1.2214	1.0655
6	0.0162	0.0135	191.9	163.2	167.1	163.1	94.3	-4.0	0.5137	-0.0248	0.5335	0.4501	1.6980	1.1814	1.2025	1.0599
7	0.0137	0.0116	188.0	160.6	166.5	160.6	87.4	-2.5	0.4836	-0.0156	0.5227	0.4432	1.6908	1.1791	1.1951	1.0552
8	0.0112	0.0098	191.3	165.6	168.9	165.6	90.0	-0.4	0.4895	-0.0023	0.5297	0.4552	1.7037	1.1907	1.1998	1.0598
9	0.0071	C.0064	193.3	168.1	168.1	168.0	95.4	5.8	0.5159	0.0348	0.5330	0.4404	1.7100	1.2006	1.2032	1.0628
10	0.0024	C.0022	184.6	156.8	156.9	156.6	97.3	7.5	0.5549	0.0479	0.5064	0.4271	1.6767	1.2076	1.2048	1.0639

SL	IACH	DEV	TURN	RHCVM-1	RHCVM-2	C-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.0932	0.1647	0.7783	44.65	52.19	0.3634	0.1232	0.0260	0.9732	98.35	98.41
2	-0.0531	0.1558	0.6560	45.69	56.83	0.3184	0.0524	0.0118	0.9882	94.20	94.40
3	-0.0956	0.1406	0.6423	53.47	58.92	0.2998	0.0240	0.0057	0.9946	88.96	89.31
4	-0.1452	0.1304	0.6005	55.15	58.08	0.3016	0.0315	0.0080	0.9931	92.39	92.63
5	-0.1820	0.1432	0.5560	52.88	54.01	0.3055	0.0405	0.0131	0.9913	89.69	89.98
6	-0.2085	0.1374	0.5385	51.52	51.91	0.3033	0.0406	0.0122	0.9929	90.19	90.45
7	-0.2392	0.1512	0.4993	51.51	51.13	0.2958	0.0470	0.0147	0.9920	74.55	74.69
8	-0.2477	0.1747	0.4918	52.03	52.34	0.2904	0.0526	0.0174	C.9909	89.16	89.44
9	-0.2698	0.2314	0.4811	51.55	52.74	0.2892	0.0612	0.0210	0.9893	86.23	86.59
10	-0.2901	0.2700	0.5070	47.74	48.63	0.3239	0.0949	0.0337	0.9848	85.42	85.80

NCCRR	HCURR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAC/SEC	KG/SEC			%	%			%
828.12	92.80	1.1929	1.7152	86.35	87.34	1.0662	0.9896	90.84

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VN-1	VN-2	PO1/PO0	VO-1	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PO1/PO0	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	
1	0.1818	0.1814	177.5	266.1	177.5	166.6	0.0666	267.5	0.0	0.8919	0.5362	0.7875	138.5	151.4	0.6801	0.5201	225.1	175.8
2	0.1545	0.1351	189.3	255.8	189.3	179.3	0.9080	182.5	0.0	0.7921	0.5741	0.7551	155.0	166.0	0.7421	0.5315	244.4	160.1
3	0.1260	0.1296	198.8	236.5	188.8	178.8	0.8918	157.8	0.0	0.7229	0.5727	0.7005	173.5	182.0	0.7778	0.5302	256.4	180.5
4	0.1082	0.1090	187.8	223.5	187.8	176.9	0.9921	137.4	0.0	0.6622	0.5693	0.6546	190.5	197.2	0.8111	0.5452	267.5	186.2
5	0.0788	0.0703	185.3	200.0	185.3	166.7	0.9864	110.5	0.0	0.5859	0.5613	0.5822	228.8	232.2	0.8920	0.6007	294.5	206.4
6	0.0650	0.0531	184.6	197.0	184.6	166.8	0.9821	104.7	0.0	0.5609	0.5590	0.5723	247.3	249.7	0.9346	0.6420	308.6	221.0
7	0.0551	0.0455	184.6	194.9	184.6	166.3	0.9802	101.7	0.0	0.5493	0.5589	0.5655	259.1	260.5	0.9635	0.6671	318.1	229.9
8	0.0493	0.0356	184.5	182.1	184.5	164.5	0.9776	98.2	0.0	0.5479	0.5586	0.5564	270.7	271.7	0.9922	0.6904	327.6	238.4
9	0.0333	0.0292	183.9	180.1	183.9	162.4	0.9748	98.2	0.0	0.5454	0.5569	0.5492	283.3	283.3	1.0228	0.7110	337.8	246.1
10	0.0194	0.0143	181.3	187.4	181.3	159.0	0.9677	98.2	0.0	0.5382	0.5484	0.5398	297.6	297.6	1.0541	0.7320	348.4	254.2
11	0.0083	0.0059	174.1	180.3	174.1	150.0	0.9510	100.1	0.0	0.5382	0.5254	0.5170	309.5	309.5	1.0719	0.7385	355.1	257.6

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO0
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0143	0.0226	0.2148	0.9850	37.65	36.97	0.4635	0.1624	0.0362	1.3735	87.98	87.43	0.6818	-0.3231	-158.5	56.1	1.3438
2	0.0276	0.0667	0.2239	0.7772	40.02	41.92	0.4582	0.1722	0.0311	1.3649	89.36	88.88	0.6858	-0.0914	-155.0	16.5	1.3793
3	0.0110	0.0911	0.2337	0.6082	40.09	43.43	0.4479	0.0809	0.0222	1.3522	92.05	91.70	0.7430	0.1348	-173.5	-24.3	1.3758
4	0.0000	0.0694	0.2370	0.4657	39.95	43.82	0.4558	0.0552	0.0154	1.3418	93.92	93.46	0.7929	0.3272	-190.5	-59.8	1.3616
5	0.0020	0.0815	0.1454	0.2600	39.35	42.66	0.4246	0.0301	0.0104	1.3260	94.89	94.48	0.8909	0.4309	-218.8	-121.7	1.3379
6	0.0069	0.0764	0.1014	0.2148	39.08	43.11	0.4035	0.0242	0.0065	1.3199	96.59	96.44	0.9303	0.7155	-247.3	-144.9	1.3460
7	0.0241	0.0737	0.0874	0.1898	38.99	43.17	0.3929	0.0219	0.0058	1.3455	96.83	96.49	0.9525	0.7628	-259.1	-158.8	1.3496
8	0.0333	0.0755	0.0832	0.1638	38.89	42.85	0.3858	0.0209	0.0071	1.3486	95.98	95.80	0.9731	0.8093	-270.7	-172.5	1.3489
9	0.0409	0.0800	0.0779	0.1457	38.68	42.39	0.3877	0.0395	0.0102	1.3540	94.04	93.78	0.9953	0.8496	-283.3	-184.8	1.3500
10	0.0509	0.0897	0.0864	0.1287	38.01	41.46	0.3851	0.0588	0.0149	1.3634	91.18	90.78	1.0237	0.8950	-297.6	-196.3	1.3496
11	0.0655	0.1047	0.1475	0.1094	36.30	38.95	0.3916	0.0750	0.0182	1.3720	88.93	88.43	1.0585	0.9491	-309.5	-209.4	1.3346

TO/TO	PO/PO0	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	ROTOR	ROTOR
1.0968	1.3507	92.71	93.02	191.85	1.0968	1.3507	92.71	93.02

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO0	TO/TO	TO2/TO1
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	RADIAN	RADIAN	INLET	INLET	STAGE
1	0.1933	0.1347	242.0	164.9	141.8	161.7	196.1	32.5	0.9434	0.1962	0.7086	0.4704	1.2850	1.1084	1.3132
2	0.1257	0.0914	241.4	181.5	166.8	178.6	174.5	32.1	0.8070	0.1769	0.7080	0.5210	1.3456	1.1047	1.3319
3	0.0790	0.0606	232.1	181.0	175.9	178.8	151.5	28.2	0.7107	0.1563	0.6801	0.5209	1.3566	1.0992	1.3366
4	0.0534	0.0470	221.7	175.4	177.4	173.5	132.9	25.3	0.6479	0.1448	0.6485	0.5053	1.3449	1.0935	1.3254
5	0.0275	0.0294	203.6	167.5	177.3	165.9	108.4	23.2	0.5613	0.1390	0.5931	0.4824	1.3255	1.0887	1.3137
6	0.0214	0.0249	202.1	170.1	173.9	162.5	103.0	23.0	0.5349	0.1407	0.5881	0.4902	1.3326	1.0904	1.3263
7	0.0181	0.0217	201.1	170.9	174.3	169.2	100.3	24.0	0.5223	0.1408	0.5846	0.4922	1.3351	1.0916	1.3316
8	0.0150	0.0184	199.3	170.5	173.5	168.8	98.1	23.9	0.5147	0.1406	0.5786	0.4905	1.3344	1.0931	1.3341
9	0.0113	0.0143	198.1	171.0	172.3	169.4	97.7	23.6	0.5160	0.1397	0.5739	0.4913	1.3361	1.0964	1.3367
10	0.0094	0.0094	196.3	171.0	169.7	168.0	98.7	24.7	0.5270	0.1370	0.5669	0.4902	1.3361	1.1020	1.3497
11	0.0014	0.0029	189.7	161.1	161.3	158.2	99.9	30.4	0.5543	0.1900	0.5454	0.4595	1.3108	1.1071	1.3481

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO0
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0238	0.1061	0.2901	0.7472	33.19	41.26	0.4570	0.1537	0.0318	1.3562	87.59	87.59	0.6818	-0.3231	-158.5	56.1	1.3438
2	0.0189	0.0793	0.2196	0.6301	40.19	46.75	0.3784	0.0857	0.0189	1.3457	81.52	81.52	0.6858	-0.0914	-155.0	16.5	1.3793
3	0.0071	0.0234	0.1802	0.5444	43.25	47.40	0.3464	0.0538	0.0129	1.3356	87.20	87.21	0.7430	0.1348	-173.5	-24.3	1.3758
4	0.0117	0.0149	0.1589	0.4981	44.25	46.22	0.3311	0.0491	0.0125	1.3279	89.67	89.67	0.7929	0.3272	-190.5	-59.8	1.3616
5	0.0196	0.0137	0.1414	0.4223	43.83	44.71	0.2981	0.0441	0.0128	1.3149	91.41	91.74	0.8909	0.4309	-218.8	-121.7	1.3379
6	0.0207	0.0224	0.1370	0.3942	44.53	44.91	0.2793	0.0473	0.0145	1.3007	93.04	93.31	0.9303	0.7155	-247.3	-144.9	1.3460
7	0.0212	0.0227	0.1347	0.3815	44.78	45.10	0.2716	0.0499	0.0159	1.2897	93.17	93.44	0.9525	0.7628	-259.1	-158.8	1.3496
8	0.0282	0.0207	0.1330	0.3740	44.66	44.94	0.2681	0.0530	0.0174	1.2897	97.21	97.53	0.9731	0.8093	-270.7	-172.5	1.3489
9	0.0297	0.0167	0.1310	0.3774	44.36	44.99	0.2649	0.0517	0.0176	1.2897	90.36	90.74	0.9953	0.8496	-283.3	-184.8	1.3500
10	0.0260	0.0125	0.1271	0.3700	43.62	44.28	0.2550	0.0517	0.0180	1.2897	87.71	88.22	1.0237	0.8950	-297.6	-196.3	1.3496
11	0.0281	0.0137	0.2297	0.3647	41.29	41.44	0.2843	0.0961	0.0346	1.2824	83.20	83.90	1.0585	0.9491	-309.5	-209.4	1.3346

TO/TO	PO/PO0	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	STAGE	STAGE
1.0968	1.3314	86.09	88.54	1.0968	0.9857	89.09	90.74	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1515	0.1029	151.7	250.6	140.4	210.8	31.6	135.5	0.2086	0.5654	0.4313	0.7131	172.2	183.4	0.5812	0.6151	204.4	216.2
2	0.1123	0.3787	183.5	246.0	181.0	211.8	30.4	125.2	0.1660	0.5306	0.5276	0.7014	187.2	197.3	0.6084	0.6361	239.5	223.1
3	0.0864	0.0601	186.9	236.5	185.0	209.5	26.8	109.7	0.1436	0.4807	0.5393	0.6769	201.2	207.1	0.7334	0.6593	254.2	231.0
4	0.0609	0.0405	183.5	222.4	181.9	200.1	24.2	96.9	0.1324	0.4503	0.5304	0.6342	216.2	220.0	0.7643	0.6701	264.4	235.0
5	0.0110	0.0002	178.7	197.7	177.2	182.2	23.4	76.8	0.1314	0.3988	0.5164	0.5622	250.1	251.2	0.8314	0.7172	287.7	252.2
6	0.0003	0.0077	179.1	189.0	177.5	176.3	23.8	68.1	0.1334	0.3487	0.5173	0.5370	262.1	262.4	0.8581	0.7456	297.2	262.4
7	0.0067	0.0111	177.7	183.7	176.1	173.3	23.8	61.0	0.1346	0.3383	0.5125	0.5222	273.8	273.8	0.8820	0.7802	305.8	274.5
8	0.0130	0.0173	176.9	184.3	175.2	174.4	24.1	59.4	0.1368	0.3281	0.5088	0.5225	289.9	288.8	0.9157	0.8173	318.3	288.2
9	0.0166	0.0212	176.6	183.1	172.5	171.7	27.2	61.5	0.1564	0.3543	0.5088	0.5173	300.9	300.3	0.9279	0.8263	323.5	292.5
10	0.0126	0.0151	163.9	162.1	161.1	147.2	30.3	67.7	0.1859	0.4311	0.4678	0.4438	312.0	311.6	0.9259	0.7976	324.5	284.9

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1522	0.0307	0.3002	0.5346	38.52	54.00	0.0015	0.0560	0.0133	1.2134	94.29	94.14	0.7552	0.2206	-140.6	-47.9	1.5636
2	0.1851	0.0757	0.1730	0.3945	47.55	55.93	0.1791	0.1425	0.0394	1.1746	80.50	80.05	0.7120	0.3176	-154.8	-70.1	1.5895
3	0.1463	0.0573	0.1454	0.3212	48.60	54.51	0.1864	0.0968	0.0244	1.1696	84.19	83.83	0.7548	0.4336	-174.4	-97.4	1.5828
4	0.1223	0.0336	0.1220	0.2611	47.77	54.67	0.1967	0.0847	0.0213	1.1576	84.30	83.98	0.8117	0.5506	-191.9	-123.1	1.5508
5	0.0705	0.0029	0.0890	0.1439	46.59	50.21	0.1900	0.0905	0.0221	1.1179	78.64	78.26	0.9074	0.7635	-226.7	-174.4	1.4876
6	0.0579	0.0001	0.0950	0.0964	46.76	48.59	0.1726	0.0887	0.0211	1.0957	72.45	72.09	0.9305	0.8341	-238.3	-194.3	1.4627
7	0.0366	0.0050	0.0958	0.0697	46.41	47.80	0.1691	0.0705	0.0164	1.0854	74.13	73.64	0.9572	0.8875	-250.0	-212.9	1.4481
8	0.0317	0.0071	0.0648	0.0671	46.12	47.89	0.1375	0.0695	0.0163	1.0837	73.08	72.77	0.9878	0.9207	-265.8	-229.5	1.4482
9	0.0240	0.0144	0.058	0.0653	45.25	44.79	0.1405	0.0631	0.0196	1.0838	69.18	68.84	1.0005	0.9432	-273.7	-236.7	1.4436
10	0.0046	0.0435	0.1272	0.0235	41.96	39.41	0.1701	0.1523	0.0328	1.0594	46.14	45.70	1.0512	1.0277	-281.7	-243.9	1.3854

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/AL	TC2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SGM			ROTOR	ROTOR
%	%	%	%				%	%
1.1443	1.4946	84.31	85.17	172.12	1.0433	1.1226	77.43	77.80

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	STAGE	TO1
1	0.1232	0.1426	226.7	227.3	183.5	227.3	135.1	0.3	0.6243	0.9013	0.6391	0.6410	1.4800	1.1753	1.1480	1.0603
2	0.0922	0.1014	233.6	235.5	199.0	235.5	122.2	-6.1	0.5492	0.8260	0.6628	0.6689	1.5330	1.1670	1.1326	1.0585
3	0.0701	0.0740	231.2	229.5	204.8	229.4	107.2	-8.2	0.4817	0.6357	0.6585	0.6536	1.5244	1.1564	1.1274	1.0543
4	0.0518	0.0520	221.9	221.3	200.6	221.3	95.0	-5.5	0.4420	0.6247	0.6329	0.6312	1.5027	1.1447	1.1224	1.0504
5	0.0264	0.0241	199.6	193.4	184.8	193.3	75.4	2.5	0.3874	0.6130	0.5481	0.5492	1.4110	1.1354	1.0598	1.0418
6	0.0208	0.0185	190.6	190.5	178.4	190.5	67.0	-1.0	0.3590	0.6050	0.5420	0.5416	1.4027	1.1309	1.0506	1.0362
7	0.0176	0.0156	185.2	180.4	175.1	180.4	60.5	0.1	0.3329	0.6005	0.5266	0.5121	1.3796	1.1279	1.0294	1.0320
8	0.0170	0.0155	185.3	181.1	175.5	181.1	59.4	3.0	0.3265	0.6166	0.5294	0.5131	1.3757	1.1330	1.0294	1.0320
9	0.0152	0.0146	183.5	180.5	172.2	180.3	63.6	8.2	0.3537	0.6473	0.5185	0.5097	1.3751	1.1401	1.0318	1.0338
10	0.0096	0.0090	163.0	164.9	149.4	164.5	67.6	10.8	0.4277	0.6658	0.4566	0.4619	1.3352	1.1474	1.0206	1.0363

SL	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT
1	-0.2433	0.1498	0.4229	49.21	57.63	0.1186	0.2732	0.0470	0.9464	64.65	67.29
2	-0.2154	0.1146	0.5752	51.85	61.24	0.1144	0.1391	0.0313	0.9645	61.88	62.54
3	-0.2524	0.1089	0.5174	55.77	60.43	0.1244	0.1400	0.0333	0.9646	64.14	64.75
4	-0.2891	0.1244	0.4467	54.81	58.71	0.1151	0.1260	0.0319	0.9704	66.33	66.88
5	-0.3355	0.1713	0.3744	50.72	50.91	0.1353	0.2531	0.0730	0.9503	39.98	40.48
6	-0.3631	0.1572	0.3640	49.02	50.25	0.1076	0.2203	0.0443	0.9601	39.19	39.61
7	-0.3900	0.1673	0.3324	48.17	47.42	0.1284	0.2990	0.0937	0.9485	25.95	26.26
8	-0.4108	0.1937	0.3098	48.19	47.44	0.1224	0.2923	0.0966	0.9499	26.02	26.33
9	-0.4279	0.2419	0.3084	46.81	47.00	0.1248	0.2853	0.0978	0.9514	26.71	27.04
10	-0.4174	0.2879	0.3616	39.64	42.30	0.1186	0.2758	0.0979	0.9624	16.05	16.31

WCI/AL	WCI/AL	TO/TO	PO/PO	EFF-AD	EFF-P	TC2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%			STAGE
SGM	SGM	%	%	%	%			%
761.96	88.4	1.1443	1.4311	74.73	75.97	1.0433	0.9575	48.05

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	PO/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1834	0.1691	168.9	264.4	168.9	162.3	0.9939	208.6	0.0	0.9077	0.5089	0.7835	141.5	154.8	0.6440	0.5050	220.3	171.0
2	0.1595	0.1379	182.9	256.1	182.9	174.8	0.9938	187.3	0.0	0.8182	0.5557	0.7541	158.4	169.4	0.7325	0.5171	242.0	175.6
3	0.1392	0.1022	183.5	242.2	183.5	178.4	0.9988	143.8	0.0	0.7412	0.5555	0.7104	177.3	186.0	0.7725	0.5276	235.2	179.8
4	0.1184	0.0853	183.5	228.8	183.5	176.8	0.9990	145.2	0.0	0.6888	0.5554	0.6689	194.7	201.6	0.8099	0.5425	267.5	185.6
5	0.0810	0.0630	183.8	204.4	183.8	164.9	0.9972	118.3	0.0	0.6165	0.5566	0.5939	233.9	237.4	0.9007	0.5994	297.5	205.1
6	0.0652	0.0523	183.9	200.8	183.9	166.1	0.9952	112.9	0.0	0.5970	0.5570	0.5816	252.8	259.2	0.9466	0.6334	312.4	218.7
7	0.0552	0.0451	183.7	199.4	183.7	166.0	0.9929	110.4	0.0	0.5871	0.5562	0.5766	264.9	268.2	0.9759	0.6585	322.3	227.7
8	0.0445	0.0369	183.4	197.1	183.4	164.6	0.9904	108.4	0.0	0.5826	0.5557	0.5688	276.7	277.7	1.0053	0.6815	332.1	236.1
9	0.0342	0.0250	183.3	195.3	183.3	162.7	0.9881	108.1	0.0	0.5866	0.5550	0.5623	289.6	289.4	1.0375	0.7016	342.7	243.7
10	0.0214	0.0174	180.3	192.9	180.3	154.0	0.9812	109.2	0.0	0.6017	0.5452	0.5530	304.1	304.1	1.0641	0.7213	353.5	251.6
11	0.0101	0.0080	169.3	185.3	169.3	149.1	0.9559	110.0	0.0	0.6358	0.5101	0.5286	316.4	316.3	1.0813	0.7261	358.8	254.5

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	ZEFF-P	ZEFF-A	B*-1	B*-2	VO*1	VO*2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0207	0.1174	0.2187	1.0161	35.86	36.32	0.4543	0.1969	0.0439	1.3765	86.32	85.89	0.6969	-0.3192	-161.5	53.9	1.3385
2	0.0003	0.0946	0.2150	0.8140	39.36	41.09	0.4751	0.1652	0.0420	1.3704	86.48	85.86	0.7137	-0.1003	-158.4	17.6	1.3796
3	0.0151	0.1072	0.2226	0.6454	39.59	43.56	0.4718	0.1101	0.0302	1.3703	89.98	89.52	0.7491	0.1238	-177.3	-22.3	1.3864
4	0.0232	0.1125	0.2109	0.5081	39.59	44.27	0.4649	0.0787	0.0222	1.3636	92.00	91.64	0.8161	0.3080	-194.7	-56.3	1.3799
5	0.0164	0.0961	0.1343	0.2856	39.57	43.23	0.4424	0.0651	0.0179	1.3445	91.86	91.51	0.9055	0.6199	-233.9	-119.1	1.3602
6	0.0190	0.0885	0.0946	0.2337	39.50	43.40	0.4267	0.0605	0.0164	1.3574	92.06	91.70	0.9424	0.7086	-252.8	-142.3	1.3685
7	0.0365	0.0861	0.0787	0.2109	39.37	43.70	0.4168	0.0568	0.0152	1.3671	92.38	92.03	0.9549	0.7541	-264.9	-155.8	1.3750
8	0.0477	0.0879	0.0736	0.1858	39.25	43.50	0.4105	0.0610	0.0161	1.3733	91.62	91.24	0.9855	0.7997	-276.7	-169.3	1.3778
9	0.0523	0.0914	0.0685	0.1665	39.13	43.09	0.4095	0.0749	0.0196	1.3799	89.62	89.14	1.0067	0.8401	-289.6	-181.5	1.3812
10	0.0631	0.1018	0.0782	0.1490	38.34	42.11	0.4125	0.0951	0.0240	1.3912	86.89	86.26	1.0358	0.8868	-304.1	-195.0	1.3827
11	0.0865	0.1252	0.1383	0.1366	35.72	39.33	0.4179	0.0981	0.0299	1.4119	86.82	86.17	1.0795	0.9450	-316.4	-206.3	1.3671

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SQM			%	%
1.1059	1.3722	89.35	89.82	109.79	1.1059	1.3722	89.35	89.82

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1952	0.1387	238.9	150.9	134.9	147.7	197.2	31.2	0.9698	0.2058	0.6976	0.4283	1.2836	1.1116	1.3212	1.1116
2	0.1285	0.0976	239.6	169.5	159.5	166.1	178.9	34.0	0.8419	0.2010	0.7005	0.4838	1.3430	1.1099	1.3356	1.1099
3	0.0832	0.0676	232.5	174.1	171.4	171.8	157.0	28.4	0.7411	0.1637	0.6792	0.4988	1.3664	1.1052	1.3504	1.1052
4	0.0566	0.0502	223.8	171.8	174.5	169.8	140.2	26.5	0.6765	0.1550	0.6531	0.4926	1.3645	1.1010	1.3484	1.1010
5	0.0279	0.0309	206.1	164.9	170.4	162.9	115.9	25.5	0.5971	0.1549	0.5986	0.4730	1.3476	1.0970	1.3361	1.0970
6	0.0214	0.0253	204.2	167.3	171.4	165.3	111.0	25.6	0.5747	0.1534	0.5921	0.4795	1.3532	1.0995	1.3421	1.0995
7	0.0181	0.0218	204.0	166.8	172.4	166.8	108.9	25.8	0.5633	0.1534	0.5907	0.4835	1.3570	1.1016	1.3492	1.1016
8	0.0142	0.0185	202.8	168.9	172.1	166.9	107.2	26.1	0.5572	0.1549	0.5864	0.4835	1.3574	1.1040	1.3530	1.1040
9	0.0117	0.0143	202.0	170.3	171.2	168.2	107.2	26.5	0.5596	0.1565	0.5827	0.4866	1.3609	1.1023	1.3597	1.1023
10	0.0066	0.0085	200.5	171.3	168.6	168.1	108.6	32.5	0.5722	0.1909	0.5765	0.4879	1.3628	1.1146	1.3710	1.1146
11	0.0021	0.0030	193.7	162.2	159.6	158.7	109.8	33.6	0.6027	0.2087	0.5541	0.4599	1.3393	1.1203	1.3837	1.1203

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-8	LOSS-P	PO2/	ZEFF-A	ZEFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0502	0.1325	0.2996	0.7641	31.88	38.60	0.5111	0.1461	0.0502	0.9593	74.25	75.25
2	0.0160	0.1053	0.2437	0.6409	38.81	44.39	0.4265	0.0921	0.0203	0.9742	78.46	79.33
3	0.0417	0.0538	0.1875	0.5775	42.69	46.54	0.3836	0.0543	0.0130	0.9855	85.28	85.90
4	0.0821	0.0187	0.1690	0.5216	44.11	47.28	0.3618	0.0438	0.0112	0.9891	88.30	88.78
5	0.1399	0.0274	0.1573	0.4422	44.02	47.44	0.3271	0.0430	0.0125	0.9908	88.54	89.00
6	0.1608	0.0425	0.1498	0.4213	44.60	45.04	0.3105	0.0527	0.0162	0.9889	88.50	88.66
7	0.1732	0.0512	0.1472	0.4100	45.04	45.39	0.3031	0.0622	0.0198	0.9869	87.99	88.49
8	0.1837	0.0582	0.1473	0.4023	45.06	45.35	0.2995	0.0711	0.0233	0.9852	86.80	87.35
9	0.1922	0.0631	0.1488	0.4031	44.84	45.58	0.2938	0.0717	0.0243	0.9853	84.80	85.44
10	0.2148	0.0823	0.1910	0.3813	44.11	45.7	0.2811	0.0712	0.0249	0.9856	82.33	83.10
11	0.2397	0.1048	0.2484	0.3939	41.56	42.3	0.3065	0.1074	0.0385	0.9798	80.83	81.70

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	%	%			%	%
776.77	1.1059	1.3509	84.72	85.36	1.1059	0.9864	84.72	

ROTOR 2

RUN NO 414, SPEED CODE 80, POINT NO 43

SL	EPST-1	EPST-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1409	0.1074	138.1	232.2	134.7	189.1	37.3	146.5	0.2198	0.6768	0.3907	0.6523	176.0	187.4	0.5616	0.5188	198.5	184.7
2	0.1101	0.0799	172.1	229.0	169.0	182.9	32.5	137.7	0.1894	0.6419	0.491E	0.6441	191.4	199.6	0.6627	0.5433	231.4	193.1
3	0.0869	0.0644	170.6	221.9	178.6	185.7	26.6	121.6	0.1475	0.5780	0.5185	0.6253	205.6	211.6	0.7261	0.5814	252.4	206.4
4	0.0652	0.0447	179.1	211.0	177.3	180.0	25.8	110.0	0.1441	0.5480	0.5151	0.5544	220.9	224.9	0.7563	0.6015	263.7	213.5
5	0.0232	0.0167	174.7	189.7	172.9	165.0	25.2	93.6	0.1449	0.5161	0.5022	0.5324	255.7	256.7	0.8260	0.6512	288.1	232.0
6	0.0149	0.0095	176.0	181.4	174.2	159.4	25.5	86.2	0.1453	0.4953	0.5055	0.5065	267.9	268.2	0.8573	0.6784	246.5	242.1
7	0.0105	0.0074	176.1	179.3	174.2	160.0	25.0	80.9	0.1477	0.4683	0.5051	0.5022	279.9	279.9	0.8836	0.7153	308.0	255.3
8	0.0049	0.0033	177.3	180.3	175.2	161.5	27.2	80.2	0.1539	0.4407	0.5074	0.5037	296.3	295.2	0.9188	0.7512	321.1	268.4
9	0.0026	0.0014	177.2	161.8	174.2	159.5	32.8	87.3	0.1859	0.5006	0.5057	0.5059	307.6	306.9	0.9283	0.7553	325.4	271.4
10	0.0010	0.0006	168.1	174.3	164.7	150.8	33.5	87.5	0.2005	0.5298	0.4777	0.4825	318.6	318.5	0.9354	0.7636	329.5	275.8

SL	INCS	INCR	DFV	TURN	RHDVN-1	RHDVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-P	TEFF-A	B ² -1	B ² -2	W0 ² -1	W0 ² -2	PO/PO
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL		PG1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0859	0.0355	0.3000	0.6010	35.74	50.71	0.2256	-0.0563	-0.0134	1.2752	104.61	104.76	0.8214	0.2204	-145.7	-46.9	1.6397
2	-0.1447	-0.0354	0.1795	0.4283	45.36	52.40	0.2948	0.061E	0.0153	1.2328	92.97	92.75	0.7524	0.3242	-158.8	-61.9	1.6684
3	-0.1258	-0.0267	0.1620	0.3353	48.15	54.31	0.2922	0.0490	0.0123	1.2222	93.29	93.09	0.7854	0.4501	-179.0	-90.1	1.6732
4	-0.1009	-0.0122	0.1385	0.2660	47.77	53.41	0.2871	0.0233	0.0058	1.2167	96.42	96.31	0.8331	0.5672	-195.2	-114.8	1.6562
5	-0.0508	0.0167	0.1052	0.1475	46.56	44.55	0.2764	0.0291	0.0070	1.1944	94.30	94.16	0.9271	0.7796	-230.4	-163.1	1.6132
6	-0.0405	0.0173	0.1116	0.0971	46.91	47.98	0.2613	0.0351	0.0082	1.1748	92.30	92.12	0.9476	0.8507	-242.4	-182.0	1.5927
7	-0.0239	0.0177	0.1019	0.0762	46.86	48.70	0.2368	0.015E	0.0024	1.1721	96.22	96.14	0.9699	0.8936	-254.1	-199.0	1.5907
8	-0.0261	0.0127	0.0754	0.0471	46.99	48.55	0.2267	0.0197	0.0046	1.1737	95.08	94.96	0.9934	0.9263	-269.1	-215.0	1.5977
9	-0.0267	0.0121	0.0587	0.0631	46.49	47.70	0.2327	0.0324	0.0077	1.1772	92.13	91.95	1.0058	0.9426	-274.8	-219.6	1.6044
10	0.0007	0.0197	0.0921	0.0549	42.54	44.75	0.2305	0.0264	0.0060	1.1845	93.66	93.52	1.0474	0.9925	-285.4	-231.0	1.5643

TO/TO	PO/PO	EFF-AD	EFF-P	W01/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	KG/SEC			%	%
1.1679	1.6207	88.09	86.87	168.03	1.0560	1.1998	95.21	95.34

STATOR 2

RUN NO 414, SPEED CODE 80, POINT NO 43

SL	EPST-1	EPST-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1217	0.1399	212.9	180.7	157.0	180.6	143.9	7.9	0.7385	0.0159	0.5942	0.4493	1.6033	1.1878	1.2467	1.0686
2	0.0880	0.0953	218.6	191.4	172.2	191.4	134.6	3.5	0.6618	0.0182	0.6126	0.5321	1.6521	1.1819	1.2195	1.0662
3	0.0661	0.0661	217.2	191.1	181.7	191.1	119.0	-2.5	0.5789	0.0130	0.6110	0.5332	1.6611	1.1730	1.2138	1.0630
4	0.0468	0.0447	216.1	183.3	180.2	193.3	108.0	-3.4	0.5397	0.0184	0.5917	0.5122	1.6413	1.1651	1.2064	1.0596
5	0.0224	0.0196	191.3	166.8	167.6	166.8	92.2	-2.1	0.5028	0.0125	0.5372	0.4654	1.5936	1.1587	1.1794	1.0549
6	0.0169	0.0143	183.3	161.7	162.4	161.2	85.1	-4.0	0.4828	0.0249	0.5141	0.4494	1.5777	1.1568	1.1634	1.0508
7	0.0137	0.0116	181.2	159.1	162.4	159.1	80.2	-2.1	0.4588	0.0135	0.5078	0.4434	1.5716	1.1564	1.1580	1.0481
8	0.0109	0.0096	182.2	161.7	163.6	161.7	80.3	1.1	0.4562	0.0070	0.5092	0.4493	1.5775	1.1639	1.1587	1.0494
9	0.0074	0.0067	183.5	162.5	161.6	162.5	87.1	3.6	0.4944	0.0223	0.5110	0.4499	1.5788	1.1728	1.1567	1.0518
10	0.0028	0.0027	176.4	155.0	153.2	154.8	87.4	6.7	0.5183	0.0433	0.4886	0.4270	1.5579	1.1798	1.1648	1.0529

SL	INCR	DFV	TURN	RHDVN-1	RHDVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-A	TEFF-P
	RADIAN	RADIAN				TOTAL	TOTAL		PG1	TOT	TOT
1	-0.1491	0.1644	0.7226	45.26	53.48	0.2889	0.1049	0.0221	0.9777	104.72	94.89
2	-0.1028	0.1586	0.4436	50.73	57.75	0.2575	0.0480	0.0104	0.9897	88.62	88.36
3	-0.1551	0.1317	0.5919	53.58	58.37	0.2513	0.0292	0.0099	0.9935	90.21	90.46
4	-0.1874	0.1306	0.5581	53.53	56.28	0.2593	0.0392	0.0099	0.9918	92.34	92.54
5	-0.2201	0.1458	0.5153	50.18	51.11	0.2687	0.0610	0.0176	0.9891	87.89	88.17
6	-0.2394	0.1373	0.5077	48.67	49.31	0.2664	0.0554	0.0167	0.9909	86.95	87.23
7	-0.2641	0.1533	0.4722	48.81	48.63	0.2642	0.0754	0.0236	0.9878	88.87	89.16
8	-0.2911	0.1840	0.4492	49.03	49.16	0.2563	0.0792	0.0267	0.9872	87.00	87.24
9	-0.2872	0.2189	0.4721	48.18	47.05	0.2710	0.0968	0.0337	0.9842	82.79	83.15
10	-0.3267	0.2654	0.4750	45.35	46.30	0.2844	0.1104	0.0393	0.9834	84.05	84.40

W01/A1	W02/A2	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET		INLET	%	%			%	%
776.77	87.4	1.1679	1.6011	85.71	86.63	1.0560	0.9879	95.69	95.69

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	M-1	M-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1043	0.1657	148.4	254.8	168.4	161.4	0.9920	209.9	0.0	0.9131	0.5075	0.7015	142.4	155.8	0.4444	0.5025	228.6	170.3
2	0.1594	0.1379	181.9	257.7	181.9	175.2	0.9920	180.9	0.0	0.8210	0.5585	0.7585	159.5	170.7	0.7320	0.5166	241.9	176.2
3	0.1379	0.1657	183.2	243.6	183.2	179.4	0.9999	164.7	0.0	0.7412	0.5545	0.7145	170.5	187.2	0.7742	0.5305	235.8	180.9
4	0.1144	0.2870	183.6	230.4	183.6	178.8	0.9999	145.7	0.0	0.6832	0.5560	0.6745	196.0	202.9	0.8132	0.5468	268.4	187.7
5	0.2770	0.2599	184.4	204.8	184.4	168.5	0.9999	119.9	0.0	0.6188	0.5583	0.6002	235.4	238.9	0.9055	0.5986	299.4	206.2
6	0.0420	0.0490	184.3	203.1	184.3	168.8	0.9999	115.8	0.0	0.6068	0.5580	0.5875	254.4	254.8	0.9513	0.6322	314.1	210.5
7	0.0526	0.0420	183.4	201.5	183.4	166.2	0.9947	113.8	0.0	0.6005	0.5558	0.5819	266.4	268.0	0.9799	0.6548	327.7	226.7
8	0.0437	0.0343	183.0	198.9	183.0	164.4	0.9912	112.0	0.0	0.5903	0.5539	0.5732	278.5	279.5	1.0087	0.6763	333.2	234.7
9	0.0331	0.0241	182.4	196.7	182.4	162.1	0.9882	111.4	0.0	0.6026	0.5520	0.5653	291.4	291.4	1.0405	0.6962	343.8	242.2
10	0.0212	0.0166	179.4	193.9	179.4	158.3	0.9816	112.0	0.0	0.6157	0.5432	0.5553	306.1	306.1	1.0731	0.7172	354.9	250.5
11	0.0103	0.0079	169.5	187.5	169.5	150.1	0.9581	112.4	0.0	0.6429	0.5107	0.5345	318.4	318.3	1.0871	0.7263	360.7	254.8

SL	INCS	INCH	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-P	TEFF-A	B-1	B-2	VO-1	VO-2	PO/PO	INLET
	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC		
1	0.0253	0.1222	0.2158	1.0234	25.79	35.97	0.4591	0.2257	0.0503	1.3722	84.48	83.77	0.7014	0.3222	-142.4	54.1	1.3325	
2	0.0042	0.1005	0.2122	0.8227	39.14	41.08	0.4763	0.1743	0.0443	1.3740	85.95	85.30	0.7196	0.1031	-159.5	18.2	1.3791	
3	0.0189	0.1110	0.2235	0.6482	39.54	43.71	0.4701	0.1156	0.0318	1.3731	89.55	89.06	0.7729	0.1247	-178.5	-22.6	1.3669	
4	0.0256	0.1150	0.2117	0.5097	39.64	44.69	0.4603	0.0820	0.0231	1.3661	91.67	91.29	0.8185	0.3088	-196.0	-57.1	1.3820	
5	0.0182	0.0977	0.1793	0.2922	39.75	43.49	0.4448	0.0899	0.0223	1.3640	89.94	89.50	0.9071	0.6149	-235.4	-110.9	1.3615	
6	0.0217	0.0906	0.0821	0.2424	39.65	43.47	0.4347	0.0849	0.0231	1.3561	89.03	88.54	0.9445	0.7021	-254.4	-141.1	1.3692	
7	0.0399	0.0894	0.0726	0.2202	39.42	43.53	0.4266	0.0834	0.0225	1.3463	89.04	88.54	0.9682	0.7460	-266.6	-154.7	1.3750	
8	0.0520	0.0922	0.0689	0.1948	39.20	43.20	0.4214	0.0801	0.0234	1.3729	88.20	87.46	0.9899	0.7951	-278.5	-167.5	1.3770	
9	0.0575	0.0945	0.0644	0.1730	38.99	42.48	0.4199	0.1002	0.0263	1.3784	86.44	85.80	1.0118	0.8380	-291.4	-180.0	1.3701	
10	0.0674	0.1042	0.0780	0.1536	38.27	41.72	0.4211	0.1102	0.0303	1.3898	84.83	83.27	1.0401	0.8866	-306.1	-194.1	1.3603	
11	0.0868	0.1275	0.1344	0.1407	35.83	39.44	0.4228	0.1170	0.0287	1.4117	84.52	83.74	1.0818	0.9410	-318.4	-205.9	1.3684	

TC/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	Σ	Σ	Σ			Σ	Σ
1.1084	1.3722	87.16	87.73	109.57	1.1084	1.3722	87.16	87.73

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	N-1	N-2	PO/PO	TO/TO	PO/PO	TQ2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01
1	0.1937	0.1377	239.0	149.4	133.3	146.5	198.4	30.5	0.9780	0.2027	0.6975	0.4243	1.2796	1.1130	1.3186	1.1130
2	0.1272	0.0949	240.9	168.8	159.7	165.3	180.4	34.2	0.8456	0.2033	0.7041	0.4812	1.3391	1.1116	1.3557	1.1116
3	0.0830	0.0685	233.8	174.1	172.3	171.7	150.8	29.1	0.7420	0.1674	0.6829	0.4984	1.3640	1.1066	1.3504	1.1066
4	0.0580	0.0524	225.6	172.2	176.3	170.1	140.8	27.2	0.6737	0.1584	0.6585	0.4938	1.3635	1.1022	1.3479	1.1022
5	0.0320	0.0353	204.2	165.3	171.8	163.2	117.5	26.1	0.5999	0.1583	0.6044	0.4737	1.3475	1.0991	1.3321	1.0991
6	0.0264	0.0298	204.4	147.4	172.2	165.4	113.8	26.0	0.5840	0.1557	0.5979	0.4793	1.3532	1.1025	1.3400	1.1025
7	0.0227	0.0259	204.1	149.1	172.9	167.0	112.2	26.4	0.5758	0.1565	0.5962	0.4837	1.3579	1.1053	1.3491	1.1053
8	0.0189	0.0210	204.8	149.4	172.3	167.3	110.7	26.2	0.5714	0.1555	0.5913	0.4839	1.3590	1.1080	1.3548	1.1080
9	0.0143	0.0165	203.6	170.7	171.0	168.5	110.5	27.2	0.5736	0.1597	0.5866	0.4868	1.3626	1.1122	1.3629	1.1122
10	0.0078	0.0093	202.0	171.7	168.5	168.4	111.4	32.3	0.5841	0.1890	0.5799	0.4884	1.3649	1.1183	1.3739	1.1183
11	0.0023	0.0031	196.3	162.9	161.1	159.8	112.2	31.6	0.6084	0.1951	0.5610	0.4610	1.3418	1.1237	1.3847	1.1237

SL	INCS	INCH	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-A	TEFF-P
	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	0.0583	0.1406	0.2965	0.7753	31.36	38.73	0.5183	0.1415	0.0292	0.9606	72.80	73.84
2	0.0197	0.1090	0.2468	0.6423	38.74	46.08	0.4337	0.0999	0.0221	0.9718	77.31	78.22
3	0.0647	0.0547	0.1912	0.5766	42.80	48.48	0.3878	0.0612	0.0146	0.9835	84.19	84.85
4	0.0849	0.0159	0.1725	0.5153	44.51	46.32	0.3453	0.0527	0.0134	0.9867	87.70	87.73
5	0.1370	0.0244	0.1607	0.4414	44.24	44.47	0.3341	0.0478	0.0130	0.9896	86.23	86.78
6	0.1516	0.0333	0.1520	0.4203	44.41	45.00	0.3206	0.0330	0.0163	0.9886	85.09	85.69
7	0.1687	0.0388	0.1503	0.4193	44.91	45.39	0.3129	0.0578	0.0183	0.9876	84.88	85.31
8	0.1695	0.0440	0.1479	0.4158	44.83	45.40	0.3096	0.0416	0.0202	0.9870	83.97	84.51
9	0.1781	0.0491	0.1520	0.4139	44.53	45.40	0.3020	0.0578	0.0196	0.9880	82.44	83.19
10	0.2029	0.0703	0.1691	0.3951	43.83	45.43	0.2894	0.0548	0.0192	0.9888	80.32	81.19
11	0.2340	0.0991	0.2348	0.4132	41.76	42.63	0.3206	0.1006	0.0362	0.9807	78.79	79.74

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	Σ	Σ			Σ	Σ
783.81	1.1086	1.3509	82.66	83.39	1.1086	0.9845	82.66	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V*-1	V*-2	
RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	%/SEC	N/SEC	RADIAN	RADIAN	N-1	N-2	N-1	N-2	N-1	N-2	N-1	N-2	N-1	N-2
1	0.1693	0.1012	130.5	230.5	133.2	177.0	29.6	146.7	0.2172	0.4835	0.3050	0.6466	177.2	100.6	0.5620	0.5124	100.0	102.7	
2	0.1092	0.0787	170.9	224.2	167.7	179.0	32.9	130.3	0.1926	0.4544	0.4077	0.6350	192.6	200.9	0.6600	0.5322	231.6	109.6	
3	0.0964	0.0640	180.1	220.0	170.0	182.0	27.2	123.7	0.1513	0.5951	0.5167	0.6187	206.9	213.0	0.7250	0.5700	253.0	202.7	
4	0.0657	0.0491	170.9	209.5	170.9	176.5	26.4	112.0	0.1479	0.5679	0.5142	0.5090	222.4	226.4	0.7500	0.5001	204.0	209.9	
5	0.0250	0.0173	174.0	189.3	172.9	163.7	25.7	95.1	0.1473	0.5265	0.5019	0.5303	257.3	250.4	0.8200	0.4470	209.1	231.2	
6	0.0164	0.0116	176.5	181.0	174.6	158.6	26.0	87.2	0.1477	0.5027	0.5061	0.5063	269.6	269.9	0.8500	0.4700	209.0	242.0	
7	0.0119	0.0093	177.0	170.0	175.0	159.7	26.1	81.4	0.1479	0.4725	0.5048	0.4998	281.7	281.7	0.8873	0.7153	309.0	255.9	
8	0.0099	0.0066	178.4	160.4	176.2	140.9	27.7	81.6	0.1557	0.4691	0.5096	0.5029	290.2	297.1	0.9224	0.7697	322.9	269.0	
9	0.0032	0.0022	178.6	182.1	175.6	159.3	32.4	88.3	0.1824	0.5061	0.5008	0.5054	309.6	308.9	0.9348	0.7554	320.1	272.1	
10	0.0012	0.0008	169.5	174.4	166.6	151.2	31.4	87.0	0.1843	0.5221	0.4806	0.4816	320.9	320.5	0.9471	0.7603	334.0	270.2	

SL	INCS	INCM	DEV	TURN	RMOVW-1	RMOVW-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	W*-1	W*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0743	0.0471	0.3082	0.6045	35.30	50.06	0.2305	-0.0960	-0.0226	1.2804	107.70	100.06	0.8331	0.2206	-147.6	-41.9	1.6517
2	-0.1382	0.0289	0.1895	0.4248	44.96	51.69	0.3097	0.0423	0.0104	1.2409	95.24	95.09	0.7509	0.3341	-159.7	-62.6	1.6755
3	-0.1221	0.0230	0.1647	0.3342	47.97	53.69	0.3085	0.0400	0.0100	1.2309	96.64	96.47	0.7891	0.4540	-179.7	-89.3	1.6832
4	-0.0979	0.0092	0.1423	0.2652	47.69	52.03	0.3042	0.0185	0.0044	1.2260	97.25	97.17	0.8361	0.5709	-196.0	-113.5	1.6883
5	-0.0484	0.0187	0.1097	0.1454	46.52	49.63	0.2827	0.0093	0.0022	1.2077	98.21	98.16	0.9295	0.7041	-231.6	-163.3	1.6307
6	-0.0391	0.0187	0.1167	0.0934	44.92	48.15	0.2450	0.0123	0.0029	1.1877	97.36	97.29	0.9493	0.8559	-243.7	-182.7	1.6104
7	-0.0234	0.0182	0.1076	0.0711	44.99	48.42	0.2393	-0.0047	-0.0015	1.1840	101.65	101.60	0.9704	0.8994	-255.6	-200.3	1.6084
8	-0.0262	0.0123	0.0783	0.0440	47.15	48.83	0.2309	0.0009	0.0002	1.1867	99.79	99.77	0.9933	0.9292	-270.5	-215.5	1.6175
9	-0.0265	0.0123	0.0614	0.0406	44.78	48.09	0.2384	0.0174	0.0041	1.1905	95.87	95.77	1.0040	0.9454	-277.1	-220.6	1.6249
10	0.0020	0.0409	0.0959	0.0523	43.97	45.29	0.2357	0.0151	0.0034	1.1970	94.44	94.35	1.0487	0.9964	-209.5	-233.5	1.6041

TD/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SON			%	%
1.1719	1.6364	87.86	88.47	160.52	1.0571	1.2113	98.42	98.46

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	PO/PO	TD/TO	PC/PC	T02/
RADIAN	RADIAN	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	N/SEC	RADIAN	RADIAN	N-1	N-2	N-1	N-2	N-1	N-2	INLET	INLET	STAGE	T01
1	0.1279	0.1412	211.6	175.7	155.0	175.7	144.1	2.9	0.7458	0.0186	0.5095	0.4045	1.6115	1.1902	1.2571	1.2571	1.0694			
2	0.0894	0.0964	215.8	186.7	168.2	186.7	135.3	1.2	0.4758	0.0064	0.6037	0.5175	1.6601	1.1864	1.2287	1.0667				
3	0.0650	0.0665	215.3	187.2	170.0	187.2	121.1	-1.0	0.5965	-0.0054	0.6044	0.5209	1.6721	1.1760	1.2231	1.0644				
4	0.0469	0.0455	208.6	180.2	176.7	180.1	110.8	-3.2	0.5993	-0.0177	0.5863	0.5021	1.6554	1.1844	1.2172	1.0614				
5	0.0216	0.0185	190.9	165.2	164.4	165.2	93.6	-2.6	0.5124	-0.0157	0.5352	0.4597	1.6128	1.1627	1.1939	1.0559				
6	0.0163	0.0136	183.0	159.6	161.5	159.5	86.1	-4.0	0.4898	-0.0249	0.5121	0.4438	1.5969	1.1610	1.1773	1.0514				
7	0.0134	0.0112	180.8	157.9	161.0	157.9	80.6	-2.1	0.4624	-0.0135	0.5057	0.4391	1.5921	1.1608	1.1719	1.0484				
8	0.0104	0.0093	182.5	161.1	163.2	161.1	81.6	0.9	0.4636	0.0057	0.5087	0.4448	1.5998	1.1690	1.1736	1.0503				
9	0.0068	0.0061	184.1	162.8	161.6	162.7	88.2	5.2	0.4994	0.0318	0.5113	0.4498	1.6033	1.1782	1.1746	1.0533				
10	0.0024	0.0022	176.6	154.5	153.7	154.3	84.9	6.6	0.5143	0.0430	0.4879	0.4245	1.5799	1.1853	1.1790	1.0546				

SL	INCM	DEV	TURN	RMOVW-1	RMOVW-2	D-FAC	OMEGA-P	LOSS-P	PO2/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT-ETC	TOT-ETC
1	-0.1420	0.1651	0.7290	45.08	52.60	0.3077	0.1162	0.0245	0.9717	97.23	97.33
2	-0.0888	0.1460	0.6694	49.46	56.95	0.2734	0.0435	0.0098	0.9965	90.72	90.99
3	-0.1376	0.1393	0.6018	52.94	57.82	0.2639	0.0277	0.0066	0.9640	91.79	92.03
4	-0.1678	0.1313	0.5770	52.97	55.96	0.2724	0.0343	0.0087	0.9929	93.94	94.11
5	-0.2105	0.1425	0.5281	50.30	51.23	0.2788	0.0549	0.0158	0.9903	92.77	92.95
6	-0.2323	0.1373	0.5147	48.87	49.40	0.2757	0.0499	0.0150	0.9918	92.81	92.97
7	-0.2605	0.1533	0.4759	49.08	48.86	0.2699	0.0644	0.0202	0.9897	95.61	95.71
8	-0.2736	0.1828	0.4579	49.37	49.59	0.2620	0.0687	0.0227	0.9889	92.93	93.09
9	-0.2923	0.2263	0.4677	48.65	49.73	0.2705	0.0819	0.0281	0.9866	88.15	88.42
10	-0.3307	0.2651	0.4713	45.92	46.69	0.2870	0.1001	0.0356	0.9850	88.04	88.32

MCOPP	MCOPR	TD/TO	PC/PC	EFF-AD	EFF-P	T02/T01	PO2/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC	%	%	%	%			%
783.81	87.8	1.1719	1.6183	85.74	86.67	1.0571	0.9890	92.57

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)

S. I. UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VN-1	VN-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1061	0.1710	171.1	243.2	171.1	159.0	0.9507	209.7	0.0	0.9205	0.516	0.7754	144.3	157.8	0.6750	0.6929	223.0	167.3
2	0.1634	0.1410	184.7	237.4	184.7	171.6	0.9910	191.8	0.0	0.8395	0.5595	0.7565	161.6	173.0	0.7433	0.5074	245.4	172.7
3	0.1425	0.1100	185.1	244.0	185.1	177.4	0.9963	167.6	0.0	0.7560	0.5406	0.7147	180.0	189.7	0.7837	0.5235	258.7	178.7
4	0.1211	0.0935	185.2	236.7	185.2	175.8	0.9946	149.3	0.0	0.7036	0.5410	0.6733	190.6	205.5	0.8226	0.5380	271.5	184.6
5	0.0816	0.0686	185.3	207.2	185.3	166.7	0.9946	123.1	0.0	0.6362	0.5612	0.6004	238.5	242.0	0.9148	0.5934	302.0	204.8
6	0.0646	0.0560	185.1	204.4	185.1	166.4	0.9925	118.6	0.0	0.6195	0.5607	0.5905	257.0	260.2	0.9613	0.6314	317.4	210.5
7	0.0539	0.0475	185.0	203.6	185.0	166.6	0.9907	117.0	0.0	0.6128	0.5603	0.5872	270.1	271.5	0.9915	0.6552	327.3	227.2
8	0.0438	0.0383	184.8	201.0	184.8	166.5	0.9887	115.4	0.0	0.6120	0.5597	0.5782	282.2	283.2	1.0216	0.6761	337.3	235.0
9	0.0325	0.0288	184.2	199.0	184.2	162.6	0.9860	114.8	0.0	0.6149	0.5578	0.5710	295.3	295.3	1.0539	0.6972	348.0	242.9
10	0.0195	0.0171	180.0	196.8	180.0	159.3	0.9766	115.6	0.0	0.6277	0.5445	0.5627	316.1	310.1	1.0844	0.7180	358.6	251.4
11	0.0084	0.0072	170.2	188.2	170.2	148.2	0.9541	116.1	0.0	0.6446	0.5131	0.5352	322.6	322.5	1.0998	0.7225	364.8	254.1

SL	INC	INCN	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0241	0.1210	0.2234	1.0148	36.18	35.58	0.4798	0.2223	0.0497	1.3777	84.55	83.83	0.7003	-0.3145	-144.3	51.9	1.3411
2	0.0054	0.0957	0.2061	0.8201	39.56	40.43	0.4982	0.1782	0.0452	1.3848	85.72	85.04	0.7188	-0.1093	-161.6	18.9	1.3935
3	0.0208	0.1129	0.2227	0.6510	39.72	43.51	0.4865	0.1087	0.0299	1.3901	90.38	89.92	0.7748	0.1238	-180.8	-22.1	1.4063
4	0.0283	0.1177	0.2121	0.5121	39.76	44.27	0.4803	0.0794	0.0221	1.3842	92.19	91.82	0.8212	0.3042	-198.4	-56.2	1.4087
5	0.0223	0.1019	0.1947	0.2910	39.67	45.45	0.4568	0.0661	0.0181	1.3799	92.04	91.67	0.9113	0.6202	-236.5	-119.0	1.3845
6	0.0253	0.0948	0.0913	0.2433	39.57	45.85	0.4423	0.0639	0.0173	1.3856	91.99	91.61	0.9486	0.7053	-257.8	-141.6	1.3963
7	0.0425	0.0920	0.0727	0.2227	39.47	44.11	0.4348	0.0651	0.0176	1.3968	91.69	91.29	0.9708	0.7481	-270.1	-154.5	1.4051
8	0.0335	0.0938	0.0694	0.1555	39.37	43.72	0.4311	0.0754	0.0206	1.4016	90.19	89.70	0.9914	0.7955	-282.2	-167.8	1.4071
9	0.0389	0.0980	0.0663	0.1753	39.17	42.30	0.4284	0.0880	0.0230	1.4085	88.42	87.84	1.0133	0.8380	-295.3	-180.5	1.4102
10	0.0321	0.1109	0.0761	0.1682	38.14	42.46	0.4285	0.1010	0.0261	1.4252	86.71	86.03	1.0449	0.8847	-310.1	-194.5	1.4132
11	0.0023	0.1311	0.1417	0.1371	35.61	39.33	0.4354	0.1127	0.0274	1.4392	85.52	84.76	1.0854	0.9483	-322.6	-206.4	1.3943

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	MC/SEC	INLET	INLET	INLET	INLET
Σ	Σ	Σ	Σ	ΣQH	Σ	Σ	Σ	Σ
1.1128	1.3963	88.72	89.24	190.53	1.1128	1.3963	88.72	89.24

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	INLET	INLET	STAGE	TO1
1	0.1952	0.1401	234.1	142.0	128.3	139.1	198.2	28.4	0.9554	0.2105	0.4878	0.4017	1.2877	1.1144	1.3243	1.1144
2	0.1307	0.1020	234.5	160.5	154.5	156.8	183.0	34.0	0.8691	0.2129	0.4984	0.4559	1.3422	1.1147	1.3371	1.1147
3	0.0892	0.0755	233.3	169.4	169.0	167.0	160.9	29.8	0.7608	0.1762	0.4805	0.4842	1.3768	1.1101	1.3608	1.1101
4	0.0438	0.0585	225.4	169.9	173.1	167.7	144.3	27.1	0.6948	0.1599	0.4563	0.4858	1.3829	1.1062	1.3667	1.1062
5	0.0345	0.0370	209.0	164.4	170.7	162.5	120.4	25.3	0.6152	0.1544	0.4059	0.4702	1.3724	1.1030	1.3580	1.1030
6	0.0274	0.0366	208.1	167.1	172.4	164.9	116.5	26.9	0.5943	0.1614	0.4022	0.4775	1.3798	1.1044	1.3690	1.1044
7	0.0237	0.0267	208.7	169.4	174.0	167.2	115.3	27.3	0.5854	0.1619	0.4031	0.4837	1.3863	1.1096	1.3760	1.1096
8	0.0199	0.0225	207.4	169.9	173.2	167.8	114.1	28.4	0.5825	0.1572	0.3980	0.4843	1.3880	1.1126	1.3823	1.1126
9	0.0154	0.0174	204.4	170.7	172.3	168.5	113.7	27.4	0.5836	0.1622	0.3939	0.4859	1.3906	1.1170	1.3888	1.1170
10	0.0095	0.0109	205.4	171.6	170.2	168.8	114.9	30.6	0.5939	0.1743	0.5888	0.4869	1.3926	1.1236	1.4037	1.1236
11	0.0037	0.0044	197.7	163.0	160.2	157.9	115.8	31.3	0.6261	0.1931	0.6637	0.4602	1.3701	1.1294	1.4140	1.1294

SL	INCS	INCN	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0758	0.1580	0.2943	0.7549	30.40	36.69	0.5464	0.1435	0.0297	0.9610	73.06	74.11
2	0.0432	0.1324	0.2556	0.6942	37.77	42.15	0.4674	0.1266	0.0279	0.9647	75.50	76.49
3	0.0220	0.0735	0.2000	0.5846	42.35	45.43	0.4089	0.0770	0.0184	0.9793	83.70	84.39
4	0.0139	0.0370	0.1739	0.5349	44.05	46.17	0.3800	0.0514	0.0131	0.9870	87.96	88.48
5	0.1218	0.0999	0.1568	0.4608	44.35	44.83	0.3465	0.0404	0.0117	0.9511	88.93	89.40
6	0.1412	0.0230	0.1578	0.4329	45.12	45.47	0.3302	0.0512	0.0157	0.9889	88.31	88.82
7	0.1311	0.0292	0.1557	0.4235	45.67	46.05	0.3233	0.0607	0.0192	0.9868	87.61	88.16
8	0.1364	0.0325	0.1495	0.4253	45.53	46.12	0.3204	0.0626	0.0225	0.9866	86.07	86.70
9	0.1462	0.0392	0.1344	0.4214	45.32	46.19	0.3159	0.0654	0.0222	0.9861	84.13	84.85
10	0.1931	0.0405	0.1794	0.4146	44.73	46.05	0.3105	0.0692	0.0243	0.9855	82.35	83.18
11	0.2162	0.0814	0.2328	0.4330	41.89	43.22	0.3322	0.0899	0.0323	0.9826	80.46	81.40

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
MC/SEC	Σ	Σ	Σ	Σ	Σ	Σ	Σ
794.14	1.1128	1.3739	84.23	84.92	1.1128	0.9840	84.23

ROTOR 2

															RUN NO 414, SPEED CODE 80, POINT NO 45			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1469	0.1002	129.1	224.4	126.1	167.3	27.8	152.4	0.153	0.7332	0.3643	0.6320	179.5	191.1	0.9566	0.4791	197.3	171.6
2	0.1038	0.0763	162.6	221.6	159.2	169.5	32.8	142.7	0.1022	0.6364	0.4621	0.6189	195.1	205.5	0.8464	0.5029	227.4	180.1
3	0.0815	0.0623	174.3	216.5	174.1	173.0	28.0	130.1	0.1588	0.6427	0.5044	0.6356	279.7	115.8	0.7200	0.5402	251.6	193.1
4	0.0422	0.0489	174.4	207.9	174.5	171.4	25.9	117.4	0.1472	0.5995	0.5056	0.5819	225.3	229.3	0.7595	0.5733	245.0	204.8
5	0.0261	0.0180	173.9	190.3	172.0	160.4	25.8	102.4	0.1491	0.5682	0.4982	0.5308	240.7	241.8	0.8340	0.4306	291.1	226.1
6	0.0165	0.0130	176.2	182.5	174.2	155.8	27.0	95.0	0.1537	0.5478	0.5046	0.5080	273.2	273.5	0.8622	0.4596	301.6	236.9
7	0.0132	0.0118	177.3	175.8	175.3	156.6	26.4	88.3	0.1508	0.5135	0.5066	0.5002	285.4	285.4	0.8511	0.7003	312.5	251.7
8	0.0080	0.0079	178.5	182.5	176.3	159.1	27.8	99.4	0.1564	0.5115	0.5087	0.5060	302.1	301.0	0.9295	0.7342	326.1	264.8
9	0.0047	0.0045	179.0	184.8	176.3	159.4	30.8	93.5	0.1728	0.5302	0.5088	0.5104	313.6	312.9	0.9475	0.7493	333.3	271.3
10	0.0016	0.0015	170.2	177.1	167.3	150.4	31.2	93.2	0.1842	0.5540	0.4813	0.4865	325.1	326.7	0.9567	0.7589	338.2	276.2

SL	INCS	INCP	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	P7/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0336	0.0078	0.3029	0.6505	33.73	48.24	0.2580	-0.1058	-0.0251	1.3128	107.82	108.12	0.8738	0.2233	-151.7	-38.5	1.6939
2	0.1042	0.0051	0.1574	0.4508	42.97	50.09	0.3457	0.0079	0.0020	1.2657	99.15	99.12	0.7929	0.3620	-162.4	-60.8	1.7154
3	0.1055	0.0045	0.1703	0.3472	47.42	52.22	0.3520	0.0483	0.0120	1.2466	93.97	93.77	0.8056	0.4584	-181.7	-85.7	1.7274
4	0.0825	0.0062	0.1486	0.2743	47.58	52.57	0.3315	0.0122	0.0030	1.2457	98.29	98.23	0.8515	0.5772	-199.4	-111.9	1.7205
5	0.0390	0.0285	0.1076	0.1568	46.89	49.85	0.3129	0.0153	0.0037	1.2306	97.33	97.25	0.9388	0.7821	-234.9	-159.4	1.6931
6	0.0331	0.0247	0.1142	0.1619	47.47	48.48	0.2940	0.0173	0.0040	1.2104	96.65	96.56	0.9552	0.8533	-246.2	-178.5	1.6745
7	0.0187	0.0234	0.1076	0.0763	47.69	48.85	0.2663	-0.0001	-0.0000	1.2052	100.05	100.04	0.9755	0.8993	-258.8	-197.1	1.6721
8	0.0200	0.0188	0.0750	0.0735	47.78	49.52	0.2591	0.0082	0.0019	1.2121	98.21	98.15	0.9995	0.9260	-274.3	-211.7	1.6850
9	0.0191	0.0197	0.0585	0.0708	47.55	49.40	0.2609	0.0185	0.0044	1.2182	96.04	95.92	1.0134	0.9425	-282.9	-219.5	1.6966
10	0.0068	0.0457	0.0937	0.0593	44.69	46.33	0.2588	0.0148	0.0036	1.2245	96.86	96.77	1.0534	0.9942	-294.0	-231.6	1.6755

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SGM			%	%
1.1828	1.6955	89.06	89.84	166.87	1.0628	1.2341	98.40	98.45

STATOR 2

															RUN N1414, SPEED CODE 80, POINT NO 45				
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	TJ/TO	TO2/	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			INLET	STAGE	TO1
1	0.1231	0.1413	209.2	163.1	145.9	163.1	149.9	3.0	0.7954	0.0184	0.5804	0.4469	1.6528	1.1976	1.1976	1.2812	1.0747		
2	0.0895	0.0560	211.9	174.4	159.4	174.3	139.7	3.9	0.7178	0.0221	0.5900	0.4801	1.6989	1.1924	1.1924	1.2525	1.0701		
3	0.0549	0.0657	212.0	177.4	169.4	177.4	127.4	-0.7	0.6437	-0.0037	0.5921	0.4905	1.7184	1.1846	1.1846	1.2405	1.0691		
4	0.0467	0.0447	206.9	172.6	171.7	172.6	115.3	-2.3	0.5908	-0.0130	0.5788	0.4782	1.7096	1.1776	1.1776	1.2382	1.0657		
5	0.0219	0.0186	191.8	161.3	163.1	161.2	101.0	-2.8	0.5542	-0.0175	0.5352	0.4462	1.6796	1.1738	1.1738	1.2202	1.0623		
6	0.0164	0.0134	184.3	155.8	158.7	155.5	93.8	-4.7	0.5337	-0.0305	0.5134	0.4303	1.6638	1.1721	1.1721	1.2022	1.0576		
7	0.0134	0.0110	181.9	154.5	159.4	154.5	87.8	-1.3	0.5024	-0.0081	0.5062	0.4271	1.6608	1.1725	1.1725	1.1970	1.0546		
8	0.0100	0.0085	184.6	159.4	161.7	159.4	89.1	0.1	0.5038	0.0005	0.5121	0.4394	1.6733	1.1820	1.1820	1.2030	1.0576		
9	0.0057	0.0049	187.0	162.1	162.0	162.0	93.3	5.2	0.5227	0.0324	0.5168	0.4450	1.6795	1.1918	1.1918	1.2059	1.0604		
10	0.0017	0.0014	179.3	152.3	153.3	152.1	93.1	7.3	0.5456	0.0481	0.4929	0.4159	1.6515	1.1990	1.1990	1.2070	1.0614		

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	O-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TO1-STG	TOT-STG
1	-0.0922	0.1670	0.7769	43.32	50.44	0.3656	0.1186	0.0250	0.9758	98.10	98.17
2	-0.1467	0.1625	0.6557	47.89	54.84	0.3199	0.0470	0.0106	0.9901	94.61	94.78
3	-0.0903	0.1409	0.6474	51.51	56.54	0.3051	0.0235	0.0056	0.9950	91.85	92.10
4	-0.1363	0.1360	0.6639	52.71	55.38	0.3076	0.0294	0.0074	0.9940	95.62	95.76
5	-0.1687	0.1408	0.5717	50.54	51.71	0.3145	0.0395	0.0114	0.9930	93.69	93.87
6	-0.1665	0.1217	0.5842	49.26	49.82	0.3161	0.0374	0.0112	0.9939	93.63	93.79
7	-0.2204	0.1588	0.5106	49.58	49.45	0.3034	0.0436	0.0137	0.9930	96.44	96.53
8	-0.2334	0.1776	0.5033	50.17	50.74	0.2957	0.0469	0.0155	0.9923	93.98	94.13
9	-0.2590	0.2290	0.4503	50.05	51.20	0.2946	0.0613	0.0210	0.9898	90.78	91.02
10	-0.2995	0.2702	0.4975	47.01	47.56	0.3209	0.0930	0.0332	0.9857	89.72	89.99

NCCRR	NCCRR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
KG/SEC	KG/SEC			%	%			%
794.14	87.8	1.1828	1.6800	87.39	88.28	1.0628	0.9909	93.98

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)**

U. S. CUSTOMARY UNITS

ROTOR 1

															RUN NO 414, SPEED CODE 10, POINT NO 41									
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VM-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V1-1	V1-2						
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLUM	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC						
1	10.556	7.660	555.2	555.4	555.2	563.0	0.9838	700.1	0.0	51.1	0.5488	0.8098	476.8	521.5	0.7032	0.5374	762.6	590.7						
2	5.149	7.938	432.5	467.0	432.5	404.4	0.9834	617.7	0.0	45.3	0.5498	0.7795	533.4	571.5	0.7664	0.5486	827.9	610.2						
3	7.860	6.180	434.5	417.8	434.5	418.5	0.9879	535.1	0.0	40.8	0.5874	0.7325	547.5	626.9	0.8065	0.5600	871.5	625.2						
4	6.604	5.165	436.0	422.3	436.0	411.0	0.9909	474.0	0.0	37.4	0.5905	0.6502	656.1	679.1	0.8476	0.5752	915.1	644.5						
5	6.552	3.681	443.6	446.0	443.6	439.4	0.9946	371.0	0.0	32.5	0.5945	0.5103	788.1	759.7	0.8430	0.6345	1017.5	720.8						
6	3.706	3.059	444.7	463.6	444.7	444.1	0.9942	344.6	0.0	31.1	0.5976	0.5910	851.7	856.7	0.8501	0.6813	1068.2	769.6						
7	5.226	4.641	441.7	455.6	441.7	445.5	0.9919	331.3	0.0	30.4	0.5966	0.5737	922.3	857.0	1.0197	0.7069	1100.3	799.7						
8	2.773	2.278	442.0	446.2	442.0	443.0	0.9893	319.1	0.0	29.5	0.5959	0.5725	932.3	915.7	1.0446	0.7381	1132.6	835.7						
9	2.178	1.803	441.1	443.6	441.1	442.3	0.9857	314.1	0.0	29.1	0.5941	0.5676	975.6	975.6	1.0817	0.7663	1167.5	869.0						
10	1.358	1.114	442.5	455.6	442.5	457.2	0.9716	314.0	0.0	25.4	0.5761	0.5624	1024.6	1024.6	1.1089	0.7941	1199.1	903.1						
11	0.561	0.456	442.8	461.8	442.8	458.0	0.9465	317.9	0.0	31.5	0.5435	0.5314	1068.0	1068.0	1.1227	0.7953	1218.2	909.6						

SL	INCS	INCM	DEV	TKM	RMCVP-1	RMCVP-2	C-FAC	OMEGA-B	LCSS-P	PU2/	REFF-P	TEFF-A	B-1	B-2	VM-1	VM-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.07	5.48	13.28	56.41	37.52	37.40	0.9949	0.2143	0.0491	1.3851	84.01	83.26	38.67	-17.54	-476.8	178.6	1.3453
2	-0.75	4.67	12.74	44.47	40.26	42.69	0.9969	0.1581	0.0402	1.3841	66.56	85.93	40.14	-4.33	-533.8	46.2	1.3864
3	0.11	5.35	12.67	34.91	40.57	43.16	0.9918	0.0992	0.0272	1.3825	90.55	90.11	43.32	8.41	-597.5	-91.6	1.3911
4	0.41	5.53	12.57	27.31	40.85	45.79	0.9475	0.0778	0.0219	1.3707	91.65	91.27	45.94	18.53	-656.1	-205.1	1.3835
5	-0.13	4.43	6.70	14.29	41.23	44.98	0.9129	0.0625	0.0173	1.3580	51.49	41.13	50.80	36.52	-788.1	-428.8	1.3555
6	0.01	3.59	6.85	16.88	41.24	44.85	0.9327	0.0560	0.0154	1.3376	51.53	41.17	52.91	42.03	-845.7	-515.1	1.3566
7	1.04	3.68	6.21	5.23	41.10	44.59	0.9315	0.0557	0.0145	1.3396	41.58	41.22	54.23	45.00	-892.3	-565.2	1.3594
8	1.70	4.00	5.55	7.88	40.56	44.71	0.9360	0.0671	0.0121	1.3454	42.64	42.32	55.43	47.55	-932.3	-616.5	1.3578
9	2.03	4.27	5.48	7.02	40.73	44.72	0.9375	0.0662	0.0117	1.3543	42.65	42.32	56.71	46.65	-975.6	-662.5	1.3596
10	2.97	5.20	5.56	6.80	39.33	44.38	0.9514	0.0624	0.0106	1.3785	43.34	43.03	58.71	51.90	-1024.6	-710.7	1.3644
11	4.15	6.37	5.07	5.76	36.54	41.00	0.9364	0.0565	0.0134	1.3510	41.27	40.95	61.05	55.29	-1068.0	-747.7	1.3410

TU/TO	P1/PO	EFF-AD	EFF-P	W1/31	TU2/TU1	PU2/PU1	EFF-AD	EFF-P
INLET	INLET	1	1	DOPT			1	1
1.1020	1.3822	90.56	90.55	40.55	1.1020	1.3822	90.55	90.56

STATOR 1

															RUN NO 414, SPEED CODE 10, POINT NO 41									
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VM-1	VM-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V1-1	V1-2						
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC						
1	11.044	7.754	814.7	548.1	472.2	537.3	601.6	108.2	54.2	11.3	0.7254	0.4748	1.2791	1.1172	1.3171	1.1172								
2	7.064	5.267	815.8	602.0	563.2	598.5	590.2	106.9	46.3	10.1	0.7283	0.5305	1.3452	1.1134	1.3432	1.1134								
3	4.441	3.494	751.2	612.9	602.6	611.3	512.6	95.3	40.4	8.9	0.7062	0.5420	1.3678	1.1073	1.3592	1.1073								
4	2.874	2.465	662.4	616.4	604.4	603.2	457.2	93.2	38.8	8.8	0.6798	0.5353	1.3650	1.1030	1.3519	1.1030								
5	1.121	1.265	662.4	582.5	552.2	576.7	363.3	80.9	31.4	8.0	0.6159	0.5113	1.3415	1.0950	1.3241	1.0950								
6	0.492	0.924	660.5	583.5	585.9	577.6	339.2	80.9	29.9	8.0	0.6022	0.5123	1.3411	1.0952	1.3246	1.0952								
7	0.710	0.700	672.0	581.4	585.7	575.8	327.4	80.6	29.2	8.0	0.5941	0.5103	1.3385	1.0955	1.3252	1.0955								
8	0.357	0.576	665.6	575.1	530.2	569.5	316.0	79.9	28.3	8.0	0.5851	0.5044	1.3326	1.0961	1.3227	1.0961								
9	0.250	0.452	663.4	576.7	560.1	570.9	310.7	81.2	27.9	8.1	0.5861	0.5053	1.3332	1.0983	1.3282	1.0983								
10	0.197	0.374	662.1	581.0	585.6	573.9	312.6	90.6	28.2	9.0	0.5835	0.5081	1.3362	1.1034	1.3350	1.1034								
11	0.675	0.180	622.6	591.9	547.4	541.8	317.4	105.0	30.1	11.0	0.5545	0.4802	1.3126	1.1049	1.3625	1.1049								

SL	INCS	INCM	DEV	TKM	RMCVP-1	RMCVP-2	C-FAC	OMEGA-B	LCSS-P	PU2/	REFF-A	TEFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	STG
1	8.55	6.26	16.83	42.98	33.44	41.36	0.9066	0.1658	0.0343	0.9509	69.88	71.03
2	-1.04	4.08	12.52	36.21	40.88	47.35	0.9855	0.0992	0.0220	0.9704	77.64	78.55
3	-4.50	0.97	10.10	34.41	44.78	49.15	0.9432	0.0591	0.0142	0.9822	85.46	86.07
4	-6.66	0.88	5.58	28.04	46.05	48.76	0.9201	0.0441	0.0123	0.9772	87.40	87.93
5	-10.79	-4.34	6.12	23.45	45.51	46.69	0.2798	0.0434	0.0126	0.9502	87.94	88.41
6	-12.25	-5.47	7.16	21.93	45.56	46.75	0.2593	0.0454	0.0140	0.9501	87.89	88.36
7	-13.00	-6.02	7.61	21.23	45.81	46.52	0.2508	0.0526	0.0167	0.9689	87.73	88.21
8	-14.12	-6.43	7.55	20.35	46.03	45.92	0.2537	0.0830	0.0273	0.9826	86.67	87.19
9	-15.14	-7.75	7.65	19.83	46.15	45.94	0.2493	0.0959	0.0326	0.9801	85.96	86.52
10	-16.92	-9.33	6.57	19.20	45.56	46.01	0.2419	0.1005	0.0354	0.9793	86.75	87.31
11	-18.16	-10.43	13.24	19.14	42.81	43.02	0.2503	0.1098	0.0395	0.9793	46.89	85.53

NGURN	NCCHR	TU/TO	P1/PO	EFF-AD	EFF-P	TU2/TU1	PU2/PU1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	1	1			1	1
7637.	201.07	1.1020	1.3375	85.07	85.68	1.1020	0.9822	85.07	85.07

ROTOR 2

RUN NJ414, SPEED CODE 10, POINT NO 41																		
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-1	V-1	V-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.570	5.787	510.1	465.0	455.1	721.2	105.2	486.2	11.8	33.6	0.4406	0.7519	594.1	631.4	0.6029	0.6360	698.0	735.7
2	6.203	4.301	423.2	361.7	361.8	722.8	101.6	450.0	9.3	31.8	0.5449	0.7374	644.8	672.4	0.7174	0.5545	820.4	756.0
3	4.728	3.219	444.6	317.7	317.9	714.9	92.6	397.0	8.2	28.9	0.5682	0.7088	694.8	713.1	0.7709	0.6775	877.3	781.6
4	3.345	2.131	442.3	272.5	272.6	688.9	89.9	349.6	8.0	25.9	0.5655	0.6694	744.4	757.7	0.8034	0.6939	912.6	800.7
5	0.865	0.194	414.0	271.6	271.7	688.8	88.3	283.5	7.5	25.0	0.5426	0.5792	861.4	865.0	0.8734	0.7261	991.5	841.9
6	0.358	-0.104	411.4	247.5	247.6	594.3	80.4	257.1	7.6	23.4	0.5381	0.5563	902.7	903.7	0.8991	0.7572	1021.5	878.2
7	-0.051	-0.412	355.5	234.7	234.8	590.7	79.4	243.0	7.6	22.4	0.5271	0.5506	943.0	943.0	0.9216	0.7897	1048.3	915.9
8	-0.039	-0.944	252.0	232.0	232.1	589.1	82.9	237.1	8.0	21.9	0.5229	0.5465	990.3	990.3	0.9556	0.8258	1089.2	959.7
9	-0.966	-1.278	252.1	232.4	232.5	579.2	92.4	248.7	9.0	23.2	0.5181	0.5404	1036.3	1036.0	0.9716	0.8365	1110.4	975.8
10	-0.773	-0.946	255.6	255.1	255.0	493.2	104.6	263.2	10.8	24.1	0.4873	0.4747	1074.3	1072.5	0.9704	0.8051	1114.8	948.2

SL	INCS	INCM	DEV	TLRN	RMVVP-1	RMVVP-2	D-FAC	OMEGA-B	LCSS-P	PQ2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PC/PD
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.64	-0.88	15.80	32.91	39.02	56.03	0.0961	0.0296	0.1071	1.2593	97.17	97.08	44.15	11.24	-487.9	-145.2	1.6168
2	-10.06	-3.79	6.66	24.40	40.73	58.01	0.1991	0.1404	0.0351	1.2105	82.16	81.67	41.34	16.94	-543.2	-221.8	1.6432
3	-9.11	-3.44	7.25	15.33	50.87	59.73	0.2103	0.1141	0.0290	1.1945	82.58	82.14	43.09	23.76	-600.1	-316.1	1.6347
4	-7.72	-2.64	6.64	15.20	50.54	57.45	0.2106	0.0900	0.0230	1.1791	83.84	83.46	45.79	30.59	-654.5	-408.2	1.6035
5	-4.06	-0.19	5.04	6.29	48.65	51.17	0.2232	0.1322	0.0324	1.1300	69.52	68.99	51.97	43.68	-781.1	-581.5	1.5159
6	-3.02	0.29	5.07	6.19	48.36	50.04	0.2031	0.1186	0.0284	1.1163	68.82	68.33	53.61	47.42	-822.3	-646.6	1.4960
7	-1.47	0.91	4.48	5.62	47.41	49.31	0.1851	0.0983	0.0233	1.1184	72.41	71.47	55.47	45.84	-863.6	-700.0	1.4902
8	-1.23	0.99	3.26	5.06	47.06	49.56	0.1737	0.0957	0.0228	1.1156	71.50	71.05	57.18	52.12	-915.4	-757.6	1.4878
9	-0.94	1.28	2.54	4.63	46.53	48.37	0.1771	0.1115	0.0266	1.1133	67.42	66.92	58.22	53.59	-943.9	-785.2	1.4432
10	0.47	2.70	7.67	1.78	43.43	40.46	0.2087	0.1831	0.0397	1.0845	48.18	47.60	60.44	58.66	-969.7	-809.9	1.4201

TO/TU	PC/PD	EFF-AD	EFF-P	W1/W1	TO2/TU1	PQ2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LB/SEC			STAGE	
1.1614	1.5370	81.07	82.16	36.29	1.0537	1.1408	75.22	75.70

STATOR 2

RUN NJ414, SPEED CODE 10, POINT NO 41																
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PJ/PO	TJ/TJ	PJ/PO	TO2/
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	6.993	8.119	162.6	181.4	625.0	780.5	477.5	-36.3	37.2	-2.7	0.6731	0.6682	1.5335	1.1953	1.1929	1.0700
2	5.214	5.789	161.4	171.2	674.5	790.5	440.2	-31.8	33.0	-2.3	0.6934	0.6801	1.5669	1.1865	1.1535	1.0683
3	4.054	4.328	154.7	165.5	653.5	764.7	393.0	-34.3	29.2	-2.6	0.6870	0.6596	1.5509	1.1748	1.1276	1.0630
4	3.184	3.243	145.7	146.0	624.7	739.4	342.8	-34.4	26.6	-2.7	0.6631	0.6340	1.5327	1.1640	1.1275	1.0574
5	1.728	1.587	137.5	134.4	617.4	654.4	279.0	-9.4	24.3	-0.8	0.5848	0.5636	1.4521	1.1508	1.1025	1.0512
6	1.260	1.137	124.7	124.4	605.4	642.4	251.6	-4.5	22.8	0.4	0.5649	0.5537	1.4420	1.1464	1.0761	1.0464
7	1.039	0.906	125.5	125.8	556.7	615.8	241.2	7.6	21.9	0.7	0.5508	0.5298	1.4173	1.1452	1.0636	1.0451
8	0.921	0.824	140.5	112.6	555.6	613.4	230.0	17.2	21.7	1.6	0.5517	0.5269	1.4156	1.1486	1.0614	1.0447
9	0.788	0.734	124.6	105.2	583.5	608.6	248.9	27.2	23.1	2.6	0.5442	0.5213	1.4125	1.1556	1.0598	1.0465
10	0.435	0.441	125.1	57.4	500.2	546.6	262.8	30.7	27.7	3.2	0.4800	0.4644	1.3622	1.1635	1.0399	1.0491

SL	INCM	DEV	TLRN	RMVVP-1	RMVVP-2	D-FAC	OMEGA-B	LCSS-P	PQ2/	EFF-A	EFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-13.66	5.86	35.85	51.11	60.71	0.1427	0.1980	0.0417	0.9482	71.66	74.31
2	-10.77	5.74	35.34	55.71	62.82	0.1486	0.1685	0.0379	0.9537	61.80	61.57
3	-12.47	5.72	31.75	57.76	61.52	0.1622	0.1854	0.0441	0.9447	57.95	58.69
4	-15.08	5.68	25.24	57.29	60.04	0.1369	0.1637	0.0426	0.9570	60.61	61.27
5	-17.11	5.24	25.14	51.67	53.15	0.1366	0.1466	0.0567	0.9594	44.74	45.35
6	-18.58	5.70	22.39	50.63	52.28	0.1331	0.1829	0.0550	0.9644	45.57	46.13
7	-15.47	10.27	21.24	50.32	49.91	0.1393	0.2575	0.0807	0.9511	39.41	39.94
8	-20.57	11.75	25.06	43.56	49.58	0.1355	0.2597	0.0808	0.9515	38.39	38.91
9	-21.72	12.64	24.54	40.63	48.94	0.1039	0.2640	0.0905	0.9514	36.04	36.56
10	-20.70	15.54	24.50	40.51	45.23	0.1821	0.2827	0.1005	0.9580	22.86	23.28

NGCRN	WLCRN	TO/TU	PC/PD	EFF-AD	EFF-P	TO2/TU1	PQ2/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
76.77	201.07	111.61	114.77	71.89	73.36	1.0537	0.9544	49.87

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ¹⁻¹	M ¹⁻²	V ¹⁻¹	V ¹⁻²
LEGRDE	LEGRDE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE	M-1	M-2	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	10.304	7.676	557.0	502.0	597.0	555.7	0.9452	712.5	0.0	51.9	0.5506	0.4134	485.4	527.8	0.7096	0.5263	769.6	584.7
2	6.748	7.929	636.0	675.8	630.0	596.0	0.9716	561.1	0.0	47.0	0.5031	0.7858	543.3	561.7	0.7699	0.5380	832.0	599.6
3	7.248	6.242	636.5	622.1	630.5	606.5	0.9852	355.3	0.0	42.5	0.5018	0.7355	608.1	638.0	0.8171	0.5469	882.1	612.0
4	6.907	5.421	646.2	775.7	646.2	605.3	0.9892	491.6	0.0	35.1	0.5543	0.6945	667.8	651.2	0.8575	0.5677	925.9	637.4
5	4.728	3.901	646.4	701.5	646.4	580.1	0.9908	395.2	0.1	34.3	0.5543	0.6212	602.1	614.0	0.9551	0.5332	1030.2	715.5
6	3.420	3.205	646.6	682.3	646.6	572.0	0.9894	372.4	0.0	32.1	0.6017	0.6031	660.5	675.1	1.0041	0.5722	1082.8	761.6
7	3.417	2.756	646.5	677.9	646.5	572.0	0.9870	352.5	0.0	32.3	0.6023	0.5976	506.3	513.0	1.0555	0.7004	1116.6	796.6
8	2.400	2.240	656.3	667.7	656.3	567.9	0.9844	353.1	0.0	31.9	0.6031	0.5884	549.0	522.4	1.0670	0.7265	1150.4	825.8
9	2.251	1.711	646.7	661.0	646.7	561.0	0.9808	349.2	0.0	31.9	0.6025	0.5808	553.1	553.1	1.1006	0.7502	1186.7	856.6
10	1.371	0.924	636.4	654.4	636.4	552.3	0.9703	351.4	0.0	32.5	0.5905	0.5723	602.5	602.5	1.1321	0.7739	1222.3	884.9
11	0.620	0.434	610.5	622.0	610.5	511.0	0.9420	350.6	0.0	33.8	0.5540	0.5407	605.0	605.0	1.1447	0.7747	1240.3	891.1

SL	INCS	INCR	LEV	TLAN	RMV-1	RMV-2	U-FAC	CMEGA-9	LCSS-P	PU2/	REFF-P	REFF-A	B ¹⁻¹	B ¹⁻²	VB ¹⁻¹	VB ¹⁻²	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TO1	TLT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	0.52	5.67	12.78	57.10	37.26	30.00	0.3000	0.2117	0.0473	1.4055	84.93	84.15	35.05	-18.04	-485.4	181.7	1.3594
2	-0.14	5.27	12.40	46.44	37.85	24.85	0.4777	0.1522	0.0386	1.4146	87.06	87.04	40.74	-5.67	-543.3	57.4	1.4062
3	0.40	5.00	13.21	35.95	40.84	24.33	0.4784	0.1217	0.0332	1.3984	88.85	88.21	42.60	7.65	-608.1	-61.7	1.4095
4	0.70	5.08	12.68	27.95	40.93	25.51	0.4003	0.0907	0.0255	1.3486	90.65	90.20	46.19	18.24	-667.8	-199.7	1.4053
5	0.20	4.81	8.00	15.34	40.18	25.32	0.4022	0.0861	0.0181	1.4731	91.57	91.19	51.19	35.85	-602.1	-41.4	1.3888
6	0.33	4.51	6.10	11.90	41.20	25.23	0.4171	0.0834	0.0171	1.3749	91.35	90.95	53.27	41.27	-866.5	-402.2	1.3917
7	1.28	4.12	5.15	10.59	41.12	25.55	0.3000	0.0966	0.0150	1.3647	92.13	91.76	54.47	43.46	-808.3	-250.5	1.3982
8	1.88	4.18	4.56	5.05	41.05	25.36	0.3000	0.0773	0.0150	1.3500	91.82	91.43	55.61	44.56	-949.0	-499.3	1.3999
9	2.15	4.38	4.05	7.43	40.87	25.02	0.3322	0.0846	0.0165	1.3470	90.65	90.17	56.33	46.90	-993.1	-443.4	1.4024
10	2.84	5.06	5.06	7.17	39.88	24.26	0.3315	0.0750	0.0190	1.4151	89.23	88.69	58.58	51.41	-1042.9	-491.6	1.4048
11	4.14	6.36	6.80	6.03	37.23	20.72	0.4011	0.0839	0.0200	1.4328	88.26	87.67	61.04	55.01	-1085.0	-730.0	1.3809

TO2/TO1	PU2/PO1	REFF-AU	REFF-P
INLET	INLET	T	T
1.1117	1.3552	84.44	84.93

STATOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ¹⁻¹	M ¹⁻²	V ¹⁻¹	V ¹⁻²
LEGRDE	LEGRDE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	M-1	M-2	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	11.220	8.020	614.5	516.7	628.3	610.2	673.3	103.2	55.7	11.5	0.7242	0.4403	1.2805	1.1214	1.2805	1.1214	1.2124	1.1214
2	7.365	5.686	615.0	575.7	599.2	564.2	612.1	114.2	44.3	11.4	0.7292	0.4993	1.3517	1.1198	1.3517	1.1198	1.3524	1.1198
3	4.777	3.937	750.7	556.6	533.0	588.5	533.3	97.7	42.4	9.4	0.7036	0.5198	1.3824	1.1139	1.3713	1.1139	1.4139	1.1139
4	3.187	2.882	744.6	555.5	555.4	568.2	474.7	91.2	38.4	9.0	0.6797	0.5200	1.3972	1.1050	1.3706	1.1050	1.4090	1.1050
5	1.415	1.551	765.4	576.5	554.3	572.1	387.4	88.7	33.1	8.8	0.6283	0.5062	1.3753	1.1032	1.3567	1.1032	1.4177	1.1032
6	0.973	1.156	656.6	582.4	562.3	575.4	366.9	89.3	31.8	9.5	0.6159	0.5090	1.3774	1.1048	1.3609	1.1048	1.4048	1.1048
7	0.768	0.943	654.6	583.4	555.7	577.2	357.7	84.9	31.0	9.4	0.6136	0.5095	1.3776	1.1063	1.3644	1.1063	1.4063	1.1063
8	0.643	0.670	685.0	576.7	555.5	572.0	369.3	83.3	30.5	8.3	0.6076	0.5048	1.3730	1.1080	1.3634	1.1080	1.4080	1.1080
9	0.533	0.623	685.1	581.1	591.1	574.9	360.4	84.4	30.4	8.3	0.6029	0.5062	1.3745	1.1115	1.3700	1.1115	1.4115	1.1115
10	0.395	0.494	681.5	585.1	585.0	577.4	369.6	84.6	30.9	9.3	0.5977	0.5084	1.3773	1.1176	1.3873	1.1176	1.4176	1.1176
11	0.142	0.194	652.2	586.3	547.6	544.7	353.9	113.1	32.9	11.7	0.5687	0.4839	1.3532	1.1235	1.4046	1.1235	1.4135	1.1235

SL	INCS	INCR	LEV	TLAN	RMV-1	RMV-2	U-FAC	CMEGA-9	LCSS-P	PU2/	REFF-A	REFF-P	B ¹⁻¹	B ¹⁻²	VB ¹⁻¹	VB ¹⁻²	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TO1	TLT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	3.02	7.73	16.40	44.19	32.34	39.00	0.5170	0.1798	0.0372	0.9468	77.07	71.25					
2	1.01	6.12	13.84	36.94	35.64	45.07	0.4318	0.1279	0.0283	0.9618	77.10	78.08					
3	-2.44	3.03	10.77	33.00	43.55	47.86	0.3733	0.0676	0.0162	0.9807	81.02	83.76					
4	-5.11	0.67	5.80	25.36	45.49	44.21	0.3483	0.0400	0.0122	0.9672	86.54	87.13					
5	-9.14	-2.69	6.54	24.28	40.24	47.04	0.3057	0.0415	0.0120	0.9503	88.26	88.76					
6	-10.37	-3.60	6.87	22.90	38.49	47.26	0.2873	0.0460	0.0141	0.9896	87.85	88.37					
7	-11.52	-4.24	6.61	22.61	38.54	47.33	0.2763	0.0654	0.0209	0.9857	87.37	87.92					
8	-11.98	-4.80	7.64	22.18	40.54	46.84	0.2831	0.0870	0.0246	0.9809	85.79	86.40					
9	-12.70	-5.35	7.50	22.02	40.78	46.40	0.2633	0.0916	0.0311	0.9801	84.47	85.15					
10	-14.23	-6.84	5.21	21.55	40.26	46.89	0.2740	0.0911	0.0329	0.9805	83.42	84.17					
11	-15.40	-7.67	14.00	21.14	41.02	43.79	0.2621	0.1008	0.0362	0.9802	82.54	83.35					

INCR	INCR	LEV	TLAN	RMV-1	RMV-2	U-FAC	CMEGA-9	LCSS-P	PU2/	REFF-A	REFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	TOTAL	PO1	TO1	TLT
777.00	202.06	1.1117	1.3590	84.11	84.91			1.1117	0.9012	84.11	84.93

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VB-1	VB-2	B-1	B-2	M-1	M-2	U-1	U-2	M1-1	M1-2	V1-1	V1-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.408	2.094	471.3	600.4	400.5	630.1	100.3	493.6	12.2	37.7	0.4057	0.6035	603.7	642.7	0.5065	0.5530	682.3	647.5
2	5.913	4.277	288.6	388.3	570.4	637.0	108.7	404.3	10.6	32.9	0.5114	0.6740	656.3	684.4	0.6919	0.5762	796.6	673.9
3	4.517	3.309	244.6	307.5	477.5	643.9	91.4	417.7	8.4	22.9	0.5461	0.6576	705.1	729.8	0.7614	0.5116	870.4	713.9
4	3.282	2.357	224.6	280.5	410.1	625.6	91.1	377.3	8.4	31.0	0.5475	0.6261	757.7	771.3	0.7967	0.6336	904.1	739.3
5	1.063	0.881	210.6	255.0	404.1	569.8	89.1	323.0	8.4	29.5	0.5353	0.5542	876.8	880.5	0.8701	0.6806	992.6	797.1
6	0.075	0.312	210.6	224.4	404.5	550.5	86.6	294.4	6.2	28.1	0.5349	0.5522	948.8	949.8	0.9305	0.7102	1028.2	833.2
7	0.475	0.261	202.3	212.6	557.5	547.9	83.0	270.3	7.9	26.8	0.5276	0.5226	959.5	959.5	0.9230	0.7451	1061.1	876.0
8	0.143	0.020	202.3	212.6	557.5	547.9	83.0	270.3	8.1	26.4	0.5228	0.5240	1016.2	1012.4	0.9648	0.7831	1105.9	922.0
9	-0.043	-0.155	202.3	212.6	557.5	547.9	83.0	270.3	9.2	27.5	0.5252	0.5232	1054.8	1052.4	0.7819	0.7976	1128.5	942.6
10	-0.071	-0.131	202.3	212.6	557.5	547.9	83.0	270.3	11.4	30.7	0.4969	0.4952	1093.5	1092.1	0.5796	0.7902	1130.6	939.1

SL	INCS	INCM	CEV	TLN	RMV-1	RMV-2	D-FAC	OMEGA-B	LCSS-P	PO2/	TEFF-P	TEFF-A	B1-1	B1-2	VB-1	VB-2	PC/PC
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOT	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.05	2.31	17.71	34.14	30.43	52.72	0.2074	0.0925	-0.0219	1.3054	107.70	107.49	47.34	13.15	-503.4	-149.1	1.6842
2	-8.12	-1.86	10.45	24.34	40.35	34.82	0.2826	0.0461	0.0114	1.2549	94.65	94.47	3.28	18.94	-547.4	-220.1	1.7139
3	-7.40	-1.81	6.57	15.24	45.49	56.70	0.2845	0.0342	0.0136	1.2405	92.57	92.34	44.72	25.48	-613.7	-508.1	1.7222
4	-6.39	-1.31	7.00	14.97	45.54	55.95	0.2833	0.0339	0.0085	1.2242	94.68	94.52	47.13	32.15	-666.6	-394.0	1.7029
5	-3.52	0.35	5.72	6.24	40.57	51.59	0.2734	0.0509	0.0138	1.1983	88.89	88.60	52.51	44.37	-767.6	-557.5	1.6495
6	-2.54	0.72	6.25	5.5	40.56	49.69	0.2620	0.0602	0.0140	1.1785	86.83	86.52	54.03	48.64	-832.2	-625.4	1.6241
7	-1.21	1.17	5.53	4.44	40.34	49.72	0.2416	0.0454	0.0105	1.1780	84.33	84.08	55.73	51.29	-876.4	-683.5	1.6182
8	-1.12	1.10	4.41	4.12	40.22	50.05	0.2312	0.0466	0.0108	1.1844	88.74	88.52	57.29	53.17	-930.6	-736.1	1.6255
9	-1.03	1.19	3.78	3.70	40.50	49.43	0.2325	0.0580	0.0136	1.1834	86.14	85.80	58.13	54.42	-958.4	-766.7	1.6290
10	0.17	2.40	5.82	2.73	40.83	45.20	0.2360	0.0112	0.0137	1.1822	85.73	85.38	60.14	57.41	-980.5	-791.3	1.6027

TO/TO	PC/PC	EFF-AD	EFF-P	WCI/A1	TO2/T01	PC2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			RUTOK	RUTOK
%	%	%	%	SGFT	%	%	%	%
1.1795	1.0260	86.32	87.25	35.74	1.0611	1.2097	91.38	91.61

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VB-1	VB-2	B-1	B-2	M-1	M-2	PJ/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	T01
1	7.009	8.044	735.2	635.8	550.7	635.8	434.4	8.6	41.1	0.8	0.6233	0.5339	1.6439	1.2034	1.2737	1.0731
2	5.104	5.513	753.5	606.4	601.5	666.4	453.7	2.1	36.9	0.2	0.6419	0.5627	1.6927	1.1970	1.2338	1.0707
3	3.749	3.811	751.7	605.3	631.0	665.2	438.0	-9.0	32.9	-0.8	0.6430	0.5642	1.7035	1.1871	1.2272	1.0683
4	2.747	2.698	747.1	607.9	605.8	637.8	370.2	-9.3	30.6	-0.6	0.6230	0.5419	1.6807	1.1777	1.2138	1.0639
5	1.334	1.195	681.5	576.4	576.9	576.4	318.3	-8.5	28.9	-0.8	0.5528	0.4888	1.6225	1.1697	1.1785	1.0594
6	1.001	0.860	628.8	554.1	550.1	553.4	289.7	-14.7	27.4	-1.5	0.5303	0.4696	1.6021	1.1668	1.1625	1.0551
7	0.835	0.725	618.7	543.3	554.6	543.3	274.2	-4.4	26.3	-0.4	0.5272	0.4601	1.5921	1.1670	1.1593	1.0537
8	0.683	0.620	622.3	552.1	552.1	274.0	3.5	26.1	0.4	0.5287	0.4663	1.5988	1.1740	1.1628	1.0554	
9	0.512	0.485	623.1	552.8	550.7	553.5	285.7	16.3	27.3	1.7	0.5275	0.4661	1.5996	1.1822	1.1622	1.0574
10	0.228	0.226	554.8	505.1	513.3	504.4	300.7	26.6	30.3	2.9	0.5007	0.4396	1.5748	1.1894	1.1655	1.0585

SL	IACH	CEV	TLN	RMV-1	RMV-2	D-FAC	OMEGA-B	LCSS-P	PO2/	TEFF-A	TEFF-P
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT-STG	TOT-STG
										%	%
1	-9.80	9.28	40.29	47.56	56.51	0.2075	0.1044	0.0220	0.9760	97.70	97.98
2	-6.86	8.23	30.76	52.80	60.41	0.2493	0.0529	0.0119	0.9872	96.75	89.10
3	-6.18	7.51	32.65	50.04	61.15	0.2453	0.0411	0.0098	0.9501	88.09	88.43
4	-11.08	7.70	31.41	56.06	58.99	0.2520	0.0519	0.0131	0.9881	88.97	89.27
5	-12.54	6.42	25.73	52.08	53.17	0.2670	0.0758	0.0219	0.9854	80.77	81.21
6	-12.94	7.77	26.95	50.45	51.04	0.2639	0.0717	0.0215	0.9873	75.74	80.17
7	-15.11	5.13	24.74	50.21	49.45	0.2627	0.0493	0.0294	0.9838	60.27	60.67
8	-16.12	10.51	25.76	50.48	50.52	0.2663	0.0959	0.0317	0.9834	49.38	49.81
9	-17.49	12.55	25.04	45.77	50.33	0.2602	0.1036	0.0355	0.9821	36.39	36.88
10	-18.07	15.43	27.44	45.74	47.20	0.2817	0.1104	0.0394	0.9825	26.38	26.88

NCORR	NCCR	TO/TO	PC/PC	EFF-AD	EFF-P	TO2/T01	PC2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
%	%	%	%	%	%	%	%	%	%
777.3	202.06	1.1795	1.0209	83.52	84.61	1.1611	0.9844	83.88	83.88

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA UNIFORM INLET FLOW Sonic Inlet, Takeoff Configuration (Choked Sonic-Inlet Throat)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EP1-1	EP1-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	VM-5	B-1	B-2	M-1	M-2	RUN NO-14, SPEED CODE 10, POINT NO 44	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	11.102	10.123	57.1	60.15	57.1	479.6	0.9217	739.4	0.0	57.0	0.5118	0.7877	499.0	545.7	0.6871	0.4623	747.9	517.3		
2	10.307	8.945	60.5	66.4	60.5	530.4	0.9959	679.2	0.0	52.0	0.5589	0.7679	558.6	558.0	0.7604	0.4784	623.8	537.0		
3	9.375	8.041	62.4	63.2	62.4	572.0	0.9733	603.9	0.0	46.6	0.5825	0.7398	625.2	653.9	0.8210	0.5111	687.2	574.9		
4	8.452	7.221	64.5	61.6	64.5	591.6	0.9881	540.8	0.0	42.5	0.5198	0.7110	686.5	710.6	0.8766	0.5459	943.3	615.5		
5	6.294	5.441	65.6	73.6	65.6	589.9	0.9883	441.9	0.0	36.9	0.6114	0.6500	824.6	836.8	0.9797	0.6260	1055.3	709.8		
6	5.072	4.476	65.7	71.7	65.7	582.9	0.9782	418.7	0.0	35.8	0.6125	0.6309	851.2	856.6	1.0295	0.6643	1108.8	755.7		
7	4.279	3.840	66.0	712.0	66.0	583.0	0.9787	408.6	0.0	35.1	0.6189	0.6240	933.8	938.6	1.0657	0.6914	1147.0	787.9		
8	3.520	3.144	67.1	70.4	67.1	580.8	0.9793	399.1	0.0	34.5	0.6244	0.6172	975.6	979.1	1.1012	0.7189	1184.4	820.8		
9	2.714	2.450	67.2	69.2	67.2	588.0	0.9768	395.8	0.0	34.9	0.6256	0.6044	1020.9	1020.9	1.1369	0.7374	1222.6	844.7		
10	1.742	1.550	68.4	68.4	68.4	582.3	0.9630	396.8	0.0	35.2	0.6100	0.5936	1072.2	1072.2	1.1678	0.7644	1256.0	878.9		
11	0.753	0.679	68.4	67.4	68.4	586.0	0.9499	399.9	0.0	36.1	0.5973	0.5876	1115.4	1115.4	1.1940	0.7805	1288.2	901.0		

SL	INCS	INCM	LEV	TLRN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LCSS-P	P02/	KEFF-P	KEFF-A	M-1	M-2	V0-1	V0-2	PC/PU
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	3.13	6.68	63.81	34.69	33.91	3.5433	0.3703	0.0808	1.3646	76.37	75.26	41.87	-21.94	-499.0	193.7	1.3131	
2	4.51	7.03	57.27	35.22	36.22	3.5987	0.3059	0.3772	1.5944	77.54	76.46	42.79	-8.70	-558.6	81.2	1.3715	
3	1.75	7.03	10.86	35.76	37.54	4.106	0.5328	0.2190	1.4094	81.69	81.09	44.96	5.15	-625.2	-52.0	1.4115	
4	1.43	6.55	10.45	30.81	41.08	43.99	3.5056	0.1641	1.4115	86.65	83.92	46.86	16.05	-686.5	-169.8	1.4307	
5	0.58	5.14	6.67	17.66	41.34	46.26	3.4629	0.3855	1.4252	90.30	89.80	51.51	33.84	-824.6	-395.0	1.4463	
6	0.67	4.65	4.40	13.55	41.15	46.46	3.4476	0.3633	1.4174	84.65	81.69	53.58	39.58	-891.2	-480.5	1.4557	
7	1.38	4.11	3.23	12.24	41.46	46.86	3.4387	0.3615	1.4168	84.55	81.69	54.57	42.33	-931.8	-530.0	1.4656	
8	1.77	4.07	3.40	11.50	41.68	47.04	3.4308	0.3644	1.4173	84.614	81.76	55.50	45.00	-975.6	-580.0	1.4725	
9	1.47	4.20	3.55	6.66	41.60	46.11	3.4316	0.3614	1.4164	89.41	88.42	56.65	47.77	-1020.9	-625.1	1.4718	
10	2.74	4.96	3.50	6.24	40.41	45.81	3.4271	0.3794	1.4545	89.71	89.11	58.47	50.23	-1072.2	-675.4	1.4809	
11	3.09	5.31	6.22	7.44	39.37	44.52	3.4203	0.3889	1.5143	88.65	87.97	59.99	52.54	-1115.4	-715.2	1.4980	

T02/T01	P02/P01	EFF-A0	EFF-P	W01/W1	T02/T01	P02/P01	EFF-A0	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1	1	1	1	1	1	1	1	1
1.1276	1.4460	87.14	87.79	41.04	1.1276	1.4460	87.14	87.79

STATOR 1

SL	EP1-1	EP1-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	B-1	B-2	M-1	M-2	RUN NO-14, SPEED CODE 10, POINT NO 44	U-1	U-2	P0/P0	T0/T0	P0/P0	T02/	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	INLET	INLET	INLET	INLET	INLET	T01
1	10.841	7.620	75.45	44.1	47.5	412.2	0.987	86.3	6.8	11.7	0.7001	0.3595	1.2666	1.1295	1.3373	1.1295				
2	6.336	4.847	75.6	48.1	48.7	478.0	0.973	104.1	5.2	12.2	0.7348	0.3193	1.3173	1.1304	1.3418	1.1304				
3	3.906	3.243	75.2	55.5	54.3	541.2	0.908	100.8	4.6	10.5	0.7133	0.4748	1.3698	1.1273	1.3682	1.1273				
4	2.421	2.183	78.7	57.8	58.5	511.5	0.831	97.7	4.8	9.7	0.6944	0.5022	1.3971	1.1234	1.3785	1.1234				
5	0.876	1.027	74.1	59.8	60.6	584.7	0.832	85.3	4.4	8.3	0.6996	0.5134	1.4075	1.1187	1.3869	1.1187				
6	0.546	0.737	73.6	60.1	61.1	594.1	0.815	91.5	3.9	8.8	0.7491	0.5222	1.4152	1.1209	1.4060	1.1209				
7	0.386	0.559	73.2	60.8	61.0	599.2	0.829	95.2	3.2	9.0	0.6469	0.5269	1.4194	1.1232	1.4096	1.1232				
8	0.290	0.441	72.3	60.3	61.0	600.2	0.847	92.5	3.2	8.6	0.6434	0.5268	1.4190	1.1255	1.4083	1.1255				
9	0.167	0.283	72.3	60.4	61.5	602.5	0.844	91.4	3.2	8.6	0.6337	0.5276	1.4196	1.1299	1.4127	1.1299				
10	-0.013	0.060	72.3	61.5	60.9	605.9	0.840	106.6	3.1	10.0	0.6306	0.5313	1.4229	1.1367	1.4166	1.1367				
11	-0.085	-0.046	71.4	57.2	57.6	581.4	0.841	112.7	3.9	11.0	0.6214	0.5088	1.4408	1.1436	1.4140	1.1436				

SL	INCS	INCM	CFV	TLRN	RHCVM-1	RHCVM-2	D-FAC	OMEGA-B	LCSS-P	P02/	KEFF-P	KEFF-A	M-1	M-2	V0-1	V0-2	T02/T01	P02/P01	EFF-A0	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	TOT	TOT	STAGE	STAGE
1	9.07	13.78	74.05	36.09	25.51	32.23	0.5281	0.1230	0.0254	0.9656	67.08	68.21								
2	6.88	11.99	14.74	41.44	32.50	37.97	0.3385	0.1297	0.0280	0.9626	67.21	68.54								
3	1.99	7.46	14.79	36.32	35.81	43.75	0.4537	0.1026	0.0245	0.9710	73.72	74.85								
4	-1.69	4.08	10.51	32.07	43.54	46.71	0.3989	0.0851	0.0217	0.9766	77.87	78.86								
5	-0.79	-0.35	6.43	27.14	47.44	48.08	0.3443	0.1062	0.0308	0.9731	82.57	83.35								
6	-0.19	-1.42	6.24	25.20	48.48	48.81	0.3185	0.1130	0.0347	0.9721	84.60	85.32								
7	-0.97	-1.54	6.67	24.20	48.78	49.17	0.3089	0.1210	0.0409	0.9684	83.70	84.47								
8	-0.94	-2.65	6.32	23.85	49.17	49.14	0.3073	0.1497	0.0491	0.9636	81.94	82.00								
9	-10.24	-2.84	6.18	24.21	49.52	49.23	0.3031	0.1497	0.0508	0.9646	79.87	80.83								
10	-11.98	-4.39	5.46	23.13	48.39	49.14	0.2989	0.1672	0.0586	0.9607	79.77	80.78								
11	-14.31	-6.59	13.24	22.58	47.37	49.66	0.3141	0.2320	0.0860	0.9445	75.69	76.49								

N00R	N00R	T02/T01	P02/P01	EFF-A0	EFF-P	T02/T01	P02/P01	EFF-A0	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1	1	1	1	1	1	1	1	1	1
1591	203.52	1.1276	1.4460	78.62	77.11	1.1276	1.4460	78.62	77.11

ROTOR 2

														RUN NO414, SPEED CODE 10, POINT NO 44									
SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2					
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC					
1	8.080	9.362	408.2	766.6	359.3	567.5	89.4	915.3	11.8	41.9	0.3482	0.4469	620.6	620.7	0.5703	0.4964	688.6	589.8					
2	5.098	3.333	226.9	793.1	217.2	500.9	100.8	479.7	10.9	39.3	0.4531	0.6362	674.7	703.8	0.6844	0.5256	772.7	622.2					
3	3.861	2.627	152.3	737.5	205.1	509.1	98.5	442.6	9.3	36.8	0.5160	0.6242	724.5	746.2	0.7426	0.5905	857.2	682.3					
4	2.965	1.881	81.2	712.1	200.4	591.6	99.4	350.1	8.8	33.9	0.5338	0.6044	778.5	782.9	0.7452	0.6028	914.6	711.2					
5	0.700	0.374	223.2	656.8	177.1	566.5	87.2	336.3	8.0	30.7	0.5430	0.5572	901.3	905.2	0.8900	0.6790	1021.6	802.8					
6	0.386	0.186	221.5	631.1	226.5	547.9	93.7	313.3	8.5	29.8	0.5466	0.5331	944.4	945.6	0.9168	0.7067	1059.3	836.7					
7	0.324	0.118	227.2	615.3	220.3	548.0	92.9	288.5	8.5	27.8	0.5452	0.5230	986.8	986.8	0.9458	0.7497	1088.0	887.6					
8	0.098	0.029	227.7	625.5	221.0	559.8	91.3	284.0	8.4	27.2	0.5440	0.5299	1044.6	1043.8	0.9860	0.7497	1137.6	938.2					
9	-0.053	-0.132	231.6	635.0	222.2	559.5	108.7	307.7	9.9	29.0	0.5460	0.5325	1084.4	1081.9	1.0004	0.7989	1197.2	992.9					
10	-0.065	-0.118	232.5	606.0	252.3	521.1	112.7	309.4	10.8	30.7	0.5193	0.5051	1124.1	1122.7	1.0083	0.9051	1172.6	966.0					

SL	INCS	INCM	DEV	TLR	RHVM-1	RHVM-2	D-FAC	OMEGA-B	LCSS-P	P02/	REFF-P	REFF-A	B'-1	M'-2	VO'-1	VO'-2	PC/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.11	8.07	18.75	32.92	31.37	48.76	0.2992	-0.1559	-0.0368	1.2960	111.12	111.61	53.10	14.19	-536.2	-149.4	1.7262
2	-3.59	2.67	22.45	22.87	46.05	54.15	0.3457	-0.0150	-0.0307	1.2958	101.54	101.59	47.81	20.94	-574.1	-223.9	1.7511
3	-5.36	0.31	10.26	15.77	46.98	52.99	0.3333	0.0640	0.0109	1.2655	94.40	94.21	42.89	27.07	-626.4	-302.5	1.7634
4	-5.11	-0.03	5.10	14.74	48.98	54.10	0.3272	0.0186	0.0066	1.2960	97.24	97.14	48.40	33.66	-684.5	-394.8	1.7596
5	-3.19	0.68	6.47	7.76	50.13	52.58	0.2985	0.0384	0.0092	1.2250	92.82	92.61	52.83	45.11	-814.1	-568.8	1.7305
6	-2.75	0.56	6.74	4.75	50.44	50.93	0.2803	0.0383	0.0089	1.2028	91.96	91.75	53.86	49.09	-850.9	-632.3	1.7076
7	-1.70	0.69	6.51	3.37	50.34	51.10	0.2906	0.0145	0.0033	1.1968	96.27	96.58	55.24	51.88	-893.4	-698.2	1.7012
8	-1.51	0.71	4.60	2.55	50.17	52.06	0.2906	0.0340	0.0042	1.2086	95.79	95.68	56.91	52.35	-953.1	-752.8	1.7160
9	-1.64	0.54	3.65	3.13	50.06	51.40	0.2453	0.0322	0.0075	1.2115	92.61	92.41	57.47	54.34	-975.7	-774.2	1.7243
10	-0.37	1.86	5.76	2.25	47.27	47.79	0.2456	0.0347	0.0078	1.2138	92.08	91.86	59.60	57.35	-1011.4	-813.4	1.6973

TU/TU	FU/FU	EFF-AD	EFF-P	MCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC			ROTOR	ROTOR
		?	?	SCFT			?	?
1.0000	1.7280	84.20	85.36	35.58	1.0650	1.2368	96.20	96.32

STATOR 2

														RUN NO414, SPEED CODE 10, POINT NO 44									
SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PJ/PO	TO/TO	INLET	INLET	PO/PO	STAGE	T02/				
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	INLET	INLET	INLET	INLET	STAGE	T01			
1	7.030	8.048	715.0	573.7	509.0	578.0	506.2	10.1	44.7	1.0	0.6002	0.4755	1.0797	1.2213	1.3191	1.0813							
2	5.161	5.498	727.0	605.4	555.1	609.3	469.4	12.2	40.1	1.1	0.6125	0.4844	1.7244	1.2153	1.2772	1.0762							
3	3.777	3.790	727.1	616.8	581.3	616.0	433.4	-3.3	36.6	-0.3	0.6148	0.5163	1.7469	1.2070	1.2523	1.0733							
4	2.685	2.557	712.2	605.2	552.6	605.1	390.4	-9.0	33.2	-0.9	0.6036	0.5079	1.7418	1.1985	1.2430	1.0689							
5	1.276	1.112	661.5	566.0	571.0	567.4	331.3	-13.7	30.0	-1.4	0.5601	0.4767	1.7083	1.1915	1.2086	1.0637							
6	0.952	0.814	634.7	546.3	554.5	548.1	308.8	-14.2	29.1	-1.5	0.5363	0.4600	1.6900	1.1886	1.1911	1.0586							
7	0.741	0.630	623.6	541.8	554.5	541.8	285.4	-7.0	27.2	-0.7	0.5269	0.4547	1.6834	1.1867	1.1866	1.0567							
8	0.569	0.500	623.4	552.4	564.3	555.4	287.8	3.0	27.0	0.3	0.5332	0.4665	1.6539	1.1572	1.1930	1.0583							
9	0.349	0.315	638.4	562.1	559.2	561.6	307.9	22.6	28.8	2.3	0.5353	0.4684	1.6983	1.2064	1.1931	1.0649							
10	0.108	0.100	606.8	524.1	524.5	523.5	309.0	25.5	30.5	2.8	0.5075	0.4340	1.6634	1.2145	1.1897	1.0618							

SL	INCM	DEV	TLR	RHVM-1	RHVM-2	D-FAC	OMEGA-B	LCSS-P	P02/	REFF-A	REFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-5.48	5.51	43.67	44.58	52.50	0.3415	0.1251	0.0264	0.9730	101.09	101.05
2	-3.69	5.15	36.97	47.61	56.38	0.3070	0.0700	0.0157	0.9243	94.77	94.95
3	-5.46	7.55	32.90	52.78	58.27	0.2930	0.0415	0.0099	0.9407	90.37	90.67
4	-8.45	7.65	34.07	54.48	57.64	0.2901	0.0436	0.0110	0.9405	92.40	93.12
5	-11.39	7.65	31.41	53.05	54.14	0.2911	0.0579	0.0167	0.9889	87.16	87.50
6	-12.26	7.82	30.60	51.44	52.22	0.2887	0.0542	0.0163	0.9404	87.25	87.57
7	-14.18	6.82	27.97	51.64	51.63	0.2780	0.0623	0.0155	0.9891	91.51	91.71
8	-15.22	10.45	26.72	52.38	52.55	0.2717	0.0757	0.0200	0.9867	84.52	88.80
9	-15.55	12.56	26.54	51.66	52.76	0.2730	0.0659	0.0245	0.9848	84.74	85.12
10	-17.51	15.51	27.72	48.04	48.59	0.3050	0.1230	0.0417	0.9807	82.12	82.55

MCRP	MCRRA	TU/TU	FU/FU	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBW/SEC			?	?			?
7941	203.52	1.0000	1.7646	81.94	83.23	1.0650	0.9865	89.85

ROTOR 2

RUN NJ414, SPEED CODE 10, PLINT NO 46																		
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	0-1	0-2	M-1	M-2	U-1	U-2	V'-1	V'-2		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	0.261	5.611	442.7	705.5	432.3	591.7	95.4	516.7	12.4	40.8	0.3797	0.6673	612.6	452.2	0.5781	0.5156	674.0	607.0
2	5.541	0.243	556.2	376.0	547.1	603.6	110.9	478.1	11.4	36.2	0.4029	0.6549	605.5	654.5	0.6761	0.5453	779.3	641.2
3	4.150	3.091	614.7	793.0	607.6	617.2	90.9	436.8	9.8	34.9	0.5358	0.6425	715.5	736.5	0.7555	0.5064	866.7	687.9
4	3.003	2.235	624.5	723.2	615.0	610.7	89.7	387.3	8.3	32.3	0.5560	0.6169	768.6	782.6	0.8020	0.6200	918.2	727.4
5	0.971	0.579	612.4	659.5	605.0	566.4	89.9	341.2	6.4	31.2	0.5389	0.5608	809.6	893.4	0.8800	0.6714	1005.2	789.6
6	0.615	0.374	614.4	625.7	610.6	545.3	91.4	316.8	6.5	30.0	0.5504	0.5567	932.3	933.3	0.9094	0.7003	1039.2	824.6
7	0.452	0.314	614.3	616.0	607.6	547.7	90.3	287.4	6.5	27.7	0.5366	0.5256	974.0	974.0	0.9369	0.7462	1072.4	870.3
8	0.118	0.025	614.8	626.0	607.5	551.7	94.4	255.9	6.8	26.2	0.5357	0.5298	1031.1	1027.3	0.9720	0.7753	1114.4	916.1
9	-0.066	-0.162	616.0	631.1	607.5	549.1	105.1	211.1	9.8	23.5	0.5359	0.5340	1070.3	1067.5	0.9912	0.7882	1140.5	935.1
10	-0.066	-0.161	615.5	595.9	570.0	508.3	115.4	316.6	11.4	32.1	0.5065	0.5028	1109.5	1108.2	0.9927	0.7870	1140.1	939.0

SL	INCS	INCR	DEV	TLGN	RNCVP-1	RNCVM-2	D-FAC	OMEGA-B	LCSS-P	P02/	REFF-P	REFF-A	0'-1	0'-2	W'-1	W'-2	PC/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	DEGREE	DEGREE	INLET
1	-2.10	4.66	17.29	33.16	33.59	50.27	0.2077	-0.1206	-0.0305	1.3404	109.60	110.00	49.89	12.73	-517.1	-135.5	1.7127
2	-0.44	0.14	11.30	25.07	43.47	52.70	0.3164	-0.0077	-0.0019	1.2061	100.77	100.79	45.26	15.59	-555.0	-216.4	1.7376
3	-0.76	-1.00	5.55	15.35	40.80	55.12	0.3265	0.0626	0.0106	1.2578	94.40	94.21	45.95	26.10	-618.6	-303.7	1.7512
4	-5.06	-0.78	0.30	14.00	45.86	35.42	0.3073	0.0205	0.0051	1.2478	96.89	96.78	47.66	32.86	-679.1	-395.3	1.7398
5	-3.34	0.55	5.13	6.34	45.39	31.94	0.3809	0.0692	0.0119	1.2224	91.80	90.74	52.71	44.37	-799.7	-552.2	1.7008
6	-7.01	0.70	6.25	5.42	45.54	50.28	0.2831	0.0508	0.0119	1.2016	89.64	89.37	54.02	46.60	-868.5	-618.5	1.6764
7	-1.65	0.93	6.05	4.07	45.25	50.73	0.2487	0.0166	0.0130	1.1992	96.25	96.15	55.49	51.42	-883.7	-686.5	1.6714
8	-1.35	0.62	4.21	5.06	45.07	50.90	0.2581	0.0336	0.0079	1.2064	92.42	92.22	57.02	52.56	-936.6	-731.4	1.6830
9	-1.35	0.67	3.28	3.78	46.84	50.42	0.2527	0.0509	0.0120	1.2091	88.76	88.45	57.81	54.03	-965.2	-756.8	1.6909
10	0.01	2.24	5.43	2.76	45.79	46.28	0.2553	0.0517	0.0116	1.2126	88.75	88.44	55.98	57.22	-994.1	-789.6	1.6827

TJ/T0	PC/PO	EFF-AD	EFF-P	WCI/41	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	L3M/SEC			STAGE	FOTOR
1.1885	1.7221	87.04	87.93	35.74	1.0651	1.2328	94.46	54.63

STATOR 2

RUN NJ414, SPEED CODE 10, PLINT NO 46																
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	0-1	0-2	M-1	M-2	U-1	U-2	W'-1	W'-2
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	7.020	0.059	727.5	591.3	521.1	591.1	507.5	15.1	44.0	1.5	0.6140	0.4429	1.6686	1.2114	1.3056	1.0792
2	5.095	5.005	735.1	627.4	572.4	627.3	667.5	12.0	39.1	1.1	0.6266	0.5462	1.7198	1.2043	1.2704	1.0737
3	3.710	3.781	735.4	634.5	604.0	634.5	623.2	-3.0	34.8	-0.1	0.6298	0.5346	1.7366	1.1952	1.2485	1.0714
4	4.745	2.423	728.5	615.4	611.5	615.3	580.4	-9.5	31.8	-0.1	0.6145	0.5197	1.7255	1.1864	1.2379	1.0672
5	1.308	1.164	623.1	565.9	571.2	565.8	336.1	-7.0	30.5	-0.7	0.5641	0.4773	1.6803	1.1796	1.2074	1.0646
6	0.580	0.035	634.0	544.1	552.8	544.0	310.3	-3.3	29.3	-1.4	0.5387	0.4589	1.6607	1.1762	1.1901	1.0597
7	0.820	0.703	634.0	535.5	554.8	535.5	284.3	-3.3	27.1	-0.4	0.5299	0.4519	1.6533	1.1731	1.1863	1.0551
8	0.882	0.609	631.2	544.4	557.4	544.4	295.3	1.2	26.0	-1.1	0.5343	0.4610	1.6635	1.1841	1.1921	1.0598
9	0.458	0.424	625.4	554.0	554.3	553.7	310.8	18.6	27.3	1.2	0.5358	0.4660	1.6673	1.1937	1.1925	1.0629
10	0.177	0.168	605.4	516.5	515.6	510.0	308.2	22.0	31.7	2.5	0.5076	0.4318	1.6359	1.2005	1.1931	1.0639

SL	INCR	DEV	TLGN	RNCVP-1	RNCVM-2	D-FAC	OMEGA-B	LCSS-P	P02/	REFF-A	REFF-P
	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-6.82	9.50	42.58	42.70	53.78	0.3275	0.1149	0.0242	0.9742	99.77	99.78
2	-4.67	5.14	36.05	50.85	58.22	0.2383	0.0463	0.0104	0.9892	95.86	96.00
3	-7.62	8.02	35.10	54.81	59.73	0.2778	0.0246	0.0068	0.9933	91.59	91.69
4	-5.62	7.73	32.83	55.60	58.36	0.2805	0.0335	0.0085	0.9925	93.41	93.62
5	-10.97	3.6	31.16	52.40	53.62	0.2948	0.0541	0.0156	0.9895	85.49	85.87
6	-12.07	0.89	30.71	50.86	51.52	0.2949	0.0494	0.0149	0.9912	85.26	85.62
7	-14.24	5.20	27.49	51.29	50.78	0.2855	0.0636	0.0199	0.9889	90.75	90.98
8	-14.29	10.27	27.03	51.31	51.63	0.2852	0.0678	0.0224	0.9880	95.94	86.32
9	-15.51	13.19	27.35	50.75	51.76	0.2865	0.0775	0.0266	0.9882	81.84	82.28
10	-16.71	15.18	25.25	46.78	47.91	0.3180	0.0993	0.0354	0.9839	80.62	81.29

NCORR	NCORR	T0/T0	PC/PO	EFF-AD	EFF-P	02/31	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
APM	LOB/SEC							
7897.	203.08	1.1885	1.6620	84.96	86.01	1.0651	0.9482	88.95

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(Choked Sonic-Inlet Throat)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	W-1	W-2	PO1/PO	W-2	0-1	0-2	M-1	M-2	U-1	U-2	LO. POINT	NO. 47	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	M-1	M-2	FT/SEC	FT/SEC
1	11.002	9.425	570.1	669.0	578.1	516.6	0.9303	499.2	0.0	53.5	0.5244	0.7785	493.8	548.0	0.4037	0.4037	756.2	548.0
2	9.955	8.058	633.2	850.4	633.2	562.2	0.9730	638.0	0.0	48.5	0.5062	0.7398	552.8	591.8	0.7701	0.5060	808.5	590.1
3	8.757	6.871	666.3	814.9	666.3	598.3	0.9844	561.8	0.0	43.6	0.5991	0.7263	618.7	649.8	0.8294	0.5319	896.7	596.8
4	7.563	5.940	656.9	778.5	656.9	596.9	0.9862	498.0	0.0	39.9	0.6038	0.6921	679.4	783.2	0.8728	0.5686	966.9	638.7
5	5.152	4.300	668.6	706.9	668.6	575.9	0.9889	618.0	0.0	35.5	0.6134	0.6263	816.8	828.1	0.9749	0.6285	1066.9	711.7
6	4.165	3.552	662.6	696.4	662.6	573.7	0.9892	396.0	0.0	34.6	0.6134	0.6131	882.8	898.2	1.0245	0.6674	1183.1	758.0
7	3.090	3.073	660.2	653.0	660.2	576.6	0.9896	387.3	0.0	34.0	0.6130	0.6091	926.0	928.9	1.0545	0.6941	1195.6	789.6
8	2.841	2.536	657.6	685.5	657.6	578.0	0.9818	375.7	0.0	31.7	0.6164	0.6013	965.5	968.9	1.0843	0.7111	1168.1	820.4
9	2.117	1.927	653.6	679.3	653.6	566.5	0.9778	377.9	0.0	33.8	0.6084	0.5942	1018.3	1018.3	1.1165	0.7411	1208.3	867.7
10	1.276	1.151	638.4	678.5	638.4	552.6	0.9664	376.6	0.0	34.5	0.5913	0.5841	1061.8	1061.8	1.1470	0.7661	1286.3	877.2
11	0.567	0.471	602.8	639.9	602.8	516.4	0.9490	380.6	0.0	36.5	0.5563	0.5544	1103.8	1103.8	1.1806	0.7886	1257.7	887.2

SL	INCS	INCR	CEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-P	EFF-A	0-1	0-2	W-1	W-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	2.17	7.72	13.74	57.99	35.52	34.49	0.5064	0.2239	0.0503	1.4031	84.40	83.85	48.91	-17.00	-493.8	159.2	1.3390
2	0.31	5.71	13.30	45.87	40.04	39.63	0.5236	0.2035	0.0510	1.3964	83.42	82.42	41.18	-4.49	-552.8	66.2	1.3930
3	0.65	5.93	14.06	35.45	48.93	43.58	0.5036	0.1313	0.0360	1.4064	88.13	87.54	43.85	6.40	-618.7	-87.3	1.4266
4	0.89	6.01	13.26	27.50	41.18	45.34	0.4832	0.0809	0.0227	1.4096	91.81	91.39	44.32	18.82	-679.4	-283.4	1.4282
5	0.15	4.71	8.19	15.04	41.67	45.52	0.4583	0.0590	0.0161	1.3987	92.78	92.34	51.08	36.01	-816.0	-618.1	1.4189
6	0.23	4.21	5.67	12.29	41.73	45.88	0.4375	0.0430	0.0170	1.4101	91.88	91.47	53.13	48.85	-882.0	-495.5	1.4312
7	1.31	4.15	4.64	11.16	41.68	46.25	0.4268	0.0249	0.0153	1.4246	92.54	92.16	54.50	43.34	-924.0	-541.6	1.4406
8	2.84	4.34	4.33	9.84	41.22	46.17	0.4186	0.0572	0.0151	1.4363	92.36	91.96	55.77	45.93	-965.5	-589.2	1.4449
9	2.44	4.67	4.05	8.86	40.88	45.78	0.4155	0.0676	0.0174	1.4445	90.91	90.43	57.12	48.28	-1018.3	-632.4	1.4487
10	3.24	5.46	4.63	8.01	39.76	44.84	0.4147	0.0800	0.0204	1.4427	89.33	88.75	58.97	50.94	-1061.8	-681.2	1.4583
11	4.47	6.68	8.35	4.88	37.24	41.56	0.4201	0.0869	0.0210	1.4403	88.64	87.99	61.36	54.56	-1103.8	-722.8	1.4278

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LB/SEC	ROTOR	ROTOR	ROTOR	ROTOR
1.1189	1.4254	89.70	90.20	40.92	1.1189	1.4254	89.70	90.20

STATOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	W-1	W-2	W-1	W-2	0-1	0-2	M-1	M-2	PO1/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	INLET	TOT
1	11.160	8.003	278.6	456.2	411.8	444.4	660.8	96.0	58.0	11.8	0.6893	0.3918	1.2048	1.1212	1.3487	1.1212
2	7.288	5.706	789.7	518.1	502.6	505.8	609.1	111.9	50.4	12.4	0.7000	0.4469	1.3365	1.1213	1.3448	1.1213
3	6.902	4.143	775.7	569.0	562.4	560.0	539.9	180.7	43.8	10.2	0.6917	0.4938	1.3894	1.1174	1.3759	1.1174
4	3.379	3.060	763.2	514.2	510.6	574.8	443.4	92.3	39.3	9.1	0.6771	0.5087	1.4078	1.1130	1.3914	1.1130
5	1.625	1.740	714.0	574.0	592.5	567.1	401.9	88.8	34.1	8.9	0.6329	0.5003	1.4024	1.1090	1.3824	1.1090
6	1.211	1.361	711.5	581.1	557.0	574.0	387.8	90.5	33.0	9.0	0.6279	0.5060	1.4081	1.1126	1.3870	1.1126
7	1.020	1.187	713.0	587.6	602.1	580.7	381.8	89.8	32.4	8.8	0.6281	0.5112	1.4136	1.1154	1.3976	1.1154
8	0.864	1.012	709.7	589.1	602.4	581.8	375.2	92.9	31.9	9.1	0.6242	0.5120	1.4150	1.1179	1.4004	1.1179
9	0.772	0.796	704.9	594.0	595.5	586.7	374.6	93.0	32.0	9.0	0.6202	0.5154	1.4192	1.1226	1.4150	1.1226
10	0.402	0.492	701.9	596.8	591.7	587.3	377.6	105.7	32.5	10.2	0.6135	0.5163	1.4211	1.1291	1.4326	1.1291
11	0.162	0.189	674.6	605.7	557.3	553.7	379.8	115.9	34.3	11.8	0.5862	0.4868	1.3942	1.1348	1.4457	1.1348

SL	INCS	INCR	CEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	5.32	10.04	17.14	46.29	29.17	25.35	0.5041	0.1049	0.0299	0.9604	73.64	74.73
2	3.11	8.23	14.47	38.01	34.78	40.80	0.4833	0.1309	0.0297	0.9623	72.84	73.95
3	-1.04	4.43	11.55	33.63	42.31	44.05	0.4686	0.0758	0.0181	0.9791	81.47	82.28
4	-0.18	1.60	9.89	30.21	45.28	47.94	0.4660	0.0493	0.0126	0.9809	87.64	88.21
5	-0.06	-1.44	9.63	25.23	46.55	47.31	0.4256	0.0490	0.0164	0.9884	88.95	89.45
6	-9.16	-2.36	8.96	24.04	47.32	47.79	0.3130	0.0673	0.0206	0.9843	87.02	87.61
7	-9.82	-2.84	8.44	23.58	47.94	48.29	0.3071	0.0799	0.0254	0.9814	87.02	87.62
8	-10.53	-3.34	8.44	22.84	48.10	48.80	0.3016	0.0889	0.0291	0.9795	86.44	87.08
9	-11.00	-3.68	8.56	22.55	47.92	48.57	0.2963	0.0892	0.0303	0.9776	85.11	85.83
10	-12.54	-4.95	10.20	22.35	47.24	48.39	0.2876	0.0896	0.0314	0.9799	83.77	84.57
11	-13.99	-6.26	14.09	22.45	44.26	45.16	0.3044	0.1131	0.0406	0.9766	82.38	83.27

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR	ROTOR	ROTOR
7900	202.95	1.1189	1.3376	84.47	85.19	1.1189	0.9805	84.47	85.19

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	D-1	D-2	N-1	N-2	U-1	U-2	M-1	M-2	V'-1	V'-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	0.222	5.509	424.2	770.4	414.2	262.1	20.6	221.5	12.4	42.2	0.3030	0.0031	614.2	453.9	0.5715	0.4937	604.8	502.3
2	5.454	3.086	337.0	754.9	326.8	370.6	107.0	405.2	11.4	36.8	0.4045	0.4006	607.7	696.3	0.6048	0.5225	705.3	619.7
3	4.152	3.130	601.0	739.3	594.0	522.0	95.5	443.1	9.1	34.7	0.3240	0.4207	717.4	730.4	0.7490	0.5425	800.0	641.6
4	3.009	2.299	610.0	714.3	484.4	522.4	80.2	398.0	8.3	33.0	0.3336	0.4060	770.0	704.6	0.7905	0.6017	911.0	708.9
5	1.050	0.707	605.5	654.0	564.0	524.0	89.0	344.4	8.4	31.0	0.3200	0.3648	802.0	695.0	0.8709	0.6642	1001.7	783.0
6	0.232	0.414	618.7	629.2	604.1	540.5	89.7	314.1	8.4	30.2	0.3127	0.3295	934.7	835.0	0.9061	0.7077	1036.0	823.0
7	0.457	0.330	612.4	611.6	605.5	530.7	90.6	289.4	8.6	28.3	0.3135	0.3100	976.5	872.5	0.9241	0.7303	1072.2	873.0
8	0.105	0.134	617.4	622.4	610.3	547.0	90.4	265.4	8.7	28.3	0.3165	0.3230	1033.8	1036.0	0.9741	0.7730	1121.0	916.3
9	0.043	0.004	617.4	628.9	608.3	545.4	107.0	113.0	10.0	29.4	0.3152	0.3204	1073.1	1078.7	0.9893	0.7864	1161.7	934.4
10	-0.000	-0.031	504.0	600.3	573.2	500.1	115.0	319.6	11.4	32.2	0.3040	0.3016	1112.4	1111.1	0.9909	0.7850	1149.7	940.5

SL	INCS	INCH	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-P	EFF-A	D'-1	D'-2	VO'-1	VO'-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	INLET	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.60	0.30	17.53	34.42	33.15	49.24	0.2993	0.1162	-0.0236	1.3044	100.31	100.44	51.39	12.97	-522.6	-132.4	1.7327
2	-4.70	1.49	11.43	24.71	42.00	51.54	0.3453	0.0061	0.0015	1.2914	99.34	99.33	44.62	19.91	-540.7	-211.1	1.7370
3	-5.90	-0.31	9.90	19.01	40.43	53.93	0.3545	0.0701	0.0175	1.2500	91.14	90.85	44.22	24.41	-621.9	-295.3	1.7713
4	-5.00	0.00	0.44	15.42	49.40	54.90	0.3292	0.0324	0.0081	1.2562	95.36	95.20	48.44	33.01	-602.6	-305.7	1.7470
5	-2.75	1.12	6.11	8.52	49.29	52.20	0.3001	0.0339	0.0081	1.2345	94.00	93.81	53.20	44.76	-603.0	-591.4	1.7349
6	-2.10	1.12	6.45	5.45	49.40	50.91	0.2830	0.0312	0.0072	1.2125	93.71	93.54	54.44	49.00	-645.1	-621.7	1.7114
7	-1.32	1.06	6.53	3.72	49.75	50.91	0.2538	0.0076	0.0017	1.2044	90.34	50.29	55.62	51.09	-604.9	-604.9	1.7030
8	-1.41	0.81	4.52	3.73	49.87	51.56	0.2509	0.0250	0.0059	1.2107	94.24	94.07	57.01	53.20	-940.3	-734.5	1.7109
9	-1.20	0.87	3.60	3.56	49.50	51.10	0.2546	0.0370	0.0009	1.2162	91.69	91.44	57.00	54.24	-944.1	-757.7	1.7205
10	0.12	2.35	5.71	2.00	46.26	47.24	0.2551	0.0330	0.0074	1.2236	92.06	92.65	64.00	57.30	-906.6	-791.4	1.7020

TO/VO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR	ROTOR	ROTOR
1.1524	1.7332	88.15	89.03	35.33	1.0062	1.2401	95.42	95.75

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	D-1	D-2	N-1	N-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	7.040	0.002	715.3	559.6	499.4	559.6	512.1	9.1	45.5	0.9	0.6020	0.4652	1.4042	1.2121	1.3005	1.0011
2	5.139	5.404	725.4	597.9	548.5	597.0	474.6	9.2	40.8	0.9	0.6137	0.4999	1.7371	1.2057	1.2745	1.0761
3	3.726	3.755	726.3	611.1	582.0	611.1	433.5	-2.5	36.0	-0.2	0.6167	0.5133	1.7015	1.1976	1.2510	1.0742
4	4.003	2.543	711.5	597.7	554.4	557.6	391.7	-11.1	33.4	-1.1	0.6050	0.5034	1.7546	1.1893	1.2472	1.0704
5	1.200	1.056	657.9	556.3	563.9	556.2	330.0	-0.4	31.0	-0.9	0.5503	0.4600	1.7172	1.1040	1.2214	1.0654
6	0.929	0.770	629.5	535.4	540.2	535.2	309.4	-13.3	29.4	-1.4	0.5334	0.4502	1.6900	1.1014	1.2025	1.0599
7	0.707	0.605	616.9	526.9	546.1	526.9	280.9	-6.2	27.7	-0.9	0.5227	0.4433	1.6900	1.1791	1.1951	1.0552
8	0.601	0.500	627.0	543.3	554.0	543.3	295.2	-1.2	28.1	-0.1	0.5297	0.4553	1.7037	1.1907	1.1990	1.0598
9	0.405	0.371	634.1	551.5	551.6	551.2	312.9	19.2	29.0	2.0	0.5330	0.4605	1.7100	1.2006	1.2032	1.0628
10	0.137	0.126	605.0	514.6	514.9	514.0	314.2	24.6	31.8	2.7	0.5064	0.4271	1.6767	1.2076	1.2048	1.0639

SL	INCH	DEV	TURN	RNDWN-1	RNDWN-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	INLET	TOT-STG	TOT-STG
1	-9.33	9.43	44.40	44.40	52.19	0.3635	0.1232	0.0400	0.9732	90.31	90.37
2	-3.04	0.53	39.05	49.00	56.02	0.3105	0.0524	0.0110	0.9402	94.13	94.33
3	-9.47	0.06	30.02	53.00	58.92	0.2999	0.0240	0.0057	0.9946	88.94	89.28
4	-8.31	7.47	34.42	53.14	58.00	0.3040	0.0315	0.0080	0.9921	92.39	92.63
5	-10.43	0.20	31.00	52.00	54.01	0.3054	0.0455	0.0131	0.9913	89.70	89.98
6	-11.94	7.07	30.00	51.51	51.91	0.3032	0.0400	0.0122	0.9929	90.21	90.40
7	-13.70	0.00	28.01	51.51	51.14	0.2957	0.0470	0.0147	0.9920	89.56	89.70
8	-14.19	10.01	28.10	52.62	52.35	0.2903	0.0526	0.0176	0.9909	89.17	89.45
9	-15.22	13.20	27.97	51.54	52.76	0.2891	0.0612	0.0210	0.9892	88.24	88.59
10	-16.02	15.47	29.00	47.74	48.43	0.3239	0.0949	0.0337	0.9848	85.42	85.80

NCORN	MCORN	TO/TO	FO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	ROTOR	ROTOR	STAGE
1900.	202.95	1.1524	1.7152	86.35	87.34	1.0062	0.9896	90.04

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPST-1	EPST-2	V-1	V-2	VR-1	VR-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	RUN NO 414	SPEED CODE	BO. POINT NO 41	V*-1	V*-2	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	ALFNUM	FT/SEC	DEGREE	DEGREE				FT/SEC	FT/SEC			M*-1	M*-2	FT/SEC	FT/SEC
1	10.417	9.244	582.3	873.1	582.3	546.6	0.9565	680.8	0.0	51.1	0.5362	0.7875	454.3	496.9			0.6861	0.5201	738.5	576.7
2	8.852	7.727	621.0	839.4	621.0	588.4	0.9880	596.4	0.0	45.4	0.5761	0.7551	508.6	544.5			0.7421	0.5315	802.7	590.9
3	7.218	7.366	619.6	782.4	619.6	586.8	0.9910	517.6	0.0	41.4	0.5727	0.7005	549.2	597.2			0.7778	0.5302	841.4	592.1
4	6.200	6.189	616.1	733.4	616.1	578.5	0.9921	450.8	0.0	37.9	0.5693	0.6544	625.1	647.0			0.8111	0.5452	877.7	610.9
5	4.514	4.026	603.0	656.4	600.0	547.0	0.9864	362.7	0.0	33.6	0.5613	0.5822	750.8	762.0			0.8920	0.6007	966.1	677.2
6	3.727	3.155	605.6	646.3	605.6	547.4	0.9823	343.7	0.0	32.1	0.5590	0.5723	811.5	819.1			0.9346	0.6420	1017.6	725.0
7	3.159	2.607	605.5	639.5	605.5	545.5	0.9802	333.7	0.0	31.5	0.5589	0.5655	850.2	854.7			0.9635	0.6471	1043.8	754.4
8	2.594	2.039	605.2	630.3	605.2	539.7	0.9779	325.5	0.0	31.1	0.5586	0.5564	888.3	891.5			0.9922	0.6904	1074.9	782.1
9	1.908	1.478	603.4	623.6	603.4	533.2	0.9748	323.4	0.0	31.2	0.5569	0.5492	929.6	929.6			1.0228	0.7110	1108.3	867.3
10	1.113	0.817	594.8	615.0	594.8	521.7	0.9677	325.4	0.0	32.0	0.5484	0.5398	974.3	976.3			1.0541	0.7777	1143.2	834.0
11	0.475	0.331	571.2	591.7	571.2	492.2	0.9510	328.3	0.0	33.7	0.5854	0.5170	1015.6	1015.3			1.0719	0.7385	1165.2	845.2

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	TO2/
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	STAGE
1	-0.82	4.73	17.31	56.44	37.05	36.97	0.4435	0.1224	0.0362	1.3735	87.98	87.43	37.92	-18.51	-454.3	104.0	1.3438	1.084
2	-1.58	3.82	17.03	44.53	40.02	41.92	0.4582	0.1222	0.0311	1.3649	89.36	88.88	39.29	-5.24	-508.6	54.2	1.3793	1.1047
3	-0.63	4.65	13.39	34.85	40.09	43.43	0.4679	0.0809	0.0222	1.3562	92.05	91.70	42.57	7.73	-549.2	-79.6	1.3758	1.0992
4	0.00	5.12	13.19	26.68	39.95	43.82	0.4598	0.0552	0.0155	1.3418	93.92	93.66	45.43	18.75	-425.1	-196.3	1.3616	1.0935
5	0.11	4.67	8.33	14.90	39.35	42.66	0.4246	0.0381	0.0104	1.3200	96.89	96.68	51.84	36.15	-750.8	-309.3	1.3379	1.0887
6	0.40	4.38	5.82	12.31	39.00	43.11	0.4035	0.0242	0.0065	1.2996	96.59	96.44	53.30	41.00	-811.5	-475.4	1.3460	1.0904
7	1.38	4.22	5.91	10.87	38.79	43.17	0.3979	0.0219	0.0058	1.2855	96.83	96.69	54.58	43.70	-850.2	-521.0	1.3489	1.0916
8	2.07	4.33	4.77	9.38	38.89	42.85	0.3858	0.0269	0.0071	1.2686	95.98	95.80	55.78	44.37	-888.3	-546.0	1.3500	1.0931
9	2.34	4.58	4.47	8.35	38.68	42.39	0.3837	0.0395	0.0107	1.2540	94.04	93.78	57.02	48.48	-929.6	-604.2	1.3561	1.0966
10	2.92	5.14	4.95	7.37	38.01	41.46	0.3951	0.0500	0.0149	1.2434	91.18	90.78	58.65	51.28	-974.3	-650.7	1.3611	1.1020
11	3.75	5.37	8.16	6.27	36.30	38.95	0.3916	0.0750	0.0182	1.2320	88.93	88.43	61.65	54.38	-1015.6	-687.0	1.3661	1.1071

TC/TO	PO/PO	EFF-AD	EFF-P	MC1/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	T	T	ROTOR	ROTOR
1.0968	1.3507	92.71	93.02	39.31	1.0968	1.3507	92.71	93.02

STATOR 1

SL	EPST-1	EPST-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	RUN NO 414	SPEED CODE	BO. POINT NO 41	V*-1	V*-2	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			M*-1	M*-2	FT/SEC	FT/SEC
1	11.078	7.720	794.1	541.2	465.4	530.5	643.4	106.8	54.1	11.2	0.7086	0.4704	1.2850	1.1086			1.0064	0.5201	738.5	576.7
2	7.172	5.235	792.0	595.4	547.4	586.0	572.5	105.3	46.7	10.1	0.7080	0.5210	1.3456	1.1047			1.0992	0.5315	802.7	590.9
3	4.526	3.474	781.6	533.8	577.0	586.5	497.2	92.7	-0.7	9.0	0.6801	0.5204	1.3560	1.0992			1.0992	0.5302	841.4	592.1
4	3.058	2.576	727.2	575.4	581.9	564.4	436.2	83.1	36.8	8.3	0.6485	0.5053	1.3449	1.0925			1.0925	0.5452	877.7	610.9
5	1.573	1.684	667.9	549.5	565.4	544.7	355.6	76.2	32.2	8.0	0.5931	0.4824	1.3255	1.0887			1.0887	0.6007	966.1	677.2
6	1.227	1.421	663.0	558.2	570.4	552.7	338.0	78.3	30.6	8.1	0.5881	0.4902	1.3326	1.0904			1.0904	0.6420	1017.6	725.0
7	1.036	1.242	659.7	560.7	571.0	555.1	329.2	78.7	29.9	8.1	0.5846	0.4922	1.3351	1.0916			1.0916	0.6471	1043.8	754.4
8	0.859	1.057	653.9	559.3	569.2	553.8	321.9	78.4	29.5	8.1	0.5786	0.4905	1.3344	1.0931			1.0931	0.6904	1074.9	782.1
9	0.644	0.827	649.9	561.1	565.2	555.7	320.7	77.4	29.6	7.9	0.5739	0.4913	1.3361	1.0966			1.0966	0.7110	1108.3	867.3
10	0.333	0.479	644.0	561.2	556.6	554.3	323.9	87.7	30.2	8.0	0.5669	0.4902	1.3361	1.1020			1.3497	0.7777	1143.2	834.0
11	0.078	0.168	622.5	528.7	509.3	519.2	327.6	99.9	31.9	10.9	0.5454	0.4595	1.3108	1.1071			1.3481	0.8452	1165.2	845.2

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	TO2/
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT	TOT	STAGE
1	1.36	6.08	16.62	42.81	33.19	41.76	0.4570	0.1537	0.0318	0.9567	74.59	75.55	81.52
2	-1.08	4.73	12.58	36.10	40.19	46.75	0.3784	0.0852	0.0189	0.9757	87.20	87.71	89.67
3	-4.13	1.34	10.32	31.77	43.25	47.40	0.3464	0.0538	0.0129	0.9846	91.41	91.74	93.04
4	-6.67	-0.95	9.10	28.54	44.25	46.22	0.3311	0.0491	0.0125	0.9879	93.17	93.44	95.31
5	-10.06	-3.62	8.10	24.20	43.83	44.71	0.2981	0.0441	0.0128	0.9907	93.17	93.44	95.31
6	-11.50	-4.77	7.85	22.59	44.53	44.91	0.2793	0.0473	0.0145	0.9901	93.17	93.44	95.31
7	-12.77	-5.29	7.72	21.86	44.78	44.94	0.2718	0.0499	0.0159	0.9897	93.17	93.44	95.31
8	-12.96	-5.77	7.62	21.43	44.86	44.94	0.2681	0.0530	0.0174	0.9892	93.17	93.44	95.31
9	-13.51	-6.11	7.50	21.42	44.36	44.99	0.2649	0.0517	0.0174	0.9887	93.17	93.44	95.31
10	-14.90	-7.30	7.00	21.20	43.62	44.68	0.2590	0.0512	0.0180	0.9900	93.17	93.44	95.31
11	-16.51	-8.78	13.16	20.87	41.29	41.44	0.2643	0.0791	0.0346	0.9824	93.17	93.44	95.31

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	T	T	STAGE	T
7276	191.96	1.0968	1.3314	88.09	88.56	1.0968	0.9857	88.09

ROTOR 2

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		N-1		N-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	
1	0.483	5.894	497.9	822.2	486.9	691.7	103.8	444.5	12.0	32.4	0.4313	0.7131	545.1	601.6	0.5812	0.6151	670.8	709.3														
2	6.435	4.509	602.2	807.3	593.8	895.0	99.9	410.4	9.5	30.4	0.5276	0.7014	614.3	640.7	0.4884	0.6361	785.7	732.1														
3	4.950	3.442	613.2	775.8	606.9	887.3	87.9	359.9	8.2	27.5	0.5393	0.6749	660.0	679.4	0.7334	0.6593	834.6	757.9														
4	3.488	2.320	622.1	729.5	596.8	856.6	79.5	318.0	7.6	25.8	0.4304	0.6342	709.3	722.0	0.7643	0.6701	847.6	770.9														
5	0.630	0.011	586.3	648.7	581.3	597.7	76.8	251.9	7.5	22.8	0.5164	0.5622	870.7	824.2	0.8314	0.7172	944.0	827.5														
6	-0.017	-3.439	587.8	629.0	582.5	578.3	78.2	223.5	7.6	21.1	0.5173	0.5370	860.1	841.0	0.8581	0.7456	975.0	860.8														
7	-0.382	-0.611	583.0	602.8	577.7	568.6	78.2	200.0	7.7	19.4	0.5125	0.5222	898.5	890.5	0.8820	0.7802	1003.3	900.7														
8	-0.743	-0.991	580.3	604.5	574.9	572.3	79.2	194.9	7.8	18.8	0.5088	0.5225	951.2	947.7	0.9157	0.8173	1044.4	945.4														
9	-0.951	-1.217	572.9	600.8	565.9	563.5	80.2	208.4	8.0	17.3	0.5008	0.5173	987.4	985.2	0.9279	0.8263	1061.5	959.6														
10	-0.773	-0.864	537.9	531.7	528.6	483.1	99.4	222.2	10.7	24.7	0.4478	0.4531	1023.6	1022.3	0.9259	0.7976	1064.7	934.7														

SL	INCS	INCM	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-P	TEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	RUN NO 414, SPEED CODE 80, POINT NO 41	
																		PC/PO	TO/TO
1	-8.72	-1.76	17.20	30.63	38.52	54.00	0.0815	0.0560	0.0133	1.2134	94.29	94.14	43.27	12.64	-461.4	-157.1	1.5634		
2	-10.40	-4.34	9.91	22.60	47.55	55.93	0.1791	0.1425	0.0354	1.1744	80.50	80.05	40.80	18.20	-514.4	-230.0	1.5895		
3	-8.96	-3.28	8.33	18.41	48.60	56.51	0.1964	0.0968	0.0744	1.1696	84.19	83.83	43.25	24.84	-572.1	-319.5	1.5828		
4	-7.01	-1.93	6.99	14.96	47.77	54.67	0.1962	0.0642	0.0713	1.1576	84.30	83.98	46.51	31.55	-629.7	-403.9	1.5508		
5	-4.04	-0.17	5.10	8.24	46.59	50.21	0.1900	0.0905	0.0221	1.1179	76.64	76.26	51.99	43.74	-743.8	-572.3	1.4476		
6	-3.32	-0.01	5.44	5.52	46.76	48.59	0.1726	0.0807	0.0211	1.0957	72.45	72.09	53.31	47.79	-781.9	-637.6	1.4627		
7	-2.10	0.29	5.40	3.99	46.41	47.60	0.1491	0.0705	0.0164	1.0854	74.13	73.84	54.84	50.85	-820.3	-698.5	1.4481		
8	-1.82	0.41	4.00	3.84	46.12	47.89	0.1375	0.0495	0.0163	1.0837	73.08	72.77	56.60	52.75	-872.0	-752.8	1.4482		
9	-1.37	0.65	3.39	3.74	45.25	46.79	0.1405	0.0831	0.0196	1.0838	69.18	68.84	57.78	54.84	-898.1	-776.7	1.4436		
10	0.26	-1.49	7.29	1.35	41.96	39.41	0.1701	0.1523	0.0328	1.0594	46.14	45.70	60.23	58.88	-924.1	-800.1	1.3854		

TO/TO	PC/PO	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
1.1443	1.4946	84.31	85.17	35.27	1.0433	1.1226	77.43	77.80

STATOR 2

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		VO-1		VO-2		B-1		B-2		M-1		M-2		PC/PO	TO/TO	TO2/					
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				DEGREE	STAGE	T01		
1	7.060	8.169	743.7	745.7	602.0	745.7	436.6	1.0	35.8	0.1	0.6391	0.6410	1.4800	1.1753	1.1480	1.0603																
2	5.282	5.811	746.3	772.8	653.0	772.5	401.0	-20.1	31.5	-1.5	0.6628	0.6689	1.5330	1.1670	1.1326	1.0585																
3	4.019	4.238	758.4	753.1	671.9	752.6	351.8	-26.9	27.6	-2.0	0.6505	0.6536	1.5744	1.1564	1.1274	1.0543																
4	2.968	2.977	728.1	726.2	656.0	726.0	311.7	-17.9	25.2	-1.4	0.6329	0.6312	1.5027	1.1467	1.1224	1.0504																
5	1.513	1.380	655.0	634.4	606.4	634.4	247.5	8.2	22.7	0.7	0.5681	0.5492	1.4110	1.1354	1.0598	1.0418																
6	1.192	1.162	625.3	624.9	585.4	624.9	219.7	-3.1	20.6	-0.3	0.5420	0.5416	1.4027	1.1309	1.0506	1.0362																
7	1.011	0.894	507.8	591.8	574.4	591.8	198.6	0.3	19.1	0.0	0.5266	0.5121	1.3736	1.1279	1.0294	1.0320																
8	0.973	0.890	607.8	594.2	575.7	594.2	194.9	9.9	18.7	1.0	0.5254	0.5131	1.3757	1.1330	1.0294	1.0320																
9	0.873	0.838	602.1	592.3	564.9	591.7	206.6	26.8	20.3	2.6	0.5185	0.5097	1.3751	1.1401	1.0318	1.0338																
10	0.403	0.514	535.0	540.9	466.8	539.8	221.9	34.6	24.5	3.8	0.4566	0.4618	1.3352	1.1474	1.0206	1.0363																

SL	INCM	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-P	TEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	RUN NO 414, SPEED CODE 80, POINT NO 41		
																	PC/PO	TO/TO	
1	-15.09	8.59	35.69	49.21	57.63	0.1186	0.2232	0.0470	0.9464										
2	-12.34	6.55	32.95	53.85	61.24	0.1144	0.1391	0.0313	0.9845										
3	-14.46	6.24	29.64	55.77	60.43	0.1244	0.1400	0.0333	0.9646										
4	-16.34	7.13	28.74	54.81	58.71	0.1151	0.1260	0.0319	0.9704										
5	-19.27	9.81	21.45	50.72	50.91	0.1353	0.2531	0.0730	0.9503										
6	-20.81	9.01	20.86	49.02	49.25	0.1078	0.2203	0.0563	0.9601										
7	-22.34	9.58	19.04	48.17	47.42	0.1284	0.2990	0.0937	0.9485										
8	-23.54	11.10	17.75	48.09	47.44	0.1224	0.2923	0.0966	0.9499										
9	-24.52	13.86	17.67	46.81	47.00	0.1248	0.2853	0.0978	0.9516										
10	-25.91	16.50	16.73	39.64	42.30	0.1186	0.2758	0.0979	0.9624										

MC/PC	MC/PP	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
7276	19.96	1.1443	1.4311	74.73	75.97	1.0433	0.9575	43.05	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	
1	10.520	5.687	554.3	667.4	554.3	532.6	0.9899	634.6	0.0	52.0	0.5090	0.7805	464.3	507.8	0.6641	0.5050	723.1	561.2
2	9.144	7.900	600.3	646.4	600.3	573.4	0.9938	614.4	0.0	46.9	0.5538	0.7541	519.8	556.5	0.7326	0.5171	794.1	576.3
3	7.982	5.855	602.1	794.6	602.1	585.4	0.9980	577.3	0.0	42.5	0.5556	0.7104	581.8	610.4	0.7726	0.5274	837.3	589.9
4	6.792	4.687	620.0	790.7	602.0	580.1	0.9990	476.5	0.0	35.3	0.5555	0.6689	638.9	641.3	0.8100	0.5425	877.9	608.9
5	4.644	3.610	603.3	771.2	603.2	547.7	0.9972	388.0	0.0	35.3	0.5567	0.5939	767.4	778.8	0.9008	0.5954	976.2	672.9
6	3.741	3.000	603.7	654.5	603.7	545.0	0.9952	370.3	0.0	34.2	0.5571	0.5816	829.4	837.2	0.9467	0.6234	1025.8	717.7
7	3.166	2.585	602.9	654.2	602.5	544.8	0.9929	362.2	0.0	33.6	0.5564	0.5766	869.0	873.5	0.9760	0.6585	1057.6	747.1
8	2.610	2.114	602.4	644.7	602.4	540.1	0.9904	355.7	0.0	33.4	0.5558	0.5688	907.5	911.2	1.0054	0.6815	1089.6	774.8
9	1.960	1.602	601.4	640.5	601.6	533.8	0.9881	354.7	0.0	33.8	0.5551	0.5623	950.1	950.1	1.0376	0.7016	1124.6	794.7
10	1.227	0.999	591.6	632.7	591.6	511.6	0.9812	358.1	0.0	34.5	0.5453	0.5530	997.8	997.8	1.0692	0.7213	1160.0	825.4
11	0.575	0.458	555.5	607.9	555.5	489.1	0.9599	361.0	0.0	36.4	0.5103	0.5206	1038.0	1037.7	1.0814	0.7261	1177.3	835.0

SL	INCS	INCM	LEV	TURB	AMLV-1	RHCVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	TEFF-P	TEFF-A	B-1	B-2	VO-1	VO-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	PO1	TOT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.18	6.73	12.53	58.21	35.86	36.32	0.4544	0.1969	0.0439	1.3765	86.32	85.69	39.52	-18.29	-464.3	176.7	1.3385
2	0.01	5.41	14.22	46.63	49.37	41.09	0.4751	0.1652	0.0419	1.3704	86.48	85.86	40.84	-5.75	-514.8	57.9	1.3796
3	0.06	4.4	14.75	34.97	34.60	43.56	0.4719	0.1781	0.0302	1.3703	84.98	89.53	44.06	7.05	-581.8	-73.0	1.3864
4	1.32	4.44	12.00	25.11	35.00	44.27	0.4649	0.0786	0.0222	1.3636	92.00	91.64	46.75	17.65	-638.5	-184.8	1.3799
5	0.94	5.50	7.70	18.36	35.58	44.23	0.4425	0.0051	0.0179	1.3445	91.86	91.51	51.87	35.52	-767.4	-390.8	1.3602
6	1.08	5.07	5.42	13.39	35.51	43.44	0.4268	0.0005	0.0164	1.3574	92.06	91.70	57.99	40.60	-829.4	-466.9	1.3685
7	2.09	4.95	4.51	12.06	39.38	43.70	0.4158	0.0568	0.0152	1.3671	92.38	92.03	57.78	43.20	-869.0	-511.3	1.3750
8	2.73	5.03	4.22	16.64	35.46	43.53	0.410	0.0610	0.0161	1.3733	91.62	91.24	56.46	45.82	-907.9	-555.5	1.3778
9	2.99	5.23	3.52	5.54	35.13	43.04	0.4096	0.0749	0.0166	1.3799	89.82	89.14	57.67	48.13	-950.1	-595.4	1.3812
10	3.61	5.83	4.46	6.54	36.34	42.11	0.4122	0.0951	0.0243	1.3912	86.87	86.26	59.34	50.81	-997.8	-639.7	1.3827
11	4.95	7.17	7.52	7.70	35.72	39.33	0.4179	0.0981	0.0239	1.4119	86.82	86.17	61.85	54.14	-1038.0	-676.7	1.3671

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TOT	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBW/SEC	INLET	INLET	INLET	INLET
#	#	#	#	SCFT	#	#	#	#
1.1059	1.3722	89.35	89.92	36.84	1.1059	1.3722	89.35	89.92

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO1/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	STG
1	11.185	7.949	763.8	495.2	442.6	484.5	646.9	102.3	55.6	11.8	0.6976	0.4283	1.2836	1.1116	1.3212	1.1116
2	7.361	5.591	763.2	556.1	523.2	544.0	586.8	111.6	48.2	11.5	0.7005	0.4838	1.3430	1.1099	1.3356	1.1099
3	4.768	3.875	762.7	571.4	562.5	581.7	515.1	93.3	42.5	9.4	0.6792	0.4588	1.3664	1.1052	1.3504	1.1052
4	3.244	2.877	764.4	581.2	572.5	571.0	460.0	97.1	38.8	8.9	0.6531	0.4926	1.3645	1.1010	1.3484	1.1010
5	1.597	1.768	676.1	544.1	559.1	534.6	380.2	83.5	34.2	8.9	0.5586	0.4730	1.3476	1.0970	1.3341	1.0970
6	1.225	1.448	676.0	546.8	562.4	542.4	364.3	83.9	32.9	8.8	0.5921	0.4775	1.3532	1.0995	1.3421	1.0995
7	1.037	1.249	686.2	553.7	563.8	547.2	357.4	84.6	32.3	8.8	0.5907	0.4835	1.3570	1.1016	1.3492	1.1016
8	0.871	1.050	685.4	545.3	564.7	547.7	351.3	85.3	31.9	8.9	0.5864	0.4835	1.3574	1.1040	1.3536	1.1040
9	0.670	0.820	682.8	544.8	561.7	552.0	351.8	87.1	32.1	9.0	0.5827	0.4866	1.3609	1.1083	1.3597	1.1083
10	0.381	0.467	686.0	561.9	553.2	551.7	356.3	105.6	32.8	10.9	0.5765	0.4879	1.3628	1.1146	1.3710	1.1146
11	0.119	0.173	685.6	532.3	523.6	520.7	360.3	110.3	34.5	12.0	0.5541	0.4599	1.3393	1.1203	1.3837	1.1203

SL	INCS	INCM	LEV	TURB	AMLV-1	RHCVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	TEFF-A	TEFF-P	TO2/
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	PO1	TOT	TCT	STG
1	2.88	7.59	17.16	43.78	31.88	38.60	0.5111	0.1461	0.0302	0.9593	74.25	75.25	74.25
2	0.92	6.02	13.97	34.72	30.81	44.39	0.4265	0.0921	0.0203	0.9742	78.46	79.33	78.46
3	-2.39	3.08	10.74	33.09	42.49	46.59	0.3836	0.0543	0.0130	0.9855	81.28	82.90	81.28
4	-4.70	1.07	5.68	25.84	44.11	44.28	0.3617	0.0434	0.0112	0.9851	84.70	86.78	84.70
5	-8.01	-1.57	5.01	23.33	44.02	44.44	0.3271	0.0430	0.0125	0.9908	88.54	89.00	88.54
6	-9.21	-2.44	6.58	24.14	44.60	45.03	0.3109	0.0527	0.0162	0.9889	88.20	89.68	88.20
7	-9.92	-2.94	8.44	23.49	45.04	45.39	0.3031	0.0622	0.0198	0.9869	87.99	88.49	87.99
8	-10.52	-3.33	8.44	23.05	45.06	45.35	0.2997	0.0711	0.0233	0.9852	86.80	87.35	86.80
9	-11.01	-3.62	8.52	23.04	44.84	45.58	0.2938	0.0717	0.0243	0.9853	84.60	85.44	84.60
10	-12.31	-4.72	10.94	21.85	44.11	45.33	0.2811	0.0712	0.0249	0.9856	82.33	83.10	82.33
11	-13.73	-6.01	14.23	22.57	41.56	42.37	0.3065	0.1074	0.0395	0.9798	80.83	81.70	80.83

NGWRP	NCRRP	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TOT	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
RPM	LBW/SEC	#	#	#	#	#	#	#
7437	192.87	1.1059	1.3709	84.72	85.36	1.1059	0.9844	84.72

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	8.582	5.864	455.0	761.0	431.5	590.9	99.4	400.0	12.0	38.8	0.3907	0.4923	577.6	614.5	0.5016	0.5188	651.1	605.9
2	4.307	4.580	544.7	751.2	554.5	600.2	100.7	451.7	10.0	36.8	0.4418	0.4441	627.9	654.8	0.4627	0.5433	761.0	633.7
3	4.974	3.685	552.5	725.2	560.1	609.2	87.3	498.7	4.5	35.1	0.5185	0.4254	674.0	654.4	0.7261	0.5814	829.7	677.1
4	3.754	2.766	587.7	652.2	581.0	530.0	64.5	361.1	4.3	31.4	0.5151	0.5544	724.5	737.4	0.7583	0.6015	865.1	700.6
5	1.330	0.843	592.3	624.4	567.2	541.3	82.3	307.2	4.3	29.0	0.5022	0.5325	636.8	662.4	0.8280	0.6512	945.2	761.2
6	0.851	0.544	595.2	595.3	571.5	523.8	33.6	282.9	4.3	26.4	0.5055	0.5095	679.0	800.0	0.6573	0.6784	979.4	794.3
7	0.604	0.425	597.7	546.2	511.4	524.9	34.7	215.5	4.4	26.8	0.5051	0.5022	514.7	918.3	0.6836	0.7153	1010.6	837.7
8	0.283	0.150	581.5	551.7	510.0	530.0	89.2	263.1	4.8	26.4	0.5074	0.5038	472.2	968.6	0.5188	0.7512	1053.7	882.4
9	0.150	0.082	581.5	551.5	571.5	523.2	107.5	286.3	10.7	28.7	0.5057	0.5059	1009.2	1006.9	0.9287	0.7553	1067.5	890.5
10	0.058	0.033	581.4	511.4	546.2	494.6	109.3	237.1	11.5	30.1	0.4771	0.4825	1046.1	1044.8	0.9354	0.7635	1081.0	904.9

SL	INCS	INCP	CEV	PLAN	RMVPM-1	RMVPM-2	O-FAC	OMEGA-B	LCSS-P	P02/	TEFF-P	EFF-A	B-1	B-2	VM-1	VM-2	PC/PG
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.92	2.03	17.15	34.44	35.74	50.21	0.2256	0.0563	0.0134	1.2752	104.61	104.76	47.06	12.63	-47.62	-134.1	1.6397
2	-8.49	-4.03	10.25	44.54	45.26	52.40	0.2441	0.0618	0.0153	1.2324	92.97	92.75	43.11	10.57	-521.2	-203.1	1.6689
3	-7.21	-1.53	5.28	15.21	45.15	34.31	0.2922	0.0490	0.0123	1.2222	93.25	93.05	45.00	25.79	-507.3	-295.5	1.6732
4	-5.78	-0.70	7.54	15.24	47.77	53.41	0.2671	0.0233	0.0059	1.2147	96.42	96.31	47.73	32.50	-640.4	-376.8	1.6562
5	-2.91	0.56	6.02	6.45	46.56	49.55	0.2764	0.0291	0.0170	1.1155	94.30	94.16	53.12	44.67	-754.0	-535.2	1.6132
6	-2.32	0.59	6.40	5.56	40.51	47.93	0.2513	0.0351	0.0182	1.1740	92.30	92.12	44.31	48.74	-795.4	-597.1	1.5927
7	-1.37	1.01	5.84	4.37	46.66	48.20	0.2769	0.0156	0.0136	1.1721	96.22	96.14	55.57	51.70	-833.6	-652.8	1.5907
8	-1.00	0.72	4.32	3.04	40.59	48.25	0.2262	0.0197	0.0046	1.1737	95.08	94.96	56.52	53.07	-882.5	-705.5	1.5977
9	-1.53	0.65	3.26	3.62	46.45	47.70	0.2327	0.0324	0.0177	1.1772	92.13	91.65	57.63	54.01	-901.6	-720.5	1.6044
10	0.04	2.27	5.28	3.14	33.54	44.75	0.2305	0.0264	0.0160	1.1845	93.68	93.52	60.01	56.87	-936.3	-757.8	1.5843

TOT/	P02/	EFF-AD	EFF-P	WCI/A1	TOT/TU1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LB/SEC			POTOR	POTOR
1.1675	1.1107	86.03	88.37	34.54	1.0580	1.1558	95.22	55.34

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	6.977	0.019	656.7	592.0	515.0	592.7	472.1	9.5	42.3	3.9	0.5942	0.4493	1.6033	1.1978	1.2467	1.0686		
2	5.043	5.459	717.1	626.1	504.5	620.0	441.7	11.5	37.9	1.0	0.6127	0.5321	1.6521	1.1819	1.2195	1.0662		
3	3.673	3.784	712.7	627.0	500.2	627.0	390.5	-9.2	33.2	-0.7	0.6110	0.5332	1.6611	1.1730	1.2138	1.0630		
4	2.684	2.621	685.3	601.6	55.42	601.5	354.5	-11.1	30.9	-1.1	0.5911	0.5122	1.6413	1.1651	1.2064	1.0596		
5	1.285	1.121	627.6	543.4	544.5	547.4	332.5	-6.8	28.8	-0.7	0.537	0.4654	1.5936	1.1567	1.1794	1.0549		
6	0.968	0.820	601.5	525.0	532.8	528.0	279.2	-13.2	27.7	-1.4	0.5141	0.4494	1.5777	1.1568	1.1634	1.0508		
7	0.788	0.666	554.4	522.0	533.0	522.0	263.2	-7.0	26.3	-0.8	0.5488	0.4434	1.5716	1.1564	1.1580	1.0481		
8	0.625	0.550	551.0	530.4	536.8	530.4	263.4	3.7	26.1	0.4	0.5092	0.4493	1.5775	1.1639	1.1587	1.0494		
9	0.422	0.384	602.2	533.2	530.1	533.1	285.7	11.9	28.3	1.3	0.5110	0.4449	1.5788	1.1728	1.1587	1.0518		
10	0.162	0.153	576.7	506.5	500.7	500.0	280.7	22.0	29.7	2.5	0.4886	0.4270	1.5574	1.1798	1.1648	1.0529		

SL	INCS	INCP	CEV	PLAN	RMVPM-1	RMVPM-2	O-FAC	OMEGA-B	LCSS-P	P02/	TEFF-P	EFF-A	B-1	B-2	VM-1	VM-2	PC/PG
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-7.54	5.42	41.40	45.25	53.48	0.2819	0.1049	0.0221	0.9777						94.72	94.89	
2	-5.05	5.65	36.87	30.24	57.75	0.2575	0.0463	0.0104	0.9897						93.02	88.36	
3	-8.09	7.54	33.92	50.58	58.37	0.2513	0.0292	0.0170	0.9935						90.21	90.48	
4	-10.74	7.48	31.98	73.53	50.28	0.2513	0.0332	0.0159	0.9918						92.34	92.54	
5	-12.61	6.25	25.52	30.18	51.11	0.2687	0.0610	0.0170	0.9891						87.89	88.17	
6	-13.72	7.66	25.09	48.67	49.31	0.2605	0.0754	0.0167	0.9909						86.95	87.23	
7	-15.13	6.70	27.06	41.81	48.63	0.2642	0.0753	0.0236	0.9878						88.87	89.10	
8	-16.10	10.54	22.74	47.03	49.16	0.2503	0.0792	0.0262	0.9872						87.00	87.26	
9	-16.46	12.54	27.05	44.18	49.05	0.2710	0.0968	0.0332	0.9842						82.79	83.15	
10	-18.72	15.21	27.22	45.35	46.50	0.2814	0.1104	0.0393	0.9834						84.35	84.40	

INLET	INLET	TOT/	P02/	EFF-AD	EFF-P	TOT/TU1	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			POTOR
7437.	192.87	1.1079	1.0611	85.71	86.63	1.0560	0.9979	88.64

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*1	M*2	W*1	W*2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE				FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	10.561	9.494	522.6	606.8	552.6	529.7	0.9998	608.7	0.0	52.3	0.5075	0.7815	447.3	511.1	0.6466	0.5025	723.8	558.7
2	5.133	7.672	554.9	645.4	556.9	574.9	0.9920	619.8	0.0	47.0	0.5505	0.7585	523.2	580.1	0.7320	0.5186	793.7	578.0
3	7.784	6.031	601.0	651.1	601.0	588.3	0.9903	540.3	0.0	42.5	0.5545	0.7145	585.6	614.3	0.7742	0.5385	839.1	593.4
4	6.564	4.986	602.5	656.8	602.5	586.6	0.9999	478.2	0.0	39.1	0.5560	0.6745	643.0	685.6	0.8132	0.5488	881.2	615.8
5	4.466	3.430	604.5	676.5	604.5	552.7	0.9998	393.5	0.0	35.5	0.5583	0.6002	772.4	783.8	0.9055	0.5986	981.1	676.6
6	3.551	2.806	604.6	682.2	604.6	547.4	0.9979	379.8	0.0	34.8	0.5580	0.5875	834.8	842.6	0.9513	0.6322	1030.7	716.8
7	3.016	2.406	604.3	681.0	602.3	545.5	0.9947	373.4	0.0	34.4	0.5558	0.5819	874.6	879.2	0.9799	0.6548	1061.9	743.9
8	2.502	1.963	604.4	682.6	600.4	539.3	0.9913	367.5	0.0	34.3	0.5539	0.5732	913.8	917.1	1.0067	0.6763	1093.4	770.0
9	1.894	1.493	604.5	682.3	598.4	531.7	0.9882	365.6	0.0	34.5	0.5520	0.5653	956.2	956.2	1.0405	0.6962	1128.1	794.7
10	1.213	0.952	604.4	682.3	595.4	519.5	0.9818	367.4	0.0	35.3	0.5432	0.5553	1004.3	1004.3	1.0731	0.7172	1164.4	821.8
11	0.587	0.451	604.0	615.2	556.8	492.4	0.9581	366.8	0.0	36.8	0.5107	0.5346	1044.7	1044.4	1.0871	0.7263	1183.5	836.0

SL	INCC	INCH	DEV	PLAN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B*1	B*2	W*1	W*2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	1.45	7.00	12.26	56.65	35.79	35.92	0.4591	0.2257	0.0503	1.3722	84.48	83.77	40.19	-18.41	-447.3	177.6	1.3325
2	0.35	5.76	12.16	47.14	35.14	41.06	0.4743	0.1743	0.0443	1.3740	85.95	85.30	41.23	-5.91	-523.2	59.8	1.3791
3	1.08	6.36	12.61	37.14	39.54	43.71	0.4701	0.1156	0.0318	1.3731	89.55	89.06	44.29	7.14	-585.6	-74.0	1.3869
4	1.47	6.59	12.13	25.20	35.66	44.69	0.4603	0.0820	0.0231	1.3661	91.67	91.29	46.90	17.70	-643.0	-187.4	1.3820
5	1.04	5.60	7.41	16.74	35.75	43.49	0.4440	0.0809	0.0223	1.3460	89.94	89.50	51.97	35.23	-772.4	-390.3	1.3615
6	1.21	5.19	5.05	13.85	34.65	43.47	0.4342	0.0849	0.0231	1.3561	89.03	88.54	54.12	40.23	-834.8	-462.8	1.3692
7	2.28	5.12	4.16	12.62	31.42	43.53	0.4266	0.0834	0.0225	1.3663	89.04	88.54	55.48	42.86	-874.6	-505.8	1.3750
8	2.51	5.28	3.55	11.16	34.20	43.20	0.4214	0.0881	0.0234	1.3729	88.20	87.66	56.71	45.55	-913.8	-549.6	1.3770
9	3.25	5.53	3.80	5.96	34.59	42.68	0.4199	0.1002	0.0263	1.3794	86.44	85.80	57.97	48.01	-956.2	-596.6	1.3791
10	3.86	6.08	4.47	4.80	38.27	41.72	0.4211	0.1182	0.0303	1.3898	84.03	83.27	59.60	50.80	-1004.3	-636.8	1.3803
11	5.05	7.30	7.70	4.06	35.63	39.44	0.4228	0.1170	0.0287	1.4117	84.52	83.74	61.98	53.92	-1044.7	-675.6	1.3884

TU/TU	FO/FO	EFF-AD	EFF-P	WCI/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC				
1	1	1	1	1	1	1	1	1
1.1086	1.3722	87.16	87.73	38.85	1.1086	1.3722	87.16	87.73

STATOR 1

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*1	M*2	W*1	W*2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.100	7.888	784.2	496.9	43.44	480.7	650.9	100.0	56.0	11.6	0.6975	0.4243	1.2755	1.1130	1.3186	1.1130	1.1130	1.1130
2	7.284	5.553	760.5	553.7	523.5	542.2	591.9	112.3	48.5	11.7	0.7041	0.4812	1.3391	1.1116	1.3357	1.1116	1.1116	1.1116
3	4.401	3.924	767.0	571.2	463.2	563.2	518.5	95.3	42.5	9.6	0.6829	0.4984	1.3640	1.1066	1.3594	1.1066	1.1066	1.1066
4	3.370	3.002	746.3	625.1	578.4	558.0	462.0	89.2	38.6	9.1	0.6585	0.4938	1.3635	1.1022	1.3414	1.1022	1.1022	1.1022
5	1.880	2.024	623.1	542.4	563.8	535.6	385.7	85.5	34.4	9.1	0.6046	0.4737	1.3475	1.0991	1.3321	1.0991	1.0991	1.0991
6	1.513	1.709	677.1	545.4	564.5	562.7	373.3	85.2	33.5	8.9	0.5979	0.4793	1.3532	1.1025	1.3400	1.1025	1.1025	1.1025
7	1.300	1.485	676.2	554.8	567.2	548.0	368.2	86.5	33.0	9.0	0.5962	0.4837	1.3579	1.1053	1.3491	1.1053	1.1053	1.1053
8	1.083	1.248	671.5	551.8	565.2	549.1	363.3	86.1	32.7	8.9	0.5913	0.4839	1.3550	1.1080	1.3548	1.1080	1.1080	1.1080
9	0.818	0.944	668.1	568.0	561.1	552.9	362.6	89.1	32.9	9.2	0.5866	0.4868	1.3626	1.1122	1.3628	1.1122	1.1122	1.1122
10	0.445	0.534	662.7	552.9	553.3	365.5	105.9	33.5	10.8	0.5799	0.4884	1.3649	1.1183	1.3739	1.1183	1.1183	1.1183	1.1183
11	0.134	0.177	644.0	534.3	528.5	524.2	368.1	103.6	34.9	11.2	0.5610	0.4610	1.3418	1.1237	1.3847	1.1237	1.1237	1.1237

SL	INCC	INCH	DEV	PLAN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TOT	TOT	STAGE			
1	3.36	8.06	14.59	44.42	31.36	38.23	0.5183	0.1415	0.0292	0.9406	72.80	73.84	1.1086	1.3722	87.16	87.73
2	1.13	6.24	14.10	36.80	36.74	44.08	0.4337	0.0999	0.0221	0.9118	77.31	78.22	1.1086	1.3722	87.16	87.73
3	-4.34	3.13	10.54	32.92	42.80	46.48	0.3876	0.0612	0.0146	0.9835	84.19	84.85	1.1086	1.3722	87.16	87.73
4	-6.87	0.91	5.88	25.52	44.51	46.32	0.3653	0.0527	0.0134	0.9867	87.20	87.73	1.1086	1.3722	87.16	87.73
5	-7.85	-1.41	5.51	25.30	44.26	44.47	0.3341	0.0478	0.0138	0.9896	86.23	86.78	1.1086	1.3722	87.16	87.73
6	-9.88	-1.91	6.71	24.54	44.61	45.00	0.3204	0.0530	0.0163	0.9906	85.09	85.69	1.1086	1.3722	87.16	87.73
7	-9.21	-2.22	6.61	24.02	44.51	45.39	0.3129	0.0578	0.0183	0.9876	84.88	85.51	1.1086	1.3722	87.16	87.73
8	-9.71	-2.52	6.48	23.82	44.83	45.40	0.3094	0.0616	0.0202	0.9870	83.97	84.65	1.1086	1.3722	87.16	87.73
9	-10.61	-2.84	6.71	23.71	44.53	45.60	0.3020	0.0578	0.0196	0.9880	82.44	83.19	1.1086	1.3722	87.16	87.73
10	-11.62	-4.03	10.44	22.64	43.83	45.43	0.2894	0.0548	0.0192	0.9888	80.32	81.19	1.1086	1.3722	87.16	87.73
11	-13.41	-5.08	13.45	23.68	41.76	42.83	0.3206	0.1006	0.0362	0.9807	78.79	79.74	1.1086	1.3722	87.16	87.73

NOOR	WCCR	TO/TU	FO/FO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET				
1	1	1	1	1	1	1	1	1	1
7485	192.64	1.1086	1.3505	87.66	83.39	1.1086	0.9845	82.66	82.66

ROTOR 2

SL	EP-1-1	EP-1-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	W-1	W-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	8.552	5.759	441.8	156.4	431.1	583.4	97.1	481.4	12.4	35.2	0.3054	0.6466	581.7	618.5	0.5620	0.5124	652.3	599.4		
2	6.259	4.511	560.7	742.1	504.2	587.2	108.0	453.9	11.1	37.5	0.4877	0.6350	631.5	659.1	0.6609	0.5322	759.8	822.0		
3	4.956	3.667	550.4	721.9	504.2	597.1	89.3	405.8	8.7	34.4	0.5167	0.6187	679.0	658.9	0.7258	0.5700	830.1	665.2		
4	3.765	2.813	561.0	687.3	504.5	574.1	86.5	370.1	8.5	32.5	0.5142	0.5890	729.6	742.7	0.7589	0.5901	866.3	688.6		
5	1.430	0.951	575.0	621.1	507.4	537.0	44.2	312.1	4.4	30.2	0.5019	0.5303	844.2	847.8	0.8299	0.6476	948.5	758.5		
6	0.938	0.667	575.0	594.0	572.7	520.5	55.2	286.2	8.5	28.8	0.5061	0.5063	881.7	825.7	0.8596	0.6768	983.5	793.9		
7	0.600	0.521	500.0	586.6	574.3	522.3	85.6	266.9	8.5	27.1	0.5068	0.4998	924.2	924.2	0.8873	0.7153	1016.5	839.6		
8	0.336	0.263	585.3	592.0	570.2	528.0	90.8	267.7	8.9	26.4	0.5096	0.5029	978.5	974.9	0.9224	0.7497	1059.4	882.6		
9	0.104	0.127	585.8	597.4	570.1	522.5	100.4	284.7	10.5	25.0	0.5088	0.5056	1015.7	1013.4	0.9348	0.7554	1076.4	892.7		
10	0.070	0.048	585.1	572.2	546.5	495.9	103.0	285.3	10.7	24.9	0.4806	0.4816	1052.9	1051.6	0.9471	0.7683	1095.9	912.7		

SL	INCS	INCM	DEV	TURN	MM-VP-1	MM-VP-2	D-FAC	OMEGA-B	LOSS-P	PO2/P01	EFF-P	EFF-A	B-1	B-2	W-1	W-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	TOT	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-4.26	2.70	11.88	34.63	37.30	50.06	0.2365	0.0960	-0.0228	1.2884	107.78	108.06	47.73	13.10	-444.2	-137.5	1.6517
2	-7.92	-1.65	10.88	24.34	44.54	51.69	0.3097	0.0423	0.0104	1.2409	95.24	95.09	43.48	15.14	-524.0	-205.2	1.6755
3	-7.00	-1.22	5.55	14.15	47.47	53.69	0.3086	0.0900	0.0100	1.2309	94.64	94.47	45.21	26.06	-589.7	-293.1	1.6832
4	-5.61	-0.53	6.19	15.20	47.49	52.63	0.3042	0.0185	0.0046	1.2260	97.25	97.17	47.91	32.71	-643.0	-372.5	1.6683
5	-2.77	1.10	6.25	6.33	46.52	44.63	0.2827	0.0093	0.0022	1.2077	98.21	98.16	53.26	44.93	-760.0	-535.7	1.6307
6	-2.24	1.07	6.63	5.35	46.52	48.15	0.2650	0.0123	0.0029	1.1877	97.36	97.29	54.34	49.04	-799.5	-599.5	1.6104
7	-1.34	1.04	6.17	4.07	46.59	48.42	0.2393	0.0067	-0.0015	1.1640	101.63	101.69	55.60	51.33	-838.7	-657.3	1.6084
8	-1.50	0.72	6.48	3.07	47.15	48.83	0.2309	0.0009	0.0022	1.1667	99.79	99.77	56.91	53.24	-887.7	-707.2	1.6175
9	-1.52	0.71	5.52	3.47	46.78	48.09	0.2384	0.0174	0.0041	1.1405	95.87	95.77	57.64	54.17	-909.3	-723.7	1.6249
10	0.12	2.35	5.50	3.00	43.57	45.29	0.2357	0.0151	0.0034	1.1170	96.44	96.35	60.08	57.09	-949.9	-766.3	1.6041

TO/TO	FC/FO	EFF-AD	EFF-P	WCI/AL	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LB/SEC	%	INLET	INLET
1.4714	1.6284	87.86	88.67	34.53	1.0571	1.2113	98.42

STATOR 2

SL	EP-1-1	EP-1-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	W-1	W-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	7.046	8.053	654.4	576.0	504.4	570.2	472.7	4.2	42.7	1.0	0.5875	0.4485	1.6115	1.6302	1.2571	1.0694				
2	5.125	5.520	702.1	612.5	591.7	612.2	443.9	3.9	38.7	0.4	0.6037	0.5175	1.6601	1.1844	1.2297	1.0667				
3	3.723	3.814	702.4	614.1	584.1	614.1	397.3	-3.3	34.2	-0.3	0.6044	0.5209	1.6721	1.1760	1.2231	1.0644				
4	2.940	2.807	684.3	554.4	575.8	591.3	393.9	-10.5	32.0	-1.0	0.5963	0.5021	1.6554	1.1684	1.2112	1.0614				
5	1.235	1.063	624.4	542.0	540.8	541.9	307.1	-8.5	24.4	-0.9	0.5352	0.4597	1.6124	1.1627	1.1939	1.0559				
6	0.933	0.779	684.4	523.6	523.8	523.9	282.5	-13.0	28.1	-1.4	0.5121	0.4438	1.5969	1.1610	1.1773	1.0514				
7	0.708	0.643	552.1	511.1	530.5	518.1	264.6	-7.0	20.5	-0.8	0.5157	0.4491	1.5921	1.1608	1.1718	1.0484				
8	0.604	0.531	552.7	524.7	535.5	520.7	267.7	3.0	26.0	0.3	0.5067	0.4468	1.5698	1.1640	1.1736	1.0503				
9	0.384	0.344	664.0	534.2	514.2	533.9	249.3	17.0	28.5	1.8	0.5113	0.4448	1.6023	1.1782	1.1746	1.0533				
10	0.136	0.124	575.3	506.8	504.3	506.3	225.0	22.3	24.5	2.5	0.4879	0.4245	1.5759	1.1853	1.1740	1.0546				

SL	INCS	INCM	DEV	TURN	MM-VP-1	MM-VP-2	D-FAC	OMEGA-B	LOSS-P	PO2/P01	EFF-P	EFF-A	B-1	B-2	W-1	W-2	PC/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	TOT	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-8.14	5.44		41.77	44.43	52.60	0.3077	0.1152	0.0245	1.0245	0.9757			47.23	47.33		
2	-5.09	6.41		36.35	45.46	50.45	0.2734	0.0435	0.0394	0.9505				90.72	90.49		
3	-7.88	7.54		34.48	52.44	57.02	0.2634	0.0277	0.0066	0.9940				91.74	92.03		
4	-9.61	7.52		32.06	52.47	55.76	0.2724	0.0343	0.0087	0.9424				94.94	94.10		
5	-12.06	6.17		30.20	50.20	51.23	0.2788	0.0249	0.0158	0.9503				92.77	92.95		
6	-13.71	7.06		25.49	48.67	44.90	0.2737	0.0349	0.0150	0.9514				92.81	92.97		
7	-14.52	6.70		21.27	45.68	48.46	0.2694	0.0646	0.0202	0.9497				95.61	95.71		
8	-15.28	10.47		20.24	44.37	44.57	0.2626	0.0687	0.0227	0.9484				92.93	93.09		
9	-16.27	11.08		20.74	45.65	44.73	0.2705	0.0319	0.0281	0.9486				88.16	88.42		
10	-16.55	15.19		21.01	45.52	46.64	0.2671	0.0691	0.0356	0.9459				84.04	84.32		

WCI/AL	PC/PO	TO/TO	FC/FO	EFF-AD	EFF-P	TO2/T01	PO2/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	STAGE	%	STAGE
749.5	192.60	1.4714	1.6284	87.86	88.67	1.0571	0.6340	92.57	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Takeoff Configuration
(0.8 Mach Number at Sonic-Inlet Throat)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		W-1		W-2		M-1		M-2		M-1		M-2		M-1		M-2	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	10.663	5.797	511.4	843.6	561.4	521.7	0.9587	688.2	0.0	52.7	0.5160	0.7756	473.5	517.8	0.4750	0.4929	734.4	548.8										
2	5.359	8.125	406.1	644.6	400.1	583.2	0.9910	629.5	0.0	48.1	0.5595	0.7565	530.1	567.5	0.7633	0.5074	805.2	566.6										
3	8.163	6.300	607.2	400.6	607.2	581.9	0.9963	549.8	0.0	43.3	0.5006	0.7148	593.3	622.4	0.7837	0.5236	868.9	586.4										
4	6.534	5.357	607.7	754.9	607.1	576.9	0.9966	489.9	0.0	40.3	0.5010	0.6733	651.2	674.4	0.8225	0.5388	890.9	609.7										
5	4.774	3.829	607.8	675.8	607.8	547.0	0.9980	403.8	0.0	35.5	0.5012	0.6044	782.6	794.1	0.9168	0.5934	990.9	672.0										
6	3.703	3.208	607.4	676.6	607.4	546.1	0.9988	389.1	0.0	35.5	0.5007	0.5905	845.0	853.7	0.9613	0.6314	1061.2	717.0										
7	3.085	2.721	606.9	667.9	606.5	546.5	0.9907	386.0	0.0	35.1	0.5003	0.5872	886.1	890.8	0.9915	0.6552	1074.0	745.4										
8	2.510	2.196	606.3	657.4	605.3	539.8	0.9877	378.7	0.0	35.1	0.5097	0.5782	925.0	929.1	1.0216	0.6761	1106.7	771.0										
9	1.864	1.653	604.4	652.9	604.4	533.4	0.9877	376.5	0.0	35.1	0.5098	0.5710	968.9	968.9	1.0539	0.6972	1141.9	797.1										
10	1.118	0.978	599.7	645.8	599.7	522.7	0.9796	379.2	0.0	36.0	0.5445	0.5627	1017.5	1017.5	1.0844	0.7188	1176.6	825.0										
11	0.482	0.411	588.4	617.6	588.4	486.1	0.9861	386.9	0.0	39.1	0.5131	0.5352	1058.5	1058.2	1.0996	0.7226	1196.8	833.7										

SL	INCS DEGREE	INCM DEGREE	CEV DEGREE	TLRN DEGREE	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B TOTAL	LCSS-P TOTAL	P02/PO1	TEFF-P TOT	TEFF-A TOT	B-1 DEGREE	B-2 DEGREE	W0-1 FT/SEC	W0-2 FT/SEC	PC/PO INLET
1	1.38	6.93	12.60	58.14	36.18	35.59	3.4798	0.2223	0.0497	1.3777	84.55	83.83	40.12	-18.02	-473.5	170.3	1.3411
2	0.31	5.71	11.81	43.45	34.56	40.43	0.4682	0.1782	0.0452	1.3048	85.72	85.04	41.19	-6.26	-530.1	62.0	1.3935
3	1.19	6.47	12.76	37.30	34.72	43.51	0.4865	0.1087	0.0299	1.3901	90.38	89.92	44.40	7.10	-593.3	-72.6	1.4063
4	1.62	6.74	12.15	24.34	34.76	44.27	0.4803	0.0784	0.0221	1.3862	92.19	91.82	47.05	17.71	-651.5	-184.4	1.4007
5	1.28	5.84	7.72	16.67	34.67	43.45	0.4568	0.0661	0.0181	1.3709	92.04	91.67	52.21	35.54	-782.6	-390.4	1.3845
6	1.45	5.43	5.23	13.44	34.57	43.85	0.4423	0.0639	0.0173	1.3856	91.59	91.61	54.35	40.91	-845.0	-464.6	1.3963
7	2.43	5.27	4.17	12.76	34.47	44.11	0.4348	0.0651	0.0176	1.3568	91.69	91.29	53.62	42.88	-886.1	-506.8	1.4051
8	3.07	5.37	2.57	11.22	34.37	43.72	0.4111	0.0754	0.0200	1.4016	90.15	89.70	56.80	45.58	-925.0	-550.5	1.4071
9	3.37	5.61	3.80	10.04	34.17	43.30	0.4204	0.0840	0.0230	1.4085	88.42	87.84	58.06	48.01	-968.9	-592.4	1.4102
10	4.13	6.35	4.36	5.18	34.14	42.46	0.4284	0.1016	0.0261	1.4252	86.71	86.03	59.67	50.69	-1017.5	-638.3	1.4132
11	5.25	7.51	6.12	7.85	34.81	39.33	0.4354	0.1127	0.0274	1.4392	85.52	84.76	61.19	54.33	-1058.5	-677.3	1.3943

TO2/T01	P02/PO1	EFF-AD ROTOR	EFF-P ROTOR
1.1128	1.3963	88.72	89.24

STATOR 1

SL	EPI-1		EPI-2		V-1		V-2		VM-1		VM-2		W-1		W-2		M-1		M-2		M-1		M-2		PC/PO INLET
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC		
1	11.185	8.029	174.7	466.0	420.9	456.4	650.4	93.8	57.0	11.5	0.6878	0.4017	1.2977	1.1144	1.3243	1.1144									
2	7.488	5.847	285.8	524.5	508.9	514.6	600.4	111.7	49.8	12.2	0.6984	0.4559	1.3422	1.1147	1.3171	1.1147									
3	5.113	4.328	761.6	256.6	254.5	548.0	527.9	97.7	43.6	10.1	0.6805	0.4842	1.3768	1.1101	1.3408	1.1101									
4	3.884	3.350	725.4	557.3	568.4	550.2	473.4	88.8	39.8	9.2	0.6563	0.4858	1.3829	1.1062	1.3167	1.1062									
5	1.977	2.121	681.7	534.5	500.0	533.1	395.8	83.0	35.2	8.8	0.6059	0.4702	1.3724	1.1030	1.3548	1.1030									
6	1.567	1.752	682.5	348.3	365.8	541.2	382.3	88.1	34.1	7.3	0.6022	0.4775	1.3788	1.1064	1.3690	1.1064									
7	1.355	1.532	684.5	255.9	270.8	548.7	378.4	89.6	33.5	6.3	0.6031	0.4837	1.3863	1.1096	1.3780	1.1096									
8	1.142	1.251	680.2	257.4	268.2	550.5	374.2	87.2	33.4	6.0	0.5980	0.4843	1.3880	1.1126	1.3823	1.1126									
9	0.881	0.997	677.2	260.2	265.2	552.9	373.2	90.4	33.4	5.3	0.5939	0.4859	1.3906	1.1170	1.3888	1.1170									
10	0.546	0.627	672.8	262.5	268.4	553.9	371.1	100.4	34.0	4.3	0.5888	0.4869	1.3926	1.1236	1.4037	1.1236									
11	0.213	0.255	648.5	254.7	255.5	524.8	380.0	102.6	35.9	3.1	0.5637	0.4602	1.3701	1.1294	1.4140	1.1294									

SL	INCS DEGREE	INCM DEGREE	CEV DEGREE	TLRN DEGREE	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B TOTAL	LCSS-P TOTAL	P02/PO1	TEFF-P TOT	TEFF-A TOT	B-1 DEGREE	B-2 DEGREE	W0-1 FT/SEC	W0-2 FT/SEC	PC/PO INLET
1	4.34	5.05	16.80	45.55	30.40	36.69	0.5464	0.1435	0.0297	0.9610	73.06	74.11					
2	2.47	7.39	14.44	37.60	37.77	42.15	0.4676	0.1266	0.0279	0.9647	75.50	76.49					
3	-1.26	4.21	11.44	33.50	42.35	45.63	0.4089	0.0770	0.0184	0.9793	83.70	84.39					
4	-3.08	2.12	5.57	30.65	44.05	46.17	0.3800	0.0514	0.0131	0.9870	87.96	88.48					
5	-6.98	0.53	1.16	24.40	44.35	44.83	0.3465	0.0404	0.0117	0.9911	88.93	89.40					
6	-8.09	-1.32	1.04	14.80	45.12	45.47	0.3302	0.0312	0.0157	0.9889	88.31	88.82					
7	-8.86	-1.67	8.52	24.27	45.67	46.05	0.3233	0.0207	0.0192	0.9868	87.61	88.16					
8	-9.07	-1.89	6.57	24.37	45.53	46.12	0.3204	0.0226	0.0205	0.9866	86.07	86.70					
9	-9.64	-2.44	8.65	4.15	45.42	46.49	0.3159	0.0654	0.0222	0.9861	84.13	84.85					
10	-11.06	-3.47	10.26	23.75	44.73	46.05	0.3105	0.0692	0.0243	0.9855	82.35	83.18					
11	-12.35	-4.60	13.34	24.81	41.89	43.22	0.3322	0.0899	0.0323	0.9826	80.46	81.40					

NO2/NO1	PC/PO INLET	EFF-AD STAGE	EFF-P STAGE
1.1128	0.9840	84.23	84.23

ROTOR 2

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	8.418	5.743	422.7	742.9	413.8	544.8	91.1	500.8	12.3	42.0	0.3643	0.6328	989.0	627.0	0.5586	0.4791	647.4	563.1
2	5.948	4.374	523.3	727.1	522.4	556.1	107.6	468.3	11.6	39.9	0.4621	0.6187	668.3	667.7	0.6464	0.5029	746.1	590.8
3	4.671	3.572	578.4	714.3	571.1	567.7	91.7	426.8	9.4	36.0	0.5044	0.6056	667.5	703.1	0.7200	0.5402	825.6	673.6
4	3.563	2.801	576.6	682.1	572.5	562.9	85.0	385.3	8.4	34.2	0.5056	0.5819	737.2	752.4	0.7595	0.5733	869.3	672.0
5	1.374	1.033	570.5	624.5	568.2	526.3	84.7	336.1	8.5	32.6	0.4982	0.5308	855.4	859.0	0.8340	0.6306	955.1	761.9
6	0.944	0.763	578.2	596.6	571.4	511.1	88.5	311.7	8.8	31.9	0.4944	0.5080	856.4	857.4	0.8632	0.6596	989.5	777.3
7	0.759	0.675	581.6	590.0	579.0	513.9	87.4	289.8	8.6	29.4	0.5066	0.5002	936.4	936.4	0.8932	0.7003	1025.5	826.0
8	0.498	0.453	585.5	558.8	576.4	522.1	91.2	243.2	9.0	29.3	0.5087	0.5060	991.4	987.7	0.9295	0.7362	1069.9	868.9
9	0.267	0.260	587.2	604.3	576.5	523.1	101.0	306.6	9.9	30.4	0.5088	0.5104	1029.1	1026.8	0.9475	0.7493	1093.6	890.0
10	0.090	0.085	588.3	581.0	582.2	496.1	102.4	305.7	10.6	31.7	0.4813	0.4865	1060.3	1055.5	0.9567	0.7589	1109.7	906.3

SL	INCS	IACH	LEV	TACH	HMV-1	HMCV-2	D-FAC	LMEGA-B	LCSS-P	T02/	TEFF-P	TEFF-A	B-1	B-2	VM-1	VM-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	TOT	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-1.93	5.03	17.35	37.27	33.73	48.24	0.2940	0.1058	0.00251	1.3128	107.82	108.12	90.06	12.79	-497.3	-126.3	1.6920
2	-5.97	0.29	11.34	25.83	46.56	50.09	0.3457	0.0079	0.0020	1.2657	99.15	99.12	95.43	19.60	-532.7	-199.4	1.7154
3	-5.05	-0.37	5.76	15.84	47.42	52.22	0.3520	0.0083	0.0120	1.2468	93.57	93.77	96.16	26.27	-556.2	-281.3	1.7274
4	-4.73	0.35	6.51	15.71	47.58	52.57	0.3315	0.0122	0.0030	1.2457	98.29	98.23	98.79	33.07	-654.2	-367.2	1.7295
5	-2.24	1.63	6.17	6.90	46.89	44.83	0.3129	0.0153	0.0017	1.2306	97.33	97.25	93.79	44.81	-770.6	-522.9	1.6931
6	-1.90	1.41	6.54	5.86	47.47	48.48	0.2940	0.0173	0.0040	1.2104	96.65	96.58	94.73	48.85	-807.5	-535.6	1.6745
7	-1.05	1.34	6.16	4.37	47.65	48.85	0.2663	0.0061	0.0010	1.2052	100.05	100.04	95.49	51.53	-849.1	-666.6	1.6721
8	-1.15	1.08	4.20	4.21	47.78	49.52	0.2591	0.0032	0.0019	1.2221	98.21	98.15	97.27	53.06	-900.1	-794.5	1.6858
9	-1.10	1.13	3.25	4.06	47.55	49.60	0.2509	0.0165	0.0044	1.2182	96.04	95.92	94.36	54.00	-928.1	-720.1	1.6966
10	0.35	2.62	5.37	3.40	44.69	46.33	0.2588	0.0148	0.0034	1.2243	96.86	96.77	90.76	56.95	-564.5	-759.8	1.6755

10/TU	P-1/P1	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LB/SEC			KUTER	POTOR
1.1028	1.6557	89.06	89.84	34.20	1.0628	1.2341	98.60	58.45

STATOR 2

SL	EPSt-1	EPSt-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	7.054	8.096	686.3	555.2	476.7	535.6	431.7	9.9	45.5	1.1	0.5304	0.4469	1.6523	1.6523	1.1576	1.1576	1.2312	1.0747
2	5.127	5.498	655.4	572.1	523.4	571.4	388.3	12.7	41.1	1.3	0.5900	0.4801	1.6889	1.6889	1.1424	1.1424	1.2525	1.0731
3	3.717	3.765	655.4	582.1	553.5	582.1	417.9	-2.2	36.9	-0.2	0.5921	0.4905	1.7184	1.7184	1.1866	1.1866	1.2403	1.0691
4	2.674	2.660	676.6	568.4	563.5	566.4	378.4	-7.4	33.9	-0.7	0.5736	0.4782	1.7056	1.7056	1.1776	1.1776	1.2182	1.0657
5	1.257	1.066	625.4	525.1	535.2	529.0	331.3	-9.3	31.8	-1.0	0.5352	0.4462	1.6756	1.6756	1.1738	1.1738	1.2202	1.0624
6	0.938	0.769	644.7	516.6	526.8	510.3	307.6	-15.6	30.6	-1.7	0.5134	0.4303	1.6638	1.6638	1.1721	1.1721	1.2022	1.0576
7	0.768	0.630	566.7	503.0	522.5	507.0	287.3	-4.1	28.8	-0.5	0.5062	0.4271	1.6608	1.6608	1.1725	1.1725	1.1970	1.0546
8	0.572	0.488	665.6	523.1	536.5	523.1	292.5	0.3	28.9	0.0	0.5121	0.4394	1.6733	1.6733	1.1820	1.1820	1.2030	1.0576
9	0.327	0.282	612.5	531.8	541.6	531.6	306.3	17.2	29.9	1.9	0.5168	0.4450	1.6755	1.6755	1.1918	1.1918	1.2059	1.0604
10	0.096	0.082	588.3	465.7	506.5	499.2	305.3	24.0	31.5	2.8	0.4929	0.4159	1.6515	1.6515	1.1990	1.1990	1.2070	1.0616

SL	INCS	IACH	LEV	TACH	HMCV-1	HMCV-2	D-FAC	LMEGA-B	LCSS-P	T02/	TEFF-P	TEFF-A
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	TOT	TOT	STAGE
1	-5.28	9.57	44.52	41.32	59.44	0.3653	0.1186	0.0250	0.9758	98.10	98.17	98.17
2	-2.68	9.21	35.86	47.84	54.84	0.3199	0.0470	0.0130	0.9501	94.61	94.78	94.78
3	-5.17	8.07	37.10	51.51	50.54	0.3051	0.0235	0.0056	0.9350	91.95	92.10	92.10
4	-7.81	7.75	34.60	52.71	55.34	0.3076	0.0294	0.0074	0.9440	95.62	95.76	95.76
5	-4.67	8.06	32.76	50.54	51.71	0.3145	0.0395	0.0114	0.9530	93.69	93.87	93.87
6	-10.80	7.55	34.32	45.26	49.82	0.3161	0.0374	0.0117	0.9439	93.63	93.79	93.79
7	-12.43	6.65	25.25	45.58	48.45	0.3034	0.0431	0.0137	0.9430	96.44	96.53	96.53
8	-13.38	10.17	26.84	50.17	50.74	0.2957	0.0469	0.0155	0.9423	95.98	96.13	96.13
9	-14.84	12.12	26.05	50.61	51.20	0.2946	0.0613	0.0210	0.9458	90.78	91.02	91.02
10	-17.16	15.48	26.50	47.01	47.56	0.3209	0.0933	0.0332	0.9057	84.72	84.99	84.99

NCORR	BCORR	TU/TU	P-1/P1	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
1	1	1	1	1	1	1	1	1
7584	19363	661826	1.6800	87.39	88.28	1.0628	0.5904	93.94

**UNIFORM INLET FLOW DATA – SONIC INLET, CRUISE CONFIGURATION
(Complete Acoustic Treatment)**

- **Overall Performance and Stall Summary**
- **Overall Performance and Blade-Element Data**

FAN OVERALL PERFORMANCE – SONIC INLET, CRUISE CONFIGURATION

	N _{CORR} (rpm)	W _{CORR} (kg/sec)	W _{CORR} (lbm/sec)	Local				Cumulative Fan Alone				Cumulative System				
				T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	T ₀ /T ₀	P ₀ /P ₀	η _{ad} (%)	η _p (%)	P ₀ /P ₀	η _{ad} (%)	η _p (%)		
415-10-1																
Sonic Inlet	8342	97.3	214.70		0.9796								0.9796			
Rotor 1	8342	99.4	219.18	1.1207	1.4279	88.79	89.35	1.1207	1.4279	88.79	89.35	1.3987	83.36	84.13		
Stator 1					0.9826				1.4030	84.19	84.93	1.3744	78.81	79.74		
Rotor 2				1.0673	1.1928	76.61	77.19	1.1961	1.6735	80.78	82.11	1.6394	77.36	78.87		
Stator 2					0.9478				1.5862	71.81	73.57	1.5538	68.43	70.32		
415-10-2																
Sonic Inlet	8354	96.9	213.80		0.9836								0.9836			
Rotor 1	8354	98.5	217.36	1.1213	1.4334	89.38	89.91	1.1213	1.4334	89.38	89.91	1.4099	85.02	85.73		
Stator 1					0.9800				1.4048	84.12	84.86	1.3818	79.80	80.70		
Rotor 2				1.0723	1.2458	89.44	89.77	1.2023	1.7500	85.65	86.73	1.7213	82.97	84.22		
Stator 2					0.9848				1.7234	83.12	84.35	1.6951	80.45	81.84		
415-10-3																
Sonic Inlet	8318	96.5	212.90		0.9825								0.9825			
Rotor 1	8318	98.2	216.70	1.1242	1.4494	90.13	90.63	1.1242	1.4494	90.13	90.63	1.4240	85.56	86.26		
Stator 1					0.9804				1.4211	85.08	85.80	1.3962	80.56	81.45		
Rotor 2				1.0789	1.2749	90.90	91.21	1.2129	1.8118	86.89	87.93	1.7801	84.13	85.36		
Stator 2					0.9879				1.7899	84.96	86.14	1.7586	82.21	83.56		
415-10-4																
Sonic Inlet	8324	95.2	210.10		0.9819								0.9819			
Rotor 1	8324	97.0	213.97	1.1267	1.4683	91.54	91.99	1.1267	1.4683	91.54	91.99	1.4417	86.96	87.62		
Stator 1					0.9810				1.4404	86.73	87.40	1.4143	82.17	83.02		
Rotor 2				1.0838	1.3050	94.13	94.35	1.2211	1.8797	89.30	90.20	1.8457	86.55	87.66		
Stator 2					0.9900				1.8609	87.74	88.76	1.8272	85.00	86.22		
415-94-1																
Sonic Inlet	7889	92.8	204.60		0.9836								0.9836			
Rotor 1	7889	94.3	208.02	1.1124	1.3945	88.71	89.23	1.1124	1.3945	88.71	89.23	1.3716	84.06	84.75		
Stator 1					0.9820				1.3695	83.66	84.37	1.3470	79.03	79.90		
Rotor 2				1.0549	1.1573	77.54	78.00	1.1735	1.5849	81.05	82.24	1.5589	77.95	79.29		
Stator 2					0.9483				1.5030	71.16	72.76	1.4784	68.12	69.82		
415-94-2																
Sonic Inlet	7883	92.3	203.70		0.9870								0.9870			
Rotor 1	7883	93.6	206.38	1.1129	1.4052	90.48	90.93	1.1129	1.4052	90.48	90.93	1.3869	86.76	87.36		
Stator 1					0.9819				1.3798	85.41	86.06	1.3619	81.72	82.50		
Rotor 2				1.0632	1.2143	90.12	90.39	1.1832	1.6755	86.71	87.64	1.6537	84.37	85.43		
Stator 2					0.9847				1.6498	83.93	85.01	1.6284	81.60	82.82		
415-94-3																
Sonic Inlet	7895	91.0	200.80		0.9837								0.9837			
Rotor 1	7895	92.5	204.13	1.1123	1.4147	92.77	93.12	1.1123	1.4147	92.77	93.12	1.3916	88.17	88.71		
Stator 1					0.9832				1.3909	88.03	88.58	1.3682	83.44	84.16		
Rotor 2				1.0700	1.2496	93.72	93.92	1.1902	1.7381	89.90	90.65	1.7098	87.08	88.01		
Stator 2					0.9888				1.7185	87.92	88.80	1.6905	85.09	86.15		
415-94-4																
Sonic Inlet	7864	90.2	198.90		0.9875								0.9875			
Rotor 1	7864	91.3	201.42	1.1174	1.4217	90.09	90.57	1.1174	1.4217	90.09	90.57	1.4039	86.70	87.32		
Stator 1					0.9819				1.3960	85.20	85.88	1.3786	81.83	82.64		
Rotor 2				1.0723	1.2608	94.40	94.67	1.1982	1.7601	88.39	89.27	1.7381	86.33	87.35		
Stator 2					0.9904				1.7432	86.77	87.75	1.7214	84.70	85.82		

OVERALL STALL POINT DATA

W _{CORR} Sonic Inlet (lbm/sec)	W _{CORR} Sonic Inlet (kg/sec)	W _{CORR} Rotor 1 (lbm/sec)	W _{CORR} Rotor 1 (kg/sec)	P ₀ /P ₀ (fan)	P ₀ /P ₀ (system)
197.0	89.3	199.4	90.4	1.748	1.727
209.9	95.2	213.5	96.8	1.856	1.825

SPEED CODE

84
10

IDENTIFICATION

84 Percent Design Speed
100 Percent Design Speed

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(100 Percent of Design Speed)**

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N ^o -1	N ^o -2	V ^o -1	V ^o -2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC
1	0.1924	0.1709	209.2	206.3	209.2	194.4	0.9690	236.9	0.0	0.8818	0.6391	0.9100	188.1	173.6	0.8024	0.6072	262.4	204.3
2	0.1744	0.1413	218.2	204.7	218.2	209.0	0.9933	207.7	0.0	0.7807	0.6693	0.8720	177.7	190.3	0.8432	0.6207	281.3	209.8
3	0.1500	0.1112	221.9	277.0	221.9	211.7	0.9944	178.0	0.0	0.6998	0.6817	0.8157	198.9	208.7	0.9154	0.6297	298.0	213.8
4	0.1242	0.0917	226.3	261.4	226.3	206.3	0.9914	158.0	0.0	0.6485	0.6896	0.7663	218.4	226.1	0.9626	0.6423	313.1	219.1
5	0.0699	0.0594	228.9	236.3	228.9	194.3	0.9906	123.6	0.0	0.5647	0.7053	0.6693	262.4	266.2	1.0728	0.7004	346.2	241.0
6	0.0205	0.0468	229.3	221.3	229.3	189.7	0.9910	114.0	0.0	0.5413	0.7063	0.6414	283.3	286.2	1.1234	0.7423	364.7	256.2
7	0.0411	0.0412	226.4	215.2	226.4	185.6	0.9886	106.9	0.0	0.5408	0.7042	0.6223	297.1	298.6	1.1547	0.7677	374.9	265.4
8	0.0339	0.0367	227.8	210.7	227.8	183.2	0.9882	104.0	0.0	0.5164	0.7015	0.6085	310.4	311.5	1.1856	0.7996	385.0	276.8
9	0.0276	0.0310	226.7	209.3	226.7	183.4	0.9831	101.8	0.0	0.5060	0.6979	0.6047	326.8	324.8	1.2192	0.8333	396.1	288.9
10	0.0144	0.0218	219.7	208.4	219.7	181.9	0.9652	101.3	0.0	0.5091	0.6741	0.5991	341.1	341.1	1.2451	0.8650	405.7	300.8
11	0.0090	0.0104	207.4	202.0	207.4	173.4	0.9301	103.6	0.0	0.5382	0.6339	0.5774	354.9	354.8	1.2555	0.8728	411.1	305.3

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B ^o -1	B ^o -2	VO ^o -1	VO ^o -2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0267	0.0702	0.2243	0.9631	41.85	40.65	0.4393	0.2842	0.0635	1.4409	78.55	77.42	0.6495	-0.3136	-158.7	43.3	1.4254
2	-0.0289	0.0654	0.2324	0.7675	43.90	44.88	0.4454	0.1853	0.0471	1.4576	84.17	83.31	0.6846	-0.0830	-177.7	17.4	1.4781
3	-0.0218	0.0704	0.2397	0.5914	44.35	47.99	0.4465	0.1094	0.0300	1.4609	89.47	88.89	0.7323	0.1409	-198.9	-30.1	1.4830
4	-0.0196	0.0698	0.2184	0.4578	44.44	50.80	0.4441	0.0734	0.0207	1.4550	92.09	91.64	0.7734	0.3136	-216.4	-68.1	1.4728
5	-0.0352	0.0443	0.1479	0.2293	44.90	49.33	0.4270	0.0645	0.0176	1.4100	91.18	90.74	0.8537	0.6334	-202.4	-142.6	1.4259
6	-0.0323	0.0372	0.1232	0.1538	44.93	48.64	0.4081	0.0702	0.0185	1.3985	89.71	89.21	0.8910	0.7372	-203.5	-172.2	1.4148
7	-0.0132	0.0364	0.1214	0.1184	44.76	47.78	0.3971	0.0750	0.0193	1.3911	88.39	88.04	0.9152	0.7968	-207.1	-189.8	1.4040
8	0.0000	0.0402	0.1213	0.0902	44.56	47.38	0.3817	0.0726	0.0183	1.3893	88.36	88.02	0.9378	0.8477	-210.4	-207.3	1.3987
9	0.0072	0.0463	0.1114	0.0793	44.31	47.62	0.3682	0.0697	0.0173	1.3940	88.87	88.33	0.9616	0.8833	-224.8	-223.2	1.4041
10	0.0260	0.0648	0.1129	0.0773	42.62	47.32	0.3589	0.0612	0.0150	1.4300	90.42	89.92	0.9968	0.9214	-241.1	-239.6	1.4090
11	0.0486	0.0873	0.1599	0.0750	39.84	44.88	0.3617	0.0543	0.0129	1.4685	91.87	91.42	1.0416	0.9666	-254.9	-231.2	1.3943

TOT/TO1	PO2/PO1	EFF-AD	EFF-P	WCI/A1	TOT/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	INLET	INLET
1.1207	1.4279	88.79	89.35	215.63	1.1207	1.4279	88.79	89.35

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	PO/PO	TO2/TO1
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	INLET	INLET
1	0.1909	0.1320	277.0	187.4	163.1	181.7	223.9	36.8	0.9397	0.1973	0.8103	0.5237	1.3468	1.1421	1.3407	1.1421
2	0.1191	0.0864	277.1	204.9	193.5	201.3	198.3	37.9	0.7966	0.1851	0.8127	0.5838	1.4287	1.1363	1.4088	1.1363
3	0.0725	0.0555	268.3	207.2	206.8	204.8	170.9	32.7	0.6897	0.1583	0.7869	0.5930	1.4523	1.1270	1.4304	1.1280
4	0.0461	0.0395	258.5	204.2	208.8	201.8	152.3	31.1	0.6295	0.1525	0.7567	0.5855	1.4475	1.1229	1.4309	1.1229
5	0.0175	0.0194	233.5	192.9	199.7	190.5	121.0	30.3	0.5446	0.1579	0.6797	0.5535	1.4102	1.1136	1.4043	1.1136
6	0.0117	0.0146	225.3	190.0	195.6	187.7	112.3	29.7	0.5209	0.1571	0.6547	0.5449	1.3994	1.1129	1.3836	1.1129
7	0.0076	0.0118	219.9	187.0	191.9	184.7	107.4	29.4	0.5101	0.1560	0.6370	0.5338	1.3893	1.1122	1.3769	1.1122
8	0.0065	0.0097	216.1	185.1	190.6	182.9	103.0	28.1	0.4967	0.1525	0.6234	0.5201	1.3830	1.1121	1.3740	1.1121
9	0.0046	0.0076	215.6	186.9	190.5	185.0	100.1	26.6	0.4866	0.1430	0.6230	0.5350	1.3873	1.1143	1.3827	1.1143
10	0.0016	0.0042	215.0	188.9	189.7	186.6	101.1	29.2	0.4898	0.1555	0.6196	0.5396	1.3919	1.1199	1.4146	1.1199
11	-0.0005	0.0011	209.2	180.3	181.9	176.4	103.4	37.1	0.5171	0.2075	0.5996	0.5119	1.3655	1.1273	1.4406	1.1273

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-A	EFF-P	TOT-STG	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN	RADIAN	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	STAGE	TOT-STG
1	0.0200	0.1023	0.2911	0.7424	36.75	46.09	0.4496	0.1573	0.0326	0.9466	64.74	66.24	84.16	86.94
2	-0.0293	0.0599	0.2278	0.6115	45.31	52.75	0.3880	0.0960	0.0213	0.9651	75.55	78.70	87.79	88.39
3	-0.0931	0.0024	0.1821	0.5315	49.86	54.61	0.3498	0.0616	0.0148	0.9753	84.16	86.94	87.79	88.39
4	-0.1291	-0.0283	0.1665	0.4770	51.27	54.18	0.3277	0.0507	0.0129	0.9840	87.79	88.39	87.79	88.39
5	-0.1924	-0.0799	0.1603	0.3867	50.38	51.10	0.2853	0.0389	0.0113	0.9897	86.16	86.79	86.16	86.79
6	-0.2147	-0.0964	0.1935	0.3638	49.75	50.21	0.2694	0.0406	0.0125	0.9899	85.32	85.97	85.32	85.97
7	-0.2266	-0.1045	0.1919	0.3521	48.96	49.30	0.2616	0.0410	0.0130	0.9902	84.78	85.45	84.78	85.45
8	-0.2441	-0.1187	0.1449	0.3442	48.66	48.77	0.2583	0.0501	0.0164	0.9884	84.93	85.41	84.93	85.41
9	-0.2652	-0.1361	0.1353	0.3436	48.97	49.25	0.2511	0.0539	0.0183	0.9876	86.88	87.51	86.88	87.51
10	-0.2972	-0.1647	0.1358	0.3343	48.77	49.48	0.2405	0.0531	0.0187	0.9879	86.88	87.51	86.88	87.51
11	-0.3253	-0.1904	0.2472	0.3095	46.48	48.22	0.2341	0.0934	0.0335	0.9799	86.40	87.08	86.40	87.08

WCI/R	PO/PO	EFF-AD	EFF-P	TOT/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	INLET
873.94	1.1207	1.4030	84.19	84.93	1.1207	0.9826

ROTOR 2

SL	EP1-1	EP1-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V'-1	V'-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1508	0.1014	171.9	286.0	168.1	236.5	35.8	168.8	0.2084	0.5912	0.4636	0.8063	197.5	210.2	0.6562	0.6795	233.2	241.6
2	0.1112	0.0771	208.7	279.6	205.5	234.5	36.1	152.2	0.1730	0.5724	0.5960	0.7075	214.7	223.9	0.7777	0.6908	272.3	245.2
3	0.0873	0.0597	215.1	267.9	212.8	232.3	31.3	133.3	0.1456	0.5192	0.6180	0.7555	230.6	237.4	0.8737	0.7180	291.6	254.6
4	0.0645	0.0413	213.8	253.3	211.6	223.7	30.3	118.9	0.1422	0.4877	0.6155	0.7140	247.6	252.3	0.8737	0.7341	303.5	260.4
5	0.0249	0.0110	202.2	217.4	200.0	192.6	29.8	100.9	0.1477	0.4827	0.5021	0.6089	286.8	288.0	0.9375	0.7518	325.6	268.5
6	0.0170	0.0081	198.3	210.3	196.1	188.0	29.4	94.3	0.1490	0.4451	0.5701	0.5884	306.5	300.9	0.9620	0.7814	334.6	279.3
7	0.0088	0.0022	194.0	207.7	191.9	187.3	28.4	89.9	0.1467	0.4474	0.5572	0.5812	313.9	313.9	0.9884	0.8171	344.1	292.0
8	0.0042	0.0007	195.2	207.4	193.3	188.8	27.1	85.8	0.1392	0.4265	0.5688	0.5792	332.4	331.1	1.0365	0.8644	361.3	309.6
9	0.0117	0.0166	194.4	205.7	192.0	184.5	30.3	90.8	0.1563	0.4573	0.5559	0.5714	345.0	344.2	1.0566	0.8709	368.7	313.5
10	0.0091	0.0121	185.0	188.5	181.2	181.0	37.8	98.1	0.2012	0.5473	0.5260	0.5188	357.7	357.2	1.0475	0.8394	366.4	305.0

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	TEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1447	0.0233	0.2829	0.5593	43.48	61.26	0.1168	0.8270	0.8864	1.3838	97.38	97.28	0.7626	0.2033	-161.7	-49.4	1.7626
2	0.1836	0.0743	0.1500	0.4189	54.06	63.89	0.2194	0.1550	0.8387	1.2449	88.83	88.23	0.7135	0.2946	-178.6	-71.7	1.7955
3	0.1595	0.0604	0.1315	0.3320	56.12	64.76	0.2286	0.1241	0.8315	1.2795	81.72	81.18	0.7517	0.4196	-199.4	-104.1	1.7852
4	0.1353	0.0466	0.1083	0.2618	55.73	62.99	0.2396	0.0982	0.8258	1.2175	83.38	82.83	0.7987	0.5369	-217.5	-133.4	1.7506
5	0.0683	0.0068	0.0962	0.1389	52.65	54.88	0.2510	0.1382	0.8336	1.1671	71.45	70.83	0.9095	0.7707	-257.0	-187.6	1.8383
6	0.0438	0.0140	0.0933	0.1121	51.57	53.62	0.2361	0.1211	0.8288	1.1622	72.84	72.34	0.9446	0.8325	-271.1	-206.5	1.6184
7	0.0148	0.0270	0.0829	0.1044	50.43	53.43	0.2194	0.0993	0.8235	1.1697	76.83	76.31	0.9792	0.8766	-285.6	-224.1	1.6184
8	0.0134	0.0254	0.0837	0.0916	50.80	54.06	0.2055	0.0997	0.8236	1.1648	75.32	74.77	1.0061	0.9144	-305.3	-245.3	1.6200
9	0.0095	0.0294	0.0574	0.0816	50.31	52.39	0.2151	0.1259	0.8298	1.1632	69.72	69.07	1.0230	0.9414	-314.7	-253.4	1.6165
10	0.0097	0.0486	0.1144	0.0416	47.87	44.94	0.2410	0.1767	0.8388	1.1432	59.00	58.23	1.0564	1.0148	-320.7	-259.1	1.5575

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	R*TOR
				S				S
1.1961	1.6735	80.78	82.11	185.63	1.0673	1.1928	76.61	77.19

STATOR 2

SL	EP1-1	EP1-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	TO/TO	PO/PO	TO2/	
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET			INLET	INLET	STAGE	TO1
1	0.1207	0.1402	255.8	254.6	201.1	254.2	158.0	-14.5	0.6625	-0.0568	0.7101	0.7066	1.6767	1.2338	1.2366	1.0606				
2	0.0878	0.0989	261.0	252.4	214.5	252.0	148.7	-14.3	0.6045	-0.0565	0.7294	0.7032	1.6893	1.2231	1.1704	1.0799				
3	0.0695	0.0762	256.7	239.6	221.1	239.3	130.4	-12.3	0.5323	-0.0511	0.7206	0.6683	1.6495	1.2095	1.1363	1.0745				
4	0.0598	0.0627	247.8	230.9	218.5	230.5	116.7	-12.6	0.4904	-0.0546	0.6970	0.6453	1.6283	1.1980	1.1307	1.0691				
5	0.0366	0.0350	219.2	210.5	195.3	210.2	99.5	-10.2	0.4713	-0.0486	0.6141	0.5881	1.5769	1.1834	1.1234	1.0636				
6	0.0265	0.0244	213.3	205.1	191.8	205.1	93.3	0.1	0.4526	0.0005	0.5974	0.5729	1.5623	1.1801	1.1212	1.0605				
7	0.0194	0.0170	211.3	199.9	191.5	199.9	89.2	2.5	0.4357	0.1124	0.5918	0.5579	1.5465	1.1783	1.1190	1.0599				
8	0.0158	0.0140	211.2	196.8	193.1	196.5	85.4	9.9	0.4172	0.2506	0.5903	0.5477	1.5370	1.1824	1.1070	1.0602				
9	0.0141	0.0133	209.5	195.6	188.9	195.3	90.7	10.5	0.4475	0.0537	0.5828	0.5419	1.5335	1.1921	1.1046	1.0637				
10	0.0076	0.0078	193.2	181.4	168.5	181.2	98.0	6.9	0.5321	0.0378	0.5322	0.4980	1.49C1	1.2026	1.0932	1.0668				

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-0.2251	0.0917	0.7123	55.54	66.92	0.1453	0.1924	0.0363	0.9507	77.42	78.09
2	-0.1600	0.0839	0.6610	60.03	67.54	0.1720	0.1979	0.0444	0.9410	57.24	58.16
3	-0.2018	0.0935	0.5834	62.58	64.75	0.1979	0.2578	0.0613	0.9247	49.87	50.76
4	-0.2367	0.0944	0.5450	62.21	63.04	0.2002	0.2509	0.0633	0.9303	51.65	52.47
5	-0.2516	0.1097	0.5199	55.34	58.25	0.1857	0.1662	0.0479	0.9625	53.03	53.79
6	-0.2695	0.1626	0.4522	54.44	56.93	0.1705	0.1642	0.0494	0.9646	54.79	55.51
7	-0.2872	0.1792	0.4232	54.53	55.45	0.1823	0.2056	0.0444	0.9566	56.38	55.10
8	-0.3201	0.2276	0.3666	54.92	54.28	0.1860	0.2439	0.0805	0.9488	48.91	49.64
9	-0.3342	0.2503	0.3938	53.27	53.53	0.2004	0.2467	0.0852	0.9485	44.96	45.72
10	-0.3130	0.2599	0.4942	46.15	48.89	0.2320	0.2508	0.0892	0.9556	38.53	39.30

MCORR	WGORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			S	S			S
873.54	99.4	1.1961	1.5862	71.01	73.57	1.0673	0.9478	52.93

C-4

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(100 Percent of Design Speed)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN				M/SEC	M/SEC			M/SEC	M/SEC
1	0.1811	0.1938	208.9	298.9	208.9	167.0	0.9706	233.2	0.0	0.8953	0.6384	0.8849	159.0	173.9	0.8022	0.5806	262.6	196.2
2	0.1582	0.1675	217.0	289.4	217.0	204.4	0.9365	204.9	0.0	0.7871	0.6651	0.8556	178.0	190.5	0.6602	0.6054	286.6	204.9
3	0.1460	0.0946	218.5	273.7	218.5	268.7	0.9989	177.1	0.0	0.7017	0.6701	0.8052	199.2	209.0	0.9048	0.6212	295.7	211.2
4	0.1214	0.0720	220.4	259.0	220.4	206.2	0.9988	156.6	0.0	0.6483	0.6766	0.7586	218.8	226.4	0.9532	0.6377	310.5	217.7
5	0.0736	0.0575	222.5	227.0	222.5	190.6	0.9937	123.4	0.0	0.5745	0.6835	0.6592	262.7	266.6	1.0577	0.6922	344.3	238.4
6	0.0562	0.0486	222.3	217.8	222.3	185.5	0.9902	114.1	0.0	0.5318	0.6828	0.6304	284.0	286.6	1.1078	0.7331	360.6	253.3
7	0.0468	0.0429	222.2	213.7	222.2	183.5	0.9878	109.5	0.0	0.5384	0.6824	0.6174	297.5	299.1	1.1466	0.7623	371.3	263.8
8	0.0384	0.0364	222.1	210.0	222.1	181.7	0.9854	105.3	0.0	0.5254	0.6822	0.6060	316.9	312.0	1.1735	0.7940	382.0	275.2
9	0.0289	0.0284	222.0	209.8	222.0	182.5	0.9830	103.6	0.0	0.5165	0.6818	0.6045	325.3	325.3	1.2096	0.8273	393.8	287.1
10	0.0179	0.0175	220.5	207.8	220.5	179.9	0.9793	104.0	0.0	0.5241	0.6770	0.5944	341.6	341.6	1.2483	0.8556	406.6	298.1
11	0.0085	0.0082	206.9	199.0	206.9	168.4	0.9412	106.0	0.0	0.5620	0.6317	0.5674	355.4	355.3	1.2555	0.8579	411.2	300.8

SL	INCS	INCP	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-P	TEFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0265	0.0703	0.2304	0.9572	41.86	39.87	0.4687	0.2757	0.0618	1.4362	78.89	77.79	0.6496	-0.3076	-159.0	59.4	1.4172
2	0.0266	0.0677	0.2451	0.7570	43.91	46.62	0.4588	0.1748	0.0445	1.4566	84.97	84.15	0.6868	-0.0702	-178.0	14.4	1.4756
3	0.0135	0.0787	0.2500	0.5894	44.18	49.78	0.4477	0.1107	0.0303	1.4572	89.48	88.90	0.7406	0.1512	-199.2	-31.9	1.4796
4	0.0102	0.0791	0.2283	0.4572	44.37	50.81	0.4444	0.0766	0.0215	1.4500	91.88	91.44	0.7827	0.3254	-218.8	-69.8	1.4724
5	0.0201	0.0594	0.1591	0.2242	44.35	48.98	0.4261	0.0603	0.0163	1.4140	91.96	91.56	0.8688	0.6446	-262.7	-143.3	1.4285
6	0.0163	0.0532	0.1352	0.1578	44.17	48.20	0.4084	0.0591	0.0154	1.4094	91.57	91.16	0.9070	0.7492	-284.0	-172.5	1.4188
7	0.0014	0.0510	0.1268	0.1277	44.05	47.94	0.3954	0.0565	0.0145	1.4103	91.66	91.24	0.9298	0.8021	-297.5	-189.6	1.4163
8	0.0129	0.0531	0.1237	0.1009	43.94	47.72	0.3821	0.0543	0.0136	1.4121	91.72	91.31	0.9507	0.8498	-310.9	-206.7	1.4146
9	0.0178	0.0569	0.1107	0.0898	43.82	48.12	0.3710	0.0538	0.0134	1.4239	91.70	91.27	0.9722	0.8824	-325.3	-221.7	1.4230
10	0.0249	0.0637	0.1164	0.0747	43.42	47.45	0.3695	0.0747	0.0183	1.4311	88.50	87.90	0.9976	0.9230	-341.6	-237.7	1.4248
11	0.0506	0.0893	0.1702	0.0668	40.25	44.09	0.3754	0.0737	0.0172	1.4648	89.16	88.56	1.0436	0.9786	-355.4	-249.3	1.4017

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.1213	1.4334	89.38	89.91	213.88	1.1213	1.4334	89.38	89.91

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	TO/TO	PO/PO	TEFF-A	TEFF-P
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN				INLET	INLET	STAGE	STAGE
1	0.1888	0.1321	270.8	179.0	157.4	175.3	220.4	36.5	0.9491	0.2030	0.7907	0.5052	1.3423	1.1401	1.3610	1.1401
2	0.1186	0.0882	272.5	199.4	189.3	195.9	196.0	37.1	0.8013	0.1863	0.7981	0.5676	1.4230	1.1349	1.4047	1.1349
3	0.0730	0.0584	263.6	202.5	202.3	199.7	169.0	34.0	0.6951	0.1684	0.7721	0.5793	1.4479	1.1269	1.4254	1.1269
4	0.0466	0.0417	254.3	200.1	204.8	197.7	150.7	31.1	0.6337	0.1557	0.7434	0.5731	1.4446	1.1218	1.4229	1.1218
5	0.0172	0.0219	229.6	189.7	195.3	187.4	120.6	29.3	0.5532	0.1548	0.6671	0.5438	1.4104	1.1134	1.3967	1.1134
6	0.0106	0.0159	222.0	187.6	191.4	185.4	117.4	29.0	0.5309	0.1551	0.6435	0.5375	1.4017	1.1132	1.3929	1.1132
7	0.0078	0.0126	218.5	186.0	189.9	183.7	108.0	28.7	0.5170	0.1548	0.6325	0.5326	1.3954	1.1131	1.3900	1.1131
8	0.0064	0.0106	215.7	184.9	188.8	182.7	104.4	28.3	0.5049	0.1536	0.6236	0.5290	1.3910	1.1138	1.3889	1.1138
9	0.0053	0.0088	216.0	186.7	190.0	184.5	102.9	28.6	0.4962	0.1537	0.6238	0.5339	1.3953	1.1168	1.3965	1.1168
10	0.0036	0.0063	214.6	188.3	188.0	185.4	103.6	32.6	0.5036	0.1740	0.6176	0.5370	1.3986	1.1229	1.4051	1.1229
11	0.0012	0.0025	206.4	179.3	177.2	176.1	105.9	33.8	0.5387	0.1895	0.5901	0.5083	1.3715	1.1304	1.4352	1.1304

SL	INCS	INCP	DEV	TURN	RMCVM-1	RMCVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	TEFF-A	TEFF-P
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOT	TOT
1	0.0294	0.1117	0.2968	0.7460	35.94	44.97	0.4781	0.1554	0.0321	0.9474	65.72	67.17
2	0.0244	0.0647	0.2290	0.6150	44.95	51.86	0.3966	0.1037	0.0230	0.9644	75.61	76.75
3	0.0077	0.0078	0.1922	0.5267	49.43	53.82	0.3533	0.0657	0.0157	0.9785	84.03	84.82
4	0.1249	0.0241	0.1697	0.4780	50.98	53.58	0.3318	0.0582	0.0148	0.9822	87.08	87.71
5	0.1838	0.0713	0.1572	0.3984	49.92	50.76	0.2880	0.0444	0.0129	0.9886	88.35	88.89
6	0.2047	0.0864	0.1515	0.3757	49.35	50.06	0.2703	0.0484	0.0148	0.9883	87.77	88.33
7	0.2195	0.0976	0.1487	0.3621	49.19	49.53	0.2642	0.0614	0.0195	0.9855	87.29	87.67
8	0.2359	0.1104	0.1460	0.3513	49.09	49.14	0.2601	0.0747	0.0245	0.9828	86.50	87.12
9	0.2555	0.1265	0.1460	0.3425	49.56	49.54	0.2537	0.0873	0.0296	0.9799	85.78	86.43
10	0.2833	0.1508	0.1741	0.3296	48.99	49.54	0.2404	0.0809	0.0284	0.9817	83.05	83.84
11	0.3036	0.1687	0.2292	0.3492	45.81	46.49	0.2590	0.1000	0.0360	0.9790	83.42	84.24

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC			%	%			%	%
874.83	1.1213	1.4048	84.12	84.86	1.1213	0.9800	84.12	84.12

ROTOR 2

																RUN NO415, SPEED CODE 10, POINT NO 2			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1516	0.1029	165.8	264.1	162.0	213.5	35.5	158.8	0.2145	0.6336	0.4662	0.7428	197.8	210.5	0.6445	0.6132	229.2	219.6	
2	0.1136	0.0802	203.2	261.9	200.1	213.8	35.6	151.3	0.1753	0.6127	0.5797	0.7326	215.0	224.2	0.7866	0.6318	266.7	225.9	
3	0.0907	0.0646	210.2	252.3	207.7	212.5	32.5	136.0	0.1549	0.5674	0.6633	0.7069	231.0	237.7	0.8244	0.6602	287.3	235.6	
4	0.0692	0.0485	209.4	238.5	207.2	205.8	29.9	120.6	0.1432	0.5294	0.6021	0.6681	248.2	252.6	0.8655	0.6849	301.0	244.5	
5	0.0296	0.0180	199.0	210.5	196.9	181.3	28.8	106.9	0.1454	0.5276	0.5723	0.5867	287.2	288.4	0.9341	0.7145	324.8	256.6	
6	0.0221	0.0142	196.2	200.7	194.1	173.4	28.6	101.1	0.1465	0.5280	0.5637	0.5576	301.0	301.3	0.9607	0.7359	334.4	264.8	
7	0.0166	0.0117	193.5	198.8	191.3	173.4	28.1	97.2	0.1459	0.5111	0.5550	0.5522	314.4	314.4	0.9882	0.7719	344.3	277.9	
8	0.0067	0.0037	195.0	200.9	192.8	176.4	29.2	96.2	0.1503	0.4994	0.5588	0.5569	332.8	331.6	1.0306	0.8153	359.7	294.1	
9	0.0012	-0.0016	194.8	201.1	192.1	173.2	32.7	102.2	0.1687	0.5330	0.5566	0.5546	345.5	344.7	1.0467	0.8219	367.1	298.0	
10	-0.0007	-0.0021	185.9	190.6	187.8	160.7	33.6	102.5	0.1819	0.5675	0.5279	0.5219	358.2	357.7	1.0579	0.8260	372.5	301.7	

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-P	TEFF-A	B-1	B-2	VO-1	VO-2	PC/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.1244	-0.0029	0.3143	0.5483	42.32	59.07	0.1865	-0.0737	-0.0175	1.3321	106.52	106.79	0.7836	0.2347	-162.2	-51.7	1.7929
2	-0.1679	-0.0596	0.1819	0.4027	53.17	61.24	0.2790	0.0839	0.6204	1.2754	90.05	89.70	0.7292	0.3265	-179.4	-72.9	1.8319
3	-0.1444	-0.0504	0.1571	0.3165	55.38	62.52	0.2836	0.0639	0.6159	1.2643	91.20	90.90	0.7617	0.4452	-198.5	-101.8	1.8518
4	-0.1228	-0.0341	0.1412	0.2414	55.18	61.62	0.2787	0.0390	0.6097	1.2526	93.75	93.54	0.8112	0.5698	-216.3	-132.1	1.8627
5	-0.0582	0.0093	0.1114	0.1338	52.37	55.04	0.2927	0.0670	0.6160	1.2306	87.63	87.24	0.8196	0.7858	-258.4	-181.5	1.7294
6	-0.0368	0.0210	0.1114	0.0944	51.59	52.67	0.2844	0.0735	0.6170	1.2169	85.49	85.08	0.9516	0.8572	-272.3	-200.2	1.7017
7	-0.0121	0.0295	0.1054	0.0846	50.60	52.69	0.2661	0.0557	0.6126	1.2243	88.57	88.24	0.9817	0.8971	-286.3	-217.2	1.7629
8	-0.0147	0.0241	0.0766	0.0773	51.09	53.86	0.2532	0.0532	0.6124	1.2308	88.75	88.41	1.0048	0.9275	-303.8	-235.4	1.7180
9	-0.0124	0.0264	0.0665	0.0694	50.65	52.56	0.2637	0.0784	0.6183	1.2324	83.90	83.41	1.0201	0.9505	-312.8	-242.5	1.7217
10	0.0112	0.0501	0.1084	0.0491	47.70	48.26	0.2666	0.0861	0.6191	1.2329	82.43	81.89	1.0578	1.0088	-324.6	-255.3	1.6682

TO/T0	PC/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.2023	1.7560	85.65	86.73	183.89	1.0723	1.2458	89.44	89.77

STATOR 2

																RUN NO415, SPEED CODE 10, POINT NO 2			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	T02/			
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1			
1	0.1225	0.1411	240.7	208.7	183.3	208.6	156.0	6.3	0.7016	0.0300	0.6654	0.5707	1.7502	1.2310	1.3000	1.0798			
2	0.0906	0.0987	247.5	217.8	198.3	217.8	148.0	-0.5	0.6394	-0.0023	0.6884	0.5996	1.8064	1.2223	1.2573	1.0799			
3	0.0671	0.0699	244.8	215.3	205.5	215.3	133.0	-5.0	0.5736	-0.0733	0.6846	0.5955	1.6122	1.2100	1.2512	1.0750			
4	0.0459	0.0497	235.8	204.7	203.9	204.6	118.4	-6.5	0.5258	-0.0317	0.6598	0.5668	1.7795	1.1990	1.2374	1.0708			
5	0.0267	0.0242	211.8	180.9	183.7	180.9	105.5	-1.3	0.5217	-0.0074	0.6590	0.4994	1.7020	1.1905	1.2115	1.0696			
6	0.0209	0.0185	202.8	174.4	176.4	174.4	100.0	-3.3	0.5157	-0.0187	0.5638	0.4810	1.6823	1.1866	1.2032	1.0676			
7	0.0165	0.0144	201.4	173.1	176.8	173.1	96.5	-2.2	0.4996	-0.0125	0.5598	0.4774	1.6790	1.1882	1.2072	1.0673			
8	0.0124	0.0109	203.9	176.7	179.9	176.7	96.1	2.1	0.4906	0.0118	0.5657	0.4864	1.6899	1.1947	1.2106	1.0692			
9	0.0082	0.0074	204.1	177.4	176.9	177.3	102.0	6.0	0.5230	0.0336	0.5634	0.4859	1.6904	1.2061	1.2099	1.0736			
10	0.0070	0.0028	194.0	165.8	164.9	165.6	102.3	8.4	0.5555	0.0505	0.5318	0.4510	1.6544	1.2154	1.2081	1.0751			

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-A	TEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TUT-STG
1	-0.1860	0.1785	0.6716	53.32	62.52	0.2617	0.0491	0.0196	0.9761	97.35	97.45
2	-0.1252	0.1381	0.6417	58.48	66.80	0.2535	0.0509	0.0114	0.9862	84.44	84.94
3	-0.1605	0.1214	0.5969	61.34	67.04	0.2530	0.0364	0.0087	0.9902	87.13	87.53
4	-0.2013	0.1173	0.5575	61.36	64.12	0.2642	0.0473	0.0120	0.9881	88.47	88.81
5	-0.2018	0.1509	0.5285	55.60	56.51	0.2910	0.0704	0.0203	0.9852	80.59	81.10
6	-0.2065	0.1435	0.5344	53.41	54.40	0.2931	0.0575	0.0173	0.9888	80.12	80.64
7	-0.2233	0.1543	0.5121	53.72	54.01	0.2937	0.0736	0.0231	0.9859	81.96	82.43
8	-0.2466	0.1888	0.4789	54.67	54.96	0.2853	0.0845	0.0279	0.9835	81.04	81.54
9	-0.2587	0.2302	0.4693	53.39	54.64	0.2931	0.0940	0.0323	0.9818	75.87	76.51
10	-0.2895	0.2726	0.5050	49.25	50.35	0.3182	0.1146	0.0407	0.9799	73.74	74.44

WCCR	WCCR	TO/T0	PO/PO	EFF-AD	EFF-P	T02/T01	P02/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
874.83	98.9	1.2023	1.7234	83.12	84.35	1.0723	0.9848	83.02

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(100 Percent of Design Speed)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1726	0.1088	204.5	298.6	204.5	184.8	0.9649	234.6	0.0	0.9016	0.6237	0.8839	158.3	173.1	0.7887	0.5765	256.6	194.8
2	0.1762	0.1397	215.3	287.7	215.3	198.7	0.9945	208.1	0.0	0.8069	0.6594	0.8486	177.2	189.7	0.8541	0.5885	278.8	199.6
3	0.1509	0.1144	216.8	269.9	216.8	202.1	0.9934	178.8	0.0	0.7236	0.6646	0.7922	198.3	208.1	0.9007	0.5995	293.9	204.2
4	0.1243	0.0954	219.0	255.3	219.0	199.7	0.9918	159.1	0.0	0.6722	0.6717	0.7463	217.8	225.4	0.9474	0.6152	308.8	210.5
5	0.0648	0.0648	222.6	222.6	222.6	187.3	0.9923	127.1	0.0	0.5945	0.6840	0.6502	261.6	265.5	1.0554	0.6749	343.5	232.9
6	0.0483	0.0519	222.6	218.3	222.6	183.2	0.9919	118.6	0.0	0.5746	0.6839	0.6306	282.7	285.4	1.1056	0.7159	359.8	247.8
7	0.0375	0.0458	221.9	214.7	221.9	181.9	0.9890	114.1	0.0	0.5604	0.6814	0.6195	296.2	297.8	1.1367	0.7458	370.1	258.5
8	0.0282	0.0398	221.1	212.0	221.1	181.5	0.9860	109.5	0.0	0.5430	0.6789	0.6109	309.5	310.6	1.1679	0.7807	380.4	270.9
9	0.0197	0.0309	220.5	210.4	220.5	181.6	0.9837	107.3	0.0	0.5342	0.6762	0.6069	323.9	323.9	1.2023	0.8130	391.7	282.6
10	0.0117	0.0186	217.9	204.4	217.9	179.6	0.9791	107.7	0.0	0.5402	0.6682	0.6003	340.1	340.1	1.2367	0.8421	403.9	293.7
11	0.0048	0.0048	205.2	200.4	205.2	177.5	0.9443	110.1	0.0	0.5615	0.6259	0.5708	353.9	353.7	1.2479	0.8419	409.0	295.7

SL	INCS	INCN	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-P	EFF-A	B ² -1	B ² -2	VO ² -1	VO ² -2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TCT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0171	0.0797	0.2160	0.9789	41.11	39.49	0.4654	0.2637	0.6588	1.4473	80.46	79.42	0.6590	-0.3199	-158.3	61.5	1.4214
2	0.0234	0.0709	0.2232	0.7821	43.64	45.47	0.4773	0.1641	0.0468	1.4594	84.50	83.65	0.6900	-0.0921	-177.2	18.4	1.4773
3	0.0116	0.0806	0.2423	0.5990	43.72	48.70	0.4717	0.0989	0.0271	1.4678	90.76	90.25	0.7425	0.1435	-198.3	-29.2	1.4841
4	0.0069	0.0804	0.2235	0.4634	43.90	49.74	0.4694	0.0620	0.0174	1.4654	93.50	93.14	0.7840	0.3206	-217.8	-66.4	1.4793
5	0.0229	0.0567	0.1508	0.2298	44.32	48.59	0.4457	0.0557	0.0151	1.4305	92.75	92.37	0.8661	0.6363	-261.6	-138.3	1.4448
6	0.0193	0.0501	0.1247	0.1653	44.28	48.04	0.4275	0.0617	0.0163	1.4248	91.49	91.05	0.9040	0.7387	-282.7	-168.8	1.4385
7	0.0002	0.0493	0.1152	0.1376	44.07	47.96	0.4126	0.0573	0.0148	1.4287	91.86	91.44	0.9282	0.7906	-296.2	-183.7	1.4382
8	0.0127	0.0529	0.1168	0.1136	43.87	48.15	0.3948	0.0490	0.0125	1.4345	92.82	92.44	0.9506	0.8369	-309.5	-201.1	1.4397
9	0.0192	0.0583	0.1016	0.1003	43.67	48.35	0.3831	0.0506	0.0127	1.4435	92.47	92.07	0.9736	0.8733	-323.9	-216.5	1.4453
10	0.0283	0.0671	0.1046	0.0879	43.12	47.83	0.3799	0.0694	0.0172	1.4536	89.71	89.15	1.0011	0.9131	-340.1	-232.5	1.4486
11	0.0524	0.0911	0.1619	0.0769	42.19	44.27	0.3887	0.0773	0.0182	1.4820	89.04	88.42	1.0454	0.9685	-353.9	-243.6	1.4245

TO2/TO1	PO2/PO1	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.1242	1.4494	90.13	90.63	212.24	1.1242	1.4494	90.13	90.63

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/TO1
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	STAGE
1	0.1922	0.1340	268.7	170.9	151.9	167.0	221.7	36.5	0.9689	0.2127	0.7837	0.4412	1.3466	1.1403	1.3710	1.1403
2	0.1200	0.0884	269.6	191.8	182.1	188.2	198.8	37.0	0.8282	0.1933	0.7880	0.5442	1.4245	1.1364	1.4073	1.1364
3	0.0742	0.0579	260.7	196.5	196.4	193.7	171.3	33.2	0.7165	0.1695	0.7620	0.5606	1.4534	1.1281	1.4378	1.1281
4	0.0481	0.0407	252.2	195.3	200.1	192.9	153.5	30.5	0.6538	0.1565	0.7361	0.5580	1.4543	1.1236	1.4406	1.1236
5	0.0191	0.0206	230.0	186.8	193.4	184.5	124.5	29.1	0.5718	0.1566	0.6677	0.5342	1.4272	1.1164	1.4130	1.1164
6	0.0120	0.0149	223.3	185.5	190.3	183.2	116.8	29.6	0.5903	0.1601	0.6462	0.5303	1.4212	1.1171	1.4080	1.1171
7	0.0089	0.0120	220.3	184.3	189.4	181.9	112.6	29.1	0.5362	0.1588	0.6369	0.5263	1.4161	1.1174	1.4071	1.1174
8	0.0075	0.0105	218.2	183.3	189.3	181.1	108.4	28.7	0.5200	0.1570	0.6301	0.5235	1.4125	1.1177	1.4076	1.1177
9	0.0067	0.0093	217.6	185.3	189.7	183.0	106.5	28.7	0.5116	0.1556	0.6275	0.5286	1.4173	1.1204	1.4158	1.1204
10	0.0047	0.0068	216.7	187.2	188.3	184.7	107.2	30.3	0.5176	0.1624	0.6228	0.5327	1.4219	1.1266	1.4270	1.1266
11	0.0018	0.0030	208.4	178.8	177.6	174.9	109.9	37.4	0.5558	0.2105	0.5948	0.5058	1.3965	1.1348	1.4541	1.1348

SL	INCS	INCN	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	EFF-A	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG			STAGE	STG
1	0.0493	0.1315	0.3065	0.7562	34.91	43.41	0.5093	0.1577	0.0325	0.9473	67.26	68.68				
2	0.0023	0.0916	0.2360	0.6356	43.49	50.35	0.4208	0.1061	0.0235	0.9643	75.20	76.37				
3	0.0663	0.0292	0.1933	0.5470	48.34	52.81	0.3724	0.0648	0.0155	0.9792	85.47	86.19				
4	0.1048	0.0040	0.1706	0.4973	50.17	52.91	0.3491	0.0545	0.0139	0.9835	88.99	89.54				
5	0.1652	0.0527	0.1590	0.4152	49.82	50.61	0.3068	0.0443	0.0128	0.9886	89.21	89.73				
6	0.1853	0.0670	0.1564	0.3902	49.43	50.10	0.2891	0.0490	0.0150	0.9880	87.75	88.33				
7	0.2043	0.0784	0.1526	0.3774	49.44	49.67	0.2843	0.0648	0.0205	0.9845	87.38	87.98				
8	0.2208	0.0953	0.1494	0.3630	49.67	49.37	0.2807	0.0816	0.0268	0.9809	87.22	87.83				
9	0.2402	0.1112	0.1477	0.3560	49.93	49.82	0.2712	0.0844	0.0286	0.9803	86.81	87.45				
10	0.2693	0.1368	0.1625	0.3552	49.52	50.05	0.2627	0.0803	0.0282	0.9815	84.46	85.22				
11	0.2865	0.1517	0.2502	0.3453	46.15	46.82	0.2692	0.0905	0.0324	0.9808	83.80	84.64				

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STG
RAD/SEC	%	%	%	%			%	%
871.02	1.1242	1.4211	85.08	85.80	1.1242	0.9804	85.08	

ROTOR 2

RUN NO415, SPEED CODE 10, POINT NO 3																		
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1495	0.1003	157.7	259.6	153.6	260.5	35.5	164.8	0.2256	0.6816	0.4424	0.7214	196.9	209.6	0.6252	0.5711	222.8	205.5
2	0.1094	0.0781	195.4	254.6	192.2	200.9	35.3	156.1	0.1807	0.6570	0.5555	0.7079	214.0	223.2	0.7462	0.5894	262.5	211.8
3	0.0882	0.0646	204.1	246.9	201.6	201.4	31.6	142.9	0.1554	0.6155	0.5841	0.6883	230.0	236.7	0.8095	0.6191	282.8	222.1
4	0.0685	0.0506	204.2	235.6	202.1	197.9	29.3	127.8	0.1441	0.5726	0.5856	0.6566	247.1	251.5	0.8520	0.6506	297.1	233.4
5	0.0286	0.0175	196.6	212.5	194.4	178.4	25.2	115.6	0.1491	0.5749	0.5640	0.5893	285.9	287.2	0.9238	0.6862	322.1	247.5
6	0.0200	0.0119	194.5	202.6	192.3	170.8	24.2	109.1	0.1507	0.5684	0.5572	0.5606	299.7	300.0	0.9508	0.7086	331.8	256.2
7	0.0147	0.0093	192.1	198.8	189.9	168.4	28.6	105.6	0.1494	0.5602	0.5499	0.5491	313.0	313.0	0.9793	0.7381	342.0	267.2
8	0.0052	0.0029	193.7	202.6	191.6	172.8	28.9	105.7	0.1495	0.5490	0.5539	0.5582	331.4	330.2	1.0238	0.7806	358.1	283.2
9	0.0005	0.0042	194.0	202.9	191.5	170.7	30.9	109.6	0.1602	0.5704	0.5530	0.5562	344.0	343.2	1.0463	0.7935	367.0	289.4
10	0.0014	0.0037	185.4	193.1	181.6	155.4	37.3	114.7	0.2025	0.6358	0.5255	0.5259	356.6	356.2	1.0411	0.7819	367.4	287.2

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/P01	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL		TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1008	0.0206	0.2966	0.5895	40.64	57.14	0.2344	-0.1002	-0.0238	1.3539	108.15	108.50	0.8066	0.2170	-161.4	-44.8	1.8286
2	0.1499	0.0466	0.1758	0.4268	51.65	59.08	0.3215	0.0741	0.0184	1.2929	91.77	91.46	0.7472	0.3204	-178.8	-67.1	1.8604
3	0.1350	0.0359	0.1463	0.3417	54.52	60.78	0.3281	0.0707	0.0178	1.2835	91.02	90.69	0.7762	0.4345	-198.3	-93.8	1.8701
4	0.1115	0.0228	0.1295	0.2644	54.56	60.86	0.3143	0.0355	0.0089	1.2777	94.84	94.65	0.8225	0.5582	-217.8	-123.8	1.8535
5	0.0552	0.0124	0.0915	0.1568	52.39	55.77	0.3229	0.0526	0.0128	1.2659	91.29	90.99	0.9227	0.7659	-256.7	-171.6	1.8039
6	0.0354	0.0224	0.1019	0.1119	51.74	53.49	0.3130	0.0572	0.0128	1.2556	89.72	89.39	0.9822	0.8889	-284.5	-207.4	1.7706
7	0.0116	0.0300	0.0972	0.0933	51.10	52.88	0.3013	0.0558	0.0130	1.2556	89.72	89.39	0.9822	0.8889	-284.5	-207.4	1.7706
8	0.0134	0.0254	0.0636	0.0915	51.47	54.33	0.2904	0.0596	0.0141	1.2647	88.91	88.53	1.0061	0.9146	-302.5	-224.4	1.7933
9	0.0107	0.0281	0.0557	0.0821	51.22	53.37	0.2977	0.0842	0.0200	1.2661	84.56	84.04	1.0218	0.9397	-313.1	-233.7	1.7986
10	0.0069	0.0458	0.0985	0.0546	48.08	48.12	0.3056	0.0880	0.0198	1.2678	84.15	83.61	1.0536	0.9989	-319.3	-241.5	1.7676

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.2129	1.6118	86.89	87.93	181.47	1.0789	1.2749	90.90	91.21

STATOR 2

RUN NO415, SPEED CODE 10, POINT NO 3																	
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/	TO2/
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	TO1	TO1
1	0.1239	0.1417	235.9	189.6	171.6	189.6	161.8	2.7	0.7526	0.0139	0.6497	0.5147	1.7796	1.2351	1.3181	1.0831	1.0831
2	0.0916	0.0978	244.4	200.8	185.7	200.8	152.8	3.3	0.6869	0.0165	0.6654	0.5486	1.8391	1.2278	1.2776	1.0830	1.0830
3	0.0669	0.0680	239.3	201.5	194.1	201.5	139.9	4.8	0.6237	0.0138	0.6652	0.5531	1.8562	1.2171	1.2742	1.0811	1.0811
4	0.0493	0.0480	232.4	193.6	195.6	193.6	125.5	3.6	0.5701	0.0196	0.6470	0.5325	1.8358	1.2077	1.2662	1.0764	1.0764
5	0.0273	0.0446	213.6	175.7	180.6	175.6	114.1	2.6	0.5636	0.0147	0.5925	0.4818	1.7811	1.2021	1.2511	1.0767	1.0767
6	0.0224	0.0198	204.5	168.4	173.7	168.3	107.8	4.7	0.5556	0.0280	0.5660	0.4612	1.7595	1.2001	1.2405	1.0740	1.0740
7	0.0190	0.0166	201.4	165.9	172.0	165.8	104.8	2.7	0.5475	0.0165	0.5568	0.4541	1.7533	1.2005	1.2413	1.0745	1.0745
8	0.0149	0.0132	205.9	171.5	176.9	171.5	105.4	1.5	0.5374	0.0087	0.5679	0.4687	1.7720	1.2086	1.2497	1.0782	1.0782
9	0.0105	0.0097	206.5	173.6	175.2	173.5	109.3	6.8	0.5581	0.0389	0.5667	0.4722	1.7781	1.2204	1.2512	1.0828	1.0828
10	0.0041	0.0046	197.3	161.5	160.7	161.3	114.6	7.7	0.6194	0.0480	0.5380	0.4362	1.7407	1.2299	1.2483	1.0837	1.0837

SL	INCL	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/P01	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL		TOT-STG	TOT-STG
1	-0.1349	0.1625	0.7387	51.15	59.19	0.3360	0.1084	0.0228	0.9733	98.51	98.57
2	-0.0777	0.1368	0.6704	56.07	64.06	0.3031	0.0482	0.0102	0.9884	87.12	87.96
3	-0.1104	0.1308	0.6375	59.45	65.29	0.2986	0.0274	0.0065	0.9930	88.24	88.64
4	-0.1574	0.1294	0.5847	60.49	63.19	0.3060	0.0370	0.0094	0.9910	91.10	91.40
5	-0.1586	0.1435	0.5781	56.34	57.26	0.3351	0.0567	0.0164	0.9880	86.07	86.50
6	-0.1664	0.1342	0.5834	54.25	54.79	0.3429	0.0471	0.0142	0.9908	85.70	86.13
7	-0.1753	0.1503	0.5644	53.79	53.97	0.3437	0.0511	0.0160	0.9903	85.40	85.84
8	-0.1998	0.1683	0.5441	55.33	55.68	0.3376	0.0466	0.0200	0.9881	83.87	84.37
9	-0.2236	0.2355	0.5191	54.43	55.87	0.3302	0.0400	0.0206	0.9882	79.69	80.33
10	-0.2257	0.2701	0.5714	49.45	51.26	0.3746	0.0860	0.0306	0.9846	77.97	78.65

NCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
871.02	948.83	1.2129	1.7899	84.96	86.14	1.0789	0.9879	86.20

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(100 Percent of Design Speed)

S. I. UNITS

ROTOR 1

SL		EFSI-1		EFSI-2		V-1		V-2		VM-1		VM-2		PO1/PO		V0-2		B-1		B-2		M-1		M-2		U-1		U-2		M-1		M-1		V-1		V-2	
RADIANT		RADIANT		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		RADIANT		RADIANT		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1815	0.1693	198.8	265.6	196.8	172.9	0.9608	227.4	0.0	0.9188	0.5986	0.8416	158.4	173.2	0.7684	0.5338	252.6	181.2																			
2	0.1546	0.1424	208.4	277.9	208.4	187.3	0.9931	205.2	0.0	0.9297	0.6366	0.8161	177.3	189.9	0.6359	0.5920	275.6	187.9																			
3	0.1295	0.1207	209.0	282.1	209.0	192.9	0.9934	177.4	0.0	0.7432	0.6387	0.7689	196.5	208.2	0.8808	0.5717	288.2	195.3																			
4	0.1092	0.1023	209.6	249.3	209.6	192.4	0.9903	158.6	0.0	0.6694	0.6405	0.7288	218.0	225.6	0.9241	0.5939	302.4	203.7																			
5	0.0790	0.0679	214.0	224.4	214.0	183.2	0.9822	129.7	0.0	0.6164	0.6551	0.6493	261.8	265.7	1.0352	0.6600	336.1	228.1																			
6	0.0609	0.0534	216.7	217.0	216.7	179.4	0.9851	122.1	0.0	0.5980	0.6642	0.6257	282.9	285.6	1.0924	0.6997	356.4	242.7																			
7	0.0534	0.0463	218.5	213.5	218.5	177.8	0.9894	118.3	0.0	0.5875	0.6703	0.6144	296.5	298.0	1.1296	0.7274	368.3	252.8																			
8	0.0463	0.0382	220.2	211.6	220.2	176.0	0.9890	114.3	0.0	0.5711	0.6760	0.6082	309.7	310.8	1.1665	0.7622	380.1	265.2																			
9	0.0360	0.0295	221.5	210.2	221.5	177.7	0.9886	112.2	0.0	0.5634	0.6802	0.6030	324.1	324.1	1.2056	0.7934	392.6	276.6																			
10	0.0226	0.0182	219.5	208.1	219.5	175.4	0.9803	112.1	0.0	0.5687	0.6734	0.5956	340.4	340.4	1.2428	0.8230	405.0	287.9																			
11	0.0106	0.0081	207.6	199.9	207.6	164.2	0.9460	114.0	0.0	0.6069	0.6340	0.5678	354.1	354.0	1.2536	0.8260	410.5	290.6																			

SL		INCS		INCM		DEV		TURN		RHOVM-1		RHOVM-2		D-FAC		OMEGA-B		LOSS-P		PO2/		EFF-P		EFF-A		B-1		B-2		V0-1		V0-2		PO/PO			
RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT		RADIANT	
1	0.0008	0.0977	0.2357	0.9792	40.01	37.91	0.4984	0.2538	0.0569	1.4394	81.57	80.0	-769	-0.3023	-158.4	54.1	1.4085																				
2	0.0088	0.0855	0.2336	0.7864	42.79	43.66	0.5665	0.1916	0.0487	1.4512	84.25	83.40	0.7046	-0.6818	-177.3	15.4	1.4681																				
3	0.0056	0.0978	0.2572	0.6013	42.81	47.21	0.4892	0.1027	0.0281	1.4638	90.75	90.24	0.7597	0.1584	-198.5	-30.8	1.4609																				
4	0.0125	0.1016	0.2382	0.4700	42.72	48.60	0.4782	0.0560	0.0157	1.4695	94.40	94.08	0.8054	0.3353	-216.0	-67.0	1.4620																				
5	0.0028	0.0768	0.1534	0.2472	43.19	48.29	0.4518	0.0360	0.0097	1.4567	95.58	95.34	0.8862	0.6389	-201.8	-136.0	1.4661																				
6	0.0057	0.0638	0.1253	0.1784	43.54	47.64	0.4366	0.0462	0.0122	1.4537	93.95	93.62	0.9177	0.7393	-202.9	-163.5	1.4643																				
7	0.0078	0.0573	0.1160	0.1448	43.75	47.68	0.4287	0.0510	0.0132	1.4541	93.09	92.71	0.9361	0.7913	-206.5	-179.7	1.4652																				
8	0.0153	0.0555	0.1008	0.1182	43.94	48.09	0.4139	0.0476	0.0121	1.4596	93.34	92.97	0.9531	0.8350	-309.7	-196.5	1.4713																				
9	0.0173	0.0563	0.1015	0.0985	44.03	48.22	0.4043	0.0518	0.0130	1.4676	92.61	92.20	0.9716	0.8732	-324.1	-211.9	1.4776																				
10	0.0255	0.0643	0.1073	0.0824	43.37	47.67	0.3999	0.0623	0.0154	1.4841	91.12	90.61	0.9983	0.9159	-346.4	-228.3	1.4816																				
11	0.0476	0.0863	0.1642	0.0698	40.54	44.36	0.4067	0.0647	0.0152	1.5163	91.12	90.58	1.0406	0.9709	-354.1	-240.0	1.4609																				

TC/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	%	%	SQM	INLET	INLET	%	%
1.1267	1.4683	91.54	91.99	210.56	1.1267	1.4683	91.54	91.99

STATOR 1

SL		EFSI-1		EFSI-2		V-1		V-2		VM-1		VM-2		V0-1		V0-2		B-1		B-2		M-1		M-2		PO/PO		TO/TO		PO/PO		T02/			
RADIANT		RADIANT		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		RADIANT		RADIANT		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC		M/SEC	
1	0.1923	0.1371	256.0	154.6	139.2	151.2	214.9	32.1	0.9947	0.2068	0.7441	0.4342	1.3403	1.1381	1.3709	1.1361	1.1361																		
2	0.1244	0.0959	258.4	174.7	168.6	170.6	196.0	37.8	0.8595	0.2172	0.7527	0.4937	1.4069	1.1348	1.3911	1.1348																			
3	0.0821	0.0678	251.0	184.8	184.4	181.9	170.4	32.7	0.7456	0.1777	0.7310	0.5255	1.4495	1.1278	1.4326	1.1278																			
4	0.0557	0.0493	244.3	166.6	190.3	184.3	153.2	29.7	0.6774	0.1594	0.7106	0.5319	1.4607	1.1236	1.4483	1.1236																			
5	0.0251	0.0268	227.1	181.7	188.2	179.2	127.1	28.9	0.5939	0.1598	0.6575	0.5175	1.4467	1.1191	1.4374	1.1191																			
6	0.0179	0.0206	221.6	181.5	186.2	178.8	120.2	31.5	0.5730	0.1746	0.6400	0.5173	1.4469	1.1205	1.4353	1.1205																			
7	0.0143	0.0168	219.2	181.8	185.5	179.1	116.7	31.4	0.5615	0.1746	0.6400	0.5173	1.4462	1.1218	1.4352	1.1218																			
8	0.0115	0.0137	218.3	182.1	186.7	179.8	113.1	28.4	0.5447	0.1855	0.6290	0.5184	1.4466	1.1228	1.4353	1.1228																			
9	0.0089	0.0108	217.9	183.8	187.3	181.5	111.3	28.9	0.5361	0.1876	0.6268	0.5229	1.4514	1.1256	1.4417	1.1256																			
10	0.0055	0.0071	217.0	185.7	186.1	182.7	111.5	32.9	0.5398	0.1784	0.6222	0.5270	1.4561	1.1318	1.4585	1.1318																			
11	0.0020	0.0028	209.7	177.7	178.1	173.7	113.8	37.0	0.5738	0.2100	0.5974	0.5612	1.4314	1.1396	1.4665	1.1396																			

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT	RADIANT
1	0.0750	0.1573	0.3006	0.7879	32.67	40.06	0.5432	0.1557	0.0321	0.9520	69.32	70.65
2	0.0336	0.1228	0.2599	0.6423	41.05	46.26	0.4595	0.1304	0.0287	0.9591	73.40	74.61
3	0.0372	0.0582	0.2015	0.5679	46.20	50.34	0.3958	0.0699	0.0167	0.9788	84.64	85.58
4	0.0813	0.0196	0.1735	0.5180	48.59	51.43	0.3652	0.0503	0.0128	0.9856	90.35	90.84
5	0.1430	0.0305	0.1622	0.4341	49.36	50.08	0.3263	0.0527	0.0153	0.9867	91.78	92.19
6	0.1625	0.0442	0.1709	0.3985	49.24	49.88	0.3045	0.0524	0.0160	0.9874	90.27	90.75
7	0.1750	0.0531	0.1672	0.3882	49.26	49.91	0.2951	0.0553	0.0175	0.9870	89.30	89.84
8	0.1961	0.0706	0.1489	0.3862	49.83	50.08	0.2947	0.0718	0.0236	0.9832	88.58	89.15
9	0.2156	0.0866	0.1499	0.3785	50.14	50.47	0.2862	0.0770	0.0261	0.9821	87.59	88.22
10	0.2471	0.1146	0.1785	0.3614	49.82	50.60	0.2732	0.0768	0.0262	0.9828	86.42	87.13
11	0.2686	0.1337	0.2497	0.3638	46.80	47.56	0.2866	0.0933	0.0334	0.9800	85.94	86.71

NCOPR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	%	%	INLET	INLET	%	%
871.70	1.1267	1.4404	86.73	87.40	1.1267	0.9810	86.73	87.40

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M*-1	M*-2	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	ADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1469	0.0994	142.7	247.1	139.3	181.4	31.2	167.7	0.2191	0.7396	0.3998	0.6632	197.0	209.8	0.6065	0.5190	216.5	186.3
2	0.1039	0.0750	178.8	241.6	175.1	180.9	36.3	140.1	0.2036	0.7210	0.5059	0.6682	214.2	223.4	0.7062	0.5301	249.6	191.6
3	0.0824	0.0615	193.6	235.6	191.2	183.8	30.6	147.3	0.1582	0.6737	0.5526	0.6528	230.1	236.9	0.7886	0.5668	276.4	204.5
4	0.0640	0.0482	195.5	227.3	193.4	184.5	28.5	132.8	0.1460	0.6230	0.5589	0.6302	247.3	251.7	0.8350	0.6086	292.0	219.5
5	0.0274	0.0186	191.0	209.0	188.6	169.4	30.2	122.4	0.1587	0.6257	0.5761	0.5764	286.2	287.4	0.9091	0.6522	316.0	236.4
6	0.0195	0.0133	190.6	201.1	188.0	163.6	31.5	116.9	0.1661	0.6203	0.5445	0.5536	299.9	300.2	0.9360	0.6766	327.7	245.7
7	0.0152	0.0113	190.3	197.3	188.1	163.5	29.0	110.5	0.1529	0.5943	0.5433	0.5424	313.3	313.3	0.9732	0.7162	340.9	260.5
8	0.0057	0.0032	192.0	202.8	189.8	169.5	29.2	111.3	0.1525	0.5906	0.5474	0.5561	331.7	330.4	1.0180	0.7599	357.1	277.1
9	0.0006	-0.0022	192.8	202.7	189.9	164.4	33.4	118.6	0.1735	0.6248	0.5462	0.5526	344.3	343.5	1.0359	0.7596	364.3	278.6
10	-0.0002	-0.0014	184.2	195.3	180.4	153.3	37.1	121.1	0.2026	0.6685	0.5206	0.5292	356.9	356.5	1.0379	0.7611	367.2	280.9

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-P	TEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOY	TOY	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0387	0.0827	0.3045	0.6438	37.42	53.94	0.3075	-0.1478	-0.0351	1.3870	110.76	111.27	0.8687	0.2249	-165.8	-47.1	1.8641
2	-0.1061	0.0032	0.1097	0.4567	47.63	55.32	0.3732	0.0097	0.0024	1.3284	98.99	98.95	0.7910	0.3343	-177.9	-63.3	1.8913
3	-0.1057	-0.0066	0.1636	0.3537	52.04	57.61	0.3836	0.0636	0.0159	1.3051	92.53	92.24	0.8055	0.4517	-199.6	-89.6	1.9063
4	-0.0873	0.0013	0.1433	0.2747	53.26	58.90	0.3561	0.0214	0.0053	1.3040	97.15	97.04	0.8467	0.5719	-218.8	-119.0	1.9638
5	-0.0420	0.0256	0.0978	0.1637	51.91	55.02	0.3548	0.0363	0.0098	1.2973	94.49	94.28	0.9359	0.7722	-256.0	-165.0	1.8757
6	-0.0285	0.0292	0.1032	0.1175	51.72	53.31	0.3416	0.0376	0.0086	1.2840	95.88	93.66	0.9598	0.8423	-268.4	-183.3	1.8568
7	-0.0075	0.0342	0.1008	0.0939	51.73	53.42	0.3227	0.0371	0.0086	1.2809	93.59	93.37	0.9863	0.8925	-284.3	-202.8	1.8526
8	-0.0092	0.0295	0.0612	0.0981	52.12	55.49	0.3118	0.0429	0.0102	1.2972	92.57	92.29	1.0103	0.9122	-302.5	-219.2	1.8835
9	-0.0101	0.0287	0.0557	0.0827	51.95	53.45	0.3292	0.0805	0.0191	1.2963	86.49	85.98	1.0224	0.9297	-310.9	-225.6	1.8879
10	0.0105	0.0495	0.0931	0.0636	48.82	49.47	0.3296	0.0741	0.0168	1.3057	87.73	87.25	1.0572	0.9936	-319.8	-235.4	1.8662

TC/TO	PC/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SOM			%	%
1.2211	1.8797	89.30	90.20	176.99	1.0938	1.3050	94.13	94.35

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PG/PO	TO/TO	PG/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	ADIAN	RADIAN			INLET	INLET	STAGE	TO1
1	0.1246	0.1429	226.4	167.2	155.3	167.1	164.7	3.2	0.8112	0.0186	0.6213	0.4510	1.8134	1.2359	1.3503	1.0876
2	0.0931	0.0992	229.0	177.7	166.9	177.6	156.8	6.7	0.7526	0.0374	0.6505	0.4818	1.8631	1.2302	1.3086	1.2852
3	0.0689	0.0690	228.6	182.9	177.2	182.9	144.4	0.6	0.6428	0.0033	0.6319	0.4985	1.8946	1.2213	1.2971	1.0655
4	0.0511	0.0482	224.4	178.7	182.6	176.7	130.4	-2.9	0.6198	-0.0161	0.6214	0.4882	1.8898	1.2135	1.2945	1.0810
5	0.0280	0.0237	210.1	166.8	171.9	166.8	120.8	-2.9	0.6126	-0.0173	0.5799	0.4547	1.8608	1.2112	1.2870	1.0817
6	0.0224	0.0184	203.0	160.6	166.8	160.5	115.6	-5.5	0.6061	-0.0341	0.5591	0.4373	1.8437	1.2098	1.2750	1.0789
7	0.0192	0.0153	199.8	158.4	167.0	158.4	109.6	-4.3	0.5807	-0.0272	0.5497	0.4311	1.8391	1.2103	1.2716	1.0783
8	0.0160	0.0158	206.1	167.1	173.8	167.1	110.8	-1.4	0.5674	-0.0086	0.5658	0.4537	1.8676	1.2200	1.2864	1.0835
9	0.0107	0.0096	206.5	168.4	169.3	168.4	118.2	5.3	0.6096	0.0313	0.5637	0.4551	1.8719	1.2325	1.2854	1.0891
10	0.0036	0.0032	199.6	158.3	158.9	158.1	120.9	0.3	0.6506	0.0295	0.5416	0.4246	1.8399	1.2431	1.2871	1.0905

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	TEFF-A	TEFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	PO1	TOY-STG	TOY-STG
1	-0.0764	0.16.3	0.7924	47.93	54.69	0.4095	0.1179	0.0249	0.9730	101.73	101.66
2	-0.0120	0.1778	0.7152	52.20	59.15	0.3697	0.0634	0.0143	0.9851	93.52	93.77
3	-0.0512	0.1479	0.6796	56.24	61.92	0.3485	0.0250	0.0062	0.9939	90.02	90.45
4	-0.1073	0.1329	0.6359	58.59	61.03	0.3525	0.0320	0.0081	0.9977	94.27	94.47
5	-0.1103	0.1410	0.6299	55.73	57.04	0.3761	0.0381	0.0110	0.9927	91.32	91.63
6	-0.1161	0.1281	0.6402	54.19	54.86	0.3687	0.0371	0.0112	0.9909	90.30	91.20
7	-0.1422	0.1396	0.6079	54.39	54.11	0.3854	0.0372	0.0116	0.9931	90.55	90.86
8	-0.1698	0.1684	0.5760	56.61	56.96	0.3683	0.0419	0.0138	0.9919	89.31	89.69
9	-0.1720	0.2279	0.5783	54.73	56.90	0.3714	0.0439	0.0151	0.9915	83.26	83.65
10	-0.1944	0.2616	0.6111	50.95	52.77	0.4120	0.0784	0.0279	0.9850	82.39	83.01

NCOPR	NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC	KG/SEC			%	%			%	%
871.70	9198.	1.2211	1.8609	87.74	88.76	1.0638	0.9900	90.44	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet Cruise Configuration
(94 Percent of Design Speed)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	PO1/PO	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	94	POINT NO	1	V*-1	V*-2
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLFNUM	M/SEC	RADIAN	RADIAN	RADIAN	M-1	M-2	M/SEC	M/SEC				M/SEC	M/SEC
1	0.1806	0.1627	187.9	287.8	187.9	178.9	0.9558	225.4	0.0	0.8977	0.5698	0.8523	150.1	164.2	0.7293	0.5599		240.5	189.1
2	0.1526	0.1295	202.8	277.4	202.8	195.4	0.9935	197.2	0.0	0.7877	0.6181	0.8204	168.1	179.9	0.8029	0.5797		263.4	196.2
3	0.1240	0.1062	203.0	260.0	203.0	196.1	0.9932	170.6	0.0	0.7147	0.6187	0.7642	182.1	197.4	0.8436	0.5819		276.7	197.9
4	0.0987	0.0922	203.1	245.2	203.1	193.1	0.9907	151.0	0.0	0.6632	0.6190	0.7178	206.4	213.8	0.8831	0.5946		289.7	203.1
5	0.0581	0.0577	205.5	217.9	205.5	181.9	0.9917	119.9	0.0	0.5828	0.6269	0.6933	248.1	251.8	0.9830	0.6531		322.2	224.7
6	0.0441	0.0453	206.4	212.7	206.4	180.8	0.9924	112.1	0.0	0.5550	0.6301	0.6169	262.2	270.7	1.0330	0.6975		338.4	240.5
7	0.0363	0.0384	206.4	209.4	206.4	179.2	0.9913	108.3	0.0	0.5437	0.6302	0.6063	281.0	282.4	1.0643	0.7236		348.7	249.9
8	0.0298	0.0316	206.5	206.1	206.5	177.3	0.9900	105.0	0.0	0.5347	0.6304	0.5957	293.6	294.6	1.0957	0.7505		358.9	259.6
9	0.0229	0.0246	206.4	204.9	206.4	176.8	0.9882	103.5	0.0	0.5298	0.6299	0.5912	307.2	307.2	1.1296	0.7782		370.1	269.7
10	0.0147	0.0157	204.3	203.4	204.3	175.1	0.9826	103.9	0.0	0.5355	0.6232	0.5855	322.6	322.6	1.1648	0.8058		381.9	280.2
11	0.0071	0.0074	192.4	196.6	192.4	165.9	0.9521	105.5	0.0	0.5664	0.5843	0.5622	335.6	335.6	1.1749	0.8113		386.9	283.6

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-S	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET	
1	0.0029	0.0940	0.2096	1.0016	38.52	38.64	0.4412	0.2190	0.0487	1.4265	84.33	83.53	0.6732	-0.3283	-150.1	61.2	1.3862
2	0.0220	0.0724	0.2275	0.7793	42.08	44.89	0.4497	0.1586	0.0403	1.4193	86.54	85.86	0.6915	-0.0878	-168.1	17.3	1.4336
3	0.0068	0.0854	0.2339	0.6121	42.05	47.01	0.4558	0.1013	0.0278	1.4161	90.35	89.87	0.7473	0.1351	-188.1	-26.7	1.4300
4	0.0009	0.0903	0.2169	0.4798	41.96	47.56	0.4535	0.0711	0.0200	1.4081	92.44	92.08	0.7938	0.3140	-206.6	-62.8	1.4183
5	0.0097	0.0699	0.1417	0.2520	42.31	46.37	0.4280	0.0672	0.0184	1.3719	91.04	90.64	0.8792	0.6273	-248.1	-131.9	1.3832
6	0.0085	0.0610	0.1064	0.1945	42.46	46.56	0.4069	0.0647	0.0174	1.3727	90.83	90.41	0.9149	0.7204	-268.2	-158.6	1.3851
7	0.0089	0.0585	0.0959	0.1660	42.41	46.37	0.3964	0.0647	0.0176	1.3734	90.26	89.81	0.9373	0.7713	-281.0	-174.1	1.3842
8	0.0200	0.0603	0.0930	0.1388	42.36	46.04	0.3866	0.0711	0.0184	1.3733	89.30	88.81	0.9579	0.8191	-293.6	-189.6	1.3823
9	0.0250	0.0641	0.0843	0.1235	42.27	46.04	0.3786	0.0769	0.0197	1.3801	88.29	87.75	0.9794	0.8560	-307.2	-203.7	1.3866
10	0.0336	0.0723	0.0873	0.1104	41.72	45.62	0.3756	0.0908	0.0230	1.3919	86.24	85.58	1.0063	0.8959	-322.6	-218.8	1.3905
11	0.0572	0.0960	0.1395	0.1041	38.91	43.00	0.3800	0.0907	0.0221	1.4195	86.78	86.11	1.0502	0.9461	-335.6	-230.1	1.3741

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SQM			%	%
1.1124	1.3945	88.71	89.23	204.70	1.1124	1.3945	88.71	89.23

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	W-1	W-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN	M-1	M-2	INLET	INLET	STAGE	TO1
1	0.1916	0.1332	262.4	175.4	153.3	171.9	213.0	35.5	0.9459	0.2000	0.7679	0.4973	1.3147	1.1279	1.3519	1.1279
2	0.1221	0.0891	262.6	194.3	183.0	191.2	188.4	34.6	0.7990	0.1778	0.7705	0.5554	1.3823	1.1225	1.3742	1.1225
3	0.0765	0.0583	252.7	195.1	192.6	192.6	183.5	30.9	0.7031	0.1585	0.7404	0.5595	1.4046	1.1160	1.3913	1.1160
4	0.0501	0.0409	242.7	191.5	194.0	189.1	145.4	30.0	0.6438	0.1572	0.7098	0.5497	1.3984	1.1113	1.3886	1.1113
5	0.0208	0.0214	220.4	181.6	184.5	179.4	117.5	28.1	0.5618	0.1553	0.6413	0.5214	1.3693	1.1043	1.3562	1.1043
6	0.0147	0.0168	216.2	181.5	185.9	179.1	110.3	28.5	0.5356	0.1580	0.6277	0.5204	1.3678	1.1050	1.3557	1.1050
7	0.0118	0.0143	213.3	180.7	184.6	178.5	104.9	28.0	0.5247	0.1555	0.6186	0.5183	1.3654	1.1057	1.3549	1.1057
8	0.0094	0.0121	210.6	179.7	183.1	177.6	104.0	27.4	0.5163	0.1532	0.6096	0.5150	1.3623	1.1071	1.3536	1.1071
9	0.0069	0.0095	209.8	180.6	182.9	178.7	102.8	26.0	0.5118	0.1442	0.6064	0.5170	1.3645	1.1102	1.3583	1.1102
10	0.0035	0.0059	209.0	182.0	181.6	178.8	103.5	34.0	0.5177	0.1800	0.6023	0.5199	1.3678	1.1160	1.3695	1.1160
11	0.0007	0.0023	202.4	173.2	172.9	169.4	105.3	35.7	0.5472	0.2077	0.5801	0.4918	1.3429	1.1225	1.3890	1.1225

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-S	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	TOT
1	0.0262	0.1085	0.2938	0.7459	35.17	43.81	0.4703	0.1602	0.0331	0.9482	70.35	71.59
2	0.0269	0.0623	0.2205	0.6212	43.92	50.24	0.3893	0.0977	0.0217	0.9682	77.65	78.63
3	0.0079	0.0158	0.1824	0.9444	46.92	51.40	0.3522	0.0567	0.0136	0.9827	85.36	86.02
4	0.01148	0.0140	0.1713	0.4866	48.04	50.71	0.3311	0.0469	0.0120	0.9866	88.44	88.96
5	0.01751	0.0227	0.1577	0.4065	47.31	48.09	0.2931	0.0402	0.0116	0.9903	87.71	88.23
6	0.01999	0.0817	0.1544	0.3776	47.57	47.94	0.2776	0.0338	0.0165	0.9875	86.58	87.14
7	0.02118	0.0899	0.1493	0.3692	47.43	47.72	0.2708	0.0392	0.0188	0.9866	85.77	86.34
8	0.02245	0.0990	0.1456	0.3632	47.17	47.39	0.2672	0.0663	0.0218	0.9853	84.41	85.06
9	0.02399	0.1109	0.1365	0.3676	47.23	47.59	0.2649	0.0740	0.0251	0.9837	82.99	83.71
10	0.02492	0.1367	0.1881	0.3297	46.89	47.41	0.2475	0.0753	0.0264	0.9834	81.07	81.89
11	0.02951	0.1603	0.2474	0.3395	44.37	44.45	0.2702	0.1091	0.0391	0.9778	80.36	81.25

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RAD/SEC			%	%			%	%
826.18	1.1124	1.3695	83.66	84.37	1.1124	0.9820	83.66	

ROTOR 2

SL	EPST-1	EPST-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M ¹ -1	M ¹ -2	V ¹ -1	V ¹ -2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1501	0.1006	163.3	269.6	159.7	225.1	34.3	148.3	0.2101	0.5764	0.4615	0.7618	186.8	198.8	0.6239	0.6521	220.8	230.7
2	0.1047	0.0741	198.5	264.2	195.8	226.5	32.7	136.0	0.1650	0.5377	0.5686	0.7487	203.0	211.7	0.7433	0.4767	259.5	238.8
3	0.0839	0.0535	203.3	254.1	201.1	224.8	29.8	118.5	0.1466	0.4834	0.5850	0.7214	218.1	224.3	0.7929	0.7055	275.6	248.5
4	0.0587	0.0322	201.4	240.8	199.3	215.3	29.2	107.8	0.1452	0.4634	0.5804	0.6829	234.4	238.6	0.8245	0.7146	286.1	251.5
5	0.0133	-0.0051	191.8	209.7	189.7	188.4	28.2	92.1	0.1476	0.4544	0.5525	0.5910	271.2	272.4	0.8881	0.7348	308.3	260.8
6	0.0041	-0.0074	189.9	201.8	187.9	184.0	28.1	82.3	0.1483	0.4207	0.5464	0.5679	284.2	284.5	0.9140	0.7702	317.7	273.4
7	0.0034	-0.0122	187.2	199.3	185.1	183.4	27.6	78.0	0.1481	0.4021	0.5379	0.5613	296.9	296.9	0.9391	0.8042	326.6	285.4
8	0.0131	-0.0197	186.7	198.0	184.7	183.0	27.5	75.7	0.1479	0.3921	0.5352	0.5560	314.3	313.2	0.9778	0.8419	341.1	299.8
9	0.0173	-0.0232	185.3	196.0	182.1	178.0	26.3	82.0	0.1859	0.4319	0.5297	0.4483	324.3	325.6	0.9836	0.8438	344.2	301.6
10	0.0129	-0.0136	175.6	175.1	171.9	154.3	35.5	82.7	0.2037	0.4923	0.4990	0.4853	338.3	337.8	0.9895	0.8264	348.2	298.1

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-P	B ¹ -1	B ¹ -2	V0 ¹ -1	V0 ¹ -2	PO/PO	
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	INLET
1	0.1485	-0.0271	0.2978	0.5407	41.40	58.38	0.0974	0.0161	0.0038	1.2645	98.31	98.25	0.7589	0.2182	-152.5	-50.6	1.6692	
2	0.1832	-0.0739	0.1758	0.3934	51.55	60.85	0.1920	0.1205	0.0299	1.2146	83.99	83.55	0.7139	0.3204	-170.3	-75.7	1.6993	
3	0.1597	-0.0606	0.1509	0.3125	52.99	61.89	0.1925	0.0721	0.0181	1.2055	88.38	88.07	0.7515	0.4390	-188.4	-106.0	1.6916	
4	0.1346	-0.0459	0.1161	0.2547	52.47	60.04	0.2043	0.0668	0.0169	1.1918	87.76	87.46	0.7994	0.5447	-205.2	-130.7	1.6569	
5	0.0700	-0.0075	0.0887	0.1447	50.03	52.70	0.2271	0.1276	0.0312	1.1414	71.43	70.89	0.9079	0.7631	-243.0	-180.3	1.5619	
6	0.0504	0.0074	0.0933	0.1056	49.57	51.55	0.2018	0.1084	0.0258	1.1256	71.75	71.27	0.9380	0.8324	-256.2	-202.2	1.5381	
7	0.0253	0.0163	0.0817	0.0951	48.86	51.42	0.1850	0.0936	0.0221	1.1253	73.89	73.45	0.9685	0.8734	-269.3	-218.9	1.5327	
8	0.0209	0.0178	0.0633	0.0843	48.70	51.06	0.1757	0.0993	0.0235	1.1196	70.75	70.28	0.9986	0.9143	-286.8	-237.5	1.5286	
9	0.0144	0.0194	0.0557	0.0735	47.91	49.34	0.1791	0.1123	0.0266	1.1165	67.37	66.87	1.0131	0.9396	-292.0	-243.5	1.5221	
10	0.0076	0.0465	0.1264	0.0274	44.87	42.04	0.2002	0.1687	0.0363	1.0893	51.00	50.42	1.0543	1.0269	-302.7	-255.1	1.4594	

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	INLET	INLET	ROTOR	ROTOR
		%	%	SOM			%	%
1.1735	1.5849	81.05	82.24	179.82	1.0549	1.1573	77.54	78.00

STATOR 2

SL	EPST-1	EPST-2	V-1	V-2	VH-1	VH-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M ¹ -1	M ¹ -2	V ¹ -1	V ¹ -2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1225	0.1428	236.2	242.0	186.1	241.8	145.5	-9.3	0.6604	-0.0383	0.6588	0.6764	1.5180	1.2072	1.1510	1.0704		
2	0.0941	0.1056	242.7	243.2	202.9	242.8	133.3	-14.5	0.5797	-0.0597	0.6820	0.6833	1.5482	1.1965	1.1067	1.0684		
3	0.0812	0.0867	240.9	230.3	211.0	230.0	116.2	-10.8	0.5032	-0.0469	0.6803	0.6476	1.5191	1.1840	1.0821	1.0625		
4	0.0742	0.0750	234.4	226.4	209.1	226.2	106.0	-8.8	0.4693	-0.0391	0.6632	0.6384	1.5277	1.1751	1.0962	1.0589		
5	0.0501	0.0457	213.3	210.5	193.0	210.5	90.9	-1.8	0.4404	-0.0084	0.6018	0.5931	1.5175	1.1647	1.1088	1.0547		
6	0.0372	0.0325	206.8	206.5	190.0	206.5	81.5	-0.9	0.4054	-0.0045	0.5835	0.5824	1.5151	1.1595	1.1084	1.0489		
7	0.0264	0.0213	205.1	201.0	189.9	200.9	77.4	6.1	0.3872	0.0305	0.5784	0.5664	1.5028	1.1582	1.1034	1.0467		
8	0.0159	0.0120	203.5	197.3	189.1	197.1	75.4	7.7	0.3795	0.0388	0.5725	0.5538	1.4927	1.1633	1.0934	1.0466		
9	0.0083	0.0058	201.0	193.6	183.6	193.7	81.8	8.5	0.4191	0.0437	0.5631	0.5421	1.4826	1.1706	1.0873	1.0478		
10	0.0020	0.0010	180.0	164.7	159.5	164.5	82.6	8.0	0.4770	0.0488	0.4996	0.4554	1.3993	1.1776	1.0645	1.0490		

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-P	B ¹ -1	B ¹ -2	V0 ¹ -1	V0 ¹ -2	PO/PO	
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	INLET
1	-0.2272	0.1103	0.6987	51.55	60.29	0.1116	0.3576	0.0753	0.9097				58.12	58.95				
2	-0.1849	0.0806	0.6394	56.91	62.00	0.1347	0.3320	0.0745	0.9111				42.74	43.54				
3	-0.2309	0.0978	0.5500	59.65	59.55	0.1703	0.3850	0.0916	0.8971				36.54	37.24				
4	-0.2578	0.1099	0.5084	59.07	59.67	0.1604	0.3177	0.0803	0.9183				45.10	45.80				
5	-0.2876	0.1498	0.4488	53.65	57.17	0.1429	0.1426	0.0411	0.9686				54.72	55.37				
6	-0.3168	0.1577	0.4099	52.79	56.51	0.1245	0.0785	0.0236	0.9838				61.12	61.68				
7	-0.3357	0.1973	0.3567	52.74	55.08	0.1288	0.0971	0.0304	0.9803				61.00	61.53				
8	-0.3578	0.2159	0.3406	52.30	53.79	0.1405	0.1177	0.0389	0.9766				55.37	55.93				
9	-0.3626	0.2403	0.3754	50.49	52.44	0.1622	0.1390	0.0477	0.9736				50.63	51.19				
10	-0.3681	0.2709	0.4282	43.28	43.56	0.2335	0.2664	0.0947	0.9589				25.45	25.89				

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	STAGE	STAGE
RAD/SEC	KG/SEC			%	%			%	%
826.18	94.9	1.1735	1.5030	71.16	72.76	1.0549	0.9483	48.99	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
 Sonic Inlet Cruise Configuration
 (94 Percent of Design Speed)

S. I. UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	PO1/PO2	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M ² -1	M ² -2	V ² -1	V ² -2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PL/PLUM	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1814	0.1693	193.1	203.3	193.1	175.2	0.9739	222.6	0.0	0.9023	0.5844	0.8378	150.0	164.1	0.7426	0.5462	244.3	184.7
2	0.1541	0.1389	201.4	273.4	201.4	190.0	0.9984	166.6	0.0	0.8006	0.6136	0.8844	167.9	179.0	0.7990	0.5626	242.2	190.7
3	0.1287	0.1069	199.4	256.4	199.4	192.5	0.9944	169.4	0.0	0.7204	0.6049	0.7529	180.0	197.2	0.8341	0.5711	274.0	194.3
4	0.1067	0.0873	199.9	241.3	199.9	189.3	0.9935	151.3	0.0	0.6735	0.6088	0.7085	206.4	213.4	0.8791	0.5828	287.4	199.3
5	0.0699	0.0587	202.2	215.8	202.2	178.7	0.9945	121.0	0.0	0.5973	0.6162	0.6264	247.9	251.4	0.9750	0.6424	319.9	221.3
6	0.0555	0.0470	203.1	210.0	203.1	177.0	0.9945	112.9	0.0	0.5579	0.6193	0.6082	267.9	270.5	1.0251	0.6845	334.2	237.0
7	0.0473	0.0401	203.5	207.1	203.5	175.9	0.9938	109.4	0.0	0.5566	0.6206	0.5989	280.7	282.2	1.0573	0.7131	346.8	246.4
8	0.0401	0.0331	203.9	203.9	203.9	173.9	0.9928	106.5	0.0	0.5496	0.6217	0.5887	293.3	294.4	1.0893	0.7390	357.2	256.0
9	0.0312	0.0259	203.8	202.0	203.8	172.6	0.9905	104.9	0.0	0.5464	0.6214	0.5819	304.9	306.9	1.1235	0.7654	368.4	261.7
10	0.0205	0.0168	201.4	199.8	201.4	170.1	0.9833	104.8	0.0	0.5523	0.6136	0.5735	322.4	322.4	1.1581	0.7928	380.1	274.1
11	0.0102	0.0081	190.3	193.8	190.3	162.5	0.9548	105.6	0.0	0.5762	0.5773	0.5540	335.4	335.3	1.1700	0.8040	385.6	281.3

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	SEFF-P	SEFF-A	B ² -1	B ² -2	V ² -1	V ² -2	PO/PO
	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL		TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0163	0.0805	0.2165	0.9813	39.99	38.43	0.4651	0.2463	0.0549	1.4044	81.70	80.80	0.6598	0.3215	-150.0	58.6	1.4359
2	-0.0189	0.0754	0.2274	0.7825	42.10	44.25	0.4671	0.1617	0.0411	1.4165	86.37	85.64	0.6945	-0.9800	-167.9	16.8	1.4329
3	0.0020	0.0942	0.2421	0.6128	41.61	46.78	0.4603	0.0836	0.0229	1.4223	92.23	91.83	0.7541	0.1432	-189.0	-27.8	1.4329
4	0.0086	0.0980	0.2208	0.4834	41.69	47.27	0.4605	0.0603	0.0170	1.4151	93.75	93.43	0.8015	0.3179	-204.4	-42.4	1.4244
5	-0.0018	0.0778	0.1455	0.2561	42.02	46.30	0.4342	0.0523	0.0142	1.3860	93.25	92.93	0.8871	0.6310	-247.9	-139.6	1.3967
6	-0.0009	0.0686	0.1135	0.1951	42.14	46.37	0.4133	0.0491	0.0131	1.3871	93.22	92.90	0.9225	0.7274	-267.9	-157.6	1.3976
7	0.0155	0.0651	0.1016	0.1669	42.15	46.30	0.4028	0.0507	0.0133	1.3894	92.78	92.43	0.9439	0.7770	-280.7	-172.8	1.3991
8	0.0259	0.0661	0.0990	0.1396	42.14	45.97	0.3946	0.0573	0.0148	1.3905	91.61	91.21	0.9637	0.8241	-293.3	-187.9	1.3986
9	0.0306	0.0697	0.0922	0.1211	42.03	45.75	0.3877	0.0646	0.0164	1.3963	90.40	89.94	0.9830	0.8638	-304.9	-202.0	1.4012
10	0.0397	0.0785	0.0988	0.1051	41.38	45.13	0.3839	0.0763	0.0191	1.4084	88.64	88.07	1.0125	0.9073	-322.4	-217.6	1.4031
11	0.0417	0.1015	0.1482	0.0999	38.73	42.98	0.3838	0.0700	0.0168	1.4379	89.92	89.39	1.0548	0.9549	-335.4	-229.4	1.3910

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
		%	%	SGM			%	%
1.1129	1.4052	90.48	90.93	203.08	1.1129	1.4052	90.48	90.93

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO	SEFF-A	SEFF-P
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET	TOT-STG	TOT-STG
1	0.1916	0.1351	254.6	167.1	146.9	163.5	210.4	34.5	0.9400	0.2056	0.7474	0.4731	1.3168	1.1262	1.3348	1.1262	68.16	69.43
2	0.1298	0.0925	257.0	184.8	175.3	183.4	187.9	35.4	0.8190	0.1895	0.7521	0.5326	1.3682	1.1222	1.3723	1.1222	77.48	78.46
3	0.0789	0.0627	247.5	188.3	186.9	185.8	162.2	36.4	0.7142	0.1618	0.7241	0.5391	1.4042	1.1151	1.3961	1.1151	87.94	87.63
4	0.0525	0.0456	238.5	185.6	188.6	183.3	146.0	28.9	0.6581	0.1564	0.6964	0.5318	1.4025	1.1115	1.3931	1.1115	89.18	89.03
5	0.0228	0.0260	218.1	177.6	183.1	175.4	118.6	27.8	0.5744	0.1569	0.6338	0.5093	1.3796	1.1051	1.3690	1.1051	89.39	89.03
6	0.0165	0.0208	213.8	178.1	182.6	175.9	111.1	28.0	0.5447	0.1581	0.6280	0.5107	1.3799	1.1054	1.3694	1.1054	89.30	88.89
7	0.0135	0.0176	211.7	178.4	182.1	176.2	108.0	27.7	0.5351	0.1568	0.6132	0.5112	1.3801	1.1047	1.3708	1.1047	89.33	87.50
8	0.0109	0.0145	209.4	177.9	180.9	175.7	105.4	27.9	0.5276	0.1576	0.6056	0.5094	1.3783	1.1043	1.3705	1.1043	89.33	86.26
9	0.0079	0.0109	208.2	178.9	180.3	176.8	104.2	27.4	0.5238	0.1548	0.6010	0.5116	1.3805	1.1115	1.3759	1.1115	89.32	85.04
10	0.0038	0.0060	206.8	180.5	178.5	177.7	104.4	31.3	0.5289	0.1744	0.5932	0.5150	1.3839	1.1169	1.3893	1.1169	89.79	84.55
11	0.0006	0.0017	201.4	172.2	171.4	168.5	105.4	35.9	0.5510	0.2101	0.5776	0.4891	1.3604	1.1225	1.4078	1.1225		

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/PO1	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL		TOT-STG	TOT-STG
1	0.0403	0.1226	0.2994	0.7544	34.29	42.44	0.4891	0.1599	0.0338	0.9302	68.16	69.43
2	-0.0049	0.0823	0.2322	0.6294	42.36	48.93	0.4043	0.0992	0.0220	0.9689	77.48	78.46
3	-0.0686	0.0269	0.1856	0.5523	46.32	50.39	0.3661	0.0625	0.0150	0.9819	87.94	87.63
4	-0.1905	0.0003	0.1705	0.5017	47.48	49.93	0.3463	0.0546	0.0139	0.9849	89.18	89.03
5	-0.1626	-0.0501	0.1593	0.4173	47.24	47.80	0.3056	0.0499	0.0145	0.9882	89.39	89.03
6	-0.1888	-0.0706	0.1544	0.3886	47.51	47.88	0.2849	0.0564	0.0173	0.9871	89.33	89.03
7	-0.2014	-0.0795	0.1493	0.3791	47.54	47.91	0.2784	0.0603	0.0191	0.9865	89.30	88.89
8	-0.2132	-0.0877	0.1500	0.3700	47.37	47.69	0.2729	0.0662	0.0217	0.9853	89.33	87.50
9	-0.2280	-0.0989	0.1471	0.3689	47.29	47.86	0.2668	0.0687	0.0233	0.9851	89.33	86.26
10	-0.2381	-0.1255	0.1745	0.3543	46.82	47.93	0.2531	0.0642	0.0225	0.9863	89.32	85.04
11	-0.2913	-0.1565	0.2498	0.3409	44.82	44.98	0.2710	0.1076	0.0396	0.9793	89.79	84.55

NCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET			STAGE	
RAD/SEC			%	%			%	%
825.48	1.1129	1.3798	85.41	86.06	1.1129	0.9819	85.41	

ROTOR 2

RUN NO415, SPEED CODE 94, POINT NO 2																		
SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	V0-1	V0-2	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1912	0.1033	153.9	253.7	150.2	201.5	33.5	153.3	0.2194	0.4442	0.4341	0.7101	184.6	198.7	0.6049	0.5793	214.4	206.6
2	0.1130	0.0807	189.7	249.5	184.7	203.4	33.6	144.5	0.1774	0.4144	0.3418	0.7010	202.8	211.5	0.7198	0.6018	232.0	214.2
3	0.0890	0.0642	193.3	239.9	193.1	202.5	28.9	128.7	0.1484	0.3644	0.3407	0.6756	217.9	224.7	0.7758	0.6300	270.2	223.9
4	0.0644	0.0469	194.5	227.1	192.5	196.0	28.1	114.8	0.1450	0.3289	0.3592	0.6387	234.2	238.4	0.8106	0.6516	282.0	231.7
5	0.0242	0.0138	187.4	201.7	185.4	175.1	27.7	100.2	0.1482	0.3198	0.3395	0.5644	271.0	272.1	0.8799	0.6668	306.0	245.4
6	0.0158	0.0089	187.1	192.7	185.0	169.1	27.7	92.4	0.1483	0.3000	0.3377	0.5386	284.0	284.3	0.9086	0.7151	316.2	255.8
7	0.0107	0.0062	185.9	190.1	183.8	168.4	27.8	87.7	0.1500	0.4798	0.3335	0.5310	294.7	294.7	0.9349	0.7502	325.7	268.5
8	0.0029	0.0008	184.2	152.2	184.1	171.4	28.0	86.9	0.1589	0.4490	0.3335	0.5357	314.1	312.9	0.9745	0.7907	340.2	283.7
9	0.0015	0.0004	184.3	152.4	183.4	168.7	31.8	92.8	0.1714	0.5028	0.3324	0.5344	326.0	325.3	0.9911	0.7972	344.8	287.3
10	0.0019	0.0034	177.4	182.9	173.9	155.1	35.9	97.1	0.2095	0.5593	0.3049	0.5045	338.0	337.6	0.9912	0.7891	348.6	286.1

SL	INCS	INCH	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VR*-1	VR*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TUT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.1158	0.0057	0.2983	0.5729	39.65	55.63	0.1859	-0.0533	-0.0127	1.2992	104.60	104.77	0.7916	0.2187	-153.1	-45.4	1.7142
2	0.1624	0.0531	0.1719	0.4182	50.01	57.99	0.2722	0.0826	0.0205	1.2508	90.26	89.94	0.7347	0.3165	-149.3	-47.1	1.7497
3	0.1375	0.0384	0.1515	0.3340	51.88	59.12	0.2777	0.0615	0.0155	1.2419	91.33	91.27	0.7737	0.4397	-189.0	-95.6	1.7468
4	0.1148	0.0261	0.1394	0.2572	51.61	58.12	0.2713	0.0310	0.0080	1.2312	94.93	94.78	0.8192	0.5620	-206.1	-125.6	1.7219
5	0.0987	0.0089	0.1018	0.1430	49.80	52.58	0.2795	0.0602	0.0145	1.2087	88.43	88.12	0.9192	0.7762	-243.3	-171.9	1.6687
6	0.0429	0.0150	0.1094	0.0970	49.69	50.89	0.2637	0.0604	0.0141	1.1837	87.08	86.76	0.9456	0.8486	-256.3	-191.9	1.6367
7	0.0225	0.0191	0.1001	0.0795	49.31	50.86	0.2434	0.0442	0.0102	1.1850	89.34	89.39	0.9713	0.8919	-268.9	-205.9	1.6335
8	0.0200	0.0180	0.0708	0.0770	49.79	51.64	0.2322	0.0444	0.0105	1.1915	89.52	89.25	0.9987	0.9217	-286.1	-226.0	1.6433
9	0.0195	0.0193	0.0590	0.0700	46.98	50.35	0.2425	0.0702	0.0164	1.1921	84.07	83.67	1.0130	0.9430	-294.2	-232.3	1.6485
10	0.0018	0.0407	0.0777	0.0504	44.00	44.02	0.2518	0.0831	0.0187	1.1925	81.68	81.21	1.0484	0.9981	-302.1	-240.5	1.6198

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
		%	%	SON			%	%
1.1832	1.0735	86.71	87.64	177.09	1.0432	1.2143	90.12	90.39

STATOR 2

RUN NO415, SPEED CODE 94, POINT NO 2																	
SL	EPSI-1	EPSI-2	V-1	V-2	VN-1	VN-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/	TO1
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	STAGE	STAGE
1	0.1215	0.1404	230.4	201.9	176.7	201.9	150.6	3.6	0.7079	0.0176	0.6412	0.5561	1.4777	1.2095	1.2705	1.0740	
2	0.0891	0.0975	237.1	210.6	190.4	210.5	141.3	2.3	0.6365	0.0110	0.6631	0.5836	1.7276	1.2015	1.2345	1.0731	
3	0.0659	0.0689	234.0	207.6	197.3	207.6	125.9	-0.7	0.5672	-0.0032	0.6570	0.5778	1.7294	1.1904	1.2299	1.0694	
4	0.0487	0.0482	225.4	197.8	195.4	197.7	112.7	-2.4	0.5225	-0.0119	0.6341	0.5508	1.7003	1.1813	1.2164	1.0643	
5	0.0242	0.0213	203.3	176.8	177.6	176.8	96.8	-2.5	0.5077	-0.0141	0.5493	0.4914	1.6344	1.1741	1.1846	1.0614	
6	0.0185	0.0156	194.5	170.5	171.9	170.4	91.1	-4.9	0.4875	-0.0290	0.5442	0.4737	1.6156	1.1695	1.1704	1.0571	
7	0.0150	0.0125	192.0	167.9	173.2	167.9	87.1	-2.5	0.4707	-0.0151	0.5349	0.4663	1.6078	1.1693	1.1645	1.0554	
8	0.0123	0.0107	194.2	170.4	173.7	170.4	86.8	-0.1	0.4634	-0.0004	0.5416	0.4721	1.6143	1.1763	1.1690	1.0576	
9	0.0096	0.0088	194.5	171.0	171.0	170.9	92.7	4.8	0.4968	0.0282	0.3400	0.4716	1.6151	1.1859	1.1677	1.0614	
10	0.0043	0.0042	185.3	162.1	157.9	161.9	96.9	7.9	0.5506	0.0489	0.5114	0.4447	1.5895	1.1939	1.1701	1.0634	

SL	INCH	DEV	TURN	RMOVN-1	RMOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	-0.1797	0.1661	0.6903	50.33	59.69	0.2567	0.0890	0.0188	0.9785	95.51	95.66
2	-0.1281	0.1514	0.6255	55.60	63.58	0.2423	0.0495	0.0111	0.9873	84.72	85.17
3	-0.1649	0.1414	0.5704	58.22	63.55	0.2396	0.0359	0.0085	0.9910	87.62	87.97
4	-0.2046	0.1372	0.5344	58.10	60.83	0.2503	0.0489	0.0124	0.9889	89.37	89.66
5	-0.2133	0.1442	0.5217	53.17	54.22	0.2728	0.0738	0.0213	0.9855	80.60	81.06
6	-0.2344	0.1332	0.5165	51.56	52.24	0.2718	0.0683	0.0205	0.9876	80.40	80.84
7	-0.2522	0.1517	0.4858	51.48	51.41	0.2717	0.0887	0.0278	0.9842	81.15	81.56
8	-0.2738	0.1766	0.4639	52.19	51.94	0.2701	0.1050	0.0347	0.9810	79.13	79.59
9	-0.2849	0.2248	0.4686	51.05	51.70	0.2766	0.1131	0.0388	0.9794	73.64	74.22
10	-0.2945	0.2710	0.5016	44.70	44.46	0.2967	0.1150	0.0409	0.9812	72.25	72.86

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
RAD/SEC	KG/SEC			%	%			%
829.48	93.6	1.1832	1.0498	83.93	85.01	1.0632	0.9847	82.77

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet Cruise Configuration
(94 Percent of Design Speed)**

S. I. UNITS

ROTOR 1

															RUN NO.415, SPEED CODE 94, POINT NO. 3			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	VO-2	E-1	E-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PLENUM	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1875	0.1866	186.2	272.7	186.2	186.4	0.9767	214.5	0.0	0.9031	0.5641	0.8043	150.2	164.3	0.7249	0.5183	239.2	173.8
2	0.1814	0.1382	192.9	266.1	192.9	183.8	0.9938	192.4	0.0	0.8065	0.5859	0.7832	168.2	180.1	0.7773	0.5422	255.8	194.3
3	0.1525	0.1191	195.0	250.6	195.0	187.1	0.9951	165.8	0.0	0.7246	0.5927	0.7330	188.2	197.5	0.8236	0.5564	271.0	189.8
4	0.1104	0.0996	197.7	236.7	197.7	184.4	0.9971	146.4	0.0	0.6773	0.6015	0.6912	206.7	214.0	0.8703	0.5716	286.0	195.7
5	0.0721	0.0663	200.4	212.7	200.4	175.6	0.9934	126.1	0.0	0.6002	0.6104	0.6171	248.3	252.0	0.9719	0.6370	319.1	219.6
6	0.0556	0.0526	200.7	207.6	200.7	173.4	0.9893	113.2	0.0	0.5786	0.6114	0.5990	268.4	270.9	1.0208	0.6780	335.1	236.4
7	0.0463	0.0446	201.0	203.4	201.0	171.7	0.9872	109.9	0.0	0.5695	0.6123	0.5988	281.2	282.6	1.0529	0.7035	345.6	243.6
8	0.0362	0.0367	201.0	200.2	201.0	169.3	0.9847	106.9	0.0	0.5635	0.6122	0.5770	293.8	294.8	1.0842	0.7289	355.9	252.9
9	0.0290	0.0284	200.0	197.4	200.0	167.6	0.9804	105.1	0.0	0.5622	0.6092	0.5691	307.4	307.4	1.1169	0.7556	366.8	262.7
10	0.0174	0.0169	197.4	194.3	197.4	165.6	0.9720	105.3	0.0	0.5622	0.6005	0.5626	322.8	322.8	1.1512	0.7839	378.4	272.4
11	0.0077	0.0074	189.6	190.5	189.6	157.6	0.9524	107.0	0.0	0.5944	0.5753	0.5674	335.9	335.8	1.1701	0.7924	385.7	277.8

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VB-1	VB-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0026	0.0015	0.2494	0.9875	39.14	37.60	0.4814	0.2586	0.0578	1.3355	81.04	80.20	0.7172	-0.2886	-150.2	50.2	1.3756
2	0.0037	0.0086	0.2484	-0.7841	40.74	43.44	0.4745	0.4136	0.0366	1.4177	88.25	87.06	0.7172	-0.0670	-168.2	12.4	1.4320
3	0.0141	0.1062	0.2484	0.6006	41.09	48.13	0.4673	0.6709	0.0193	1.4197	93.48	93.15	0.7682	0.1076	-180.7	-31.7	1.4261
4	0.0152	0.1146	0.2483	0.4804	41.55	46.86	0.4670	0.9532	0.0148	1.4105	94.44	94.16	0.8081	0.3417	-206.7	-65.6	1.4288
5	0.0032	0.0028	0.1589	0.2477	41.77	46.37	0.4387	0.0307	0.0083	1.3976	96.06	95.87	0.8922	0.6444	-248.3	-131.9	1.4108
6	0.0036	0.0071	0.1244	-0.1904	41.59	45.57	0.4190	0.0238	0.0068	1.4549	96.49	96.32	0.9289	0.7384	-268.4	-157.7	1.4129
7	0.0221	0.0716	0.1133	0.6118	41.56	45.75	0.4097	0.0285	0.0074	1.4084	96.01	95.81	0.9565	0.7882	-281.2	-172.8	1.4134
8	0.0333	0.1735	0.1117	-0.1334	41.42	45.25	0.4614	0.0351	0.0089	1.4097	94.95	94.64	0.9711	0.8376	-293.6	-157.9	1.4112
9	0.0397	0.0788	0.1074	0.1151	41.11	44.94	0.3933	0.0399	0.0100	1.4173	94.17	93.87	0.9941	0.8790	-307.4	-20.3	1.4126
10	0.0493	0.0081	0.1116	0.1015	40.42	44.45	0.3888	0.0504	0.0124	1.4334	92.66	92.28	1.0221	0.9201	-322.8	-217.6	1.4164
11	0.0636	0.1025	0.1609	0.0893	38.57	42.11	0.3947	0.0645	0.0132	1.4506	90.85	90.35	1.0568	0.9675	-335.7	-228.8	1.4045

TI/TI	PO/PL	EFF-AD	EFF-P	WCI/A1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	ROTOR	ROTOR
%	%	%	%	SOM	%	%	%
1.1123	1.4147	92.77	93.12	200.67	1.1123	1.4147	92.77

STATOR 1

															RUN NO.415, SPEED CODE 94, POINT NO. 3			
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VR-1	VO-2	E-1	E-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO	TO2/TO1	TO2/TO1
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET	STAGE	STAGE
1	0.1921	0.1362	245.2	156.4	137.8	133.1	202.7	32.2	0.9724	0.2047	0.7141	0.4424	1.3151	1.1218	1.3231	1.1218	1.1218	1.1218
2	0.1253	0.0951	248.7	177.0	167.4	175.2	183.9	36.4	0.8314	0.2063	0.7281	0.5040	1.3917	1.1199	1.3678	1.1199	1.1199	1.1199
3	0.0828	0.0672	240.5	181.0	186.21	175.2	154.4	31.6	0.7242	0.1701	0.7021	0.5205	1.4081	1.1133	1.3920	1.1133	1.1133	1.1133
4	0.0571	0.0506	236.4	181.9	182.9	178.6	145.4	28.5	0.6746	0.1579	0.6775	0.5180	1.4100	1.1097	1.3910	1.1097	1.1097	1.1097
5	0.0476	0.0424	215.0	174.7	179.9	172.4	117.8	27.7	0.5795	0.1561	0.6242	0.5004	1.3938	1.1044	1.3801	1.1044	1.1044	1.1044
6	0.0211	0.0242	211.1	175.1	179.4	172.5	111.3	30.2	0.5555	0.1730	0.6116	0.5915	1.3947	1.1059	1.3847	1.1059	1.1059	1.1059
7	0.0180	0.0210	204.0	175.4	178.7	172.8	108.4	30.2	0.5452	0.1728	0.6047	0.5870	1.3955	1.1073	1.3905	1.1073	1.1073	1.1073
8	0.0168	0.0175	206.3	174.9	177.2	172.7	105.7	28.0	0.5380	0.1605	0.5999	0.5904	1.3944	1.1088	1.3927	1.1088	1.1088	1.1088
9	0.0111	0.0132	204.9	175.4	176.5	173.2	104.2	28.0	0.5338	0.1602	0.5906	0.5911	1.3957	1.1117	1.4005	1.1117	1.1117	1.1117
10	0.0062	0.0077	204.1	177.0	175.2	174.3	104.7	31.6	0.5398	0.1758	0.5867	0.5846	1.3944	1.1174	1.4164	1.1174	1.1174	1.1174
11	0.0019	0.0027	195.0	174.0	177.4	176.4	106.8	31.6	0.5685	0.1878	0.5691	0.4803	1.3778	1.1243	1.4235	1.1243	1.1243	1.1243

SL	INCS	INCR	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT
1	0.0528	0.1351	0.2495	0.7877	32.70	40.17	0.5649	0.1563	0.0322	0.9549	68.39	69.62
2	0.0055	0.0047	0.2494	0.4257	41.07	46.59	0.4192	0.1189	0.0298	0.9654	78.11	79.05
3	0.0586	0.0369	0.1978	0.5502	45.27	49.03	0.3707	0.0690	0.0165	0.9805	87.57	88.14
4	0.0440	0.0066	0.1719	0.5087	46.68	49.15	0.3478	0.0529	0.0134	0.9811	90.14	90.59
5	0.0375	0.0405	0.1615	0.4403	47.04	47.52	0.3093	0.0525	0.0152	0.9679	92.20	92.55
6	0.0180	0.0016	0.1694	0.3824	47.22	47.49	0.2895	0.0578	0.0176	0.9872	92.50	92.84
7	0.0191	0.0094	0.1667	0.3747	47.34	47.52	0.2801	0.0579	0.0183	0.9673	92.09	92.45
8	0.0228	0.0177	0.1528	0.3771	48.89	47.54	0.2769	0.0559	0.0183	0.9881	91.24	91.64
9	0.0279	0.0089	0.1525	0.3736	46.73	47.47	0.2712	0.0572	0.0194	0.9880	90.44	90.89
10	0.0244	0.0115	0.1759	0.3650	49.41	47.59	0.2613	0.0570	0.0200	0.9882	89.12	89.64
11	0.0275	0.0141	0.2275	0.3787	44.25	44.98	0.2869	0.0957	0.0345	0.9812	85.47	86.18

TI/TI	PO/PL	EFF-AD	EFF-P	WCI/A1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	STAGE	STAGE
%	%	%	%	SOM	%	%	%
1.1123	1.3909	88.03	88.58		1.1123	0.9832	88.03

ROTOR 2

RUN NO415, SPEED CODE 94, POINT NO 3																		
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	V'-1	V'-2		
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC	M/SEC	M/SEC		
1	0.1486	0.1008	143.4	243.4	140.0	185.5	31.3	157.6	0.2193	0.6981	0.4044	0.6799	186.9	179.0	0.5902	0.5308	209.3	190.0
2	0.1083	0.0740	179.9	238.6	174.4	184.2	35.2	149.1	0.1762	0.6719	0.5124	0.6673	203.2	211.9	0.6942	0.5496	243.4	196.5
3	0.0859	0.0633	188.8	231.7	184.5	188.0	29.6	135.4	0.1577	0.6423	0.5416	0.6489	218.3	224.7	0.7638	0.5829	265.3	208.1
4	0.0653	0.0478	188.9	221.3	184.9	185.1	27.3	121.3	0.1449	0.5794	0.5425	0.6199	234.5	238.7	0.8018	0.6139	279.1	219.2
5	0.0254	0.0160	183.9	200.2	181.6	167.6	28.9	109.4	0.1577	0.5781	0.5283	0.5981	271.4	272.6	0.8704	0.6522	303.0	233.9
6	0.0180	0.0117	183.7	191.1	181.2	161.2	30.2	102.7	0.1673	0.5673	0.5173	0.5921	284.4	284.7	0.9360	0.6759	312.2	243.1
7	0.0137	0.0100	183.0	188.5	180.8	161.9	28.3	96.5	0.1552	0.5376	0.5246	0.5242	297.1	297.1	0.9289	0.7170	324.0	257.8
8	0.0061	0.0040	183.2	191.1	181.0	164.6	28.2	97.0	0.1547	0.5323	0.5243	0.5298	314.5	313.4	0.9699	0.7940	338.7	271.9
9	0.0016	0.0005	184.0	192.6	181.3	162.3	31.1	102.2	0.1699	0.5593	0.5252	0.5318	324.5	323.8	0.9894	0.7643	346.6	276.8
10	0.0003	0.0013	175.9	183.2	173.1	152.7	31.5	101.3	0.1802	0.5656	0.4996	0.5027	338.5	338.1	1.0007	0.7730	357.4	281.7

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
RADIAN	RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0725	0.0489	0.2961	0.6184	37.31	53.10	0.2536	-0.1009	-0.0240	1.3299	107.89	108.21	0.8349	0.2165	-155.6	-41.3	1.7303
2	0.1383	0.0289	0.1782	0.4361	47.64	54.88	0.3247	0.0430	0.0107	1.2739	95.33	95.16	0.7588	0.3228	-148.0	-62.7	1.7781
3	0.1211	0.0221	0.1337	0.3482	50.71	56.70	0.3308	0.0515	0.0129	1.2651	93.51	93.30	0.7900	0.4418	-188.6	-84.3	1.7864
4	0.0974	0.0088	0.1358	0.2721	50.78	56.73	0.3164	0.0208	0.0052	1.2593	97.00	96.90	0.8364	0.5644	-207.3	-117.4	1.7728
5	0.0498	0.0177	0.0974	0.1562	49.36	52.14	0.2184	0.0401	0.0097	1.2417	93.19	92.98	0.9280	0.7718	-242.5	-163.2	1.7310
6	0.0368	0.0209	0.1070	0.1054	49.26	50.27	0.3032	0.0402	0.0094	1.2242	92.51	92.29	0.9515	0.8461	-254.2	-182.0	1.7081
7	0.0149	0.0267	0.1001	0.0870	49.10	50.62	0.2810	0.0293	0.0068	1.2236	94.15	93.98	0.9789	0.8919	-248.8	-200.6	1.7064
8	0.0127	0.0261	0.0693	0.0865	49.04	51.43	0.2746	0.0393	0.0092	1.2336	92.14	91.91	1.0068	0.9203	-206.3	-216.4	1.7219
9	0.0122	0.0264	0.0560	0.0403	48.94	50.75	0.2832	0.0630	0.0150	1.2366	87.72	87.34	1.0203	0.9400	-299.4	-273.6	1.7310
10	0.0107	0.0494	0.0976	0.0593	46.27	47.05	0.2823	0.0657	0.0148	1.2378	87.14	86.74	1.0573	0.9980	-307.0	-236.8	1.7031

TD/TD	PD/PU	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC			ROTOR	ROTOR
%	%	%	%	SQM			%	%
1.1902	1.7381	89.90	90.65	173.73	1.0700	1.2494	93.72	93.92

STATOR 2

RUN NO415, SPEED CODE 94, POINT NO 3																
SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TD/TD	PO/PO	TD/TD
RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	INLET	INLET
1	0.1235	0.1417	222.8	178.5	100.3	178.4	154.8	7.6	0.7648	0.0198	0.6317	0.5220	1.7057	1.2096	1.2963	1.0783
2	0.0906	0.0975	226.8	189.6	173.6	189.6	146.0	5.1	0.6974	0.0269	0.6309	0.5266	1.7742	1.1938	1.2566	1.0741
3	0.0661	0.0675	225.7	190.5	182.7	190.5	132.6	0.1	0.6268	0.0007	0.6140	0.5075	1.7548	1.1863	1.2484	1.0701
4	0.0488	0.0472	219.4	183.4	184.2	183.4	119.2	-0.8	0.5737	-0.0043	0.6140	0.5075	1.7548	1.1863	1.2484	1.0701
5	0.0252	0.0218	201.6	167.8	170.2	167.8	106.0	-1.0	0.5654	-0.0057	0.5623	0.4636	1.7132	1.1808	1.2289	1.0684
6	0.0192	0.0161	193.1	161.1	164.3	161.0	101.4	-0.6	0.5531	-0.0283	0.5379	0.4449	1.6945	1.1778	1.2143	1.0442
7	0.0156	0.0150	190.8	159.5	165.0	159.5	95.7	-2.2	0.5294	-0.0138	0.5309	0.4402	1.6901	1.1782	1.2120	1.0421
8	0.0121	0.0104	193.7	164.2	167.7	164.2	96.8	0.3	0.5236	0.0021	0.5373	0.4519	1.7033	1.1871	1.2202	1.0678
9	0.0076	0.0066	195.2	166.6	168.4	166.6	101.9	6.7	0.5494	0.0400	0.5392	0.4569	1.7045	1.1977	1.2214	1.0715
10	0.0025	0.0022	186.1	155.6	156.2	155.6	101.2	6.6	0.5746	0.0426	0.5111	0.4240	1.6770	1.2058	1.2188	1.0723

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
RADIAN	RADIAN	RADIAN					TOTAL	TOTAL	P01	TOT-STG	TOT-STG
1	-0.1130	0.1632	0.7499	47.64	55.28	0.3406	0.1120	0.0236	0.9746	98.14	98.22
2	-0.0672	0.1672	0.6705	52.27	59.93	0.3021	0.0464	0.0104	0.9891	90.64	90.95
3	-0.1072	0.1453	0.6262	55.69	61.06	0.2940	0.0275	0.0066	0.9935	90.83	91.12
4	-0.1534	0.1448	0.5780	56.84	59.11	0.3010	0.0382	0.0197	0.9914	93.22	93.43
5	-0.1575	0.1525	0.5712	52.79	54.08	0.3231	0.0490	0.0141	0.9905	87.50	88.90
6	-0.1696	0.1339	0.5835	51.06	51.69	0.3307	0.0438	0.0132	0.9922	88.78	89.08
7	-0.1472	0.1510	0.5394	51.43	51.34	0.3248	0.0552	0.0173	0.9904	89.42	89.70
8	-0.2136	0.1791	0.5215	52.19	52.60	0.3166	0.0616	0.0204	0.9890	86.82	87.19
9	-0.2321	0.2366	0.5094	51.52	52.96	0.3141	0.0687	0.0236	0.9877	82.08	82.58
10	-0.2705	0.2647	0.5320	47.75	48.85	0.3450	0.0940	0.0334	0.9847	80.29	80.82

MCURR	MCURR	TO/TU	VO/VO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RAD/SEC	KG/SEC			%	%			%
86.73	82.88	1.1902	1.7185	87.42	88.80	1.0700	0.9888	88.41

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet Cruise Configuration
(94 Percent of Design Speed)

S. I. UNITS

ROTOR 1

RUN NO415, SPEED CODE 94, POINT NO 4																			
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	PC/PC	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	P'-1	P'-2	V'-1	V'-2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	PERCENT	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1854	0.1696	182.6	272.0	182.6	182.6	0.9748	217.7	0.0	0.9256	0.5525	0.8015	149.7	163.7	0.7144	0.5064	236.1	171.9	
2	0.1403	0.1418	157.5	265.5	189.5	177.1	0.9942	197.9	0.0	0.8394	0.5750	0.7001	167.5	179.4	0.7074	0.5231	253.0	170.0	
3	0.1357	0.1180	191.3	250.9	191.3	182.5	0.9963	172.1	0.0	0.7555	0.5807	0.7344	187.5	196.7	0.8132	0.5392	247.9	184.2	
4	0.1144	0.1000	192.7	236.3	192.7	181.0	0.9970	154.1	0.0	0.7028	0.5853	0.6952	205.9	213.1	0.8546	0.5577	202.0	191.2	
5	0.0772	0.0693	196.1	214.1	196.1	173.1	0.9970	126.0	0.0	0.6295	0.5963	0.6199	247.3	251.0	0.9598	0.6183	315.4	213.5	
6	0.0614	0.0545	197.0	208.4	197.0	171.0	0.9959	119.2	0.0	0.6091	0.5992	0.6017	267.3	269.8	1.0100	0.6580	332.1	227.9	
7	0.0525	0.0486	196.4	206.3	196.4	170.5	0.9924	116.3	0.0	0.5989	0.5980	0.5947	286.1	281.5	1.0408	0.6844	342.2	237.5	
8	0.0441	0.0396	196.4	204.0	196.4	169.4	0.9887	113.4	0.0	0.5896	0.5971	0.5869	292.4	293.7	1.0717	0.7122	352.4	247.5	
9	0.0329	0.0298	196.5	202.3	196.5	168.4	0.9867	111.0	0.0	0.5857	0.5975	0.5889	306.2	306.2	1.1065	0.7389	363.8	257.4	
10	0.0202	0.0183	195.2	200.1	195.2	165.0	0.9832	112.0	0.0	0.5940	0.5935	0.5724	321.4	321.4	1.1437	0.7647	376.2	267.3	
11	0.0095	0.0083	184.3	193.1	184.3	154.3	0.9558	113.4	0.0	0.6279	0.5580	0.5496	334.6	334.6	1.1546	0.7703	382.0	270.7	

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	0.0102	0.1070	0.2197	1.0046	38.57	36.28	0.4936	0.2872	0.0641	1.3812	79.50	78.55	0.6863	0.3183	-149.7	54.0	1.3635
2	0.0104	0.1048	0.2115	0.8277	40.29	41.44	0.4984	0.1907	0.0484	1.4104	84.95	84.20	0.7239	0.1038	-167.5	18.5	1.4200
3	0.0219	0.1141	0.2325	0.6423	40.66	44.86	0.4864	0.1076	0.0295	1.4200	90.62	90.14	0.7760	0.1337	-187.5	-24.6	1.4327
4	0.0263	0.1154	0.2169	0.5051	40.85	45.90	0.4806	0.0722	0.0203	1.4182	92.90	92.54	0.8192	0.3140	-205.9	-59.1	1.4319
5	0.0122	0.0918	0.1404	0.2752	41.31	45.47	0.4553	0.0570	0.0156	1.4018	93.09	92.75	0.9011	0.6299	-247.3	-125.0	1.4153
6	0.0129	0.0824	0.1088	0.2135	41.36	45.41	0.4393	0.0578	0.0155	1.4067	92.57	92.61	0.9363	0.7228	-267.3	-150.7	1.4187
7	0.0369	0.0804	0.0951	0.1888	41.16	45.54	0.4282	0.0534	0.0141	1.4170	92.97	92.61	0.9593	0.7704	-280.1	-165.3	1.4240
8	0.0423	0.0825	0.0982	0.1638	40.99	45.54	0.4177	0.0512	0.0133	1.4258	93.10	92.74	0.9882	0.8164	-292.6	-180.3	1.4276
9	0.0442	0.0853	0.0850	0.1440	40.92	45.43	0.4101	0.0583	0.0150	1.4331	91.99	91.58	1.0004	0.8547	-306.2	-194.4	1.4320
10	0.0526	0.0913	0.0931	0.1236	40.55	44.73	0.4040	0.0795	0.0200	1.4410	89.04	88.45	1.0253	0.9017	-321.6	-209.8	1.4347
11	0.0344	0.1131	0.1487	0.1121	37.94	41.97	0.3144	0.0894	0.0200	1.4467	88.85	88.23	1.0674	0.9553	-334.6	-221.0	1.4197

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	STAGE	%
1.1174	1.4217	90.09	90.57	198.21	1.1174	1.4217	90.09	90.57

STATOR 1

RUN NO415, SPEED CODE 94, POINT NO 4																			
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	P'-1	P'-2	V'-1	V'-2	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC	
1	0.1926	0.1375	244.6	147.0	132.3	143.8	205.7	30.3	0.9981	0.2050	0.7118	0.4146	1.3073	1.1231	1.3251	1.1231	1.1231	1.1231	
2	0.1252	0.0969	247.8	166.9	160.4	163.3	188.8	34.4	0.8657	0.2047	0.7223	0.4733	1.3682	1.1227	1.3589	1.1227	1.1227	1.1227	
3	0.0826	0.0689	240.8	176.1	175.1	173.4	145.3	30.7	0.7563	0.1748	0.7020	0.5019	1.4043	1.1172	1.3918	1.1172	1.1172	1.1172	
4	0.0566	0.0511	233.7	176.8	180.2	174.6	148.8	27.9	0.6901	0.1585	0.6804	0.5049	1.4112	1.1135	1.3977	1.1135	1.1135	1.1135	
5	0.0269	0.0294	216.4	171.8	177.7	169.6	123.5	27.3	0.6072	0.1597	0.6271	0.4908	1.3990	1.1093	1.3856	1.1093	1.1093	1.1093	
6	0.0196	0.0230	212.5	173.1	177.3	170.6	117.2	29.8	0.5842	0.1731	0.6145	0.4544	1.4021	1.1111	1.3901	1.1111	1.1111	1.1111	
7	0.0161	0.0192	211.5	174.3	177.8	171.7	114.7	30.1	0.5728	0.1733	0.6108	0.4975	1.4051	1.1131	1.3982	1.1131	1.1131	1.1131	
8	0.0131	0.0158	210.2	174.4	177.8	172.1	112.1	27.7	0.5626	0.1595	0.6063	0.4972	1.4049	1.1150	1.4031	1.1150	1.1150	1.1150	
9	0.0161	0.0123	209.4	175.1	177.7	172.8	110.9	28.0	0.5578	0.1604	0.6028	0.4984	1.4064	1.1184	1.4077	1.1184	1.1184	1.1184	
10	0.0063	0.0079	208.2	176.4	175.9	173.8	111.4	30.8	0.5644	0.1755	0.5973	0.5015	1.4099	1.1243	1.4159	1.1243	1.1243	1.1243	
11	0.0023	0.0030	202.0	169.2	167.3	164.2	113.2	31.5	0.5949	0.1875	0.5765	0.4780	1.3890	1.1312	1.4355	1.1312	1.1312	1.1312	

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	SEFF-A	SEFF-P
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	0.0784	0.1607	0.2988	0.7931	31.23	38.12	0.5466	0.1416	0.0292	0.9593	68.06	69.30
2	0.0398	0.1240	0.2494	0.6589	39.18	44.20	0.4442	0.1209	0.0267	0.9645	74.66	75.74
3	0.0265	0.0690	0.1987	0.5815	43.93	47.75	0.4034	0.0697	0.0166	0.9802	84.69	85.38
4	0.0368	0.0323	0.1725	0.5317	45.99	48.42	0.3757	0.0542	0.0138	0.9855	88.45	89.02
5	0.1298	0.0173	0.1621	0.4474	46.49	57.11	0.3352	0.0500	0.0145	0.9884	89.38	89.86
6	0.1513	0.0330	0.1695	0.4111	46.74	47.33	0.3125	0.0517	0.0158	0.9884	88.87	89.38
7	0.1636	0.0417	0.1671	0.3996	47.06	47.60	0.3039	0.0596	0.0188	0.9867	88.89	89.41
8	0.1773	0.0528	0.1519	0.4030	47.24	47.63	0.3037	0.0722	0.0236	0.9841	88.37	88.91
9	0.1946	0.0649	0.1526	0.3975	47.30	47.69	0.2999	0.0823	0.0279	0.9821	86.72	87.35
10	0.2225	0.0900	0.1756	0.3889	46.81	47.78	0.2896	0.0803	0.0282	0.9828	84.05	84.82
11	0.2474	0.1126	0.2272	0.4075	44.29	45.22	0.3107	0.1067	0.0384	0.9785	82.97	83.82

MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	%	%	STAGE	%
823.56	1.1174	1.3960	85.20	85.88	1.1174	0.9819	85.20	85.88

ROTOR 2

														RUN NO415, SPEED CODE 94, POINT NO 4				
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	M'-1	M'-2	V'-1	V'-2
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			M/SEC	M/SEC			M/SEC	M/SEC
1	0.1470	0.0999	135.4	230.4	132.2	177.5	29.4	161.2	0.2175	0.7365	0.3809	0.6632	186.2	198.2	0.5768	0.4991	205.0	179.4
2	0.1043	0.0756	170.5	232.7	167.3	177.7	33.2	150.1	0.1948	0.6978	0.4840	0.6477	202.4	211.1	0.6753	0.5231	237.9	167.9
3	0.0922	0.0616	184.1	226.2	181.8	179.0	29.0	138.3	0.1577	0.6557	0.5263	0.6306	217.4	223.8	0.7485	0.5531	261.8	198.4
4	0.0633	0.0482	184.6	217.6	182.7	178.5	26.7	124.3	0.1450	0.6076	0.5286	0.6067	233.6	237.8	0.7904	0.5899	276.0	211.5
5	0.0263	0.0185	181.1	199.3	178.9	164.2	28.5	112.9	0.1579	0.6025	0.5187	0.5534	270.4	271.5	0.8615	0.6338	300.8	228.3
6	0.0192	0.0141	182.0	191.2	179.5	158.8	30.0	106.3	0.1455	0.5900	0.5206	0.5300	283.3	283.6	0.8884	0.6601	310.5	238.0
7	0.0152	0.0123	182.0	188.3	179.8	160.0	28.2	99.3	0.1554	0.5554	0.5201	0.5217	296.0	296.0	0.9220	0.7025	322.6	253.6
8	0.0377	0.0063	182.6	190.8	180.4	162.7	28.1	99.8	0.1546	0.5501	0.5208	0.5270	313.3	312.2	0.9626	0.7387	337.5	267.5
9	0.0036	0.0023	177.5	192.6	180.9	161.2	31.0	105.3	0.1698	0.5786	0.5223	0.5292	325.3	324.5	0.9828	0.7479	345.4	272.1
10	0.0011	0.0005	175.7	185.1	172.9	152.9	31.4	104.3	0.1799	0.5988	0.4973	0.5058	337.2	336.6	0.9942	0.7604	351.2	278.2

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-P	EFF-A	B'-1	B'-2	VO'-1	VO'-2	PO/PO
	RADIAN	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT	TOT	RADIAN	RADIAN	M/SEC	M/SEC	INLET
1	-0.0406	0.0808	0.2844	0.6619	35.49	51.05	0.2960	-0.1067	-0.0254	1.3427	107.74	108.07	0.8668	0.2048	-156.7	-36.9	1.7596
2	-0.1082	0.0012	0.1835	0.4609	45.39	53.09	0.3498	0.0210	0.0054	1.2887	97.73	97.65	0.7889	0.3281	-169.2	-60.9	1.7817
3	-0.1090	-0.0100	0.1561	0.3579	49.82	54.65	0.3642	0.0666	0.0167	1.2574	91.94	91.66	0.8021	0.4443	-188.5	-85.6	1.7909
4	-0.0869	0.0018	0.1369	0.2816	50.07	55.40	0.3400	0.0260	0.0067	1.2662	96.43	96.30	0.8471	0.5655	-206.9	-113.5	1.7849
5	-0.0438	0.0237	0.0935	0.1661	49.04	51.77	0.3366	0.0386	0.0097	1.2543	93.79	93.59	0.9340	0.7679	-241.9	-158.6	1.7563
6	-0.0338	0.0240	0.1012	0.1143	49.19	50.25	0.3109	0.0374	0.0088	1.2376	93.42	93.22	0.9545	0.8403	-253.4	-177.3	1.7374
7	-0.0142	0.0275	0.0962	0.0917	49.22	50.77	0.2939	0.0227	0.0053	1.2357	95.67	95.54	0.9797	0.8880	-267.8	-196.7	1.7357
8	-0.0128	0.0259	0.0660	0.0894	49.23	51.56	0.2877	0.0359	0.0090	1.2454	93.50	93.29	1.0067	0.9170	-285.2	-212.4	1.7518
9	-0.0130	0.0258	0.0527	0.0828	49.17	50.84	0.2979	0.0597	0.0125	1.2495	88.88	88.52	1.0195	0.9367	-294.2	-219.2	1.7619
10	0.0095	0.0485	0.0887	0.0671	46.52	47.86	0.2936	0.0545	0.0125	1.2549	89.79	89.46	1.0562	0.9891	-305.8	-232.5	1.7409

TO/TO	PO/PO	EFF-AD	EFF-P	MCI/A1	T02/T01	P02 P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	KG/SEC	%	%	ROTOR	ROTOR
%	%	%	%	SQM	%	%	%	%
1.1982	1.7601	88.39	89.27	171.19	1.0723	1.2608	94.49	94.67

STATOR 2

														RUN NO415, SPEED CODE 94, POINT NO 4			
SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	T02/	
	RADIAN	RADIAN	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	M/SEC	RADIAN	RADIAN			INLET	INLET	STAGE	T01	
1	0.1233	0.1416	219.3	167.8	151.8	167.8	158.3	2.5	0.8032	0.0146	0.6061	0.4570	1.7149	1.2142	1.3090	1.0811	
2	0.0909	0.0975	221.5	179.2	165.8	178.1	147.0	5.1	0.7236	0.0286	0.6144	0.4879	1.7616	1.2080	1.2734	1.0768	
3	0.0866	0.0875	220.5	181.1	174.0	181.1	135.4	-0.2	0.6604	-0.0011	0.6135	0.4981	1.7826	1.1999	1.2617	1.0761	
4	0.0487	0.0466	215.6	176.1	177.7	176.0	122.1	-0.8	0.6017	-0.0045	0.6009	0.4849	1.7733	1.1929	1.2583	1.0723	
5	0.0247	0.0210	200.7	163.8	166.8	163.8	111.5	-1.2	0.5091	-0.0074	0.5574	0.4503	1.7416	1.1892	1.2436	1.0712	
6	0.0188	0.0154	193.1	157.9	162.0	157.8	105.1	-4.4	0.5753	-0.0281	0.5358	0.4339	1.7254	1.1868	1.2290	1.0671	
7	0.0154	0.0126	190.6	157.0	163.2	157.0	98.5	-7.2	0.5428	-0.0142	0.5285	0.4314	1.7236	1.1870	1.2269	1.0651	
8	0.0117	0.0100	193.6	162.2	164.0	162.2	99.5	0.2	0.5397	0.0010	0.5348	0.4444	1.7383	1.1964	1.2358	1.0693	
9	0.0066	0.0054	195.4	165.2	164.8	165.0	105.1	6.6	0.5680	0.0398	0.5376	0.4507	1.7459	1.2080	1.2381	1.0741	
10	0.0016	0.0013	188.1	154.4	156.6	154.3	104.2	6.6	0.5871	0.0425	0.5144	0.4187	1.7138	1.2161	1.2354	1.0748	

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	P02/	EFF-A	EFF-P
	RADIAN	RADIAN	RADIAN				TOTAL	TOTAL	P01	TOT-STG	TOT-STG
							%	%	%	%	%
1	-0.0844	0.1631	0.7886	45.63	53.01	0.3821	0.1153	0.0243	0.9747	98.38	98.44
2	-0.0410	0.1690	0.6949	50.50	57.29	0.3380	0.0509	0.0114	0.9885	92.90	93.14
3	-0.0737	0.1436	0.6615	53.66	59.07	0.3234	0.0202	0.0048	0.9955	90.05	90.37
4	-0.1254	0.1446	0.6062	55.33	57.80	0.3263	0.0290	0.0073	0.9937	93.71	93.93
5	-0.1338	0.1509	0.5965	52.47	53.79	0.3455	0.0407	0.0117	0.9923	90.13	90.41
6	-0.1468	0.1341	0.6034	51.10	51.82	0.3531	0.0380	0.0114	0.9933	90.31	90.59
7	-0.1801	0.1526	0.5549	51.43	51.54	0.3420	0.0410	0.0128	0.9929	92.30	92.52
8	-0.1976	0.1781	0.5387	52.42	53.00	0.3312	0.0443	0.0147	0.9922	89.78	90.08
9	-0.2137	0.2364	0.5282	51.74	53.50	0.3276	0.0512	0.0175	0.9909	86.74	85.20
10	-0.2580	0.2646	0.5446	48.81	49.41	0.3639	0.0941	0.0335	0.9845	83.11	83.60

MCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	%	%	STAGE
RAD/SEC	KG/SEC	%	%	%	%	%	%	%
823.56	91.3	1.1982	1.7432	86.77	87.75	1.0723	0.9904	90.44

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(100 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

															RUN NO415, SPEED CODE 10, POINT NO 1									
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	PO1/PO	V0-2	B-1	P-2	M-1	M-2	U-1	U-2	N-1	N-2	V*-1	V*-2						
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC						
1	11.035	9.770	686.2	1005.6	656.2	638.0	0.9090	777.3	0.0	56.5	0.6391	0.9100	520.6	569.6	0.8024	0.6672	861.5	676.9						
2	10.005	8.098	716.1	566.8	716.1	625.0	0.9933	621.4	0.0	44.7	0.6693	0.8720	583.1	624.2	0.8632	0.6207	923.4	688.2						
3	8.594	6.370	728.2	906.7	728.2	644.6	0.9944	526.0	0.0	46.1	0.6617	0.8157	652.6	684.6	0.9154	0.6297	977.8	701.6						
4	7.116	5.251	735.9	657.0	735.9	623.3	0.9914	518.5	0.0	32.5	0.6696	0.7663	716.7	741.8	0.9626	0.6423	1027.2	716.9						
5	5.949	3.401	751.2	751.5	751.2	627.4	0.9906	405.5	0.0	37.2	0.7053	0.6693	860.8	873.5	1.0728	0.7006	1142.5	790.8						
6	2.894	2.662	752.3	726.2	752.3	622.4	0.9910	374.1	0.0	31.0	0.7045	0.6614	936.3	939.1	1.1236	0.7425	1196.4	840.6						
7	2.353	2.358	750.0	764.0	750.0	608.9	0.9888	357.2	0.0	30.4	0.7042	0.6223	974.7	979.6	1.1547	0.7677	1229.9	870.9						
8	1.941	2.103	747.4	691.3	747.4	601.2	0.9862	341.2	0.0	29.6	0.7015	0.6685	1018.4	1022.6	1.1656	0.7996	1263.3	908.3						
9	1.384	1.776	743.9	687.9	743.9	611.7	0.9831	333.3	0.0	29.0	0.6979	0.6607	1065.7	1065.7	1.2192	0.8333	1299.7	947.9						
10	1.110	1.239	720.7	683.4	720.7	607.0	0.9852	333.1	0.0	29.2	0.6741	0.5991	1119.2	1119.2	1.2451	0.8656	1331.2	987.1						
11	0.513	0.245	691.0	667.8	691.0	569.1	0.9301	39.7	0.0	30.8	0.6339	0.5776	1164.4	1164.0	1.2555	0.8728	1348.9	1001.6						

SL	INCS	INCM	LEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-E	LCSS-P	PO2/	ZEFF-P	ZEFF-A	B*-1	B*-2	V0*-1	V0*-2	PO/PO
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TCT	TCT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-1.53	4.02	12.85	55.18	41.65	40.65	0.4393	0.2842	0.0635	1.4409	78.55	77.42	37.21	-17.97	-520.8	207.7	1.4254
2	-1.66	3.75	13.31	43.98	43.90	46.88	0.4454	0.1853	0.0471	1.4576	64.17	83.31	39.22	-4.75	-583.1	57.2	1.4781
3	-1.25	4.03	12.73	33.89	44.35	49.99	0.4465	0.1094	0.0300	1.4609	89.47	88.89	41.96	8.07	-652.6	-98.7	1.4830
4	-1.12	4.00	12.52	26.23	44.04	50.80	0.4421	0.0734	0.0207	1.4550	92.09	91.66	44.31	18.08	-716.7	-223.3	1.4726
5	-2.02	7.54	6.47	12.82	44.90	49.33	0.4270	0.0645	0.0176	1.4100	91.18	90.74	46.91	36.29	-660.8	-466.0	1.4259
6	-1.85	2.13	7.06	8.51	44.93	48.44	0.4081	0.0702	0.0185	1.3985	89.71	89.21	51.05	42.24	-626.3	-565.0	1.4148
7	-0.75	2.08	6.96	8.79	44.76	47.78	0.3971	0.0756	0.0192	1.3911	88.59	88.04	52.44	45.45	-974.7	-622.6	1.4040
8	0.00	2.30	6.96	5.17	44.56	47.38	0.3817	0.0726	0.0183	1.3893	88.56	88.02	53.73	46.57	-1018.4	-680.9	1.3987
9	0.41	2.65	6.40	4.48	44.31	47.62	0.3682	0.0697	0.0173	1.3990	88.87	88.33	55.09	50.61	-1065.7	-732.4	1.4041
10	1.49	3.71	6.47	4.42	42.62	47.32	0.3589	0.0612	0.0150	1.4300	90.42	89.92	57.22	52.79	-1119.2	-786.1	1.4090
11	2.78	5.00	9.16	4.30	39.84	44.88	0.3617	0.0543	0.0129	1.4685	91.87	91.42	59.68	55.38	-1164.4	-824.2	1.3943

TC/TO	PC/PO	EFF-AD	EFF-P	WCI/A1	TC2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
%	%	%	%	%	%	%	%	%
1.1707	1.4279	88.79	89.35	44.20	1.1207	0.9826	84.19	84.19

STATOR 1

															RUN NO415, SPEED CODE 10, POINT NO 1									
SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	V0-1	V0-2	B-1	B-2	M-1	M-2	PC/PO	TC/TO	PO/PO	TC2/TO1	PO2/PO1	ZEFF-A	ZEFF-P					
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	STAGE	INLET	INLET	STAGE	STAGE				
1	10.955	7.566	908.9	606.4	525.3	596.5	734.6	120.7	53.8	11.3	0.6163	0.5237	1.3468	1.1421	1.3607	1.1421	1.1421	1.1421	1.1421	1.1421				
2	6.824	4.962	909.0	672.2	634.8	600.6	650.7	124.4	45.8	10.6	0.6127	0.5838	1.4287	1.1563	1.4088	1.1363	1.1363	1.1363	1.1363	1.1363				
3	4.156	3.183	880.2	679.7	678.6	671.1	566.6	107.4	39.5	9.1	0.7849	0.5630	1.4523	1.1280	1.4304	1.1280	1.1280	1.1280	1.1280	1.1280				
4	2.640	2.205	848.6	670.0	685.2	662.2	499.6	101.9	36.1	6.7	0.7567	0.5855	1.4475	1.1276	1.4369	1.1276	1.1276	1.1276	1.1276	1.1276				
5	1.002	1.111	766.2	632.9	654.2	625.0	397.1	99.6	31.2	4.0	0.6797	0.5535	1.4102	1.1136	1.3963	1.1136	1.1136	1.1136	1.1136	1.1136				
6	0.668	0.838	740.0	621.5	641.8	615.8	368.3	97.6	29.8	4.0	0.6547	0.5444	1.3994	1.1129	1.3836	1.1129	1.1129	1.1129	1.1129	1.1129				
7	0.444	0.674	721.4	613.5	629.5	605.0	352.3	96.5	29.2	4.1	0.6370	0.5351	1.3893	1.1122	1.3769	1.1122	1.1122	1.1122	1.1122	1.1122				
8	0.374	0.555	709.6	607.3	623.3	603.2	337.9	92.3	28.5	8.7	0.6254	0.5301	1.3830	1.1121	1.3740	1.1121	1.1121	1.1121	1.1121	1.1121				
9	0.265	0.425	707.3	613.1	625.2	606.9	330.8	87.4	27.9	8.2	0.6230	0.5550	1.3873	1.1143	1.3827	1.1143	1.1143	1.1143	1.1143	1.1143				
10	0.092	0.238	705.4	619.7	622.4	612.2	331.6	96.0	28.1	8.9	0.6196	0.5396	1.3919	1.1199	1.4146	1.1199	1.1199	1.1199	1.1199	1.1199				
11	-0.026	0.062	686.5	591.5	596.7	576.8	339.3	121.9	24.6	11.9	0.5996	0.5119	1.3655	1.1273	1.4406	1.1273	1.1273	1.1273	1.1273	1.1273				

SL	INCS	INCM	LEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LCSS-P	PO2/	ZEFF-A	ZEFF-P
	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TCT-STG	TCT-STG
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
1	1.15	5.86	16.68	42.54	36.75	46.09	0.4690	0.1578	0.0326	0.9446	64.74	66.24
2	-1.68	3.43	13.05	55.04	45.31	57.75	0.3886	0.0960	0.0213	0.9661	75.55	76.70
3	-5.33	0.14	10.43	30.48	49.86	54.61	0.3498	0.0616	0.0149	0.9793	84.16	84.94
4	-7.43	-1.62	9.54	27.35	51.27	54.18	0.3277	0.0507	0.0129	0.9840	87.79	88.39
5	-11.02	-4.58	9.16	22.15	50.38	51.10	0.2853	0.0389	0.0115	0.9897	87.76	88.32
6	-12.30	-5.52	8.79	20.84	49.75	50.21	0.2694	0.0406	0.0125	0.9699	86.16	86.79
7	-12.97	-5.98	8.70	20.17	46.96	44.30	0.2616	0.0410	0.0130	0.9902	85.32	85.97
8	-13.99	-6.80	8.30	19.72	48.66	46.77	0.2503	0.0501	0.0164	0.9864	84.78	85.45
9	-15.19	-7.80	7.75	19.69	46.97	49.25	0.2511	0.0539	0.0182	0.9876	84.93	85.61
10	-17.03	-9.44	6.91	19.15	48.77	44.46	0.2405	0.0531	0.0187	0.9879	86.88	87.51
11	-18.64	-10.91	14.16	17.73	46.48	46.22	0.2541	0.0934	0.0335	0.9799	86.40	87.08

TC/TO	PC/PO	EFF-AD	EFF-P	WCI/A1	TC2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM
1.1207	1.4030	84.19	84.93	44.20	1.1207	0.9826	84.19	84.19

ROTOR 2

SL	E-1		E-2		E-3		E-4		E-5		E-6		E-7		E-8		E-9		E-10		E-11		E-12		E-13		E-14		E-15		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	2.438	5.817	563.9	938.5	551.5	776.0	117.4	277.7	11.9	33.9	0.4636	0.8643	647.9	689.7	0.6562	0.6795	765.3	792.8													
2	6.371	4.416	484.6	717.3	674.3	764.5	118.3	19.3	9.9	32.8	0.5960	0.7875	704.3	734.5	0.7777	0.6908	893.4	804.6													
3	5.002	3.419	765.8	872.8	698.3	762.3	102.6	637.4	2.3	29.7	0.6180	0.7955	754.7	778.9	0.8377	0.7186	956.6	839.3													
4	3.498	2.369	701.5	851.0	694.4	759.8	99.5	390.0	8.1	27.9	0.6155	0.7166	813.1	827.7	0.8737	0.7341	999.7	854.4													
5	1.426	0.679	663.4	713.4	656.2	631.9	97.6	321.2	6.5	27.7	0.5621	0.6659	944.9	944.9	0.9375	0.7518	1668.5	880.9													
6	0.976	0.466	650.4	650.0	643.4	616.7	94.6	309.4	8.5	26.4	0.5701	0.5884	984.6	987.1	0.9820	0.7614	1697.7	916.3													
7	0.804	0.125	630.4	681.5	629.6	614.5	93.0	294.8	8.4	25.4	0.5672	0.5812	1030.0	1036.0	0.9824	0.8171	1128.9	958.2													
8	-0.243	-0.558	640.5	680.5	634.3	619.5	88.9	281.4	8.0	24.4	0.5600	0.5792	1096.5	1096.5	1.0345	0.8644	1185.5	1018.7													
9	-0.670	-0.953	627.7	674.8	629.9	605.5	99.3	297.9	9.0	24.2	0.5559	0.5714	1132.0	1129.4	1.0546	0.8709	1209.6	1028.6													
10	-0.524	-0.695	666.9	618.6	594.7	528.2	121.3	321.9	11.5	31.4	0.5260	0.5186	1175.5	1172.0	1.0475	0.8344	1208.6	1000.8													

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO	
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE
1	-8.29	-1.34	16.21	32.05	43.44	61.26	0.1106	0.0270	0.0064	1.3020	97.38	97.28	43.70	11.65	-530.5	-162.1	1.7626	
2	-10.52	-4.25	6.60	24.00	54.04	63.09	0.2194	0.1550	0.0387	1.2449	80.63	80.23	40.38	16.80	-586.0	-235.2	1.7955	
3	-9.14	-3.44	7.53	19.03	56.12	64.26	0.2286	0.1261	0.0315	1.2295	81.72	81.16	43.07	24.04	-654.1	-341.5	1.7852	
4	-7.75	-2.67	6.70	15.00	55.73	62.99	0.2304	0.0982	0.0250	1.2155	83.30	82.83	45.76	30.76	-713.7	-437.7	1.7904	
5	-3.91	-0.64	5.51	7.96	52.65	54.80	0.2510	0.1382	0.0336	1.1671	71.45	70.83	52.11	44.16	-843.2	-613.7	1.6363	
6	-2.51	0.00	5.35	6.43	51.57	53.67	0.2341	0.1211	0.0288	1.1622	72.94	71.30	54.12	47.70	-869.4	-677.7	1.6194	
7	-0.84	1.15	4.75	5.97	50.43	53.63	0.2174	0.0993	0.0235	1.1697	76.83	76.31	56.10	50.11	-937.0	-735.2	1.6764	
8	-0.77	1.45	3.65	5.24	50.60	54.06	0.2055	0.0997	0.0236	1.1668	75.32	74.77	57.65	52.41	-1001.6	-804.9	1.6200	
9	-0.54	1.68	3.29	4.68	50.31	52.39	0.2151	0.1259	0.0298	1.1632	69.72	69.07	58.62	53.94	-1032.7	-831.5	1.6145	
10	0.56	2.79	4.55	2.38	47.07	44.94	0.2410	0.1767	0.0388	1.1432	59.00	58.23	60.53	58.14	-1052.2	-850.1	1.5575	

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	%	%	SOFT	%	%	%	%
1.1961	1.6735	80.78	82.11	38.04	1.0673	1.1926	76.41	77.19

STATOR 2

SL	E-1		E-2		E-3		E-4		E-5		E-6		E-7		E-8		E-9		E-10		E-11		E-12		E-13		E-14		E-15	
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	6.913	8.032	839.1	835.4	659.4	634.4	518.4	-47.7	36.0	-3.3	0.7161	0.7666	1.6767	1.2338	1.2366	1.0866														
2	5.031	4.445	676.7	828.1	703.6	674.8	489.9	-46.4	34.6	-3.2	0.7294	0.7632	1.4893	1.2231	1.1764	1.0799														
3	2.965	4.347	642.1	784.1	725.3	705.1	427.9	-40.1	30.5	-2.9	0.7206	0.6863	1.6405	1.2095	1.1363	1.0745														
4	3.475	3.562	612.9	757.5	717.0	756.3	363.0	-41.4	28.1	-3.1	0.6970	0.6453	1.4283	1.1960	1.1307	1.0691														
5	2.160	2.604	719.0	660.6	640.7	619.8	326.4	-33.5	27.0	-2.8	0.6141	0.5681	1.5769	1.1634	1.1234	1.0426														
6	1.520	1.369	640.4	672.9	624.4	672.9	366.0	0.3	25.9	0.0	0.5974	0.5729	1.5623	1.1601	1.1212	1.0405														
7	1.110	0.975	693.2	685.9	624.5	658.0	292.5	6.2	25.0	0.7	0.5918	0.5574	1.5465	1.1713	1.1196	1.0599														
8	0.905	0.801	692.6	645.7	633.4	644.8	280.7	32.6	23.0	2.9	0.5903	0.5477	1.5370	1.1624	1.1070	1.0402														
9	0.811	0.762	677.4	641.8	614.7	646.9	297.3	34.1	25.6	3.1	0.5828	0.5414	1.5335	1.1421	1.1040	1.0437														
10	0.436	0.444	633.6	592.0	546.1	544.4	321.5	22.5	30.5	2.2	0.5322	0.4980	1.4901	1.2026	1.0932	1.0666														

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LOSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE
1	-12.90	5.26	41.21	55.74	66.92	0.1453	0.1724	0.0367	0.9507		
2	-9.17	4.81	57.87	60.03	67.56	0.1720	0.1979	0.0444	0.9410		
3	-11.56	5.36	33.43	62.58	64.75	0.1974	0.2576	0.0613	0.9247		
4	-13.56	5.41	31.23	61.21	63.04	0.2002	0.2509	0.0633	0.9303		
5	-14.42	6.28	29.79	55.34	59.25	0.1857	0.1862	0.0479	0.9625		
6	-15.44	4.22	25.91	54.44	56.93	0.1705	0.1642	0.0494	0.9666		
7	-16.44	10.27	24.25	54.53	55.45	0.1823	0.2056	0.0644	0.9566		
8	-18.14	12.04	21.00	54.92	54.28	0.1860	0.2439	0.0805	0.9468		
9	-19.15	14.34	22.56	53.27	52.53	0.2064	0.2467	0.0852	0.9485		
10	-17.43	14.89	28.22	46.15	48.89	0.2370	0.2508	0.0892	0.9556		

MC/PR	MC/PR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	%	%	%	%	%
8342	219.18	1.1961	1.5862	71.81	73.57	1.0673	0.9478	52.43

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(100 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	PO1/PO	V6-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2		
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	PLENUM	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC					
1	10.276	11.106	455.6	460.8	615.4	613.5	0.9706	765.2	C.0	51.3	0.6364	0.6644	521.6	570.5	0.8022	0.8666	161.4	443.7
2	9.064	9.547	711.4	664.7	711.4	670.8	0.9965	472.2	C.0	45.1	0.6491	0.6550	583.5	625.1	0.8602	0.8054	950.7	672.4
3	8.368	5.421	711.8	664.6	716.8	654.8	0.9989	560.9	C.0	40.2	0.6701	0.6052	653.6	605.8	0.9268	0.8112	976.0	692.8
4	6.952	4.127	723.2	664.6	723.2	676.6	0.9988	514.0	C.0	37.1	0.6764	0.7586	717.7	742.9	0.9532	0.6377	1616.9	714.3
5	4.219	2.787	729.9	744.6	729.9	625.3	0.9937	404.8	C.0	32.9	0.6835	0.6592	862.1	874.6	1.0577	0.6522	1129.4	762.3
6	3.218	2.794	729.2	714.7	729.2	618.7	0.9902	374.1	C.0	31.6	0.6828	0.6304	931.7	940.4	1.1078	0.7331	1183.7	831.1
7	2.664	2.454	726.4	721.6	726.4	613.5	0.9878	354.3	C.0	30.6	0.6824	0.6174	976.2	981.3	1.1466	0.7623	1216.3	865.6
8	2.202	2.086	726.7	619.1	726.7	594.2	0.9894	345.5	C.0	30.1	0.6822	0.6060	1016.9	1023.5	1.1735	0.7944	1251.5	902.9
9	1.655	1.626	726.2	618.4	726.2	594.7	0.9830	339.6	C.0	29.6	0.6818	0.6045	1067.3	1067.3	1.2046	0.8273	1292.1	942.1
10	1.028	1.002	723.4	611.7	723.4	596.2	0.9793	341.1	C.0	30.0	0.6770	0.5964	1120.9	1120.9	1.2483	0.8596	1334.1	976.0
11	0.447	0.449	678.9	652.8	676.9	592.4	0.9412	347.8	C.0	32.2	0.6317	0.5674	1166.1	1165.7	1.2555	0.6579	1349.3	967.0

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-E	LOSS-P	PG2/	ZEFF-P	ZEFF-A	B*-1	B*-2	W6*-1	W6*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PG1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-1.57	4.62	13.20	54.84	41.84	39.47	0.4667	0.2757	0.0614	1.4562	76.69	77.79	37.22	-17.62	-51.16	194.7	1.4172
2	-1.12	3.88	14.64	42.38	43.91	46.42	0.4566	0.1748	0.0444	1.4566	64.47	64.15	39.25	-4.02	-182.9	47.1	1.4756
3	-0.77	4.51	14.23	35.77	44.18	46.78	0.4477	0.1107	0.0303	1.4572	69.48	66.90	42.43	8.66	-655.6	-104.7	1.4798
4	-0.54	4.52	12.78	26.20	44.37	50.81	0.4444	0.0766	0.0215	1.4560	51.66	91.44	44.84	18.65	-717.7	-226.9	1.4724
5	-0.15	3.41	9.11	10.85	44.28	49.96	0.4211	0.0603	0.0163	1.4146	91.96	51.56	49.76	36.93	-862.1	-470.0	1.4265
6	-0.92	3.65	7.75	4.04	44.17	46.70	0.4064	0.0591	0.0154	1.4054	91.57	91.16	51.97	47.93	-931.7	-565.9	1.4166
7	0.06	2.62	7.26	7.32	44.05	47.94	0.3954	0.0565	0.0165	1.4013	91.66	91.24	53.27	45.96	-976.2	-622.0	1.4163
8	0.74	2.04	7.08	5.78	43.94	47.72	0.3821	0.0543	0.0136	1.4121	61.72	61.31	54.47	46.65	-1019.9	-676.1	1.4196
9	1.02	3.26	6.34	5.15	43.62	46.12	0.3710	0.0522	0.0154	1.4234	91.70	91.27	55.70	50.36	-1067.3	-727.4	1.4250
10	1.42	3.45	6.56	4.21	43.42	47.45	0.3695	0.0547	0.0183	1.4311	66.56	67.40	57.16	51.66	-1120.9	-779.1	1.4248
11	2.90	5.12	6.71	3.63	40.25	44.59	0.3754	0.0737	0.0172	1.4646	69.16	68.56	59.79	55.97	-1166.1	-617.5	1.4617

TC/TC	PO/PO	EFF-AD	EFF-P	MC1/A1	TC2/TC1	PG2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBH/SEC			STAGE	ROTOR
1.1213	1.4334	60.38	60.91	45.83	1.1213	1.4334	69.36	69.61

STATOR 1

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	V6-1	V6-2	B-1	B-2	M-1	M-2	PO/PO	TC/TC	PC/PO	TC2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TOT
1	10.820	7.567	686.6	577.4	516.4	575.0	723.1	119.9	54.4	11.6	0.7907	0.5052	1.3423	1.1401	1.3616	1.1401
2	6.794	5.051	694.0	654.4	621.2	642.9	643.6	121.9	45.9	10.7	0.7981	0.5676	1.4230	1.1349	1.4047	1.1349
3	4.182	3.348	855.0	664.6	665.9	655.1	554.5	111.6	39.3	9.6	0.7721	0.5793	1.4479	1.1269	1.4254	1.1269
4	1.673	2.390	874.2	674.5	672.6	648.5	494.4	101.4	36.3	8.9	0.7454	0.5731	1.4446	1.1216	1.4229	1.1216
5	0.085	1.227	752.2	622.4	646.7	614.5	395.9	96.0	31.7	8.9	0.6671	0.5438	1.4104	1.1134	1.3967	1.1134
6	0.606	0.610	726.4	615.6	626.1	608.2	366.4	95.1	30.4	8.9	0.6435	0.5375	1.4017	1.1152	1.3929	1.1152
7	0.440	0.731	716.9	610.2	623.1	602.9	354.4	94.1	29.6	8.9	0.6325	0.5326	1.3954	1.1131	1.3900	1.1131
8	0.366	0.610	707.8	606.6	619.4	599.4	342.4	92.8	28.9	8.8	0.6236	0.5290	1.3910	1.1138	1.3889	1.1138
9	0.300	0.507	706.6	612.7	623.3	605.4	337.5	93.8	28.4	8.8	0.6236	0.5239	1.3953	1.1166	1.3965	1.1166
10	0.206	0.358	704.2	617.7	616.7	608.4	339.9	97.0	28.9	10.6	0.6176	0.5370	1.3988	1.1229	1.4051	1.1229
11	0.068	0.146	677.2	566.3	561.3	577.6	347.5	110.8	30.9	10.9	0.5901	0.5690	1.3715	1.1304	1.4352	1.1304

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-E	LOSS-P	PG2/	ZEFF-A	ZEFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	PO1	TOT-STG	TOT-STG
1	1.48	6.46	17.01	42.74	35.94	44.97	0.4781	0.1556	0.0321	0.4674	65.72	67.17
2	-1.41	3.71	13.12	38.24	44.95	51.66	0.3966	0.1037	0.0230	0.9644	75.61	76.75
3	-5.02	0.45	11.61	36.18	49.43	52.02	0.3533	0.0657	0.0157	0.9785	84.03	84.82
4	-7.14	-1.39	9.73	27.39	50.48	53.58	0.3311	0.0562	0.0141	0.9822	87.08	87.71
5	-10.53	-4.09	9.00	22.83	49.92	50.76	0.2886	0.0444	0.0129	0.9866	88.35	88.89
6	-11.72	-4.95	8.66	21.53	49.35	50.36	0.2705	0.0484	0.0149	0.9865	87.77	88.33
7	-12.58	-5.59	8.52	20.75	49.19	49.53	0.2642	0.0464	0.0195	0.9855	87.29	87.67
8	-13.52	-6.23	8.36	20.13	49.09	49.14	0.2601	0.0747	0.0245	0.9826	86.50	87.12
9	-14.64	-7.25	8.36	19.63	49.51	48.54	0.2537	0.0773	0.0296	0.9796	85.78	86.43
10	-16.23	-8.64	9.98	18.88	48.99	48.54	0.2416	0.0609	0.0284	0.9817	83.05	83.64
11	-17.29	-9.67	12.13	20.01	45.81	46.49	0.21	0.1000	0.0360	0.9790	83.42	84.24

NCCRR	MCOFF	TC/TC	PC/PO	EFF-AD	EFF-P	TC2/TC1	PG2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPR	LBH/SEC							
8354.	217.36	1.1213	1.4048	64.12	64.66	1.1213	0.9600	84.12

ROTOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	W-3	W-4
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	8.686	5.897	544.0	673.0	531.4	700.4	116.3	521.1	12.3	36.3	0.4462	0.7426	846.8	896.7	1.6445	0.6132	752.1	720.7
2	6.510	4.506	466.7	654.3	656.4	701.4	116.7	496.4	10.0	35.1	0.5797	0.7324	705.3	735.8	0.7686	0.6318	681.7	741.0
3	5.194	3.700	389.8	627.7	681.5	671.3	106.6	446.1	8.9	32.5	0.6033	0.7069	757.6	760.1	0.8244	0.6602	942.6	775.1
4	3.988	2.770	326.9	727.5	679.5	675.1	98.1	395.6	7.2	30.3	0.6621	0.6681	814.3	828.9	0.8625	0.6949	987.5	802.2
5	1.895	1.629	253.0	690.6	646.1	593.0	94.6	350.7	6.3	30.5	0.5723	0.5861	942.3	946.3	0.9341	0.7145	1065.8	841.6
6	1.243	0.816	643.8	658.4	636.5	568.8	94.0	331.7	6.4	36.3	0.5637	0.5576	987.5	988.8	0.9607	0.7359	1097.3	868.9
7	0.953	0.671	636.5	652.2	627.7	545.9	92.3	319.0	6.4	29.3	0.5580	0.5522	1031.6	1031.6	0.9822	0.7719	1129.5	911.8
8	0.364	0.214	639.9	695.3	632.7	576.7	92.9	315.8	6.4	28.6	0.5588	0.5569	1092.1	1092.1	1.0366	0.8153	1180.1	965.0
9	0.071	0.089	639.2	695.9	630.1	545.3	167.3	335.3	9.7	30.5	0.5564	0.5544	1135.6	1131.1	1.0627	0.8219	1204.3	977.9
10	-0.039	-0.120	609.8	625.4	594.7	527.4	110.3	294.2	10.4	32.5	0.5279	0.5219	1175.2	1173.7	1.0579	0.8260	1222.2	969.8

SL	INCS	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	W-1	W-2	W-3	W-4	PG/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	INLET
1	-7.12	-C.17	16.01	31.42	42.32	59.07	0.1865	-0.0737	-0.0175	1.3321	106.52	106.79	44.86	13.45	-532.3	-169.6	1.7929	1.7929	1.7929
2	-6.62	-3.24	10.42	23.07	53.87	61.24	0.2790	0.0823	0.0206	1.2754	90.05	89.70	41.78	18.71	-568.6	-239.2	1.6319	1.6319	1.6319
3	-6.54	-2.69	4.00	16.13	55.38	62.52	0.2636	0.0633	0.0159	1.2643	91.20	90.96	43.64	25.51	-651.2	-334.0	1.6310	1.6310	1.6310
4	-7.03	-1.45	8.09	13.83	55.18	61.62	0.2767	0.0390	0.0097	1.2526	93.75	93.54	46.48	32.65	-716.2	-433.3	1.6027	1.6027	1.6027
5	-2.34	0.53	6.36	7.67	52.37	55.04	0.2922	0.0670	0.0160	1.2306	87.63	87.26	52.49	45.63	-647.7	-595.5	1.7294	1.7294	1.7294
6	-2.11	1.20	6.76	5.41	51.59	52.67	0.2844	0.0735	0.0170	1.2169	85.49	85.66	54.52	49.11	-693.5	-656.9	1.7017	1.7017	1.7017
7	-0.69	1.69	6.04	4.85	50.80	52.50	0.2661	0.0557	0.0128	1.2243	88.57	88.24	56.25	51.40	-939.3	-712.6	1.7029	1.7029	1.7029
8	-0.64	1.38	4.29	4.43	51.09	51.09	0.2532	0.0532	0.0124	1.2308	88.75	88.41	57.57	53.14	-996.2	-772.3	1.7180	1.7180	1.7180
9	-0.71	1.51	3.61	3.99	50.65	50.65	0.237	0.0764	0.0163	1.2324	83.90	83.41	58.45	54.46	-1026.3	-795.7	1.7217	1.7217	1.7217
10	0.64	2.67	6.21	2.81	47.76	46.40	0.2666	0.0661	0.0191	1.2329	82.43	81.85	60.61	57.80	-1064.9	-837.5	1.6682	1.6682	1.6682

TC/TC	PC/PC	EFF-AD	EFF-P	W1/W1
INLET	INLET	INLET	INLET	SOFT
1.2023	1.7560	85.65	86.73	37.48

T02/T01	PO2/PO1	EFF-AD	EFF-P
STAGE	STAGE	STAGE	STAGE
1.0723	1.2456	89.44	89.77

STATOR 2

SL	EP51-1	EP51-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	W-3	W-4	PG/PO
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	INLET
1	7.017	5.057	789.5	634.8	661.4	614.5	111.8	206.4	40.2	1.7	0.6654	0.5707	1.7502	1.2310	1.3000	1.0798	1.0798	1.0798	
2	4.190	5.453	812.0	714.7	650.8	714.7	485.6	-1.6	36.6	-0.1	0.6884	0.5996	1.6069	1.2223	1.2573	1.0799	1.0799	1.0799	
3	3.844	4.065	802.1	706.4	674.3	706.2	436.4	-16.5	32.9	-1.3	0.6840	0.5955	1.8122	1.2100	1.2712	1.0756	1.0756	1.0756	
4	2.861	2.846	773.5	671.5	666.9	671.1	388.5	-21.3	30.1	-1.8	0.6598	0.5666	1.7795	1.1990	1.2374	1.0756	1.0756	1.0756	
5	1.528	1.365	695.0	593.5	602.8	593.5	346.0	-4.4	29.9	-0.4	0.5902	0.4994	1.7020	1.1905	1.2115	1.0698	1.0698	1.0698	
6	1.197	1.059	665.3	572.2	578.6	572.1	328.0	-10.7	29.5	-1.1	0.5638	0.4810	1.6823	1.1886	1.2032	1.0676	1.0676	1.0676	
7	0.948	0.824	640.7	568.1	560.0	560.0	316.5	-7.1	26.6	-0.7	0.5596	0.4774	1.6790	1.1862	1.2072	1.0673	1.0673	1.0673	
8	0.708	0.626	649.1	579.9	590.2	579.8	315.3	6.8	28.1	0.7	0.5657	0.4864	1.6899	1.1947	1.2106	1.0692	1.0692	1.0692	
9	0.469	0.426	669.8	582.0	580.3	581.6	324.5	19.6	30.0	1.9	0.5634	0.4859	1.6904	1.2061	1.2099	1.0736	1.0736	1.0736	
10	0.174	0.162	636.7	544.0	540.9	543.3	335.8	27.5	31.8	2.9	0.5318	0.4510	1.6544	1.2154	1.2081	1.0751	1.0751	1.0751	

SL	INCH	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LCSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	PO1	TOT	TOT
1	-10.66	10.27	39.48	53.32	62.52	0.2617	0.0931	0.0194	0.9761	97.35	97.45
2	-7.17	7.91	36.76	58.46	60.40	0.2535	0.0509	0.0114	0.9862	84.44	84.94
3	-9.19	6.95	34.70	61.34	67.04	0.2530	0.0384	0.0087	0.9902	87.13	87.52
4	-11.54	6.72	31.94	61.36	64.12	0.2642	0.0473	0.0120	0.9881	88.47	88.81
5	-11.66	6.64	30.28	55.60	56.51	0.2910	0.0704	0.0203	0.9852	80.59	81.10
6	-11.63	6.22	30.62	53.41	54.40	0.2931	0.0575	0.0172	0.9868	80.12	80.64
7	-12.70	6.84	29.34	53.72	54.01	0.2937	0.0736	0.0231	0.9859	81.96	82.43
8	-14.13	10.82	27.44	54.67	54.96	0.2853	0.0829	0.0279	0.9835	81.04	81.54
9	-14.82	13.19	26.04	53.30	54.84	0.2931	0.0740	0.0323	0.9818	75.87	76.51
10	-16.59	11.62	26.94	49.25	50.35	0.3187	0.1146	0.0407	0.9799	73.74	74.44

MCCR	MCCR	TC/TC	PC/PC	EFF-AD	EFF-P	T02/T01	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	STAGE	STAGE	STAGE	STAGE
8954	217.36	1.2023	1.7734	83.72	84.35	1.0773	0.9846	87.02	87.02

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VW-1	VW-2	VW-1	VW-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	VW-1	VW-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	0.567	2.748	817.4	851.7	500.1	650.0	116.5	540.8	22.9	39.1	0.4424	0.7214	646.8	687.7	0.6292	0.8711	731.1	674.2
2	4.168	4.678	841.1	880.7	600.8	699.2	150.7	512.1	18.4	37.6	0.5585	0.7879	782.3	792.4	0.7462	0.8094	861.2	890.1
3	3.655	1.700	887.5	810.1	681.4	680.6	102.8	468.9	8.9	35.3	0.5841	0.4883	754.5	776.7	0.8095	0.8191	927.9	718.8
4	1.437	1.003	845.1	697.4	637.9	649.3	98.2	419.2	8.3	32.8	0.5896	0.4866	810.9	825.3	0.8520	0.8206	974.8	783.0
5	1.164	0.684	838.0	684.8	630.8	580.3	95.8	397.8	8.6	32.4	0.5572	0.5686	783.2	784.2	0.9238	0.8862	1056.7	812.0
6	0.840	0.533	838.1	452.2	623.1	552.8	93.8	346.5	8.8	32.1	0.5499	0.5491	1627.1	1027.1	0.9793	0.7981	1122.2	876.8
7	0.298	0.114	835.4	664.6	648.5	566.8	94.7	346.9	8.4	31.5	0.5539	0.5582	1087.3	1083.3	1.0438	0.7986	1174.9	929.5
8	-0.047	-0.238	836.4	665.4	628.2	560.2	101.5	359.3	9.2	32.7	0.5580	0.5562	1128.7	1126.2	1.0463	0.7993	1204.8	949.5
10	-0.109	-0.209	608.4	633.7	598.0	509.9	122.4	376.3	11.6	36.4	0.5295	0.5259	1178.1	1168.6	1.0411	0.7819	1263.3	932.2

SL	INCS	INCM	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VW-1	VW-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE							P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-3.78	1.18	16.99	33.76	48.64	57.14	0.2344	-0.1082	-0.0238	1.3536	108.15	108.50	46.21	12.48	-829.5	-147.0	1.8204
2	-8.59	-2.32	18.07	24.45	51.45	59.08	0.3215	0.0741	0.0184	1.2920	91.77	91.46	42.81	18.26	-586.6	-228.3	1.8604
3	-7.73	-2.06	8.38	19.58	54.52	60.78	0.3281	0.0707	0.0178	1.2625	91.02	90.69	44.47	24.09	-650.7	-307.7	1.8781
4	-6.39	-1.31	7.42	15.15	54.56	60.86	0.3143	0.0555	0.0089	1.2777	94.84	94.65	47.13	31.98	-714.5	-406.0	1.8533
5	-3.16	0.71	5.24	8.98	52.39	55.77	0.3229	0.0526	0.0128	1.2669	91.29	90.99	32.87	48.88	-842.4	-562.9	1.8839
6	-2.03	1.28	5.84	6.41	51.74	57.49	0.3130	0.0572	0.0135	1.2522	89.82	89.58	54.68	48.89	-887.4	-626.4	1.7761
7	-0.67	1.72	5.57	5.35	51.10	52.88	0.3013	0.0558	0.0130	1.2534	89.72	89.39	56.27	56.95	-923.3	-680.3	1.7706
8	-0.77	1.44	3.45	5.24	51.47	54.33	0.2904	0.0596	0.0141	1.2647	88.91	88.53	57.45	52.48	-992.8	-736.4	1.7933
9	-0.61	1.61	3.19	4.70	51.22	53.37	0.2977	0.0842	0.0200	1.2661	84.54	84.84	58.54	53.84	-1027.2	-766.7	1.7986
10	0.40	2.63	5.44	3.13	48.08	48.15	0.3056	0.0880	0.0198	1.2678	84.15	83.61	60.37	57.24	-1047.7	-792.3	1.7876

TO/TO	PO/PO	EFF-AD	EFF-P	WCI/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC			ROTOR	ROTOR
		%	%	SOFT			%	%
1.2129	1.8118	86.89	87.93	37.19	1.0789	1.2749	90.90	91.21

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VW-1	VW-2	VW-1	VW-2	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TO1
1	7.100	8.117	774.0	622.1	563.1	622.1	531.0	8.7	43.1	0.8	0.6497	0.5147	1.7796	1.2351	1.3181	1.0831
2	5.248	5.064	758.8	658.9	609.1	658.8	501.2	17.9	39.4	0.9	0.6654	0.5486	1.6391	1.2278	1.2742	1.0830
3	3.832	3.897	785.2	661.1	637.4	661.0	459.1	-9.2	35.7	-0.8	0.6652	0.5531	1.8562	1.2171	1.2742	1.0811
4	2.824	2.784	762.5	635.3	641.7	635.2	411.8	-12.5	32.7	-1.1	0.6470	0.5325	1.835	1.2077	1.2662	1.0764
5	1.564	1.448	760.4	576.3	592.6	576.3	374.3	-8.5	32.3	-0.6	0.5925	0.4818	1.7811	1.2021	1.2511	1.0767
6	1.285	1.137	670.9	552.3	570.0	552.0	353.8	-15.5	31.8	-1.6	0.5860	0.4612	1.7595	1.2001	1.2405	1.0740
7	1.086	0.950	660.8	544.2	544.2	544.1	344.0	-9.0	31.4	-0.9	0.5568	0.4541	1.7533	1.2005	1.2413	1.0745
8	0.853	0.756	675.5	562.8	580.3	562.8	345.8	-4.9	30.8	-0.5	0.5679	0.4687	1.7720	1.2086	1.2497	1.0782
9	0.664	0.558	677.5	569.7	574.7	569.2	358.8	22.2	32.0	2.7	0.5667	0.4722	1.7791	1.2204	1.2512	1.0828
10	0.238	0.227	647.4	529.9	527.2	529.3	375.6	25.4	35.5	2.8	0.5380	0.4362	1.7407	1.2299	1.2483	1.0837

SL	INCM	DEV	TURN	RHOW-1	RHOW-2	D-FAC	OMEGA-B	LOSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE						P01	TOT-1TG	TOT-2TG
1	-7.73	9.31	42.33	51.15	54.19	0.3360	0.1084	0.0228	0.9733	98.51	98.57
2	-4.45	8.98	38.41	56.07	64.06	0.3031	0.0452	0.0182	0.9884	87.12	87.56
3	-6.32	7.50	36.53	59.45	65.29	0.2986	0.0274	0.0065	0.9930	88.54	88.64
4	-9.00	7.42	33.79	60.49	63.19	0.3060	0.0370	0.0094	0.9910	91.10	91.40
5	-9.14	8.22	33.12	56.34	57.26	0.3351	0.0567	0.0164	0.9880	86.07	86.50
6	-9.55	7.69	33.44	54.25	54.79	0.3429	0.0471	0.0142	0.9908	85.70	86.13
7	-10.05	8.61	32.31	53.74	53.97	0.3437	0.0511	0.0160	0.9903	85.40	85.84
8	-11.45	9.64	31.29	55.33	55.68	0.3376	0.0406	0.0200	0.9881	83.87	84.37
9	-12.81	13.49	29.74	54.43	55.87	0.3302	0.0800	0.0206	0.9182	79.49	80.33
10	-12.93	13.48	32.74	49.45	51.26	0.3748	0.0860	0.0306	0.9846	77.97	78.65

WCI/A1	WCI/A1	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
RPM	LBM/SEC	INLET	INLET	INLET	INLET			%
8318	216.70	1.2129	1.7699	84.96	86.14	1.0789	0.9879	86.20

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(100 Percent of Design Speed)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	10.357	9.703	445.7	927.2	645.7	567.3	0.9608	744.0	0.0	52.6	0.5966	0.8414	519.7	568.4	0.7684	0.8336	628.9	594.4
2	0.857	9.159	473.7	911.6	673.7	614.3	0.9933	673.4	0.0	47.5	0.6366	0.8161	581.9	622.9	0.8359	0.8520	697.8	616.0
3	7.411	6.917	615.4	654.6	651.8	632.9	0.9934	582.0	0.0	42.6	0.6387	0.7669	651.2	663.2	0.6801	0.5717	595.7	600.9
4	0.256	5.871	677.6	617.9	603.6	631.1	0.9903	520.5	0.0	39.5	0.6451	0.7266	715.2	740.2	0.9441	0.9339	592.1	600.4
5	4.258	3.899	702.1	736.4	702.1	611.0	0.9888	425.5	0.0	35.3	0.6551	0.6492	859.0	871.7	1.0352	0.6666	1109.4	746.4
6	3.489	3.066	711.1	712.1	711.1	583.6	0.9891	400.7	0.0	34.3	0.6642	0.6257	928.4	937.1	1.0424	0.6997	1169.4	796.4
7	3.061	2.455	717.0	700.5	717.0	563.2	0.9894	388.1	0.0	32.7	0.6703	0.6144	972.7	977.8	1.1294	0.7274	1208.4	829.4
8	2.652	2.161	722.6	694.2	722.6	544.1	0.9896	375.1	0.0	32.7	0.6760	0.6082	1016.3	1019.9	1.1665	0.7622	1248.9	870.0
9	2.043	1.690	728.7	689.6	728.7	523.1	0.9886	366.2	0.0	32.3	0.6802	0.6036	1063.5	1063.5	1.2056	0.7934	1288.1	907.0
10	1.295	1.044	720.0	682.9	720.0	507.4	0.9883	367.7	0.0	32.6	0.6734	0.5996	1116.9	1116.9	1.2428	0.8230	1328.8	946.1
11	0.466	0.467	681.1	652.1	681.1	526.7	0.9460	374.0	0.0	34.8	0.6740	0.5678	1161.9	1161.5	1.2536	0.8260	1346.6	954.1

SL	INCS	INCN	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LCSS-P	PO2/	TEFF-P	TEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TCY	TCY	CEGREE	CEGREE	PT/SEC	PT/SEC	
1	0.05	5.60	13.50	56.11	40.01	37.91	0.4984	0.2538	0.0569	1.4394	81.57	80.60	38.79	-17.32	-519.7	177.6	1.4085
2	-0.51	4.90	13.38	45.04	42.79	43.66	0.5065	0.1916	0.0487	1.4512	84.25	83.40	40.37	-4.69	-581.9	50.5	1.4681
3	0.32	5.60	14.74	34.45	42.81	47.21	0.4892	0.1027	0.0281	1.4636	90.75	90.24	43.53	9.07	-651.2	-161.2	1.4809
4	0.71	5.84	13.65	76.93	42.72	48.60	0.4782	0.0560	0.0157	1.4695	94.40	94.08	44.15	19.21	-715.2	-220.0	1.4820
5	-0.16	4.40	6.79	14.17	43.19	48.29	0.4518	0.0366	0.0097	1.4567	95.58	95.34	50.77	36.61	-859.0	-446.2	1.4641
6	-0.22	3.66	7.18	10.22	41.54	47.64	0.4386	0.0462	0.0122	1.4537	93.95	93.62	52.58	42.36	-928.4	-536.4	1.4663
7	0.44	3.28	6.64	8.30	43.75	47.68	0.4287	0.0510	0.0132	1.4541	93.09	92.71	53.64	45.34	-972.7	-589.7	1.4652
8	0.67	3.18	6.24	6.77	43.94	48.09	0.4139	0.0476	0.0171	1.4598	93.34	92.97	54.61	47.84	-1016.3	-644.6	1.4713
9	0.99	3.22	5.62	5.64	44.03	46.22	0.4043	0.0418	0.0120	1.4676	92.61	92.20	55.67	50.03	-1063.5	-695.3	1.4776
10	1.46	3.66	4.15	4.72	43.37	47.67	0.3999	0.0673	0.0154	1.4841	91.12	90.61	57.20	52.46	-1116.9	-749.1	1.4816
11	2.73	4.05	0.41	4.00	40.54	44.36	0.4067	0.0647	0.0152	1.5163	91.12	90.56	59.62	55.63	-1161.9	-787.5	1.4609

TO/TO	PL/PC	EFF-AC	EFF-P	MC1/A1	TO2/TO1	PC2/PO1	EFF-AD	EFF-P
INLET	INLET	%	INLET	LBM/SEC	%	STAGE	%	%
1.1267	1.4663	91.54	91.99	43.15	1.1267	1.4663	91.54	91.99

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	TC2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	STAGE
1	11.020	7.853	840.0	507.1	456.7	464.1	705.0	105.3	57.0	11.8	0.7441	0.4342	1.3403	1.1361	1.3704	1.1361	1.1361
2	7.130	5.496	848.3	572.3	553.3	556.7	643.1	124.1	49.2	12.4	0.7527	0.4937	1.4069	1.1348	1.3911	1.1348	1.1348
3	4.702	3.883	823.6	606.4	604.9	596.6	556.0	107.4	42.7	10.2	0.7310	0.5255	1.4495	1.1278	1.4326	1.1278	1.1278
4	3.189	2.877	801.4	612.3	624.3	604.6	502.5	97.3	38.8	9.1	0.7106	0.5319	1.4607	1.1236	1.4423	1.1236	1.1236
5	1.435	1.535	745.0	595.4	617.4	587.8	417.0	94.8	34.0	8.2	0.6575	0.5179	1.4467	1.1191	1.4374	1.1191	1.1191
6	1.027	1.179	727.2	595.6	611.0	586.5	394.3	103.4	32.8	10.0	0.6400	0.5173	1.4459	1.1205	1.4353	1.1205	1.1205
7	0.818	0.963	719.1	596.5	606.6	587.5	382.9	102.9	32.2	9.9	0.6319	0.5176	1.4462	1.1216	1.4352	1.1216	1.1216
8	0.660	0.787	716.3	597.4	612.6	590.1	371.2	93.1	31.2	9.0	0.6290	0.5184	1.4466	1.1228	1.4353	1.1228	1.1228
9	0.510	0.621	715.0	603.1	614.6	595.7	365.2	94.7	30.7	8.6	0.6268	0.5229	1.4514	1.1256	1.4417	1.1256	1.1256
10	0.316	0.406	711.9	609.2	616.8	595.5	365.9	108.1	30.9	10.2	0.6222	0.5270	1.4561	1.1316	1.4495	1.1316	1.1316
11	0.113	0.161	667.9	582.9	577.7	570.1	373.4	121.5	32.9	12.6	0.5674	0.5012	1.4314	1.1396	1.4865	1.1396	1.1396

SL	INCS	INCN	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LCSS-P	PO2/	TEFF-A	TEFF-P	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	PO1	TCY	TCY	CEGREE	CEGREE	PT/SEC	PT/SEC	
1	4.20	9.01	17.22	45.14	32.67	40.06	0.5432	0.1557	0.0321	0.9520	89.32	70.65	1.1361	1.1361	1.1361	1.1361	1.1361
2	1.92	7.04	14.89	36.80	41.05	44.28	0.4595	0.1306	0.0287	0.9591	73.40	74.61	1.1348	1.1348	1.1348	1.1348	1.1348
3	-2.13	3.14	11.55	32.54	44.26	50.34	0.3958	0.0690	0.0167	0.9788	64.84	65.58	1.1278	1.1278	1.1278	1.1278	1.1278
4	-4.66	1.12	9.94	29.68	46.59	51.43	0.3652	0.0503	0.0128	0.9856	60.35	60.84	1.1236	1.1236	1.1236	1.1236	1.1236
5	-8.10	-1.75	6.29	24.87	49.36	50.08	0.3263	0.0277	0.0153	0.9867	57.76	57.76	1.1191	1.1191	1.1191	1.1191	1.1191
6	-10.03	-2.53	5.79	22.83	49.24	49.85	0.3045	0.0526	0.0160	0.9874	56.27	56.27	1.1205	1.1205	1.1205	1.1205	1.1205
7	-11.24	-3.04	4.98	19.24	49.26	49.91	0.2951	0.0553	0.0175	0.9870	55.30	55.30	1.1216	1.1216	1.1216	1.1216	1.1216
8	-11.24	-4.05	4.53	22.24	49.43	50.08	0.2947	0.0718	0.0236	0.9852	54.58	54.58	1.1228	1.1228	1.1228	1.1228	1.1228
9	-12.35	-4.96	4.50	21.69	50.14	50.47	0.2862	0.0770	0.0261	0.9821	53.99	53.99	1.1256	1.1256	1.1256	1.1256	1.1256
10	-14.16	-6.57	10.23	20.71	49.82	50.60	0.2732	0.0748	0.0262	0.9826	53.42	53.42	1.1316	1.1316	1.1316	1.1316	1.1316
11	-15.30	-7.66	14.31	20.84	46.80	47.56	0.2866	0.0633	0.0334	0.9800	52.94	52.94	1.1396	1.1396	1.1396	1.1396	1.1396

MCORR	MCOPR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	%	STAGE	%	%
8224	213.97	1.1267	1.4404	86.73	87.40	1.1267	0.9810	86.73	

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	P-1	P-2	M-1	M-2	U-1	U-2	R-1	R-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	2.417	5.694	466.3	610.7	451.9	545.3	102.5	550.3	12.6	42.6	0.3996	0.6631	649.9	688.3	0.6085	0.5112	710.4	611.1
2	5.993	4.296	486.7	752.6	576.4	543.5	119.2	525.3	11.7	41.3	0.3659	0.6681	760.3	733.6	0.7062	0.5301	818.9	628.7
3	4.722	3.523	435.4	772.0	627.4	603.1	106.4	483.4	5.1	38.6	0.3924	0.6526	795.1	777.3	0.7884	0.5666	906.0	670.9
4	3.665	2.767	411.3	745.8	634.5	605.3	93.4	435.6	8.4	35.7	0.3589	0.6362	811.4	823.9	0.7140	0.6056	936.2	720.3
5	1.571	1.077	626.6	615.6	618.5	555.7	90.0	401.6	9.1	35.6	0.3661	0.5764	938.9	942.9	0.9091	0.6522	1043.2	775.8
6	1.176	0.762	625.4	654.7	616.1	531.6	103.4	363.6	9.4	31.5	0.4465	0.5536	983.9	989.0	0.9360	0.6766	1075.1	806.2
7	0.871	0.647	624.4	647.5	617.2	536.3	95.1	262.4	8.8	30.6	0.3533	0.5424	1027.9	1027.9	0.9732	0.7162	1118.5	854.7
8	0.324	0.184	620.0	665.4	622.7	556.3	95.7	365.1	6.7	33.3	0.3474	0.5561	1088.2	1094.2	1.0180	0.7599	1171.6	909.1
9	0.034	-0.128	622.6	664.9	623.1	555.3	104.5	369.0	10.0	35.8	0.3462	0.5521	1119.6	1127.0	1.0359	0.7590	1195.3	914.1
10	-0.017	-0.060	664.3	640.9	541.9	502.9	121.6	397.2	11.6	31.3	0.3106	0.5292	1171.6	1169.5	1.0379	0.7611	1204.8	921.6

SL	INCS	INCH	LEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-P	LUSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	VO-1	VO-2	PO/PU
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-2.27	4.74	17.45	34.84	37.42	53.94	0.3075	-0.1478	-0.0251	1.3676	116.76	111.27	49.77	12.89	-544.0	-136.0	1.8661
2	-4.68	0.14	10.67	26.17	47.83	55.22	0.3732	0.0097	0.0624	1.3264	98.99	56.95	45.32	19.13	-561.6	-207.6	1.6415
3	-6.06	-0.28	9.37	20.27	52.64	57.61	0.3850	0.0630	0.0159	1.3051	97.93	42.24	46.15	23.88	-654.7	-290.8	1.9062
4	-5.00	0.00	8.21	15.74	53.26	58.90	0.3561	0.0214	0.0023	1.3040	97.15	47.64	46.51	37.77	-718.0	-390.3	1.9038
5	-2.41	1.47	5.63	9.38	51.91	55.02	0.3548	0.0362	0.0088	1.2973	96.49	46.28	53.62	44.24	-839.9	-501.3	1.8737
6	-1.44	1.47	5.91	6.73	51.72	57.21	0.3418	0.0376	0.0088	1.2864	93.88	43.66	56.99	46.28	-880.8	-601.9	1.8568
7	-0.43	1.46	5.77	5.38	51.75	55.42	0.3227	0.0371	0.0064	1.2669	93.59	43.27	54.51	51.18	-932.8	-665.5	1.8526
8	-0.53	1.65	5.51	4.82	52.12	55.44	0.3111	0.0420	0.0101	1.2572	92.57	42.29	57.88	52.24	-992.4	-719.1	1.8435
9	-0.58	1.65	5.19	4.74	51.95	55.45	0.3292	0.0805	0.0161	1.2663	86.49	45.98	56.58	52.64	-1020.1	-738.1	1.8879
10	0.60	2.63	5.34	3.65	48.22	49.47	0.3291	0.0741	0.0168	1.3657	67.73	47.25	60.57	54.93	-1049.4	-771.3	1.8662

TC/TC	PU/PU	EFF-AD	EFF-P	MC1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBM/SEC	Y	Y	ACTOR	ROTOR
1.2211	1.8707	64.70	96.20	36.27	1.0836	1.3050	64.13	94.35

STATOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PC	TO/TO	PC/PO	T02/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	TOT
1	7.142	8.188	742.7	548.5	569.7	546.4	540.3	10.4	46.5	1.1	0.6219	0.4510	1.2134	1.2359	1.3503	1.0478
2	5.333	5.666	751.2	522.0	547.5	572.6	514.4	21.9	45.1	2.1	0.6305	0.4918	1.8631	1.2302	1.3686	1.0852
3	3.944	3.954	750.1	600.1	511.5	600.1	475.8	2.0	35.1	0.2	0.6319	0.4905	1.8946	1.2213	1.2971	1.0855
4	2.930	2.763	736.1	586.4	544.0	586.4	427.9	-0.5	35.5	-0.9	0.6214	0.4882	1.8898	1.2135	1.2945	1.0810
5	1.404	1.357	690.5	547.3	544.1	547.2	396.4	-0.5	35.1	-1.0	0.5799	0.4547	1.8668	1.2112	1.2876	1.0817
6	1.205	1.056	665.9	526.9	547.3	526.6	379.3	-18.0	34.7	-2.0	0.5591	0.4573	1.8437	1.2098	1.2750	1.0789
7	1.102	0.965	655.5	519.8	546.1	519.6	359.6	-14.1	32.3	-1.6	0.5497	0.4311	1.8391	1.2103	1.2716	1.0783
8	0.917	0.789	676.3	546.1	576.3	546.1	345.4	-4.7	32.5	-0.5	0.5650	0.4537	1.8676	1.2260	1.2864	1.0833
9	0.812	0.547	677.5	552.7	555.5	552.4	387.9	17.3	34.9	1.8	0.5637	0.4551	1.8719	1.2329	1.2854	1.0891
10	0.708	0.185	655.0	519.2	521.2	516.8	396.7	20.5	37.3	2.3	0.5416	0.4248	1.8399	1.2431	1.2871	1.0905

SL	INCH	LEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-B	LUSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	PO1	TOT-STC	TOT-STC
1	-4.38	9.59	49.40	47.93	54.69	0.4094	0.1170	0.0249	0.9720	101.73	101.66
2	-0.68	10.19	40.98	52.20	58.15	0.3497	0.0634	0.0143	0.9651	93.52	93.77
3	-2.93	8.47	31.94	56.24	61.92	0.3485	0.0260	0.0062	0.9939	90.09	90.45
4	-4.15	7.61	38.44	54.59	61.03	0.3525	0.0320	0.0081	0.9927	94.27	94.47
5	-6.32	8.68	36.09	55.73	57.04	0.3761	0.0361	0.0116	0.9922	91.32	91.63
6	-6.45	7.34	36.68	54.19	54.86	0.3687	0.0371	0.0117	0.9929	90.40	91.20
7	-8.14	8.00	34.83	54.39	54.11	0.3854	0.0372	0.0116	0.9931	90.55	90.86
8	-9.72	9.45	33.00	56.21	56.96	0.3683	0.0410	0.0137	0.9918	89.31	89.64
9	-9.86	13.06	33.14	54.73	56.90	0.2714	0.0439	0.0151	0.9915	83.26	83.85
10	-11.14	14.99	35.01	56.95	52.77	0.4120	0.0764	0.0279	0.9898	82.39	83.01

NCORR	MCORR	TO/TO	PU/PU	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	Y	Y	STAGE	Y
872.6	213.97	1.2211	1.8609	67.74	88.76	1.0838	0.9900	60.44	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(94 Percent of Design Speed)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EP11-1	EP11-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	U-1	U-2	W-1	W-2	PC/PO	TC/TO	PC/PO	TC/TO	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	INLET	INLET	STAGE	TO1	
1	10.947	9.319	816.5	846.2	816.5	846.2	816.5	846.2	0.0	0.0	51.4	0.5698	0.8823	492.6	538.7	0.7293	0.5599	789.2	820.3	620.3	643.7
2	0.744	7.419	649.3	910.9	649.3	910.9	649.3	910.9	0.0	0.0	45.1	0.6181	0.8284	351.5	590.4	0.8029	0.5797	844.2	844.2	844.2	844.2
3	7.197	6.987	649.3	852.9	649.3	852.9	649.3	852.9	0.0	0.0	41.0	0.6187	0.7642	417.2	647.3	0.8634	0.5619	908.0	844.2	844.2	844.2
4	5.653	5.281	649.3	804.4	649.3	804.4	649.3	804.4	0.0	0.0	38.8	0.6190	0.7178	377.8	701.6	0.8831	0.5944	926.4	844.2	844.2	844.2
5	3.331	3.368	676.1	714.9	676.1	714.9	676.1	714.9	0.0	0.0	35.4	0.6209	0.6333	314.1	824.2	0.9030	0.6531	1087.0	844.2	844.2	844.2
6	2.526	2.597	677.2	697.8	677.2	697.8	677.2	697.8	0.0	0.0	31.8	0.6301	0.6169	279.9	888.1	1.0330	0.6975	1110.3	844.2	844.2	844.2
7	2.081	2.499	677.4	687.0	677.4	687.0	677.4	687.0	0.0	0.0	31.2	0.6302	0.6063	221.9	924.7	1.0643	0.7234	1144.0	844.2	844.2	844.2
8	1.710	1.818	677.6	678.1	677.6	678.1	677.6	678.1	0.0	0.0	30.6	0.6304	0.5957	163.2	966.6	1.0957	0.7505	1177.4	844.2	844.2	844.2
9	1.309	1.410	677.1	672.3	677.1	672.3	677.1	672.3	0.0	0.0	30.4	0.6299	0.5912	1007.9	1007.9	1.1296	0.7782	1214.2	844.2	844.2	844.2
10	0.845	0.899	676.3	667.9	676.3	667.9	676.3	667.9	0.0	0.0	30.7	0.6292	0.5855	1658.5	1058.5	1.1648	0.8058	1252.9	844.2	844.2	844.2
11	0.408	0.427	631.3	644.9	631.3	644.9	631.3	644.9	0.0	0.0	32.5	0.5843	0.5622	1101.2	1100.9	1.1749	0.8113	1269.4	844.2	844.2	844.2

SL	INCS	INCH	DEV	TURN	RMOV-1	RMOV-2	D-FAC	OMEGA-0	LOSS-P	PO2/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PC/PO	TC/TO	PC/PO	TC/TO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	INLET	STAGE	TO1
1	-0.17	5.38	12.01	57.39	38.52	38.64	0.4412	0.2190	0.0487	1.4265	84.33	83.53	38.57	-10.81	-492.6	200.9	1.3862	1.1225	1.3862	1.1225
2	-1.26	4.15	13.04	44.48	42.08	44.89	0.4497	0.1586	0.0409	1.4193	86.54	85.84	39.42	-5.83	-551.5	56.7	1.4336	1.1160	1.4336	1.1160
3	-0.99	4.99	13.40	39.07	42.05	47.01	0.4558	0.1013	0.0278	1.4161	90.35	89.67	42.82	7.74	-471.2	-87.7	1.4300	1.1183	1.4300	1.1183
4	0.05	5.17	12.43	27.49	41.96	47.56	0.4575	0.0711	0.0200	1.4081	92.46	92.08	45.48	17.99	-477.8	-206.0	1.4183	1.1332	1.4183	1.1332
5	-0.55	4.00	6.12	14.44	42.31	44.37	0.4280	0.0472	0.0184	1.3719	91.06	90.44	50.38	35.94	-814.1	-432.7	1.3851	1.1352	1.3851	1.1352
6	-0.46	3.50	6.09	11.15	42.44	46.56	0.4049	0.0447	0.0174	1.3727	90.83	90.41	52.42	41.27	-879.9	-520.5	1.3851	1.1352	1.3851	1.1352
7	0.51	3.35	5.90	9.51	42.41	46.37	0.3964	0.0447	0.0176	1.3734	90.26	89.81	53.70	44.19	-921.9	-571.4	1.3851	1.1352	1.3851	1.1352
8	1.15	3.45	5.38	7.95	42.36	46.04	0.3886	0.0711	0.0184	1.3733	89.30	88.81	54.88	46.93	-963.2	-622.2	1.3851	1.1352	1.3851	1.1352
9	1.44	3.67	4.83	7.07	42.27	46.04	0.3756	0.0769	0.0197	1.3801	88.29	87.75	56.12	49.04	-1007.9	-666.2	1.3866	1.1366	1.3866	1.1366
10	1.92	4.14	5.00	6.33	41.72	45.62	0.3756	0.0908	0.0230	1.3919	86.24	85.58	57.66	51.33	-1058.5	-717.7	1.3905	1.1374	1.3905	1.1374
11	3.28	5.50	7.99	5.76	38.91	43.00	0.3800	0.0907	0.0221	1.4195	86.78	86.11	60.17	54.21	-1101.2	-754.8	1.3741	1.1374	1.3741	1.1374

TC/TO	PC/PO	EFF-AD	EFF-P	MC1/A1	TC/TO	PC/PO	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1124	1.3945	88.71	89.23	41.95	1.1124	1.3945	88.71	89.23

STATOR 1

SL	EP11-1	EP11-2	V-1	V-2	VM-1	VM-2	VO-1	VO-2	R-1	R-2	M-1	M-2	PC/PO	TC/TO	PC/PO	TC/TO
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	TO1
1	10.980	7.630	861.0	579.6	502.8	563.9	699.0	115.7	54.7	11.5	0.7679	0.4973	1.3147	1.1279	1.3519	1.1279
2	6.993	5.104	861.7	637.6	600.4	627.4	418.2	113.4	45.8	10.2	0.7705	0.5594	1.3983	1.1225	1.3742	1.1225
3	4.384	3.340	829.0	640.1	632.0	632.0	536.4	101.3	40.3	9.1	0.7464	0.5595	1.4066	1.1160	1.3913	1.1160
4	2.872	2.344	796.3	678.2	636.6	620.4	478.3	98.5	36.9	8.0	0.7098	0.5497	1.3964	1.1115	1.3886	1.1115
5	1.190	1.226	723.2	595.7	612.0	588.5	385.4	82.2	32.2	6.9	0.6413	0.5214	1.3895	1.1043	1.3882	1.1043
6	0.841	0.964	704.2	595.0	608.8	587.6	362.0	83.6	30.7	6.1	0.6277	0.5206	1.3678	1.1050	1.3557	1.1050
7	0.677	0.822	699.9	592.8	605.7	585.6	350.7	81.8	30.1	5.9	0.6186	0.5183	1.3654	1.1057	1.3549	1.1057
8	0.539	0.692	696.4	589.5	600.8	567.4	341.1	80.0	29.6	5.8	0.6096	0.5150	1.3623	1.1071	1.3536	1.1071
9	0.395	0.545	688.5	592.6	600.2	566.4	337.2	85.2	29.3	5.3	0.6064	0.5170	1.3645	1.1102	1.3583	1.1102
10	0.263	0.339	695.8	597.2	597.9	586.7	339.4	111.6	29.7	10.8	0.6023	0.5199	1.3678	1.1160	1.3695	1.1160
11	0.062	0.129	644.2	568.1	567.2	555.9	349.6	117.2	31.4	11.9	0.5801	0.4918	1.3429	1.1225	1.3490	1.1225

SL	INCS	INCH	DEV	TURN	RMOV-1	RMOV-2	D-FAC	OMEGA-0	LOSS-P	PO2/	SEFF-A	SEFF-P	TC/TO	PC/PO	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	PO1	TOT	TOT	INLET	INLET	STAGE	TO1
1	1.50	6.22	16.83	42.74	35.17	43.81	0.4703	0.1662	0.0331	0.9482	70.35	71.59	1.1279	1.3519	83.66	84.37
2	-1.54	3.57	12.63	35.59	43.52	50.24	0.3893	0.0977	0.0217	0.9682	77.65	78.63	1.1225	1.3742	83.66	84.37
3	-4.56	0.91	10.45	31.20	46.92	51.40	0.3522	0.0567	0.0136	0.9827	85.36	86.02	1.1160	1.3913	83.66	84.37
4	-6.50	-0.80	9.81	27.88	48.04	50.71	0.3311	0.0469	0.0120	0.9866	86.54	87.14	1.1115	1.3886	83.66	84.37
5	-10.02	-3.79	9.03	23.29	47.31	48.09	0.2931	0.0402	0.0111	0.9903	87.71	88.23	1.1043	1.3882	83.66	84.37
6	-11.46	-4.64	8.85	21.64	47.57	47.94	0.2776	0.0538	0.016	0.9875	88.56	89.14	1.1050	1.3557	83.66	84.37
7	-12.13	-5.15	8.55	21.16	47.43	47.72	0.2708	0.0592	0.0188	0.9866	85.77	86.36	1.1057	1.3549	83.66	84.37
8	-12.86	-5.67	8.34	20.81	47.17	47.39	0.2672	0.0663	0.0218	0.9853	84.41	85.00	1.1071	1.3536	83.66	84.37
9	-13.75	-6.35	7.82	21.06	47.23	47.59	0.2649	0.0740	0.0251	0.9837	82.99	83.71	1.1102	1.3583	83.66	84.37
10	-14.43	-7.83	10.78	18.88	46.89	47.41	0.2475	0.0753	0.0264	0.9836	81.07	81.89	1.1160	1.3695	83.66	84.37
11	-16.91	-9.19	14.18	19.45	44.37	44.45	0.2702	0.1091	0.0391	0.9778	80.36	81.25	1.1225	1.3490	83.66	84.37

MC/PC	MC/PC	TC/TO	PC/PO	EFF-AD	EFF-P	TC/TO	PC/PO	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
78.99	208.02	1.1124	1.3945	83.66	84.37	1.1124	1.3945	83.66	84.37

ROTOR 2

SL	EP21-1	EP21-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	8.600	5.766	525.9	804.5	524.0	736.7	112.5	406.4	12.8	32.0	0.4615	0.7618	612.7	682.3	0.4239	0.6521	726.4	757.1
2	4.287	4.243	431.2	866.7	642.2	765.0	107.4	446.2	9.5	36.0	0.5606	0.7487	666.1	694.7	0.7633	0.6767	851.3	783.4
3	4.605	3.065	667.1	833.7	659.9	737.4	97.4	388.9	8.4	27.7	0.5850	0.7214	713.7	736.7	0.7929	0.7055	904.1	815.3
4	3.362	1.844	660.9	790.1	652.9	704.4	95.8	352.0	8.2	26.6	0.5806	0.6829	769.0	782.8	0.8243	0.7144	938.6	826.5
5	0.760	-0.178	629.3	688.2	622.5	618.3	92.3	302.1	8.5	26.0	0.5925	0.5910	809.9	825.5	0.8881	0.7308	1011.5	873.7
6	0.234	-0.427	623.2	661.5	616.4	603.8	92.1	278.2	8.5	26.1	0.5400	0.5479	923.3	933.5	0.9140	0.7702	1042.2	897.0
7	-0.197	-0.648	614.2	644.0	607.8	601.9	90.4	255.9	8.5	25.8	0.5379	0.5412	974.2	976.2	0.9391	0.8042	1072.3	927.1
8	-0.748	-1.130	612.7	649.6	606.0	600.3	90.3	246.3	8.5	25.5	0.5352	0.5364	1031.3	1027.5	0.9778	0.8419	1119.3	983.7
9	-0.942	-1.331	608.1	643.1	597.6	594.0	112.4	249.2	10.7	24.7	0.5297	0.5403	1070.6	1068.2	0.9826	0.8428	1129.3	999.7
10	-0.739	-0.896	576.1	576.4	564.2	566.2	116.6	271.5	11.7	23.2	0.4990	0.4853	1109.8	1108.5	0.9895	0.8264	1142.3	978.2

SL	INCS	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-PAC	OMEGA-8	LOSS-P	PO2/	HEFF-P	HEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-8.51	-1.25	17.06	30.98	41.40	58.38	0.0974	0.0161	0.0038	1.2645	98.31	98.25	43.40	12.50	-500.2	-165.9	1.6692
2	-10.50	-4.23	10.07	22.54	31.55	60.85	0.1920	0.1205	0.0290	1.2144	83.99	83.55	40.90	18.26	-558.7	-244.4	1.6995
3	-9.15	-3.47	8.64	17.90	32.99	61.89	0.1928	0.0721	0.0181	1.2053	88.38	88.07	43.04	25.15	-618.0	-247.8	1.6916
4	-7.71	-2.63	4.65	14.60	32.47	60.04	0.2043	0.0668	0.0149	1.1918	87.76	87.44	45.80	21.21	-672.3	-239.0	1.6389
5	-4.01	-0.14	5.08	8.29	30.83	52.70	0.2271	0.1274	0.0312	1.1414	71.43	70.89	52.82	43.72	-797.3	-491.2	1.5619
6	-2.89	0.42	5.34	6.05	49.57	51.55	0.2018	0.1084	0.0258	1.1254	71.75	71.27	53.74	47.69	-840.4	-643.4	1.5381
7	-1.45	0.93	4.68	5.45	48.86	51.42	0.1850	0.0936	0.0221	1.1253	73.89	73.45	55.49	50.04	-883.4	-715.3	1.5217
8	-1.20	1.02	3.63	4.83	48.70	51.06	0.1757	0.0993	0.0235	1.1196	70.75	70.28	57.21	52.38	-941.0	-779.2	1.5286
9	-1.11	1.11	3.19	4.21	47.91	49.34	0.1791	0.1123	0.0264	1.1168	67.37	66.87	58.65	53.84	-988.2	-799.6	1.5221
10	0.44	2.67	7.26	1.57	44.87	42.04	0.2002	0.1687	0.0363	1.0893	51.00	50.42	60.40	58.84	-993.3	-837.0	1.4994

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/AL	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	S	S	SOFT			ROTOR	ROTOR
							S	S
1.1735	1.5849	81.05	82.24	36.85	1.0549	1.1573	77.34	78.00

STATO: 2

SL	EP21-1	EP21-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	N-1	N-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC
1	7.020	9.182	775.1	794.1	610.5	793.5	477.5	-20.5	37.6	-2.2	0.6508	0.6764	1.5180	1.2072	1.1910	1.0704		
2	5.394	6.033	790.4	797.9	645.7	796.5	437.2	-47.7	32.2	-2.4	0.6420	0.6433	1.5482	1.1945	1.1067	1.0684		
3	4.650	4.968	790.3	755.5	692.3	754.7	381.3	-35.4	28.8	-2.7	0.6403	0.6476	1.5191	1.1840	1.0821	1.0625		
4	4.253	4.294	769.2	742.8	686.1	742.3	347.7	-29.0	26.9	-2.2	0.6432	0.6384	1.5277	1.1751	1.0942	1.0569		
5	2.872	2.621	699.9	690.7	633.3	690.4	298.1	-9.8	25.2	-0.5	0.6418	0.5931	1.5175	1.1647	1.1088	1.0547		
6	2.132	1.861	678.5	677.5	623.5	677.5	267.4	-9.1	23.2	-0.3	0.6335	0.5824	1.5151	1.1599	1.1084	1.0489		
7	1.511	1.222	672.8	659.6	623.0	659.3	234.8	20.1	22.2	1.7	0.5784	0.5464	1.5028	1.1582	1.1034	1.0467		
8	0.910	0.690	647.8	647.2	620.3	646.7	247.3	25.1	21.7	2.2	0.5725	0.5338	1.4929	1.1633	1.0924	1.0446		
9	0.477	0.335	659.5	636.3	602.4	635.7	268.4	27.8	24.0	2.5	0.5631	0.5421	1.4826	1.1706	1.0873	1.0478		
10	0.112	0.058	590.6	540.5	524.7	536.9	271.1	26.4	27.3	2.8	0.4996	0.4554	1.3993	1.1776	1.0445	1.0490		

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-PAC	OMEGA-8	LOSS-P	PO2/	HEFF-P	HEFF-A	B-1	B-2	VO-1	VO-2	PO/PO	
DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET		
1	-13.02	6.32	40.03	51.55	60.29	0.1116	0.3376	0.0753	0.0097							50.12	50.95
2	-10.59	4.62	36.64	56.91	62.00	0.1347	0.3320	0.0745	0.0111							42.74	43.34
3	-13.23	5.60	31.51	59.65	59.95	0.1703	0.3050	0.0910	0.0971							30.54	37.24
4	-14.77	6.30	29.13	59.07	59.67	0.1604	0.3177	0.0803	0.0182							49.10	45.80
5	-16.19	8.58	25.71	53.65	57.10	0.1429	0.1426	0.0411	0.0406							54.72	55.37
6	-18.15	9.03	23.49	52.79	54.51	0.1245	0.0785	0.0230	0.0030							61.12	61.48
7	-19.23	11.30	20.44	52.74	55.08	0.1288	0.0971	0.0204	0.0032							61.00	61.53
8	-20.50	12.37	19.52	52.30	53.79	0.1425	0.1177	0.0300	0.0766							59.37	59.93
9	-20.77	13.77	21.58	50.49	52.46	0.1622	0.1390	0.0477	0.0736							50.63	51.19
10	-21.09	15.52	24.53	43.28	43.94	0.2335	0.2644	0.0947	0.0589							25.45	25.69

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	S	S			STAGE	S
RPM	LRM/SEC								
7889	208.02	1.1735	1.5030	71.16	72.76	1.0549	0.9483	48.99	

OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW
Sonic Inlet, Cruise Configuration
(94 Percent of Design Speed)

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EP81-1	EP81-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	U-1	U-2	W-1	W-2	V1-1	V1-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	10.409	7.700	425.4	329.4	422.4	374.7	0.0779	730.4	0.0	31.7	0.5864	0.6378	492.2	538.3	0.7426	0.8442	802.2	606.0
2	0.832	7.956	440.8	375.0	440.8	423.4	0.0984	645.1	0.0	45.9	0.6136	0.6064	351.0	386.9	0.7990	0.8424	840.4	625.2
3	7.375	4.125	454.1	461.2	454.1	431.5	0.0944	555.7	0.0	41.3	0.6069	0.7329	616.7	647.3	0.8341	0.8711	899.0	636.0
4	4.115	3.013	454.0	795.0	454.0	421.1	0.0934	494.3	0.0	38.4	0.6088	0.7085	677.2	701.0	0.8751	0.8828	942.0	653.9
5	4.000	1.361	443.3	708.2	443.3	384.4	0.0944	377.1	0.0	34.1	0.6162	0.6264	613.4	623.3	0.9750	0.8424	1049.6	726.7
6	3.183	2.490	446.5	685.9	446.5	388.8	0.0944	370.4	0.0	32.5	0.6193	0.6082	679.1	687.4	1.0251	0.8405	1109.2	777.4
7	2.710	2.395	447.8	479.5	447.8	377.0	0.0938	358.9	0.0	31.9	0.6206	0.5989	621.1	625.9	1.0573	0.7131	1137.7	809.0
8	2.707	1.897	448.9	669.1	448.9	370.4	0.0928	349.4	0.0	31.3	0.6217	0.5887	662.4	665.7	1.0893	0.7300	1172.0	840.0
9	1.788	1.485	448.6	667.8	448.6	368.4	0.0900	344.7	0.0	31.3	0.6214	0.5819	1007.1	1007.1	1.1235	0.7654	1200.8	871.8
10	1.177	0.961	448.8	655.5	448.8	358.0	0.0833	343.9	0.0	31.4	0.6170	0.5735	1057.7	1057.7	1.1581	0.7928	1247.1	906.0
11	0.588	0.464	424.2	636.0	424.2	333.3	0.0748	346.5	0.0	31.0	0.5773	0.5540	1100.3	1100.3	1.1700	0.8040	1265.0	923.1

SL	INCS	INCH	DEV	TURN	RHOVH-1	RHOVH-2	D-FAC	OMEGA-S	LOSS-P	PO2/	SEFF-P	SEFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.93	4.62	12.40	30.22	39.99	30.43	0.4451	0.2463	0.0549	1.4044	81.70	80.80	37.80	-18.42	-492.2	192.1	1.3039
2	-1.00	4.32	13.03	44.84	42.10	44.25	0.4471	0.1617	0.0411	1.4165	84.37	85.60	39.79	-5.04	-551.0	95.2	1.4329
3	0.12	5.44	13.87	39.11	41.61	46.78	0.4483	0.0836	0.0229	1.4223	92.23	91.83	43.32	0.21	-616.7	-91.3	1.4329
4	0.40	5.61	12.65	27.71	41.69	47.27	0.4405	0.0463	0.0170	1.4151	93.75	93.43	43.92	16.22	-677.7	-204.7	1.4244
5	-0.10	4.45	8.34	14.47	42.02	46.30	0.4342	0.0323	0.0142	1.3860	93.25	92.93	50.83	36.16	-813.4	-428.4	1.3947
6	-0.05	3.93	6.50	11.10	42.14	46.37	0.4133	0.0491	0.0131	1.3871	93.25	92.90	52.00	41.68	-879.1	-517.0	1.3978
7	0.09	3.73	5.82	9.36	42.15	46.30	0.4070	0.0507	0.0133	1.3894	92.70	92.43	54.00	44.52	-921.1	-567.1	1.3991
8	1.48	3.79	5.61	8.00	42.14	45.97	0.3944	0.0573	0.0140	1.3905	91.61	91.21	55.22	47.22	-962.4	-616.4	1.3986
9	1.73	3.99	5.28	6.94	42.03	45.75	0.3877	0.0644	0.0164	1.3943	90.40	89.94	56.43	49.49	-1007.1	-662.8	1.4012
10	2.20	4.30	5.64	6.02	41.30	45.13	0.3839	0.0745	0.0191	1.4084	88.64	88.07	58.01	51.90	-1057.7	-713.0	1.4031
11	3.54	5.76	6.49	5.72	38.73	42.98	0.3838	0.0790	0.0168	1.4379	89.92	89.39	60.43	54.71	-1100.3	-753.4	1.3910

TD/TD	PO/PO	EFF-AD	EFF-P	WCI/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LEM/SEC			ROTOR	ROTOR
		§	§	SOP1			§	§
1.1129	1.4052	90.48	90.93	41.62	1.1129	1.4052	90.48	90.93

STATOR 1

SL	EP81-1	EP81-2	V-1	V-2	VH-1	VH-2	VO-1	VO-2	B-1	B-2	M-1	M-2	PO/PO	TD/TD	PO/PO	T02/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	INLET	INLET	STAGE	T01
1	10.976	7.742	841.9	548.4	481.9	536.6	0.0903	113.3	95.0	11.8	0.7494	0.4731	1.3160	1.1262	1.3368	1.1262
2	7.096	3.298	843.1	512.7	575.2	601.6	0.1044	116.0	40.9	10.9	0.7571	0.5324	1.3481	1.1282	1.3723	1.1222
3	4.522	3.594	817.1	617.9	613.9	679.8	0.1233	99.7	40.9	9.3	0.7241	0.5391	1.4062	1.1151	1.3961	1.1151
4	3.009	2.623	782.4	608.9	618.9	618.9	0.1233	95.8	37.7	9.0	0.6964	0.5318	1.4493	1.1115	1.3931	1.1115
5	1.505	1.490	715.7	592.8	600.8	575.6	0.0908	91.1	32.9	9.0	0.6338	0.5293	1.3794	1.1091	1.3490	1.1091
6	3.944	1.192	701.4	584.4	599.1	577.1	0.0477	92.0	31.3	9.1	0.6200	0.5107	1.3799	1.1054	1.3404	1.1054
7	0.773	1.011	694.6	585.3	597.5	578.2	0.0462	90.9	30.7	8.9	0.6132	0.5112	1.3801	1.1067	1.3700	1.1067
8	0.623	0.833	687.1	583.8	595.4	576.6	0.0460	91.7	30.2	9.0	0.6054	0.5094	1.3783	1.1085	1.3705	1.1085
9	0.483	0.625	683.2	587.0	591.6	580.0	0.0417	90.3	30.0	8.9	0.6010	0.5114	1.3805	1.1115	1.3759	1.1115
10	0.230	0.341	678.5	592.1	585.8	583.1	0.0424	102.7	30.3	10.0	0.5992	0.5150	1.3839	1.1169	1.3893	1.1169
11	0.032	0.096	648.8	573.1	563.0	552.7	0.0468	117.9	21.6	12.0	0.5770	0.4891	1.3404	1.1225	1.4076	1.1225

SL	INCS	INCH	DEV	TURN	RHOVH-1	RHOVH-2	D-FAC	OMEGA-S	LOSS-P	PO2/	SEFF-A	SEFF-P
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT
1	2.31	7.02	17.15	43.22	34.20	42.44	0.4891	0.1599	0.0350	0.9502	88.14	89.43
2	-0.40	4.72	17.91	36.36	42.36	48.93	0.4843	0.0992	0.0220	0.9489	77.48	78.44
3	-3.93	1.54	10.44	31.65	46.32	30.39	0.3641	0.0625	0.0159	0.9815	67.04	61.63
4	-5.76	0.02	9.77	28.75	47.48	49.93	0.3443	0.0546	0.0139	0.9849	69.10	69.67
5	-9.32	-2.07	9.13	23.92	47.24	47.80	0.3036	0.0499	0.0145	0.9882	69.30	69.85
6	-10.02	-4.04	8.85	22.27	47.51	47.88	0.2849	0.0364	0.0173	0.9871	69.03	69.51
7	-11.54	-6.36	8.58	21.72	47.54	47.91	0.2704	0.0603	0.0191	0.9863	68.30	68.89
8	-12.22	-5.03	8.39	21.70	47.37	47.69	0.2729	0.0442	0.0217	0.9855	68.30	68.89
9	-13.06	-5.67	8.43	21.14	47.29	47.86	0.2660	0.0447	0.0233	0.9851	68.63	68.76
10	-14.79	-7.19	10.00	20.31	46.82	47.93	0.2531	0.0442	0.0225	0.9863	64.32	65.04
11	-16.69	-8.97	14.31	19.53	44.82	44.98	0.2710	0.1074	0.0284	0.9793	63.79	64.55

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

ROTOR 2

SL	EPI-1		V-1		V-2		VH-1		VH-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		POINT NO 2			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	0.004	3.920	504.9	830.8	492.7	661.3	110.1	502.9	12.5	36.9	0.4341	0.7101	612.2	651.8	0.0049	0.5793	703.5	677.8												
2	0.475	4.020	622.3	810.0	612.5	667.4	110.2	474.0	10.2	39.2	0.5410	0.7010	645.5	694.1	0.7198	0.6078	826.8	702.7												
3	5.102	3.678	640.7	787.3	633.7	664.4	96.9	422.3	9.5	32.2	0.5607	0.6750	715.1	736.1	0.7758	0.6390	886.7	734.6												
4	3.802	2.657	630.2	749.2	631.3	643.1	92.3	376.3	8.3	30.3	0.5592	0.6587	766.4	782.1	0.8106	0.6516	925.1	760.3												
5	1.300	0.709	613.5	661.9	600.0	574.5	90.9	320.8	8.5	29.8	0.5595	0.5644	809.1	822.9	0.8799	0.6668	1003.9	805.1												
6	0.904	0.507	613.9	652.2	607.1	554.8	90.7	303.1	8.5	29.6	0.5577	0.5586	931.8	932.8	0.9086	0.7151	1074.7	839.3												
7	0.612	0.357	609.8	623.6	602.9	522.2	91.1	287.8	8.6	27.5	0.5535	0.5310	973.4	973.4	0.9349	0.7502	1066.6	868.9												
8	0.164	-0.091	611.1	630.6	604.1	502.5	91.9	283.1	8.6	26.9	0.5535	0.5357	1090.1	1026.7	0.9745	0.7907	1116.2	930.8												
9	-0.305	-0.250	611.2	631.8	602.3	523.6	104.3	304.3	9.8	28.8	0.5524	0.5244	1069.7	1067.3	0.9911	0.7972	1177.9	942.5												
10	-0.109	-0.195	602.6	600.2	575.6	508.8	117.7	318.5	11.7	32.0	0.5649	0.5045	1100.9	1107.3	0.9912	0.7891	1143.7	958.8												

SL	INCS	INCH	DEV	TURN	RHOWH-1	RHOWH-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE					TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	-0.63	0.32	17.09	32.03	39.65	55.63	0.1899	0.0833	-0.0127	1.2992	104.66	104.77	43.36	12.53	-502.2	-140.8	1.7142
2	-0.31	-3.04	9.05	23.96	50.01	57.99	0.2722	0.0824	0.0205	1.2600	90.24	89.94	42.69	10.13	-555.3	-320.1	1.7497
3	-7.08	-2.20	8.68	19.14	51.88	59.12	0.2777	0.0615	0.0155	1.2411	91.83	91.37	44.33	23.19	-620.1	-313.8	1.7668
4	-0.58	-1.50	7.64	14.74	51.61	70.12	0.2713	0.0310	0.0000	1.2312	94.93	94.78	44.94	37.20	-670.1	-605.6	1.7219
5	-3.04	0.52	5.83	8.10	49.80	52.58	0.2795	0.0402	0.0145	1.2057	88.43	88.12	32.67	44.47	-798.2	-564.1	1.6867
6	-2.65	0.06	6.27	3.54	49.09	50.89	0.2637	0.0404	0.0141	1.1857	87.00	86.76	34.10	48.62	-841.0	-629.7	1.6367
7	-1.29	1.10	5.74	4.55	49.31	50.06	0.2424	0.0442	0.0102	1.1656	89.84	89.59	35.65	51.10	-922.3	-659.4	1.6235
8	-1.19	1.03	4.05	4.41	49.29	51.66	0.2322	0.0444	0.0105	1.1919	89.52	89.25	37.22	52.81	-938.6	-741.6	1.6453
9	-1.12	1.11	3.58	4.01	45.98	50.55	0.2425	0.0702	0.0166	1.1921	84.67	83.67	39.84	54.03	-968.4	-762.8	1.6485
10	0.10	3.33	3.68	2.80	46.00	46.02	0.2510	0.0831	0.0187	1.1925	81.68	81.21	39.87	57.19	-991.2	-709.1	1.6198

TO/TO	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LSM/SEC			ROTOR	ROTOR
		Σ	Σ	SOFT			Σ	Σ
1.1832	1.6755	84.71	87.64	34.29	1.0632	1.2143	90.12	90.39

OH 2

SL	EPI-2		V-1		V-2		VH-1		VH-2		VO-1		VO-2		B-1		B-2		M-1		M-2		U-1		U-2		POINT NO 2		
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	
1	0.903	0.047	756.6	662.3	573.1	662.4	696.0	11.7	40.6	1.0	0.6412	0.5561	1.6777	1.2075	1.2705	1.8740													
2	5.104	5.587	777.9	600.0	624.8	690.8	663.5	7.6	36.5	0.6	0.6431	0.5834	1.7274	1.2915	1.2345	1.8731													
3	3.773	3.966	767.9	681.3	647.3	681.3	613.1	-2.2	32.5	-0.2	0.6570	0.5778	1.7294	1.1904	1.2299	1.8604													
4	2.709	2.769	740.7	648.9	641.2	648.8	564.7	-7.7	29.9	-0.7	0.6341	0.5500	1.7003	1.1813	1.2164	1.8643													
5	1.300	1.219	647.3	580.2	582.8	580.1	324.1	-0.2	29.1	-0.8	0.5603	0.4914	1.6344	1.1731	1.1646	1.8516													
6	1.057	0.895	638.2	559.4	563.9	559.2	299.0	-16.2	27.9	-1.7	0.5442	0.4737	1.6154	1.1695	1.1704	1.8571													
7	0.837	0.710	630.1	541.0	541.6	550.9	293.7	-8.3	27.0	-0.9	0.5369	0.4663	1.6078	1.1693	1.1565	1.8554													
8	0.705	0.614	617.2	559.1	570.0	559.1	284.8	-0.2	26.4	-0.8	0.5416	0.4721	1.6143	1.1763	1.1690	1.8576													
9	0.549	0.505	626.1	540.9	541.0	560.7	304.1	15.8	28.5	1.6	0.5400	0.4716	1.6131	1.1859	1.1677	1.8614													
10	0.246	0.238	608.0	531.9	518.1	531.3	318.1	26.0	31.5	2.8	0.5114	0.4447	1.5895	1.1939	1.1701	1.8634													

SL	INCH	DEV	TURN	RHOWH-1	RHOWH-2	D-FAC	OMEGA-0	LOSS-P	P02/	SEFF-P	SEFF-A	B-1	B-2	VO-1	VO-2	PO/PO	
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	
1	-10.30	9.52	39.53	50.33	59.69	0.2547	0.0990	0.0188	0.9785							95.51	65.66
2	-7.34	0.67	35.84	55.60	67.58	0.2423	0.0495	0.0111	0.9873							84.72	85.17
3	-0.56	8.10	32.68	58.22	63.33	0.2396	0.0359	0.0085	0.9910							87.62	87.97
4	-11.72	7.86	30.62	58.10	60.83	0.2500	0.0409	0.0124	0.9885							89.37	89.66
5	-12.34	8.24	29.89	53.17	54.22	0.2720	0.0738	0.0213	0.9853							80.60	81.06
6	-13.44	7.63	29.59	51.54	52.24	0.2770	0.0683	0.0205	0.9876							80.40	80.84
7	-14.45	6.69	27.83	51.48	51.41	0.2717	0.0687	0.0278	0.9842							81.15	81.56
8	-15.69	10.17	24.58	52.19	51.94	0.2701	0.1050	0.0347	0.9810							79.13	79.59
9	-16.32	12.80	24.85	51.05	51.70	0.2766	0.1121	0.0380	0.9796							73.64	74.22
10	-16.87	15.53	28.74	44.70	48.46	0.2967	0.1150	0.0409	0.9812							72.25	72.86

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	STAGE
RPM	LSM/SEC			Σ	Σ			Σ	Σ
7883	206.30	1.1832	1.6498	83.93	85.01	1.0432	0.9847	82.77	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFORM INLET FLOW!
Sonic Inlet, Cruise Configuration
(94 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

RUN MD415, SPEED CODE 94, POINT NO 3																
SL	EP51-1	EP51-2	V-1	V-2	VR-1	VR-2	PO1/PO	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	V*-1	V*-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC
1	10.741	9.344	810.8	874.9	810.8	552.0	0.9787	7.3.8	0.0	51.7	0.5641	0.0043	492.9	539.1	0.7249	0.5103
2	9.245	7.918	832.9	873.2	832.9	643.2	0.9935	631.4	0.0	48.2	0.5939	0.7032	551.8	598.8	0.7773	0.5422
3	7.509	6.420	839.7	821.3	839.7	614.0	0.9981	544.0	0.0	41.5	0.5927	0.7330	617.4	648.0	0.8238	0.5564
4	6.327	5.706	848.7	776.6	848.7	665.1	0.9977	466.8	0.0	38.8	0.6015	0.6912	670.3	702.0	0.8703	0.5716
5	4.129	3.797	857.6	898.6	857.6	576.1	0.9936	354.1	0.0	34.4	0.6104	0.6171	814.7	826.7	0.9719	0.6370
6	3.106	3.114	858.6	879.3	858.6	548.9	0.9893	371.3	0.0	33.1	0.6114	0.5998	880.5	886.7	1.0200	0.6700
7	2.053	2.350	859.5	889.6	859.5	563.5	0.9872	340.5	0.0	32.6	0.6123	0.5888	922.5	927.3	1.0529	0.7025
8	2.191	2.103	859.3	858.8	859.3	559.3	0.9887	356.7	0.0	32.3	0.6122	0.5770	963.8	967.3	1.0842	0.7289
9	1.663	1.625	858.3	849.2	858.3	558.8	0.9888	344.9	0.0	32.1	0.6092	0.5691	1008.6	1008.6	1.1164	0.7556
10	0.996	0.968	847.7	843.9	847.7	543.5	0.9720	345.4	0.0	32.4	0.6005	0.5626	1059.2	1059.2	1.1512	0.7839
11	0.444	0.424	822.2	822.2	822.2	517.1	0.9888	351.1	0.0	34.2	0.5753	0.5434	1102.0	1101.6	1.1701	0.7924

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-P	EFF-A	B*-1	B*-2	VO*-1	VO*-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	PO/PO	
1	1.15	5.76	16.25	55.42	39.14	37.64	0.4619	0.2568	0.0570	1.3955	81.09	84.26	30.89	-16.53	-492.9	164.8	1.3756
2	0.22	5.42	16.25	44.93	40.70	43.44	-0.4745	0.1636	0.0364	1.4170	88.25	87.04	41.09	-3.84	-551.8	60.0	1.4320
3	0.81	6.09	15.26	34.41	48.09	46.13	0.4673	0.0709	0.0193	1.4197	93.48	93.15	44.01	9.60	-617.6	-104.0	1.4561
4	0.87	5.99	16.01	28.73	61.55	46.66	0.4670	0.0532	0.0160	1.4185	94.44	94.16	46.30	19.58	-470.3	-215.2	1.4588
5	0.19	4.74	9.10	14.14	61.72	46.07	0.4367	0.0307	0.0063	1.3976	96.06	95.87	51.12	36.92	-614.7	-432.7	1.4100
6	0.32	4.36	7.13	10.97	61.59	45.97	0.4190	0.0258	0.0068	1.4049	94.49	94.32	53.22	42.31	-800.5	-517.4	1.4129
7	1.27	4.10	6.49	9.27	61.54	45.75	0.4097	0.0205	0.0074	1.4084	94.01	93.81	54.44	45.19	-922.5	-566.8	1.4134
8	1.48	4.21	6.44	7.63	61.42	45.25	0.4014	0.0151	0.0069	1.4097	94.95	94.69	55.64	48.01	-963.8	-616.6	1.4112
9	2.20	4.51	6.15	6.59	61.21	44.94	0.3933	0.0109	0.0100	1.4173	94.17	93.87	56.96	50.36	-1008.6	-663.7	1.4126
10	2.83	5.05	6.39	5.84	60.42	44.45	0.3888	0.0504	0.0124	1.4334	92.46	92.20	58.56	52.72	-1059.2	-713.8	1.4164
11	3.65	5.87	9.22	5.12	38.57	42.11	0.3947	0.0645	0.0152	1.4506	90.85	90.35	60.55	55.43	-1102.0	-750.6	1.4045

TO/TU	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1123	1.4147	92.77	93.12	41.16	1.1123	1.4147	92.77	93.12

STATOR 1

RUN MD415, SPEED CODE 94, POINT NO 3																
SL	EP51-1	EP51-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	N-1	N-2	U-1	U-2	TO2/	TO2/
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	FT/SEC	FT/SEC	STAGE	TOT
1	11.009	7.802	806.4	513.2	452.3	502.2	665.2	105.5	55.7	11.7	0.7141	0.4424	1.3131	1.1210	1.3231	1.1210
2	7.177	5.451	815.9	580.8	549.3	568.4	603.3	119.6	47.6	11.8	0.7261	0.5040	1.3012	1.1199	1.3678	1.1199
3	4.744	3.868	789.0	597.1	590.8	580.1	523.9	163.6	41.5	10.0	0.7021	0.5205	1.4001	1.1133	1.3920	1.1133
4	3.270	2.867	742.5	593.4	600.1	586.0	470.4	231.4	38.1	9.0	0.6775	0.5180	1.4100	1.1097	1.3910	1.1097
5	1.570	1.683	765.5	572.9	596.3	565.7	386.4	304.8	33.2	9.1	0.6242	0.5004	1.3938	1.1046	1.3801	1.1046
6	1.209	1.380	692.0	574.5	588.5	565.9	365.3	308.9	31.8	9.9	0.6116	0.5015	1.3947	1.1059	1.3867	1.1059
7	1.033	1.205	685.8	573.4	586.5	566.9	355.6	309.0	31.2	9.9	0.6047	0.5020	1.3955	1.1073	1.3905	1.1073
8	0.851	1.092	670.9	574.0	581.3	568.6	346.9	311.7	30.8	9.2	0.5959	0.5004	1.3944	1.1088	1.3927	1.1088
9	0.635	0.755	672.1	575.6	578.6	568.2	342.6	311.8	30.6	9.2	0.5906	0.5011	1.3957	1.1117	1.4005	1.1117
10	0.356	0.444	669.7	564.9	574.8	571.9	343.6	310.6	30.9	10.1	0.5847	0.5046	1.3995	1.1174	1.4144	1.1174
11	0.109	0.154	652.9	555.9	558.9	546.1	330.4	303.8	32.5	10.8	0.5691	0.4803	1.3770	1.1243	1.4235	1.1243

SL	INCS	INCR	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-0	LOSS-P	PO2/	EFF-A	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	TOTAL	TOTAL	TOTAL	TOTAL	PO1	TOT	STAGE	TOT
1	3.02	7.74	17.10	43.99	32.70	40.17	0.5049	0.1561	0.0322	0.9517	68.39	69.62
2	0.31	5.43	14.27	35.81	41.67	46.59	0.4192	0.1169	0.0258	0.9654	78.11	79.05
3	-3.36	2.11	11.33	31.52	45.27	49.03	0.3707	0.0690	0.0165	0.9805	87.57	88.14
4	-5.39	0.39	9.85	29.03	46.68	49.15	0.3478	0.0526	0.0134	0.9861	90.14	90.59
5	-9.02	-2.58	9.25	24.08	47.02	47.52	0.3093	0.0525	0.0152	0.9879	92.20	92.55
6	-10.32	-3.54	9.71	21.91	47.22	47.49	0.2895	0.0576	0.0176	0.9872	92.50	92.84
7	-10.96	-3.98	9.55	21.33	47.19	47.52	0.2806	0.0574	0.0183	0.9873	92.09	92.43
8	-11.62	-4.43	8.76	21.63	46.88	47.44	0.2769	0.0559	0.0183	0.9881	91.24	91.64
9	-12.19	-4.89	8.74	21.61	46.73	47.47	0.2712	0.0572	0.0194	0.9880	90.44	90.89
10	-14.22	-6.63	10.00	20.81	46.41	47.59	0.2613	0.0570	0.0200	0.9882	89.12	89.64
11	-15.00	-8.08	13.04	21.70	44.45	44.98	0.2060	0.0957	0.0345	0.9812	85.47	86.18

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
RPM	LP/SEC							
7895.	206.13	1.1123	1.3979	88.03	88.58	1.1123	0.9832	88.03

ROTOR 2

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	VM-5	B-1	B-2	M-1	M-2	U-1	U-2	M-1	M-2	U-1	U-2	M-1	M-2	V-1	V-2	
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC			FT/SEC	FT/SEC	
1	0.217	5.374	470.5	790.4	459.2	670.5	102.0	517.2	12.5	40.0	0.4044	0.6799	613.2	652.8	0.5902	0.5308	686.7	623.4						
2	0.000	4.471	590.1	782.8	578.7	811.0	115.5	449.5	11.2	38.5	0.5126	0.6673	646.6	695.1	0.6942	0.5496	799.1	644.7						
3	4.924	3.028	619.6	760.1	611.9	616.8	67.2	444.2	9.0	35.7	0.5416	0.6489	716.2	737.2	0.7608	0.5829	870.3	682.8						
4	3.742	2.738	619.8	726.2	613.3	6.744	89.6	398.1	8.3	33.2	0.5425	0.6159	769.5	783.3	0.8016	0.6139	915.7	719.3						
5	1.465	0.919	663.4	656.6	595.9	556.0	94.8	358.9	9.0	33.1	0.5283	0.5581	890.5	894.2	0.8704	0.6522	994.1	767.5						
6	1.629	0.671	602.8	627.1	594.0	528.9	99.2	336.9	9.5	32.5	0.5273	0.5321	933.2	934.2	0.8960	0.6769	1024.3	797.8						
7	0.768	0.515	600.3	618.4	593.1	531.1	92.8	316.6	8.9	30.8	0.5246	0.5242	974.9	974.9	0.9289	0.7176	1062.9	845.8						
8	0.350	0.252	601.1	620.4	594.0	540.1	92.0	318.2	8.9	30.5	0.5245	0.5298	1032.0	1028.2	0.9694	0.7540	1111.4	892.1						
9	0.092	-0.028	603.0	632.0	594.4	539.7	102.1	335.3	9.7	32.0	0.5252	0.5318	1071.3	1068.9	0.9896	0.7643	1137.2	908.3						
10	-0.015	-0.677	577.3	601.2	567.4	5.100	103.4	332.3	10.3	33.6	0.4996	0.5027	1110.6	1109.2	1.0007	0.7730	1156.2	924.4						

SL	INCS	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-T	LOSS-P	PO2/	EFF-P	EFF-A	B-1	B-2	W-1	W-2	PO/PO	TO/TO	PO/PO	TO/TO
DEGREE	DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET	INLET	STAGE	TOT
1	-4.15	2.80	10.97	35.42	31.21	53.10	0.2536	0.104	1.3295	107.89	108.21	47.86	12.41	-510.4	-135.6	1.7503				
2	-7.91	-1.00	10.01	44.98	47.64	54.18	0.3247	0.1030	1.2751	95.33	95.16	43.48	16.49	-551.1	-205.8	1.7781				
3	-4.44	-1.27	8.61	19.45	50.71	56.70	0.3308	0.0515	1.2651	93.51	93.30	45.26	25.31	-16.0	-292.9	1.7864				
4	-5.28	-0.54	7.78	15.59	50.76	56.73	0.3164	0.0204	1.2593	97.00	96.90	47.93	32.34	-80.0	-385.2	1.7728				
5	-2.88	1.02	5.58	8.95	49.36	52.14	0.3184	0.0401	1.2417	93.19	92.98	53.17	44.22	-795.7	-535.3	1.7310				
6	-2.11	1.20	6.13	6.04	49.46	50.27	0.3032	0.0402	1.2242	92.51	92.29	54.52	48.48	-834.0	-547.3	1.7081				
7	-0.88	1.53	5.74	4.95	49.11	51.62	0.2810	0.0293	1.2094	94.15	93.98	56.09	51.10	-882.1	-658.2	1.7064				
8	-0.73	1.49	5.97	4.95	48.64	51.43	0.2746	0.0293	1.2336	92.14	91.91	57.69	52.73	-939.4	-711.0	1.7219				
9	-0.70	1.52	3.21	4.61	48.94	50.75	0.2832	0.0630	1.2366	87.72	87.34	58.46	53.86	-969.2	-733.6	1.7310				
10	0.61	2.84	5.59	3.64	46.27	47.05	0.2823	0.0457	1.2378	87.14	86.74	60.58	57.18	-1007.1	-776.9	1.7031				

TO/TO	PO/PO	EFF-AD	EFF-P	W1/A1	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LRM/SEC			ROTOR	ROTOR
X	X	X	X	56FT			X	X
1.1902	1.7301	89.40	90.85	35.00	1.0700	1.2496	93.72	93.92

STATOR 2

AIRFOIL AERODYNAMIC SUMMARY PRINT

SL	EPSI-1	EPSI-2	V-1	V-2	VM-1	VM-2	VM-3	VM-4	B-1	B-2	M-1	M-2	PO/PO	TO/TO	PO/PO	TO/TO
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			INLET	INLET	STAGE	TOT
1	7.075	8.126	731.4	585.5	525.8	585.5	567.8	8.6	43.8	0.8	0.6178	0.4882	1.7057	1.2096	1.2963	1.0783
2	5.191	5.588	744.1	622.4	569.8	622.0	478.9	16.8	40.0	1.5	0.6317	0.5220	1.7590	1.2027	1.2614	1.0758
3	3.787	3.867	744.6	625.1	599.4	625.1	434.9	6.4	35.9	0.0	0.6309	0.5266	1.7742	1.1938	1.2566	1.0741
4	2.798	2.705	719.8	601.6	644.4	611.6	391.0	-2.6	32.9	-0.2	0.6140	0.5075	1.7568	1.1863	1.2484	1.0701
5	1.445	1.251	661.4	550.5	558.5	510.5	354.3	-3.2	32.4	-0.3	0.5623	0.4636	1.7137	1.1600	1.2289	1.0684
6	1.098	0.921	633.5	528.8	539.0	528.4	332.8	-15.0	31.7	-1.0	0.5379	0.4449	1.697	1.1778	1.2143	1.0642
7	0.894	0.742	625.9	513.2	541.4	513.2	314.0	-7.2	30.1	-0.8	0.5309	0.4402	1.66	1.1782	1.2120	1.0631
8	0.692	0.595	635.4	538.6	550.3	538.6	317.7	1.1	30.0	0.1	0.5373	0.4519	1.7033	1.1871	1.2202	1.0673
9	0.433	0.386	646.3	546.8	546.0	546.3	334.5	21.9	31.5	2.3	0.5392	0.4569	1.7095	1.1977	1.2214	1.0715
10	0.145	0.127	610.7	510.5	512.6	510.1	331.9	21.7	32.9	2.6	0.5111	0.4240	1.6776	1.2058	1.2188	1.0723

SL	INCM	DEV	TURN	RHOVM-1	RHOVM-2	D-FAC	OMEGA-T	LOSS-P	PO2/	EFF-1	EFF-P	TO2/T01	P02/P01	EFF-AD	EFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL	P01	TOT-STG	TOT-STG			STAGE	
X	X	X	X						X	X	X			X	X
1	-7.09	9.35	42.97	47.62	55.28	0.3406	0.1120	0.0236	0.9746	98.14	98.22				
2	-3.85	9.56	31.42	52.27	59.93	0.3021	0.0464	0.0104	0.9891	90.64	90.95				
3	-6.14	8.33	35.88	55.09	61.06	0.2940	0.0275	0.0066	0.9935	90.83	91.12				
4	-8.79	8.30	33.12	56.64	59.11	0.3010	0.0382	0.0097	0.9914	93.22	93.43				
5	-9.23	8.74	32.72	52.79	54.08	0.3237	0.0490	0.0141	0.9985	88.58	88.90				
6	-9.68	7.67	33.31	51.08	51.89	0.3367	0.0438	0.0132	0.9922	88.78	89.08				
7	-11.30	8.76	30.91	51.43	51.34	0.3248	0.0552	0.0173	0.9904	89.42	89.70				
8	-12.24	10.26	29.86	52.19	52.60	0.3166	0.0616	0.0204	0.9890	86.82	87.19				
9	-13.30	13.56	29.20	51.52	52.96	0.3141	0.0687	0.0236	0.9877	82.08	82.58				
10	-15.55	15.17	30.46	47.95	48.85	0.3490	0.0940	0.0334	0.9847	80.28	80.82				

MCORR	MCORR	TO/TO	PO/PO	EFF-AD	EFF-P	T02/T01	P02/P01	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET			STAGE	
X	X	X	X	X	X			X	X
7895.	201.13	1.1902	1.7185	87.92	88.80	1.0700	0.9888	88.81	

**OVERALL PERFORMANCE AND BLADE-ELEMENT DATA
UNIFJRM INLET FLOW
Sonic Inlet, Cruise Configuration
(94 Percent of Design Speed)**

U. S. CUSTOMARY UNITS

ROTOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	PO1/PO	VO-2	B-1	B-2	M-1	RUN NO415, SPEED CODE %4, PCINT NO 4	U-1	U-2	M-1	M-2	V-1	V-2		
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	OLENUM	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC			
1	10.637	9.715	399.0	892.4	399.0	535.5	0.9748	714.1	0.0	53.0	0.5525	0.8015	491.0	537.0			0.7144	0.5064	774.5	564.0
2	9.187	8.122	621.9	871.2	621.9	581.0	0.9942	649.2	0.0	48.1	0.5750	0.7801	549.7	588.5			0.7174	0.5231	830.6	584.1
3	7.775	6.763	677.6	823.3	627.6	598.9	0.9983	584.8	0.0	43.3	0.5887	0.7346	615.3	645.5			0.6132	0.5392	778.9	644.3
4	6.553	5.729	632.3	782.0	632.3	596.6	0.9970	505.5	0.0	40.3	0.5853	0.6952	675.7	699.3			0.6586	0.5577	925.4	627.3
5	4.423	3.968	643.4	782.4	643.4	588.0	0.9970	413.3	0.0	36.1	0.5963	0.6199	811.5	823.6			0.9598	0.6183	1355.6	740.6
6	3.520	3.235	646.3	683.8	646.3	561.0	0.9959	391.0	0.0	34.9	0.5992	0.6017	877.1	885.3			1.0100	0.6560	1689.5	747.7
7	3.009	2.784	645.1	677.0	645.1	559.3	0.9924	381.4	0.0	34.3	0.5988	0.5947	919.0	923.6			1.0408	0.6844	1122.6	779.1
8	2.524	2.271	646.3	689.3	646.3	556.4	0.9987	372.0	0.0	33.8	0.5971	0.5869	960.1	963.6			1.0717	0.7122	1156.3	812.1
9	1.887	1.706	646.6	683.7	646.6	553.2	0.9987	366.8	0.0	33.6	0.5975	0.5809	1004.7	1004.7			1.1065	0.7369	1193.7	844.4
10	1.160	1.051	646.6	656.5	646.6	544.1	0.9832	367.4	0.0	34.0	0.5935	0.5724	1055.2	1055.2			1.1437	0.7647	1234.4	877.0
11	0.543	0.477	646.6	633.7	646.6	512.8	0.9958	372.2	0.0	36.0	0.5580	0.5496	1097.7	1097.4			1.1566	0.7703	1253.2	888.2

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-P	REFF-A	B-1	B-2	VO-1	VO-2	PO/PO
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL		PO1	TOT	TOT	DEGREE	DEGREE	FT/SEC	FT/SEC	INLET
1	0.58	6.13	12.59	57.56	38.57	36.28	0.4936	0.2872	0.0641	1.3812	79.50	78.55	39.32	-16.24	-691.0	177.1	1.3635
2	0.60	6.00	12.12	47.42	40.79	41.64	0.4984	0.1907	0.0484	1.4104	84.95	84.20	41.67	-5.95	-549.7	160.7	1.4200
3	1.26	6.54	13.32	36.80	40.44	44.84	0.4868	0.1074	0.0295	1.4200	90.62	90.14	44.46	7.66	-615.3	-86.6	1.4327
4	1.51	6.43	12.43	28.94	40.85	45.98	0.4886	0.0722	0.0203	1.4182	92.96	92.54	46.94	17.99	-675.7	-193.8	1.4315
5	0.70	5.26	8.04	15.77	41.31	45.47	0.4553	0.0570	0.0156	1.4016	93.09	92.75	51.63	35.84	-611.5	-101.1	1.4153
6	0.74	4.72	6.23	12.23	41.34	45.41	0.4393	0.0570	0.0154	1.4067	92.57	92.20	53.64	41.41	-677.1	-542.3	1.4167
7	1.77	4.61	5.45	10.82	41.16	45.54	0.4282	0.0534	0.0141	1.4170	92.97	92.61	54.96	44.14	-619.0	-562.3	1.4240
8	2.42	4.75	5.17	9.38	40.99	45.54	0.4173	0.0512	0.0133	1.4258	93.18	92.74	56.16	46.77	-664.1	-591.6	1.4276
9	2.65	4.89	4.87	8.25	40.92	45.43	0.4101	0.0583	0.0150	1.4331	91.99	91.58	57.33	49.68	-1004.7	-637.9	1.4326
10	3.01	5.23	5.33	7.08	40.55	44.73	0.4090	0.0795	0.0200	1.4410	89.04	88.45	58.75	51.64	-1055.2	-687.6	1.4347
11	4.26	6.48	8.52	6.42	37.94	41.97	0.4144	0.0834	0.0200	1.4467	88.65	88.23	61.16	54.73	-1697.7	-725.2	1.4197

TO/TO	PO/PO	EFF-AD	EFF-P	WC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	LBN/SEC			ROTOR	ROTOR
		%	%	SQFT			%	%
1.1174	1.4217	90.09	90.57	40.62	1.1174	1.4217	90.09	90.57

STATOR 1

SL	EPSI-1	EPSI-2	V-1	V-2	VR-1	VR-2	VO-1	VO-2	B-1	B-2	M-1	RUN NO415, SPEED CODE %4, POINT NO 4	U-1	U-2	M-1	M-2	V-1	V-2
DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE			FT/SEC	FT/SEC			FT/SEC	FT/SEC
1	11.033	7.880	802.4	482.2	434.0	471.9	674.9	99.5	57.2	11.7	0.7118	0.4146	1.3073	1.1231			1.3251	1.1231
2	7.175	5.550	813.0	547.7	526.4	535.9	619.5	112.9	49.4	11.8	0.7223	0.4733	1.3682	1.1272			1.3589	1.1227
3	4.735	3.945	790.2	577.8	574.5	549.0	542.5	100.7	43.3	10.0	0.7020	0.5019	1.4043	1.1172			1.3918	1.1172
4	3.245	2.928	766.8	580.2	591.2	572.9	488.3	91.4	39.5	9.1	0.6804	0.5049	1.4112	1.1135			1.3977	1.1135
5	1.539	1.686	710.0	563.6	583.0	556.4	405.2	89.7	34.8	9.2	0.6271	0.4908	1.3990	1.1093			1.3856	1.1093
6	1.126	1.319	697.2	548.1	581.6	559.6	384.6	97.8	33.5	9.9	0.6145	0.4944	1.4021	1.1111			1.3961	1.1111
7	0.922	1.101	694.0	572.0	583.2	563.4	378.2	98.4	32.8	9.9	0.6108	0.4975	1.4051	1.1131			1.3982	1.1131
8	0.750	0.904	689.8	572.1	583.5	564.8	367.9	90.9	32.2	9.1	0.6043	0.4972	1.4049	1.1150			1.4031	1.1150
9	0.581	0.706	687.2	574.4	583.0	567.0	363.8	91.7	32.0	9.2	0.6028	0.4984	1.4064	1.1164			1.4077	1.1164
10	0.364	0.453	683.1	579.3	577.1	570.4	365.4	101.2	32.3	10.1	0.5973	0.5015	1.4099	1.1243			1.4159	1.1243
11	0.129	0.174	662.8	555.0	549.0	545.3	371.5	103.4	34.1	10.7	0.5765	0.4780	1.3890	1.1312			1.4355	1.1312

SL	INCS	INCM	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LOSS-P	PO2/	REFF-A	REFF-P
DEGREE	DEGREE	DEGREE	DEGREE				TOTAL	TOTAL		PO1	TOT	TOT
1	4.49	9.21	17.12	45.44	31.23	38.12	0.5466	0.1416	0.0297	0.9593	68.06	69.30
2	2.28	7.39	14.29	37.75	39.18	44.20	0.4642	0.1209	0.0267	0.9645	74.66	75.74
3	-1.52	3.95	11.38	33.32	43.93	47.75	0.4034	0.0697	0.0166	0.9802	84.69	85.36
4	-3.93	1.85	9.88	30.46	45.99	48.42	0.3757	0.0542	0.0139	0.9855	88.46	89.02
5	-7.44	-0.99	9.29	25.84	46.49	47.11	0.3352	0.0500	0.0145	0.9884	89.36	87.66
6	-8.67	-1.89	9.71	23.56	46.74	47.33	0.3125	0.0517	0.0158	0.9884	88.87	89.36
7	-9.38	-2.39	9.57	22.89	47.06	47.60	0.3039	0.0596	0.0188	0.9867	88.89	89.41
8	-10.21	-3.02	8.70	23.09	47.24	47.63	0.3037	0.0722	0.0236	0.9861	88.37	88.91
9	-11.11	-3.72	8.75	22.77	47.30	47.69	0.2999	0.0823	0.0279	0.9821	86.72	87.35
10	-12.75	-5.16	10.06	22.28	46.81	47.78	0.2896	0.0803	0.0282	0.9828	84.05	84.82
11	-14.17	-6.45	13.02	23.35	44.29	45.22	0.3107	0.1067	0.0384	0.9785	82.97	83.82

WCORR	WCORR	TO/TO	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD
INLET	INLET	INLET	INLET	INLET	INLET			STAGE
RPM	LBN/SEC			%	%			%
7864.	20.12	1.1174	1.3960	85.20	85.88	1.1174	0.9819	85.20

ROTOR 2

SL	EPI-1		V-1		V-2		VH-1		VH-2		V0-1		V0-2		B-1		B-2		N-1		N-2		PC/PC		TO/TC		PC/PO		TO2/TO1			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE		
1	8.425	4.722	444.2	782.0	433.6	575.9	96.5	529.0	12.5	42.2	0.3809	0.6632	610.8	650.3	0.5766	0.4991	672.7	586.6														
2	5.974	4.333	559.4	763.3	548.8	583.1	108.6	492.6	11.2	46.0	0.4840	0.6477	664.0	692.5	0.6753	0.5231	780.7	616.5														
3	4.710	3.571	604.0	742.1	596.4	587.3	95.1	453.6	9.0	37.6	0.5263	0.6306	713.4	734.3	0.7485	0.5531	859.1	651.0														
4	3.674	2.761	605.8	713.8	599.4	585.7	87.6	402.0	8.3	34.8	0.5284	0.6067	766.6	780.3	0.7904	0.5899	905.7	696.0														
5	1.509	1.059	594.3	653.8	586.9	536.7	93.5	376.8	9.0	34.5	0.5187	0.5934	867.0	890.8	0.8615	0.6338	987.0	746.9														
6	1.008	0.807	597.0	627.2	588.8	521.1	98.3	348.9	9.5	33.8	0.5206	0.5300	929.4	930.6	0.8884	0.6601	1016.7	781.0														
7	0.871	0.701	597.0	617.8	589.0	525.0	92.4	325.7	8.4	31.8	0.5201	0.5217	971.1	971.1	0.9220	0.7025	1056.3	831.9														
8	0.443	0.363	599.0	626.2	591.4	533.7	92.3	327.4	8.9	31.5	0.5208	0.5270	1028.1	1024.3	0.9626	0.7387	1107.3	877.0														
9	0.207	0.134	602.2	631.8	593.5	528.9	101.8	345.5	9.7	33.2	0.5223	0.5292	1067.2	1064.8	0.9828	0.7479	1135.3	892.8														
10	0.063	0.021	576.5	607.2	547.2	561.5	103.1	342.2	10.3	34.3	0.4973	0.5058	1104.3	1104.9	0.9942	0.7604	1152.4	912.0														

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LCSS-P	PO2/	ZEFF-P	ZEFF-A	B-1	B-2	V0-1	V0-2	PO/PO	TO/TC	PC/PC	TO2/	INLET		
																				INLET	INLET	
1	-2.75	4.65	16.30	37.93	35.49	51.85	0.2960-0.1067	-0.0254	1.3427	107.74	100.07	49.44	11.74	-514.3	-121.2	1.7596						
2	-6.20	0.07	10.51	26.41	45.39	53.09	0.3499	0.0218	1.2887	97.73	97.45	45.20	18.80	-555.2	-199.4	1.7617						
3	-6.75	-0.57	8.94	20.50	49.82	54.45	0.3642	0.0664	0.0167	1.2474	91.94	45.96	25.45	-618.3	-260.7	1.7609						
4	-4.98	0.10	7.84	16.13	50.87	55.40	0.3406	0.0760	0.0065	1.2642	96.43	96.36	48.84	32.40	-479.0	-372.3	1.7649					
5	-2.51	1.36	5.36	9.52	49.04	51.77	0.3368	0.0384	0.0094	1.2543	93.79	93.59	53.52	44.00	-793.6	-520.3	1.7563					
6	-1.94	1.37	5.80	4.55	49.19	50.25	0.3199	0.0374	0.0088	1.2376	93.42	93.22	54.69	48.15	-831.3	-561.7	1.7374					
7	-0.81	1.57	5.51	5.25	49.22	50.77	0.2939	0.0227	0.0053	1.2355	95.47	95.54	56.13	50.88	-876.7	-645.4	1.7357					
8	-0.74	1.49	3.78	5.14	49.23	51.56	0.2877	0.0339	0.0080	1.2454	93.50	93.29	57.48	52.54	-935.8	-696.9	1.7518					
9	-0.74	1.48	3.02	4.75	49.17	50.84	0.2979	0.0597	0.0142	1.2495	88.88	88.52	58.41	53.67	-965.4	-719.2	1.7619					
10	0.55	2.70	5.08	3.84	46.52	47.86	0.2936	0.0545	0.0125	1.2540	89.79	89.46	60.51	56.67	-1003.2	-762.7	1.7409					

TO/TC	PO/PO	EFF-AD	EFF-P	MC1/A1	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
1.1982	1.7601	88.39	89.27	35.08	1.0723	1.2668	94.49	94.67

STATOR 2

SL	EPI-1		V-1		V-2		VH-1		VH-2		V0-1		V0-2		B-1		B-2		N-1		N-2		PC/PC		TO/TC		PC/PO		TO2/			
	DEGREE	DEGREE	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	FT/SEC	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE	DEGREE		
1	7.062	8.115	719.5	550.6	497.9	550.6	519.5	8.1	46.0	0.8	0.6061	0.4576	1.7147	1.2142	1.3090	1.0811																
2	5.206	5.583	726.9	584.7	543.9	584.5	462.7	16.8	41.5	1.6	0.6144	0.4875	1.7616	1.2060	1.2734	1.6766																
3	3.818	3.867	723.4	594.3	571.0	594.3	444.3	-0.6	37.8	-0.1	0.6135	0.4981	1.7826	1.1999	1.2617	1.0761																
4	2.791	2.669	707.4	577.6	583.0	577.6	400.8	-2.6	34.5	-0.3	0.6009	0.4849	1.7733	1.1929	1.2583	1.0723																
5	1.414	1.704	658.3	537.3	547.4	537.3	365.8	-4.0	33.8	-0.4	0.5574	0.4503	1.7416	1.1892	1.2436	1.0712																
6	1.077	0.885	633.5	517.9	531.5	517.7	344.7	-14.6	32.0	-1.6	0.5356	0.4339	1.7254	1.1868	1.22	1.0671																
7	0.882	0.722	625.4	515.0	535.6	515.0	323.0	-7.3	31.1	-0.8	0.5285	0.4314	1.7234	1.1870	1.2265	1.0651																
8	0.673	0.571	625.0	522.1	544.8	532.1	324.3	0.5	30.9	0.1	0.5346	0.4444	1.7363	1.1904	1.2358	1.0653																
9	0.377	0.320	641.3	542.0	540.6	541.5	345.0	21.6	32.5	2.3	0.5376	0.4507	1.7459	1.2060	1.2381	1.0741																
10	0.094	0.072	617.1	506.6	513.7	506.1	341.8	21.5	33.6	2.4	0.5144	0.4187	1.7136	1.2161	1.2354	1.0746																

SL	INCH	DEV	TURN	RHOVN-1	RHOVN-2	D-FAC	OMEGA-B	LCSS-P	PO2/	ZEFF-P	ZEFF-A	B-1	B-2	V0-1	V0-2	PO/PO	TO/TC	PC/PC	TO2/	INLET	
																				INLET	INLET
1	-4.94	9.35	45.18	45.43	53.01	0.3821	0.1153	0.0247	0.9747												
2	-7.35	9.68	39.82	50.50	57.79	0.3360	0.0509	0.0114	0.9885												
3	-4.27	8.23	37.90	53.66	59.07	0.3234	0.0202	0.0048	0.9955												
4	-7.18	8.28	34.73	55.33	57.80	0.3263	0.0290	0.0073	0.9937												
5	-7.67	8.64	34.18	52.47	53.79	0.3455	0.0407	0.0117	0.9923												
6	-9.41	7.88	34.57	51.10	51.82	0.3531	0.0380	0.0114	0.9933												
7	-10.32	8.74	31.91	51.63	51.54	0.3426	0.0410	0.0128	0.9929												
8	-11.37	10.20	30.86	52.42	53.00	0.3317	0.0443	0.0147	0.9922												
9	-12.24	13.55	30.26	51.74	53.50	0.3276	0.0512	0.0175	0.9909												
10	-14.78	15.16	31.20	46.81	49.41	0.3639	0.0941	0.0335	0.9845												

MCCR	MCCR	TO/TC	PO/PO	EFF-AD	EFF-P	TO2/TO1	PO2/PO1	EFF-AD	EFF-P
RPM	LBM/SEC	INLET	INLET	INLET	INLET	INLET	INLET	INLET	INLET
7864	201.12	1.1982	1.7432	86.77	87.75	1.0773	0.9904	90.44	

**FAN INLET DYNAMIC PRESSURE DATA –
SONIC INLET, UNIFORM FLOW CONFIGURATION
(Complete Acoustic Treatment)**

- **Power Spectral Density Data**
- **Power Spectral Density Plots**

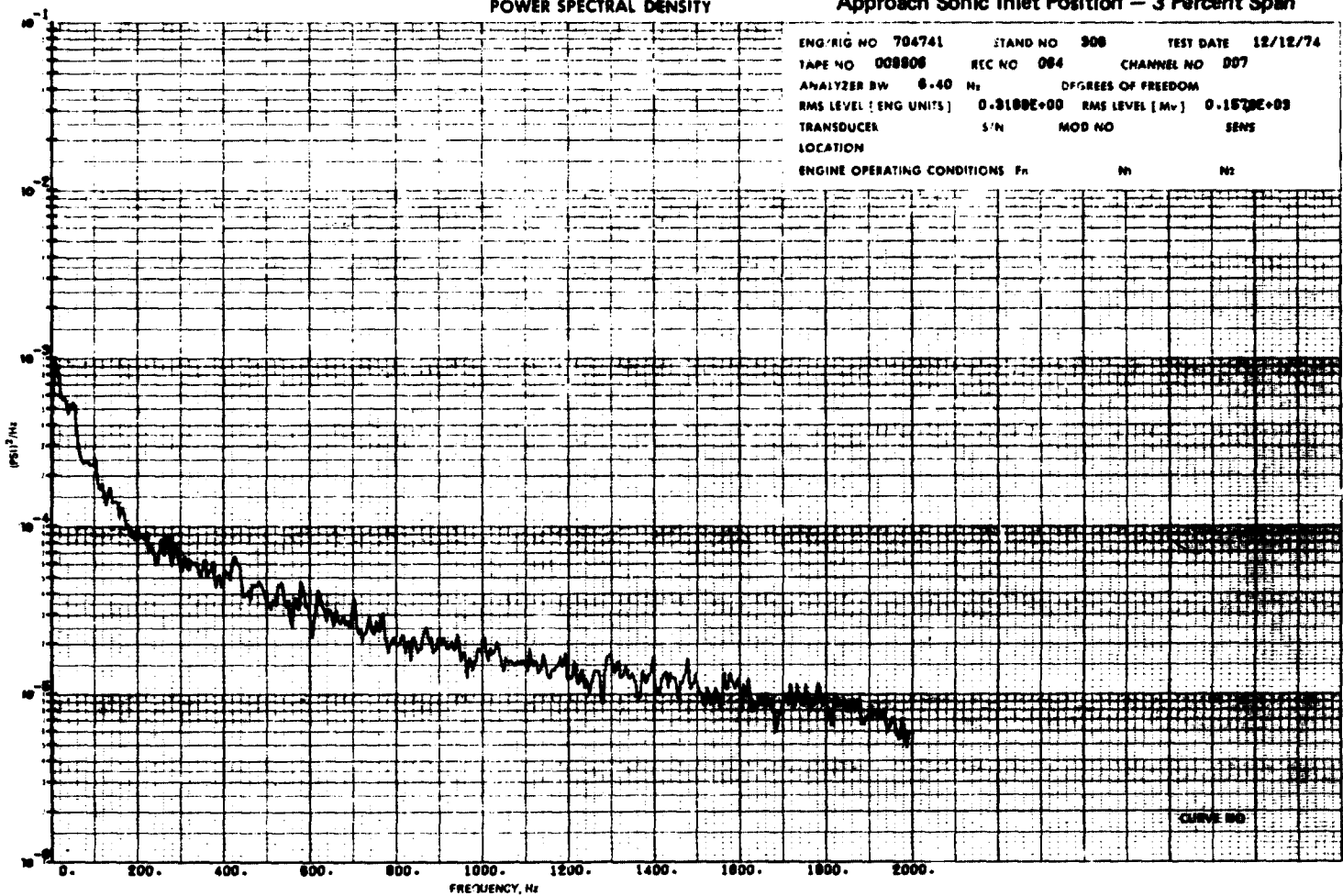
POWER SPECTRAL DENSITY DATA

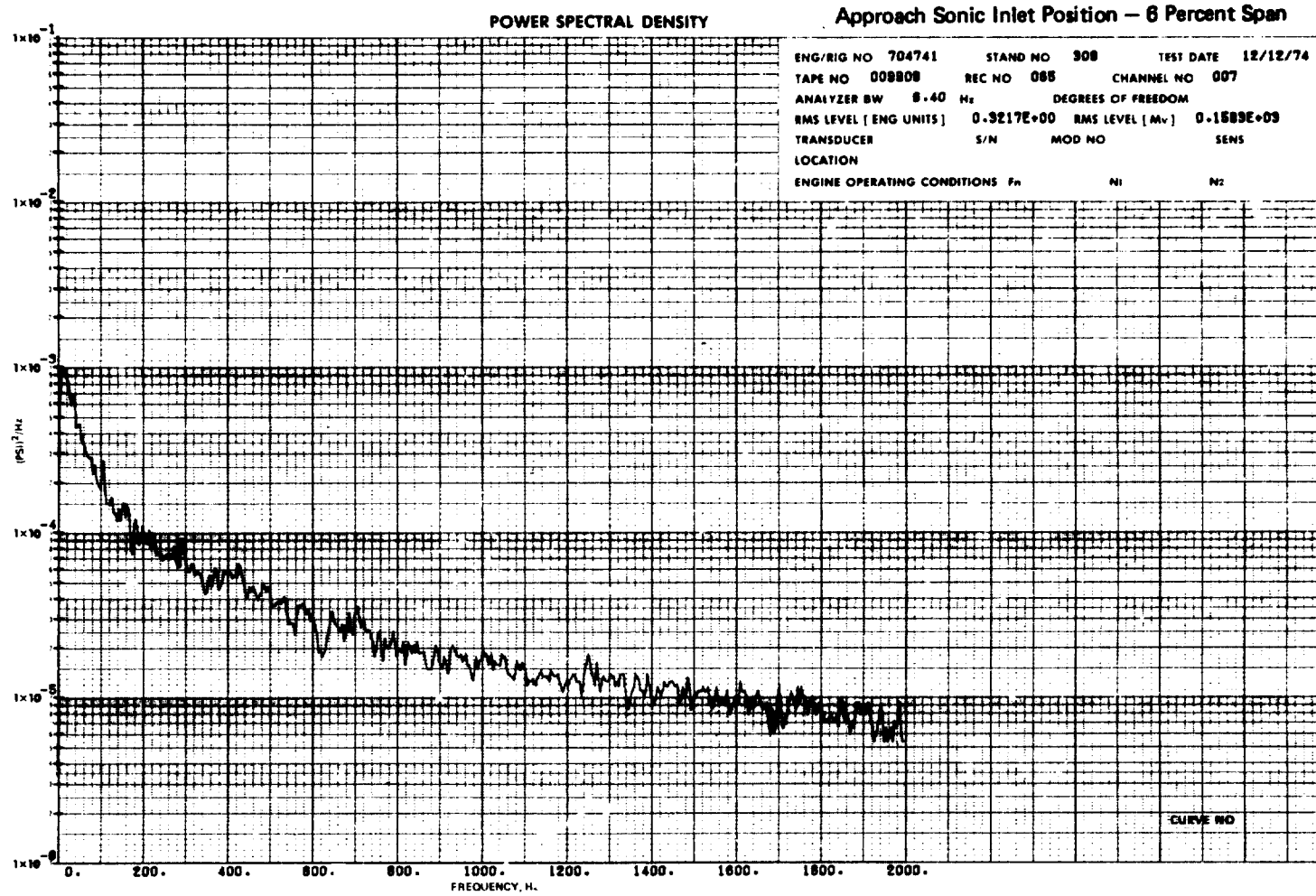
CONFIGURATION	PLOT REC. NUMBER	PERCENT SPAN
Approach Sonic Inlet Position (Throat Mach No = .9) 413-90-51	064	3
	065	6
	066	9
	067	20
	068	40
	069	60
	070	80
	071	91
	072	94
	073	97
Takeoff Sonic Inlet Position (Throat Mach No = .9) 413-80-50	033	3
	133	6
	233	9
	333	20
	433	40
	533	60
	633	80
	733	91
	833	94
	933	97
Cruise Sonic Inlet Position (100% Speed Near Stall) 415-10-03	005	3
	105	6
	205	9
	305	20
	405	40
	505	60
	605	80
	705	91
	805	94
	905	97

POWER SPECTRAL DENSITY

Approach Sonic Inlet Position - 3 Percent Span

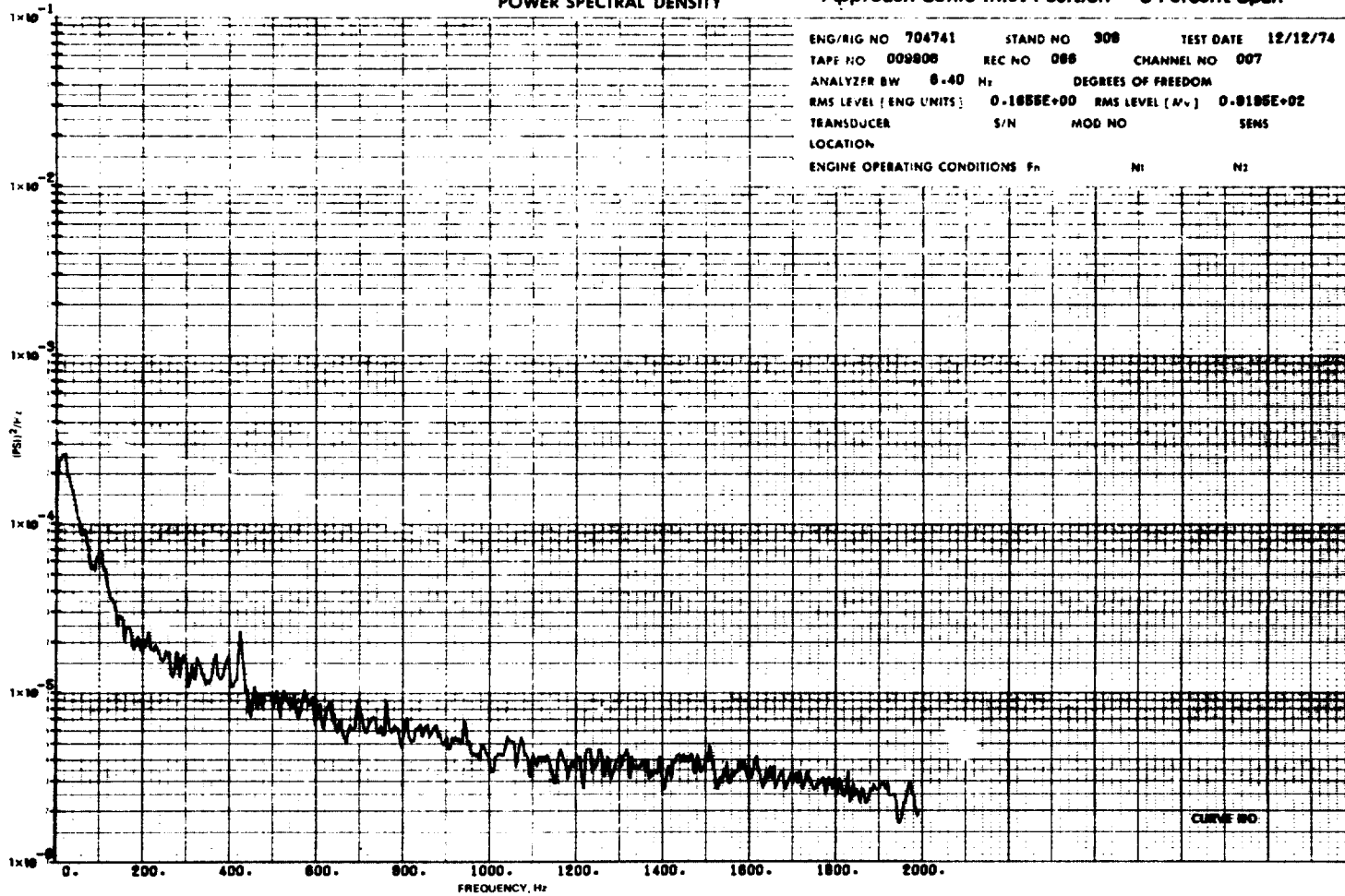
ENG RIG NO 704741 STAND NO 308 TEST DATE 12/12/74
TAPE NO 008808 REC NO 084 CHANNEL NO 007
ANALYZER BW 8.40 Hz DEGREES OF FREEDOM
RMS LEVEL [ENG UNITS] 0.3100E+00 RMS LEVEL [MV] 0.1570E+03
TRANSDUCER S/N MOD NO SENS
LOCATION
ENGINE OPERATING CONDITIONS Fr N1 N2



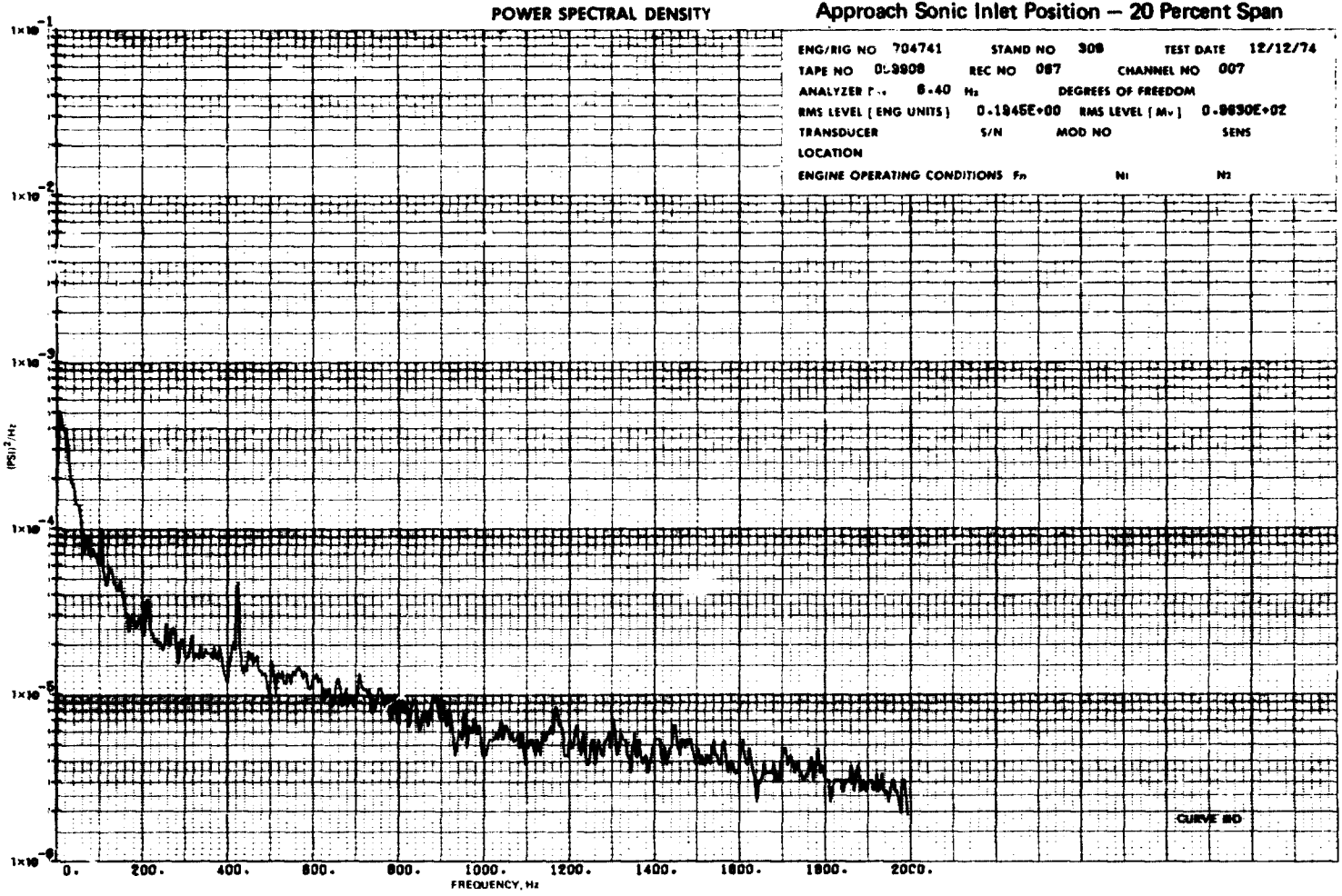


POWER SPECTRAL DENSITY

Approach Sonic Inlet Position - 9 Percent Span

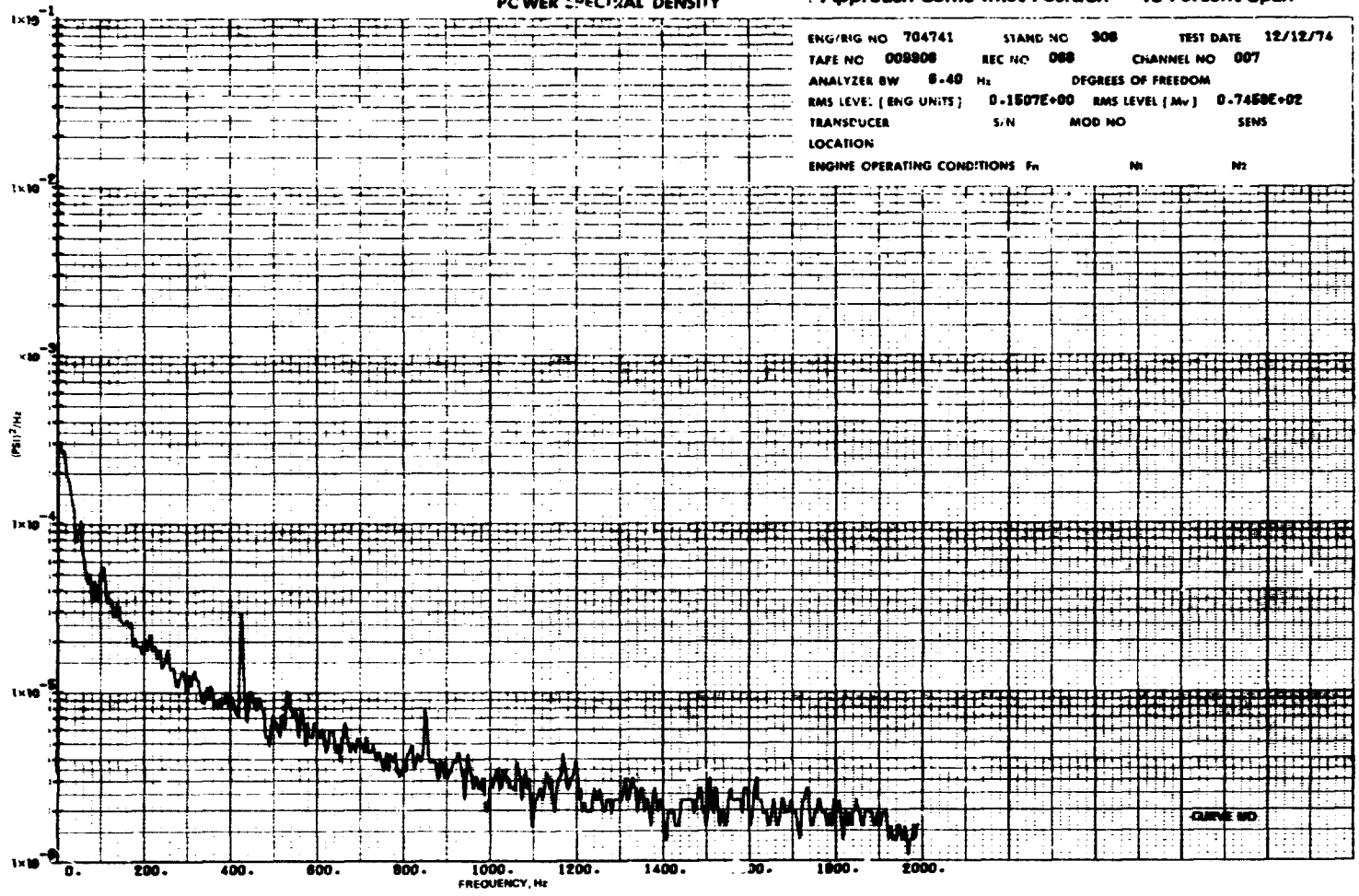


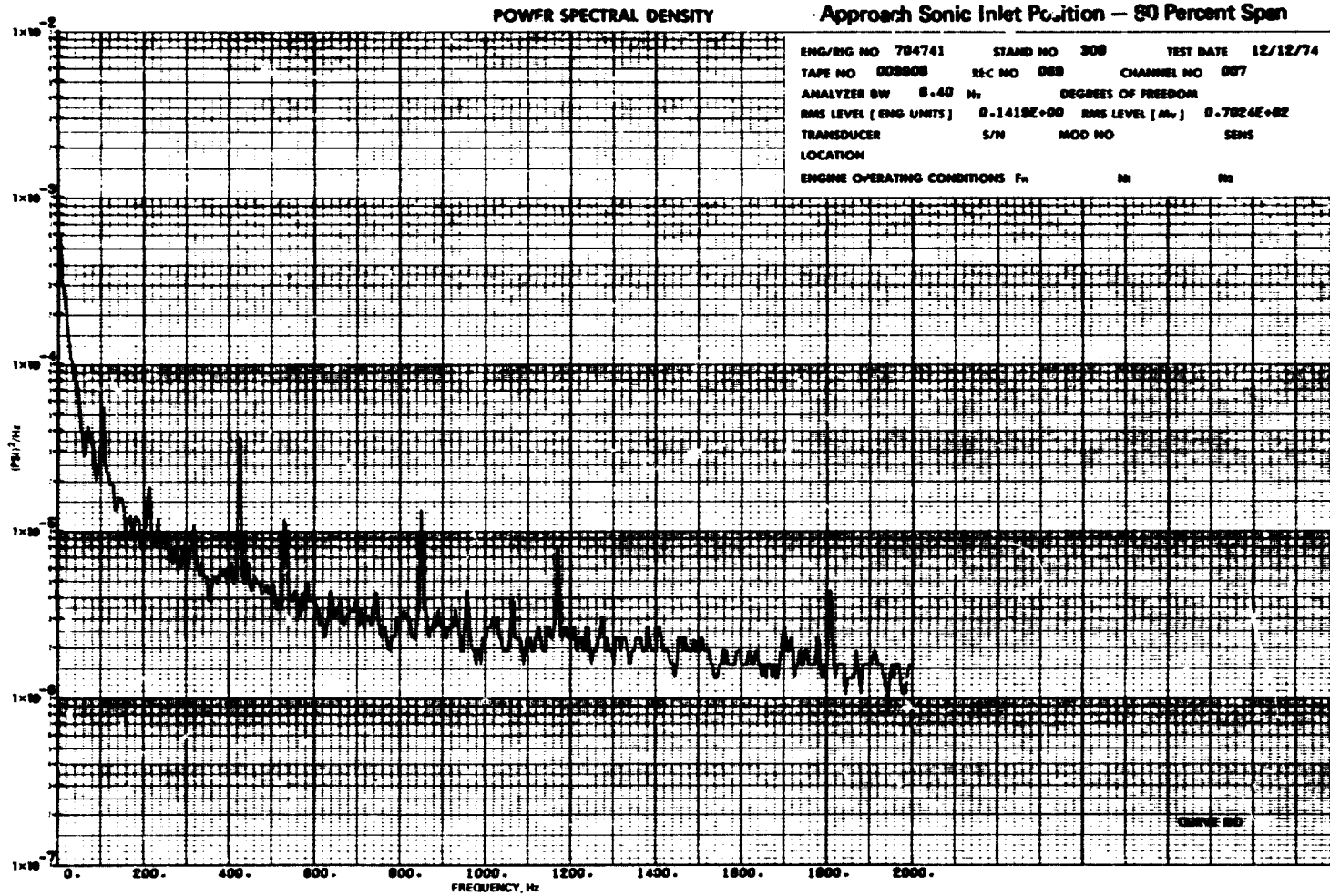
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POWER SPECTRAL DENSITY

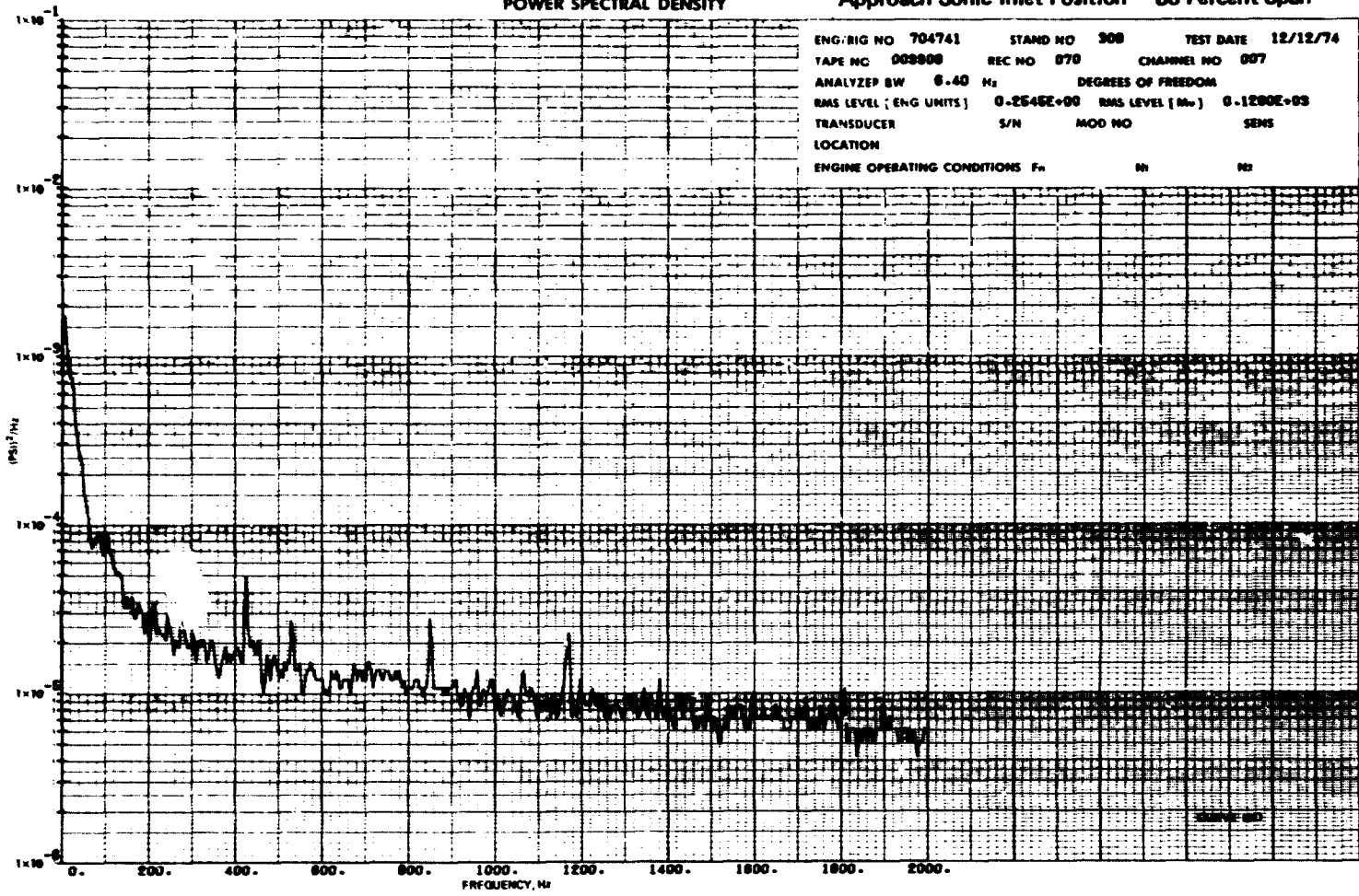
Approach Sonic Inlet Position - 40 Percent Span





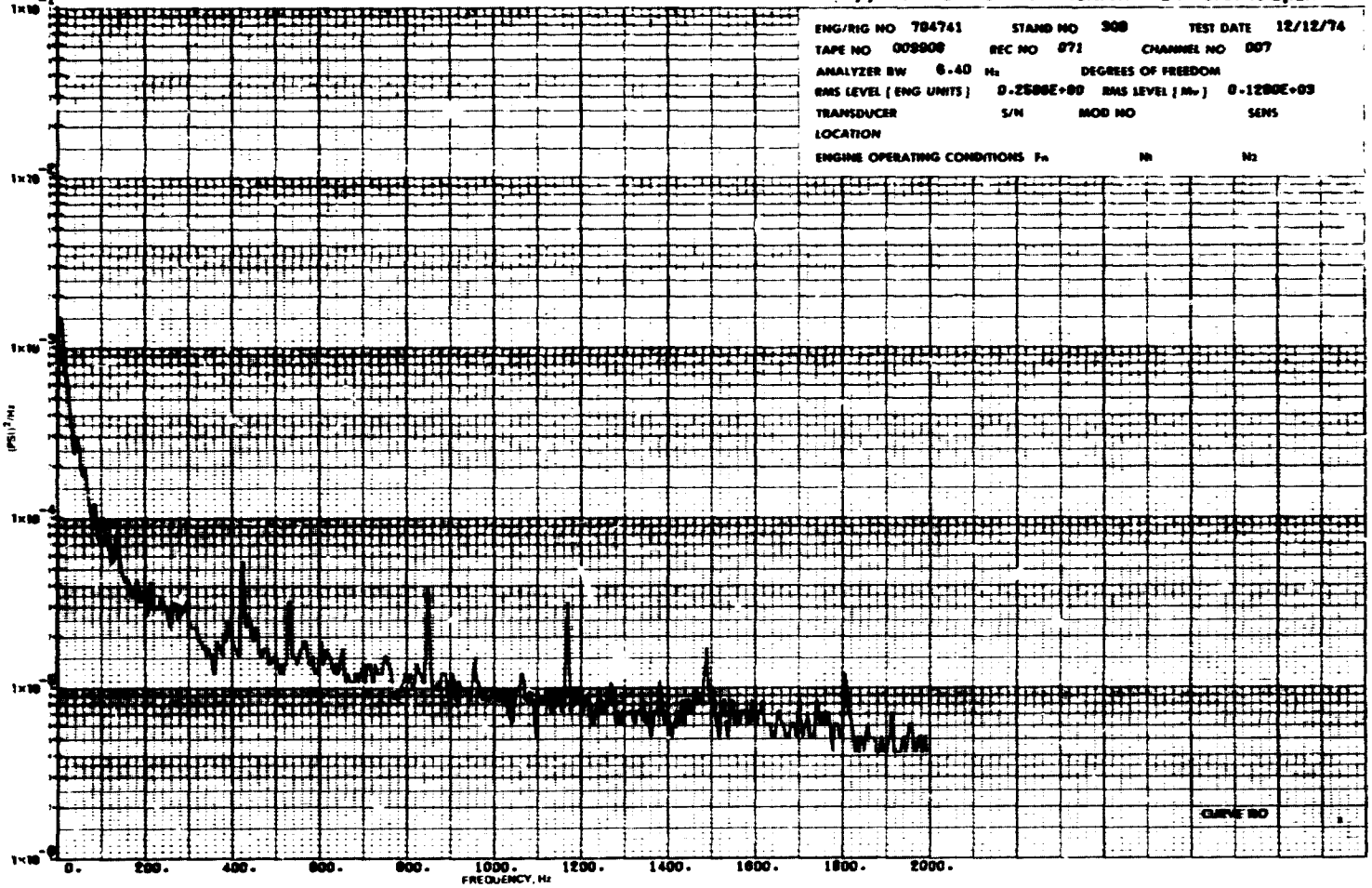
POWER SPECTRAL DENSITY

Approach Sonic Inlet Position - 80 Percent Span



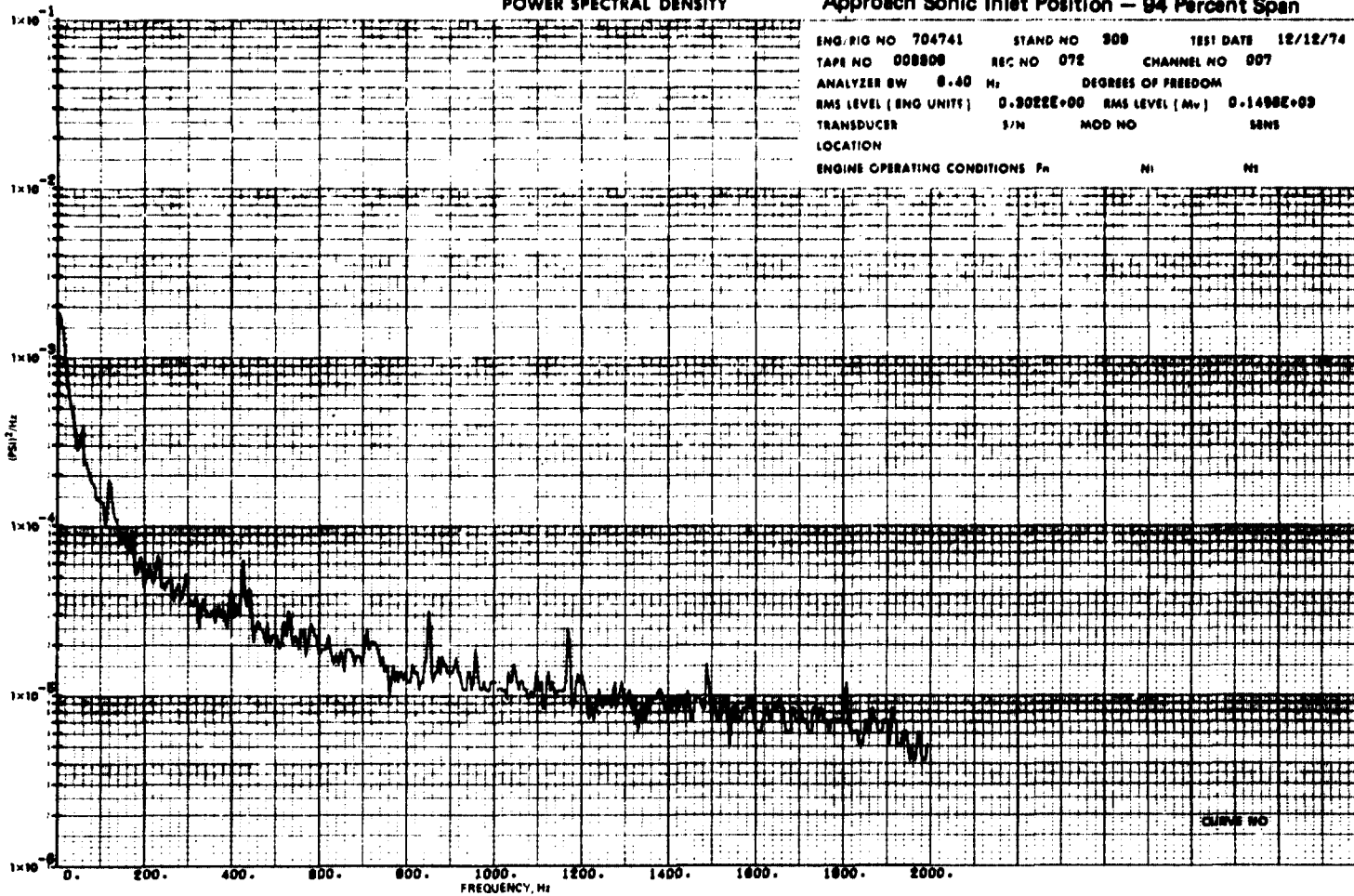
POWER SPECTRAL DENSITY

Approach Sonic Inlet Position - 91 Percent Span



POWER SPECTRAL DENSITY

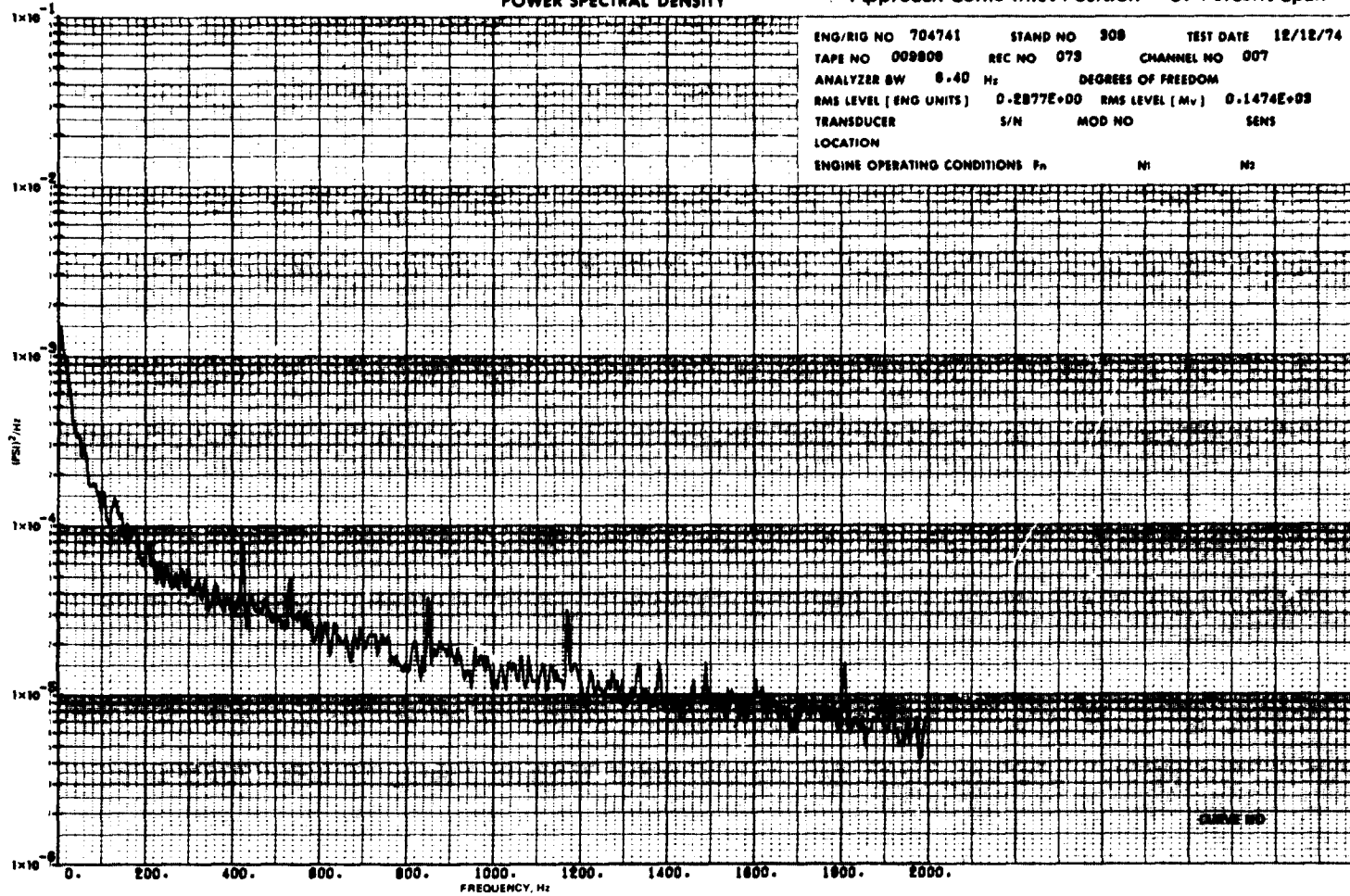
Approach Sonic Inlet Position - 94 Percent Span



ENG. FIG NO 704741 STAND NO 308 TEST DATE 12/12/74
TAPE NO 008808 REC NO 072 CHANNEL NO 007
ANALYZER BW 8.40 Hz DEGREES OF FREEDOM
RMS LEVEL (ENG UNITS) 0.3022E+00 RMS LEVEL (Mv) 0.1490E+03
TRANSDUCER S/N MOD NO SENS
LOCATION
ENGINE OPERATING CONDITIONS Pa Ni Ni

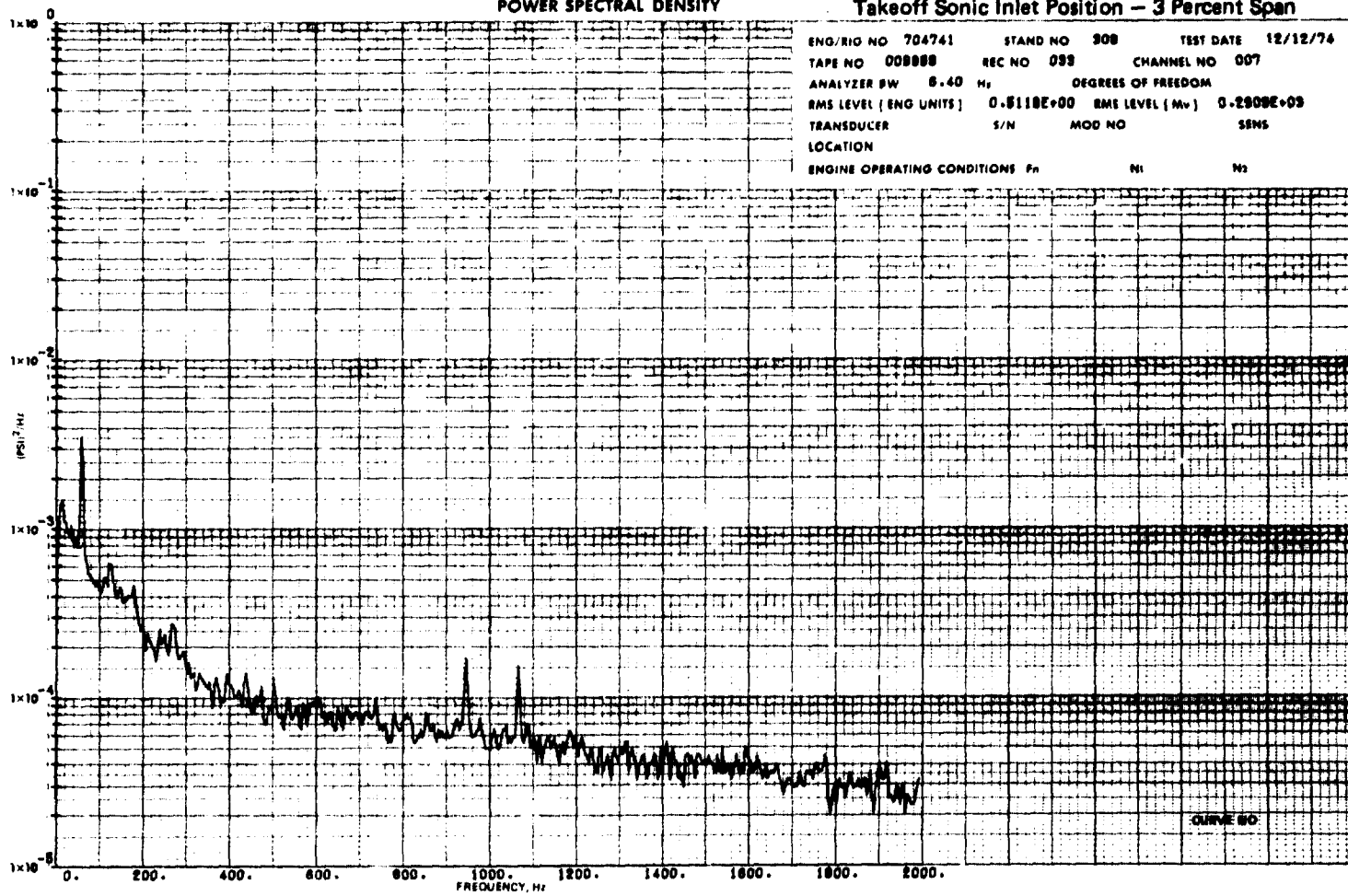
POWER SPECTRAL DENSITY

Approach Sonic Inlet Position - 97 Percent Span

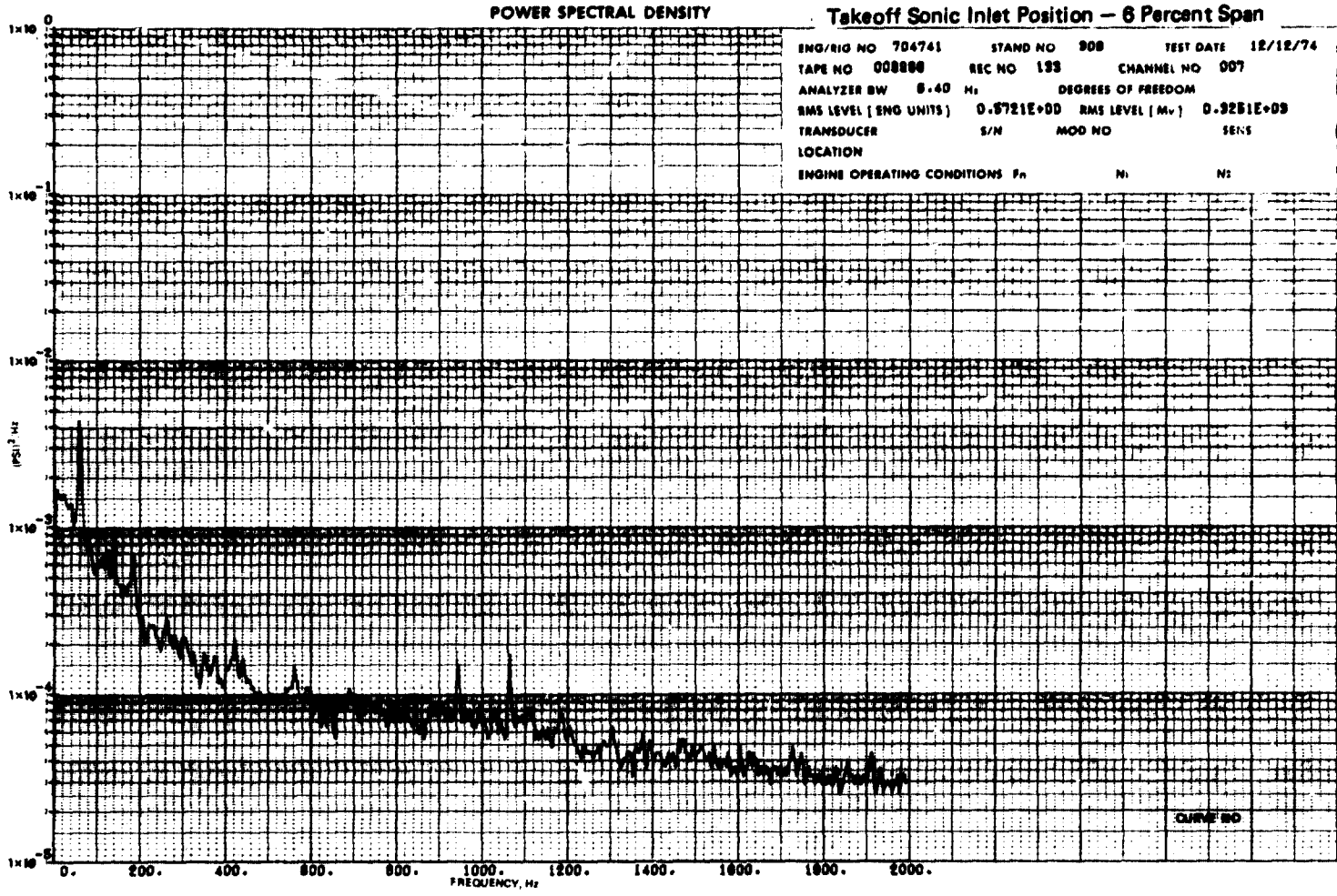


POWER SPECTRAL DENSITY

Takeoff Sonic Inlet Position - 3 Percent Span

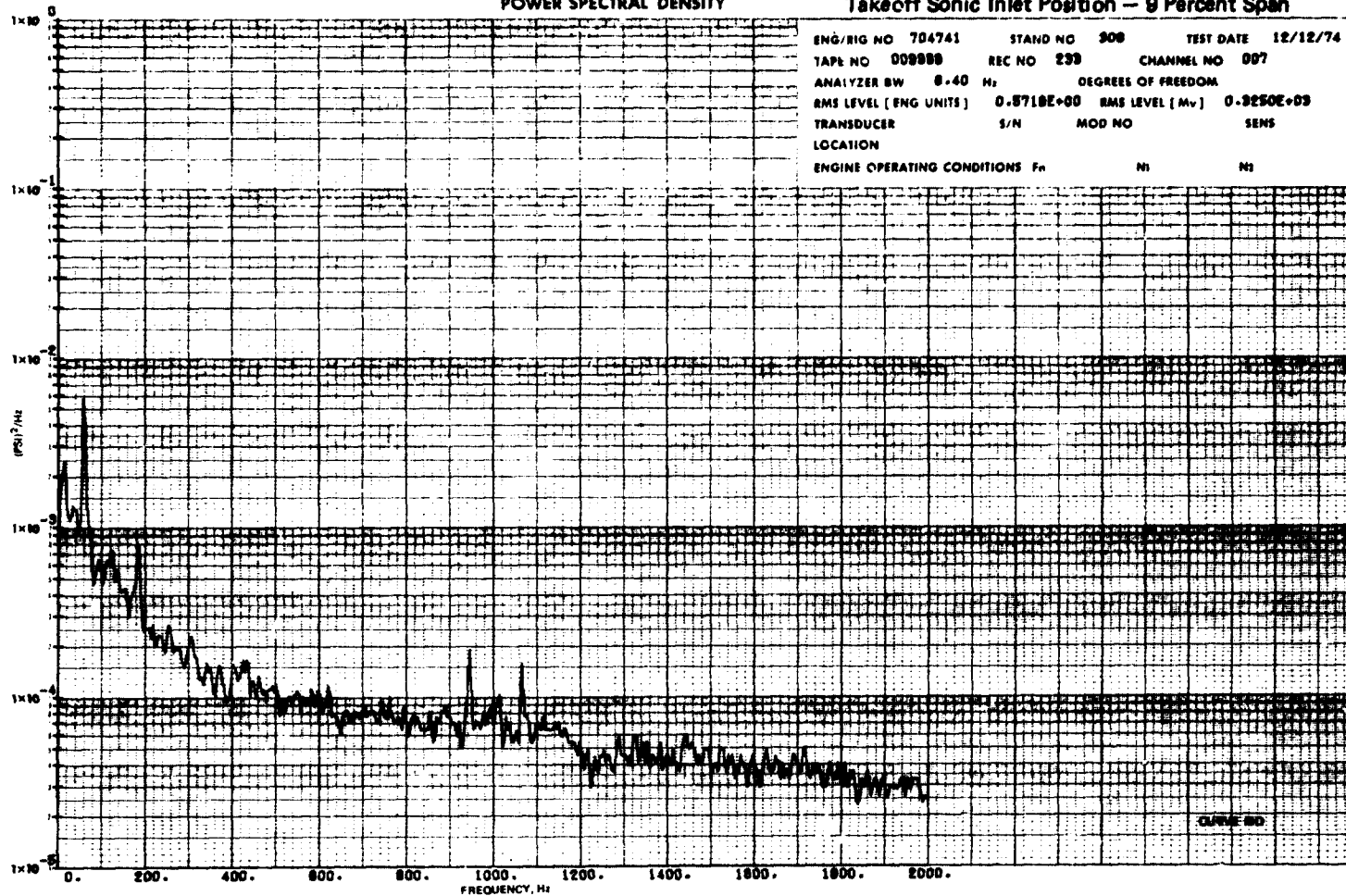


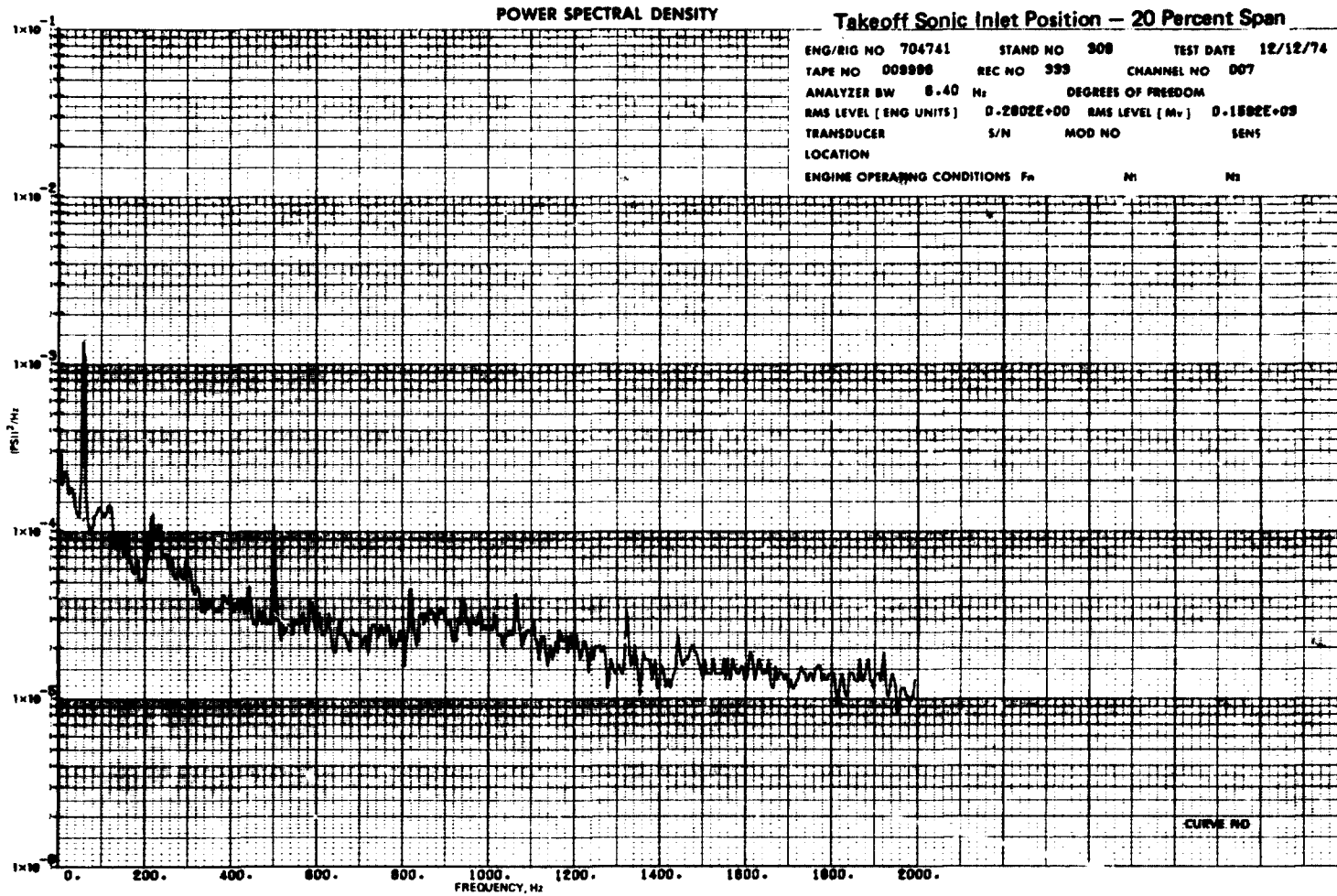
ENG/RIG NO	704741	STAND NO	308	TEST DATE	12/12/74
TAPE NO	009888	REC NO	099	CHANNEL NO	007
ANALYZER BW	8.40 Hz	DEGREES OF FREEDOM			
RMS LEVEL (ENG UNITS)	0.5118E+00	RMS LEVEL (MV)	0.2908E+03		
TRANSDUCER	S/N	MOD NO	SENS		
LOCATION					
ENGINE OPERATING CONDITIONS	F _n	N ₁	N ₂		



POWER SPECTRAL DENSITY

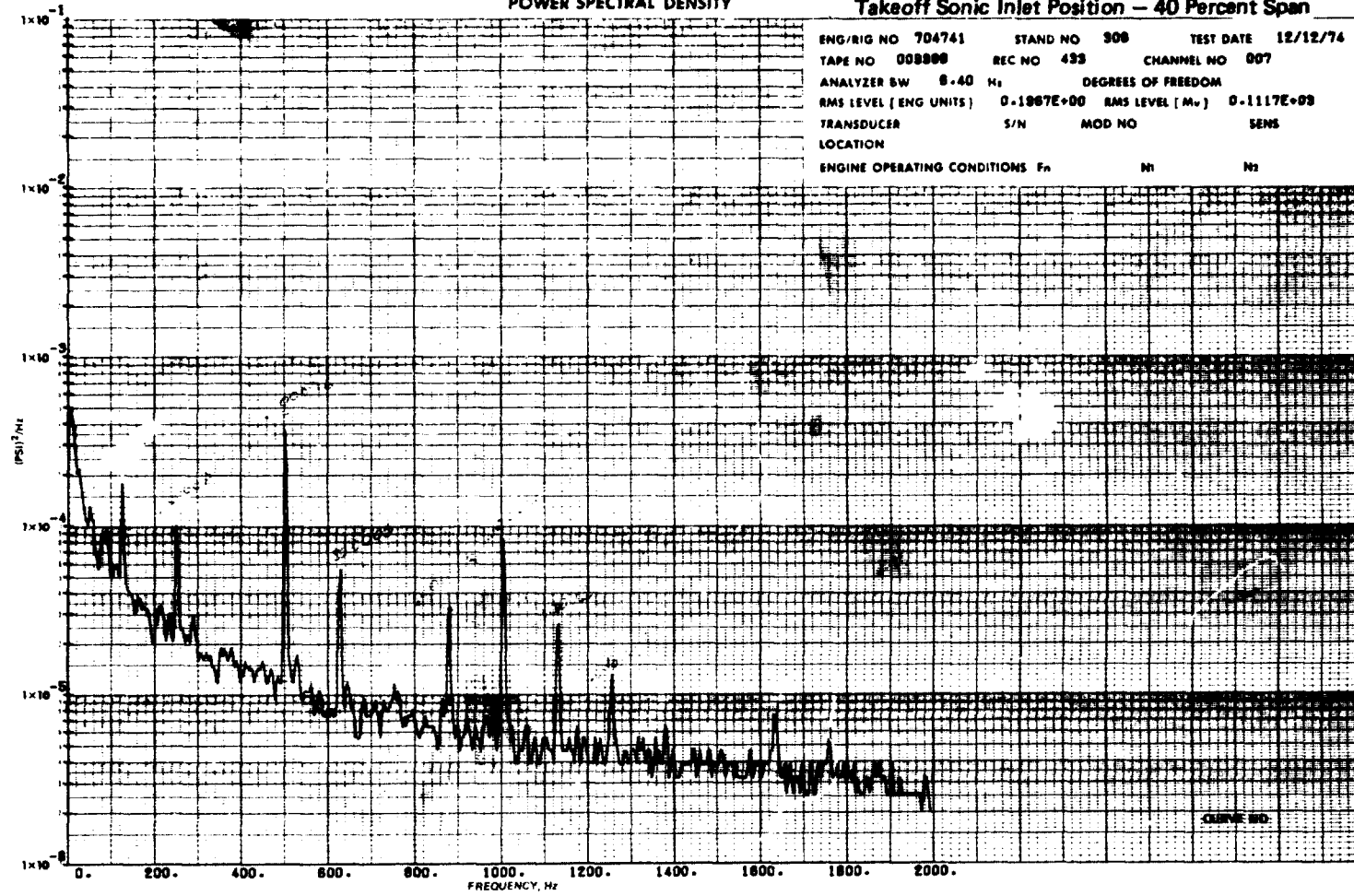
Takeoff Sonic Inlet Position - 9 Percent Span



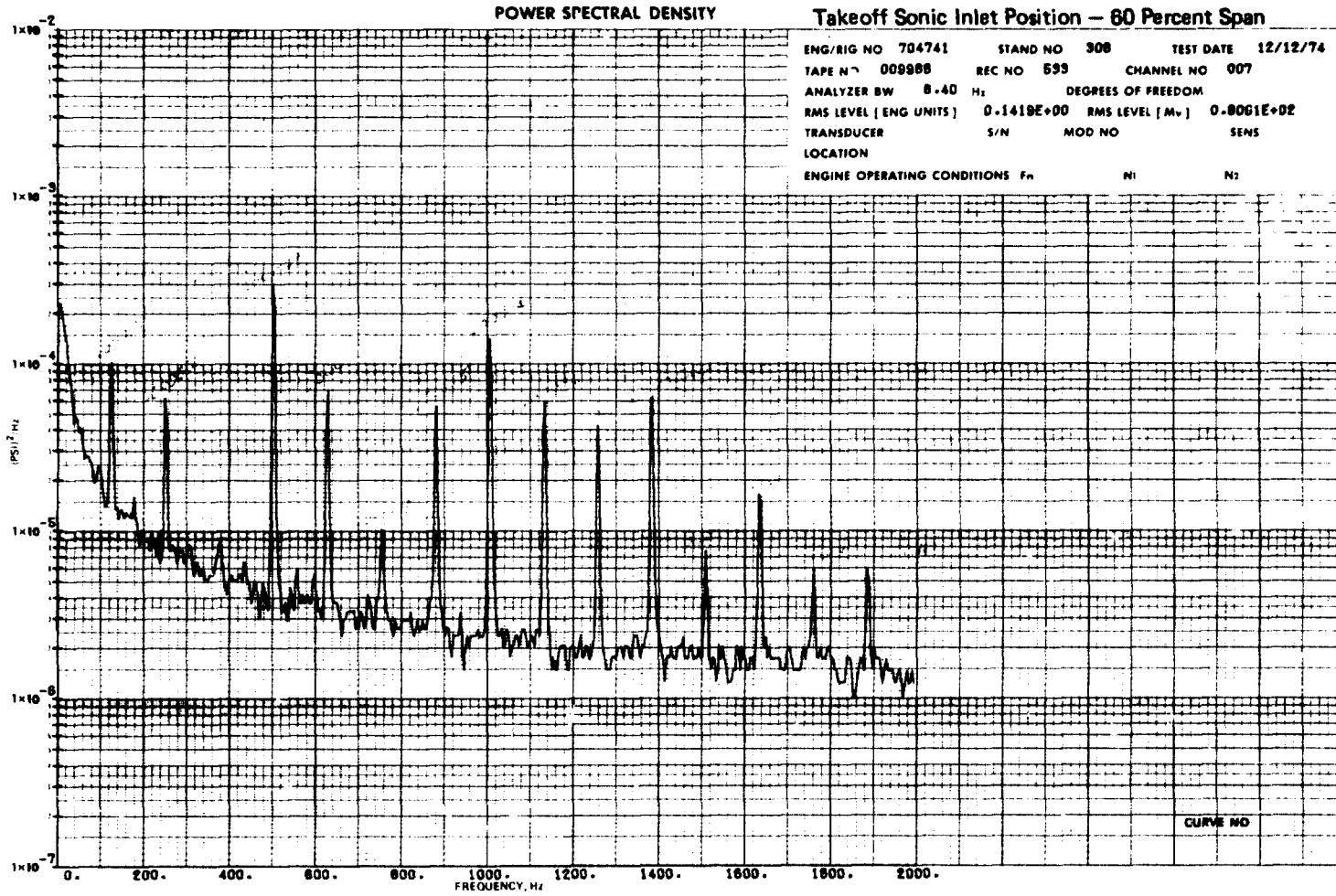


POWER SPECTRAL DENSITY

Takeoff Sonic Inlet Position - 40 Percent Span

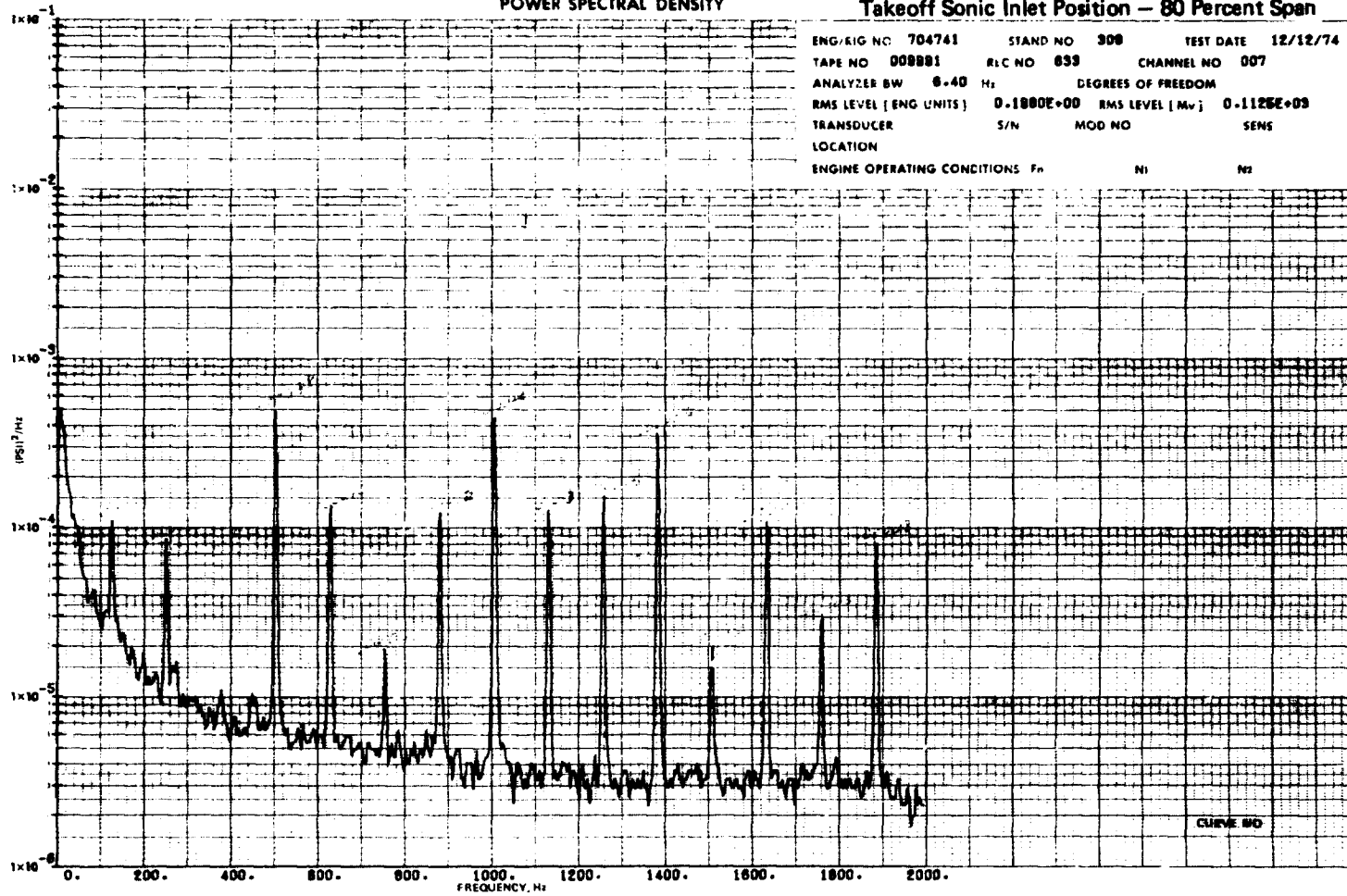


REPRODUCIBILITY OF THIS ORIGINAL PAGE IS POOR



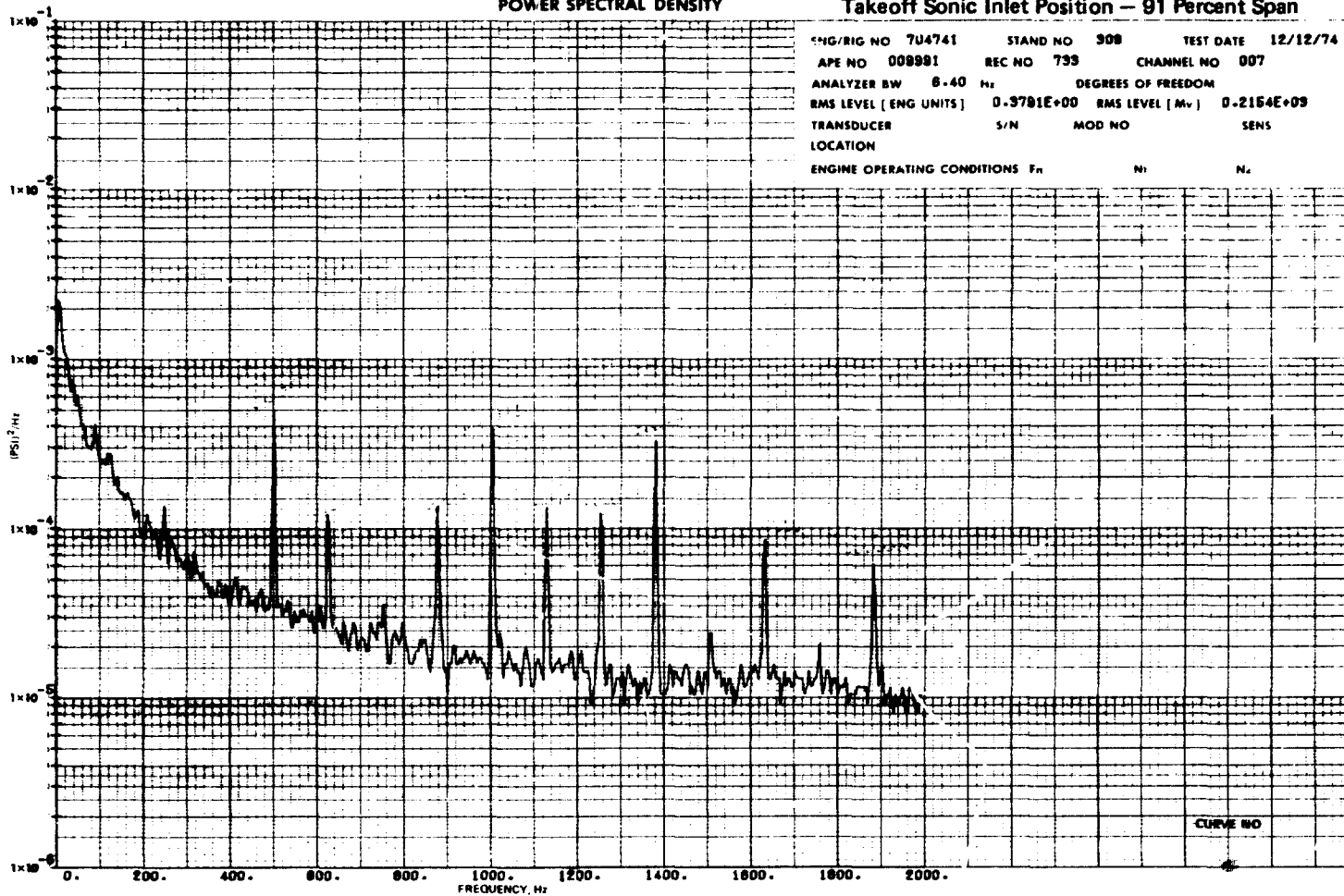
POWER SPECTRAL DENSITY

Takeoff Sonic Inlet Position - 80 Percent Span



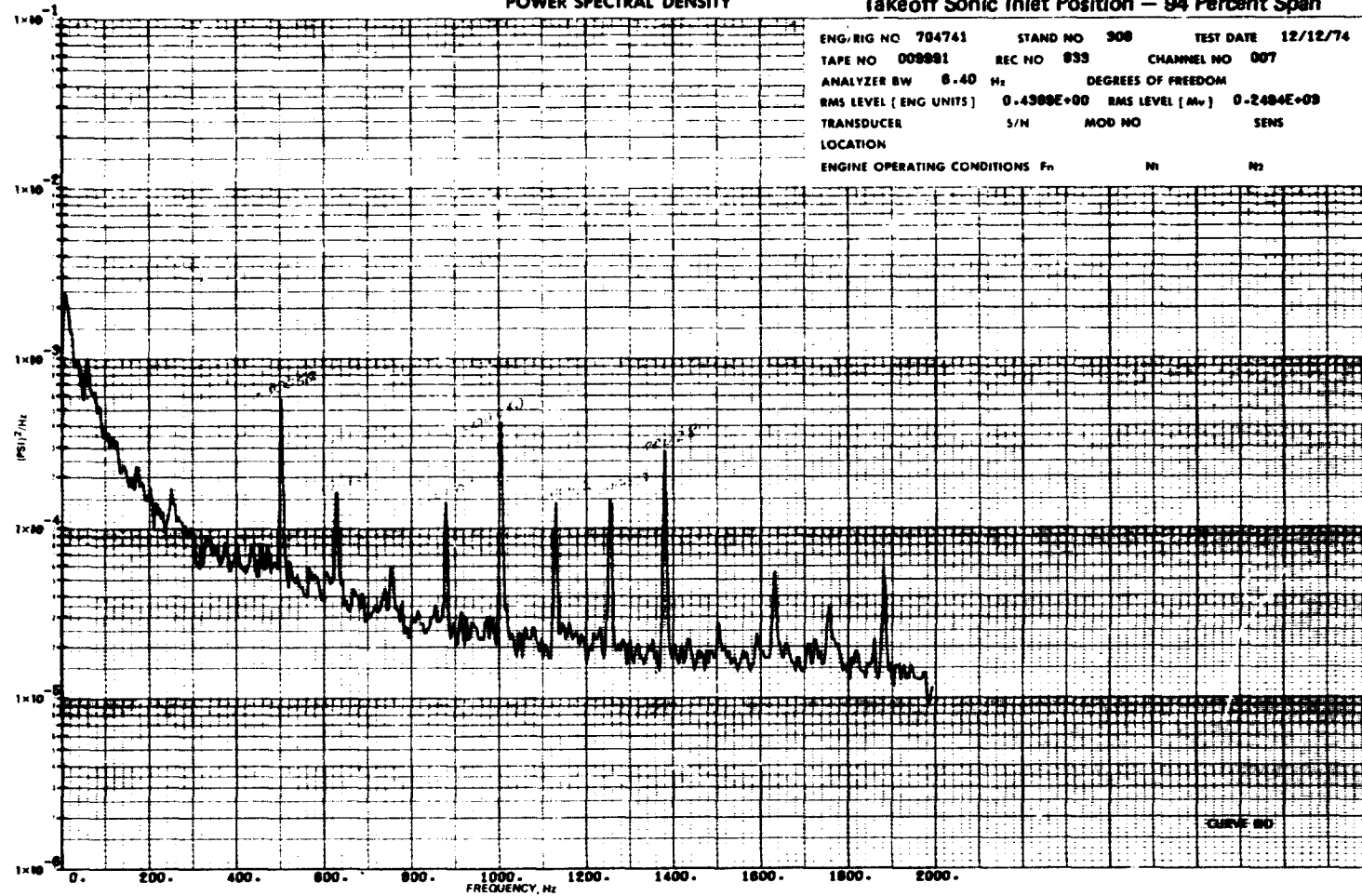
POWER SPECTRAL DENSITY

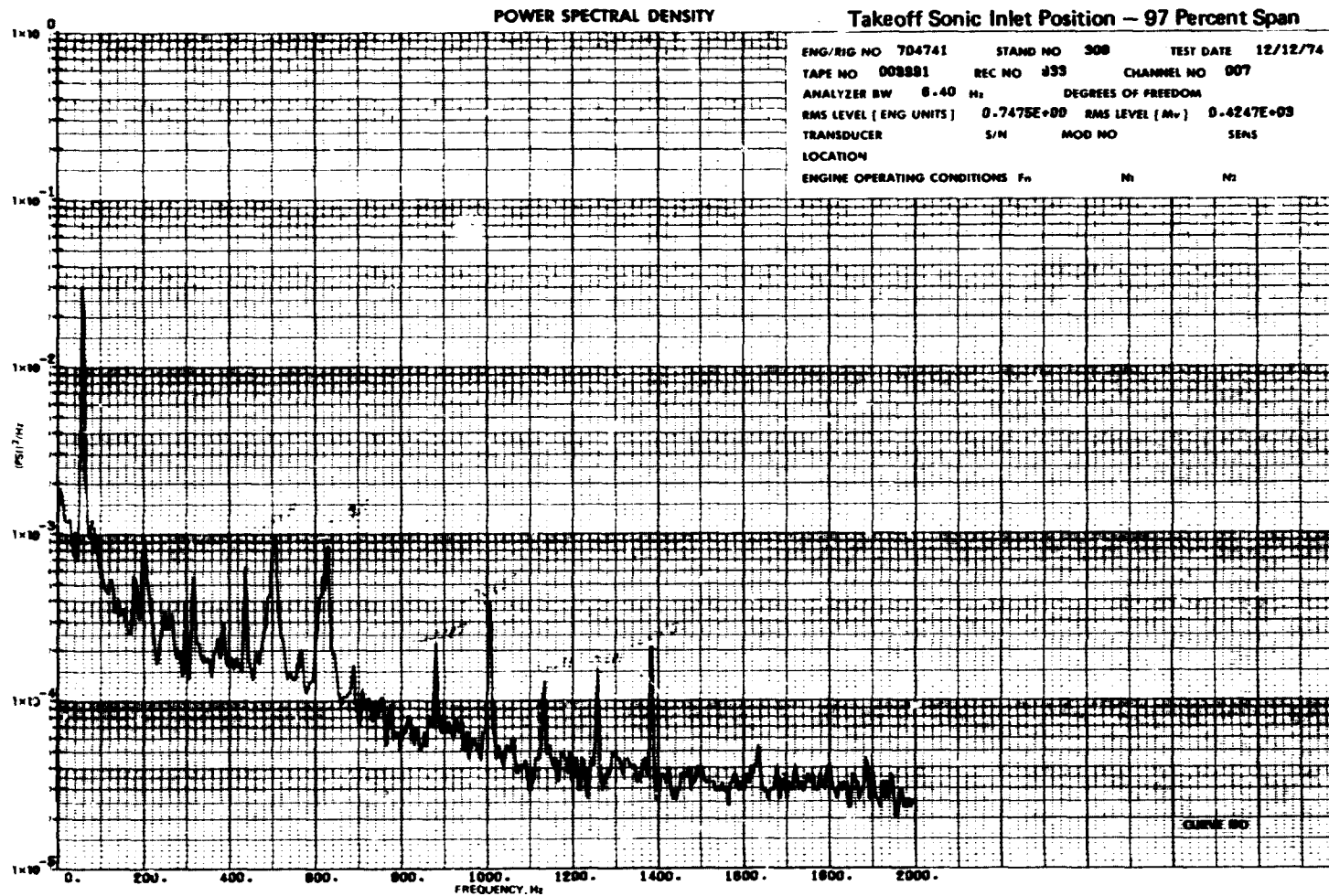
Takeoff Sonic Inlet Position - 91 Percent Span



POWER SPECTRAL DENSITY

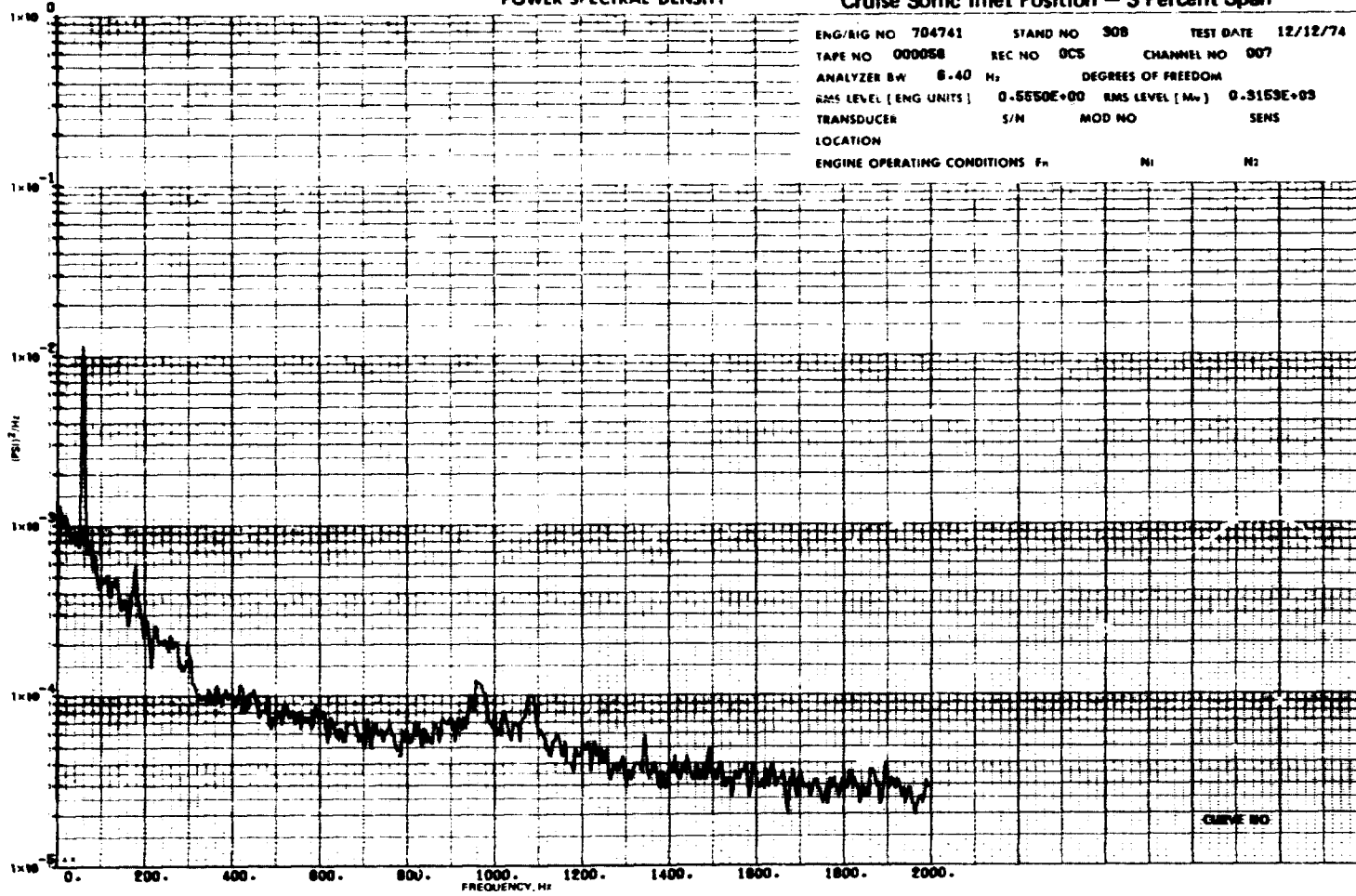
Takeoff Sonic Inlet Position - 94 Percent Span

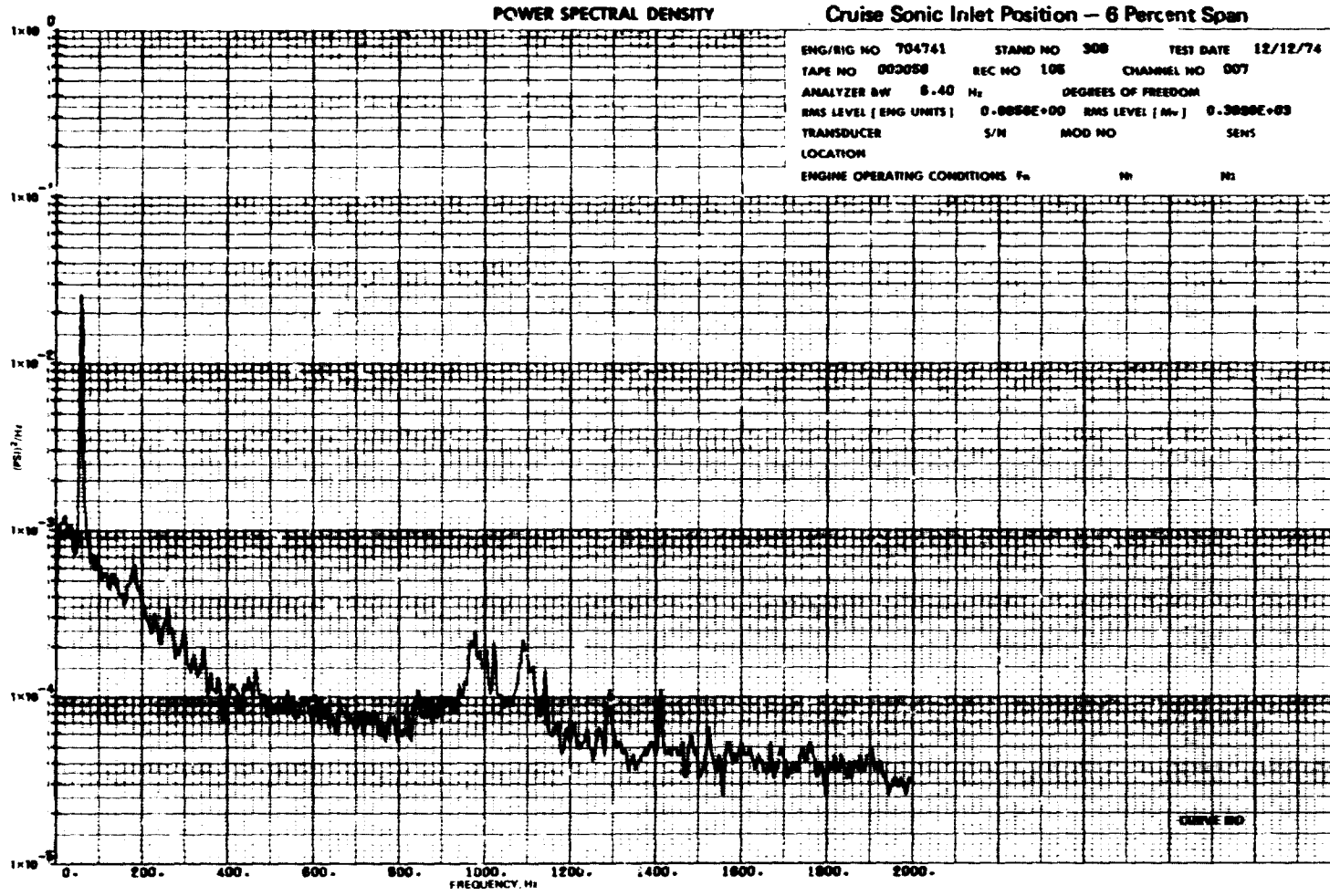




POWER SPECTRAL DENSITY

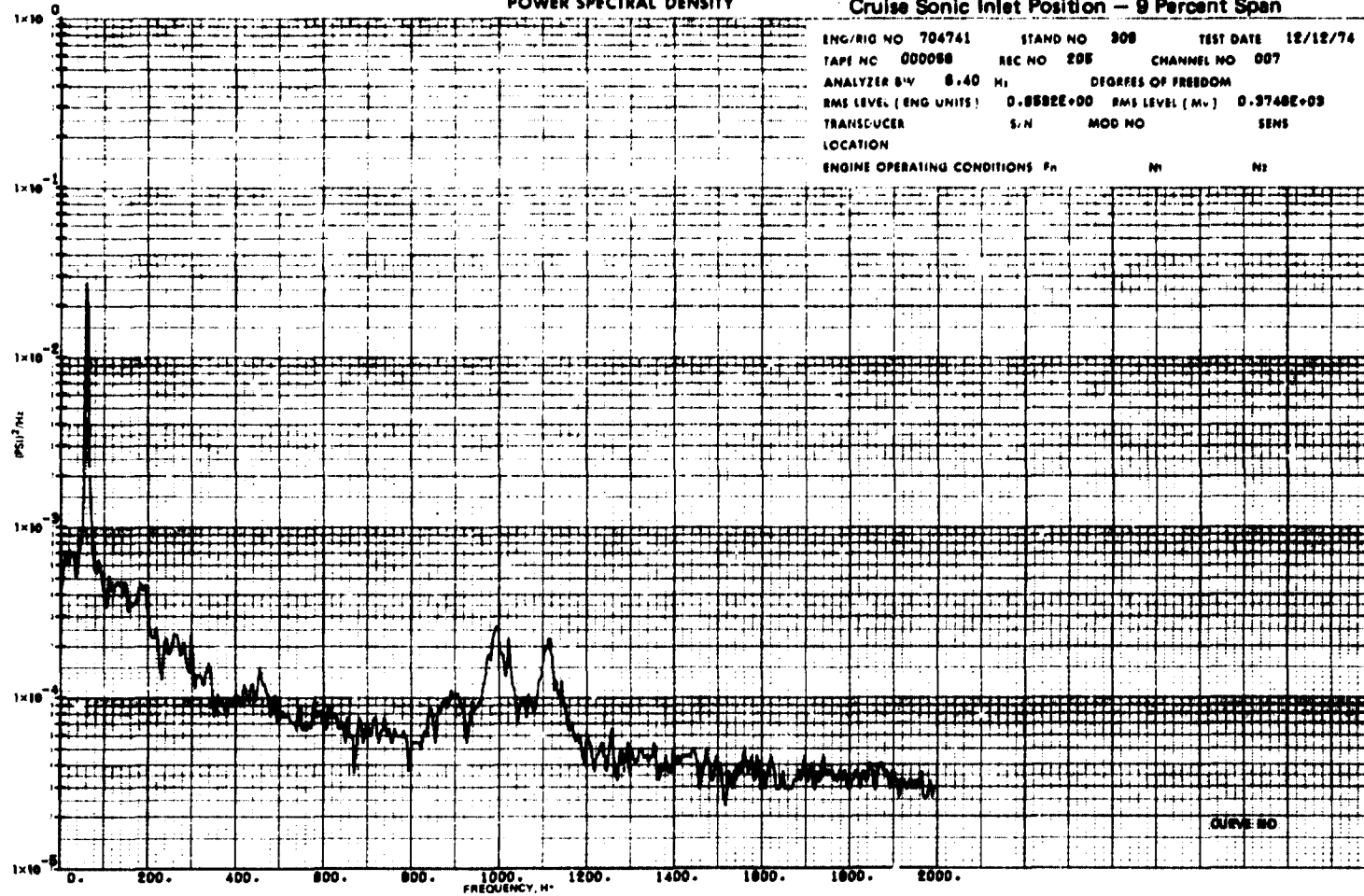
Cruise Sonic Inlet Position - 3 Percent Span



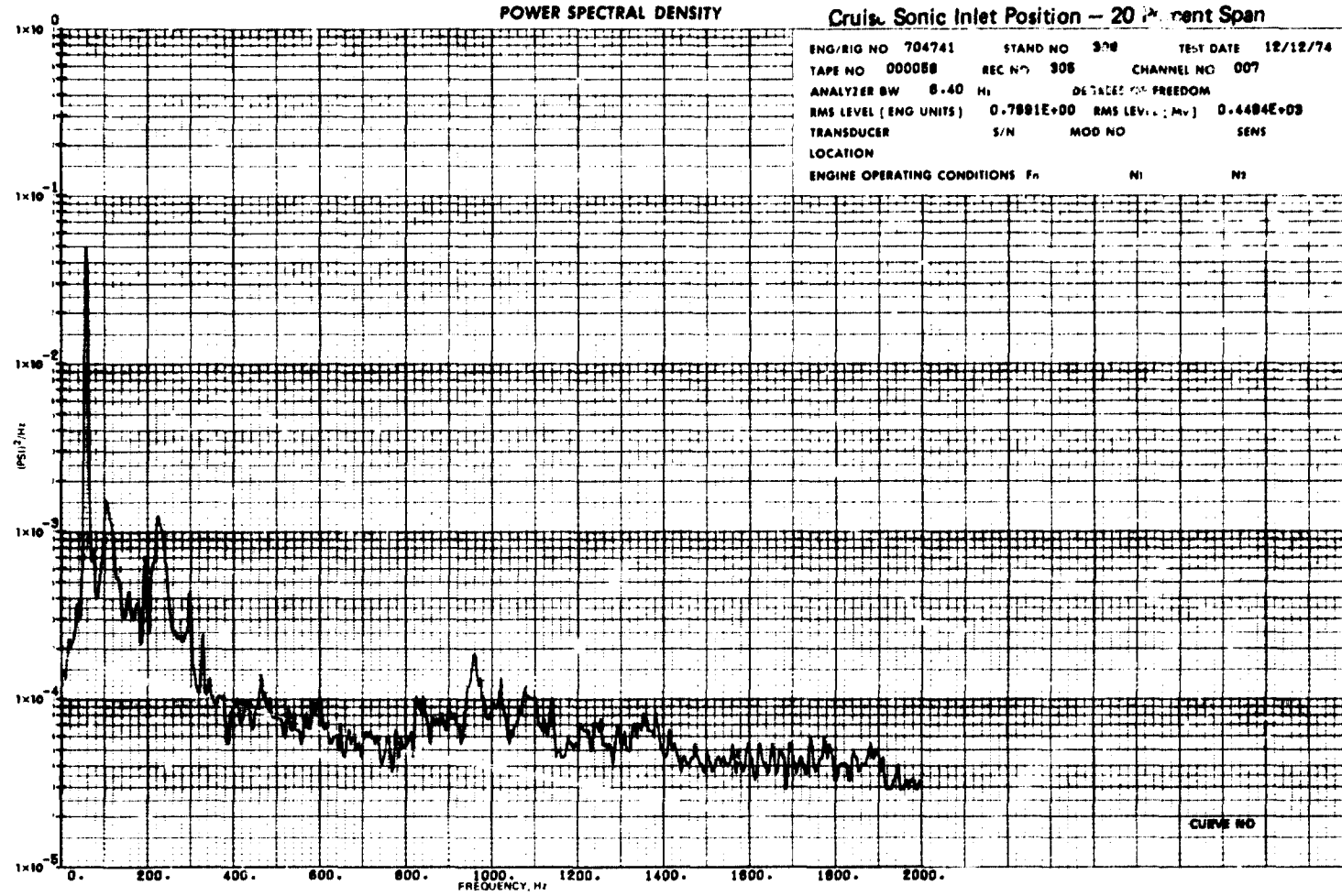


POWER SPECTRAL DENSITY

Cruise Sonic Inlet Position - 9 Percent Span

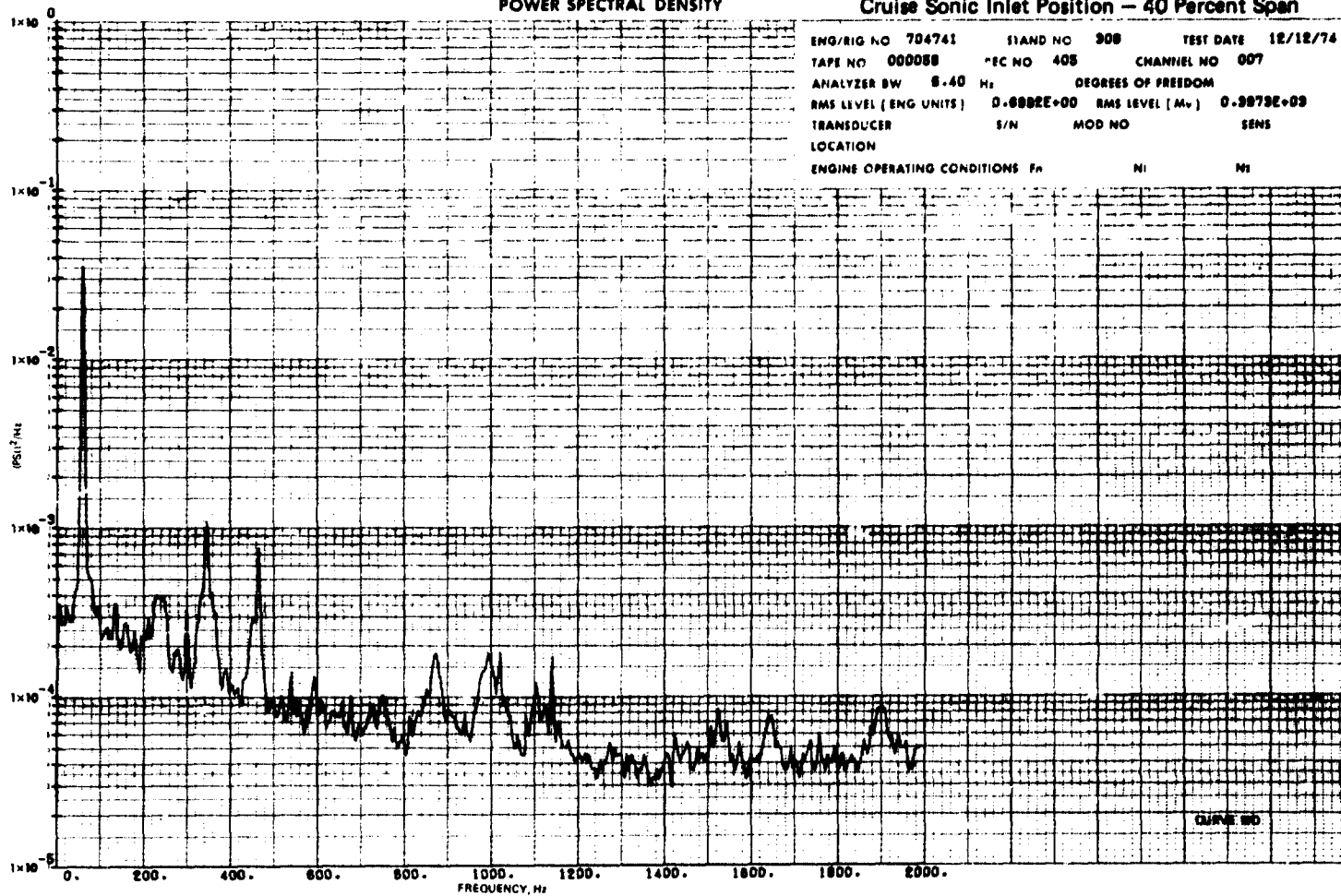


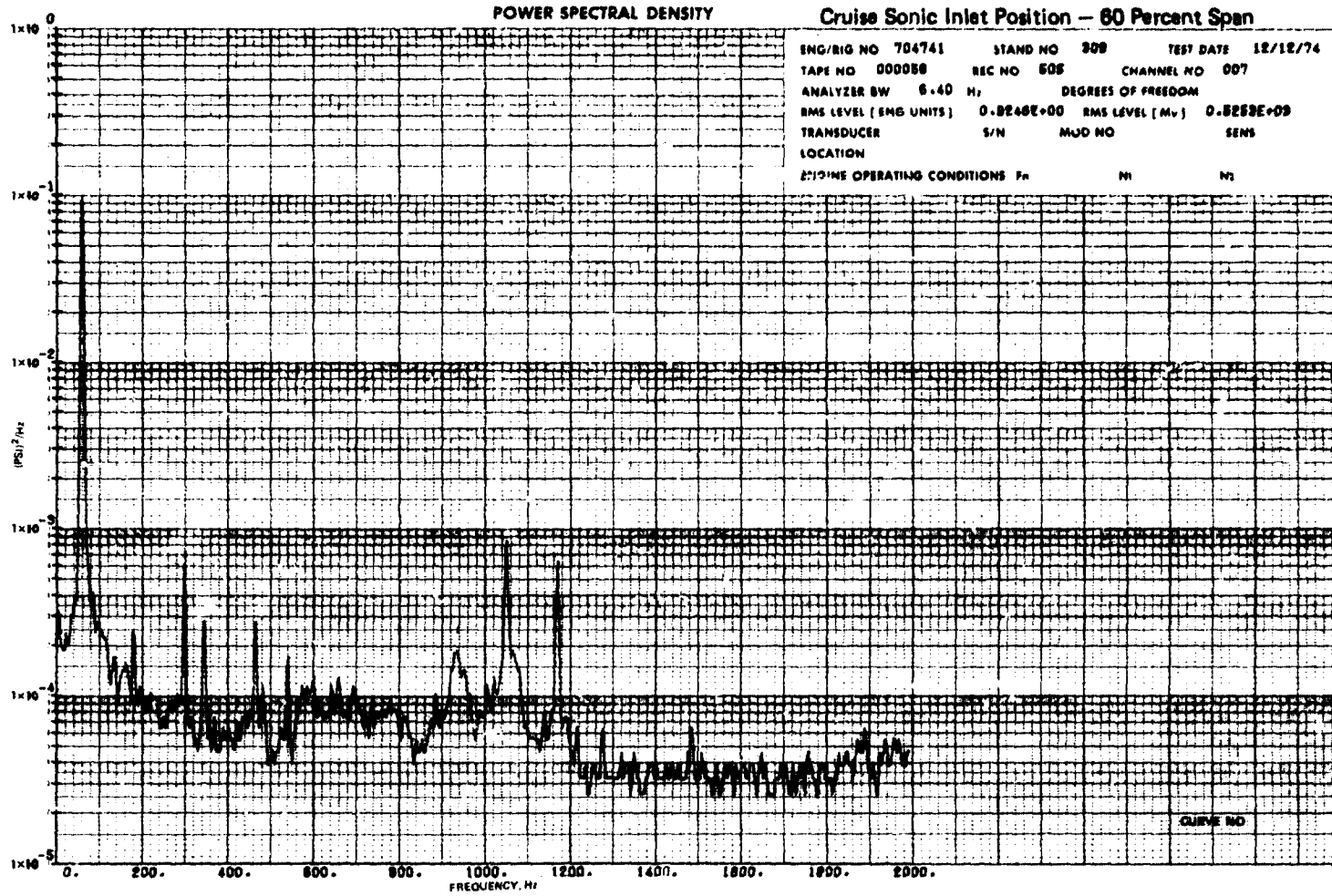
ENG/RIG NO 704741 STAND NO 308 TEST DATE 12/12/74
TAPE NO 000088 REC NO 208 CHANNEL NO 007
ANALYZER BW 8.40 Hz DEGREES OF FREEDOM
RMS LEVEL (ENG UNITS) 0.8582E+00 RMS LEVEL (MV) 0.3748E+03
TRANSDUCER S/N MOD NO SENS
LOCATION
ENGINE OPERATING CONDITIONS Pn N1 N2



POWER SPECTRAL DENSITY

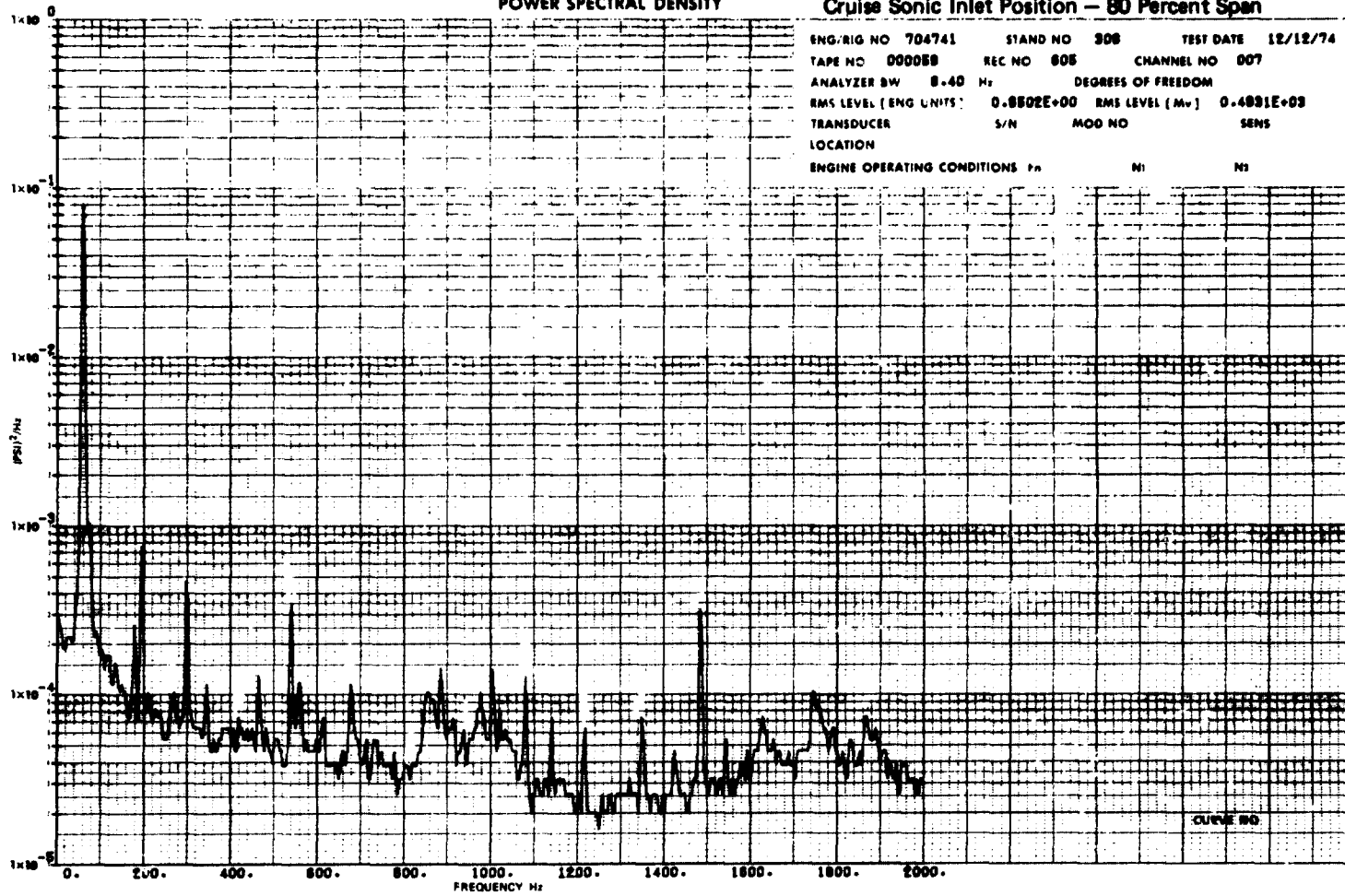
Cruise Sonic Inlet Position - 40 Percent Span

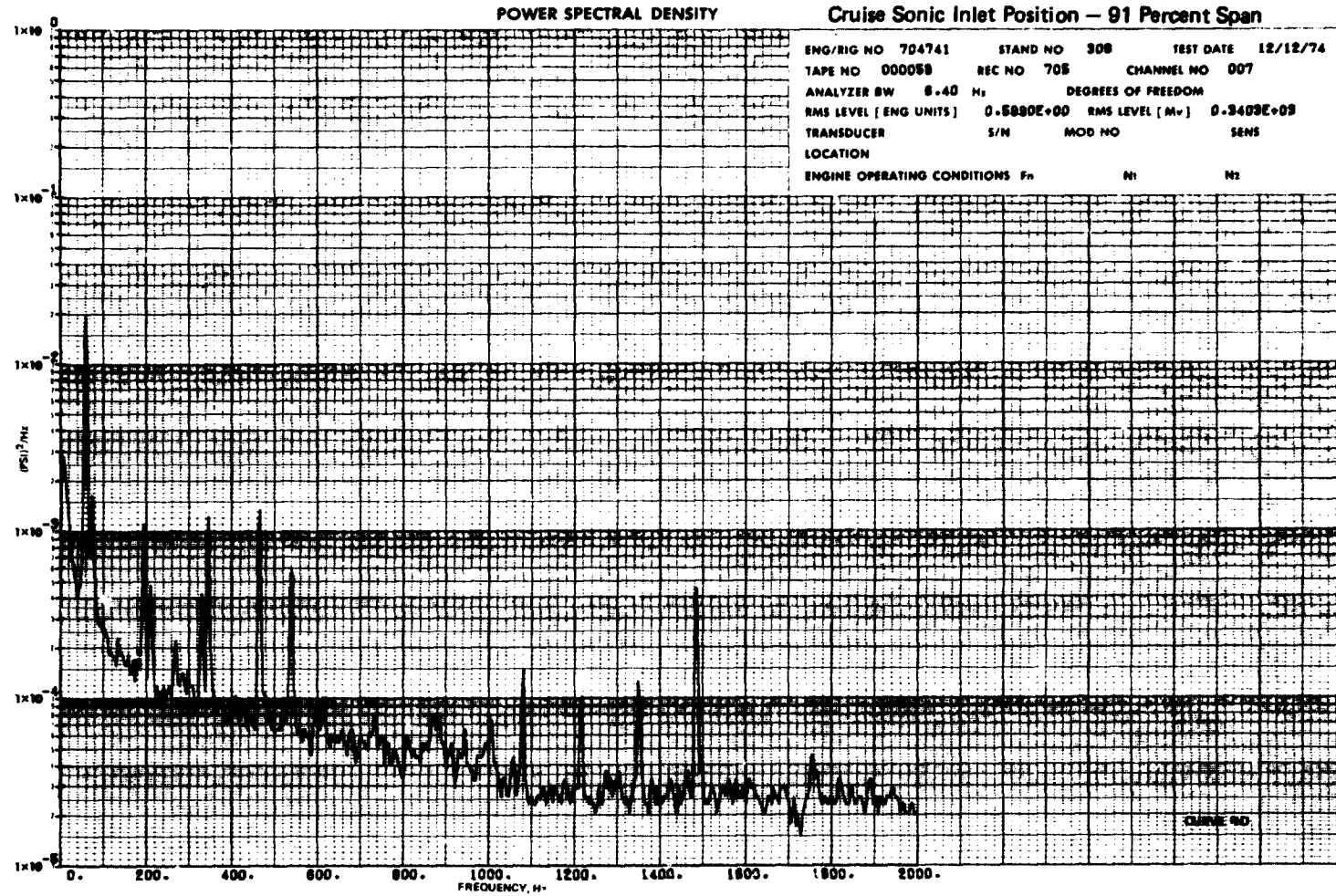




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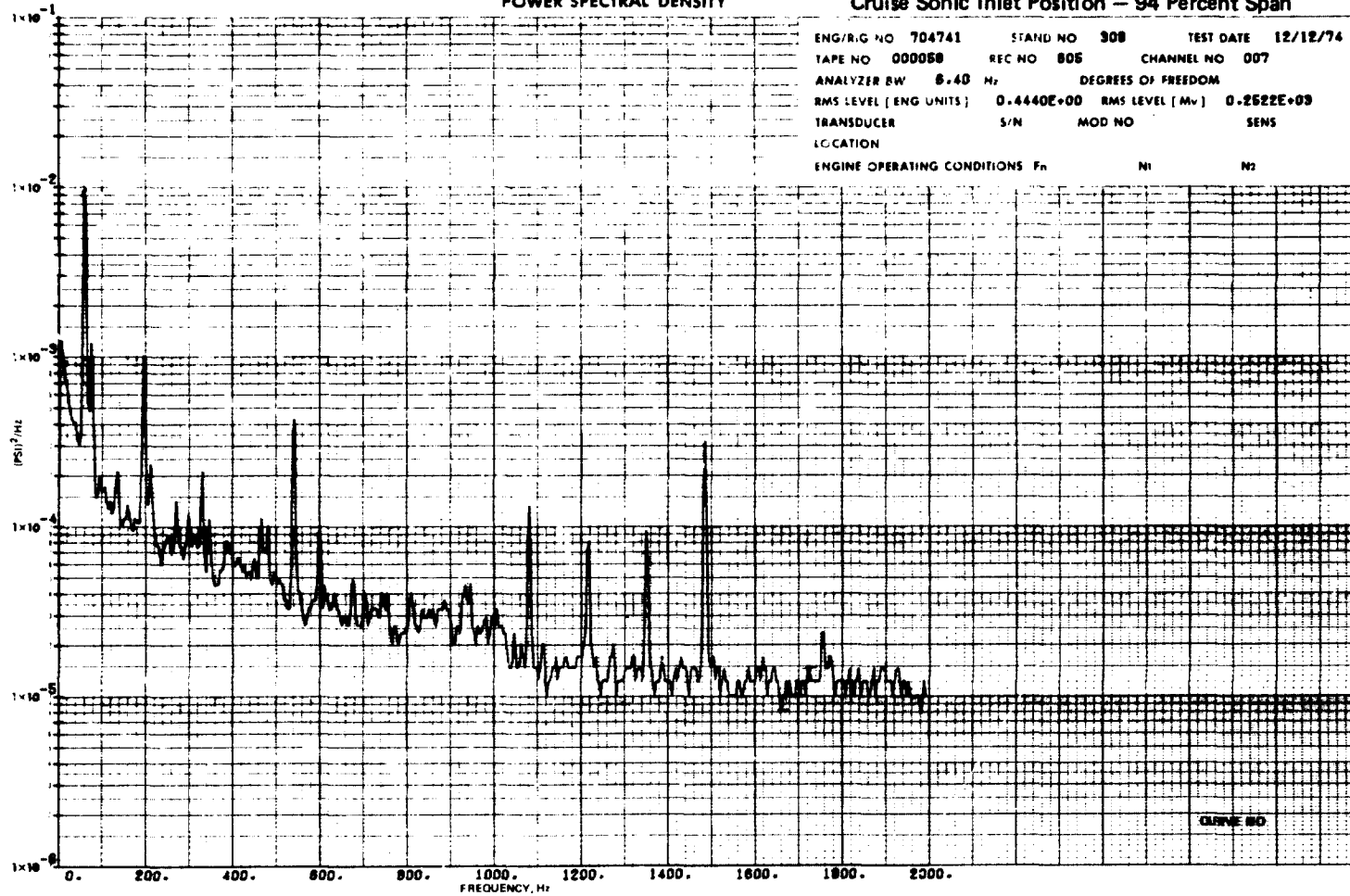
Cruise Sonic Inlet Position - 80 Percent Span

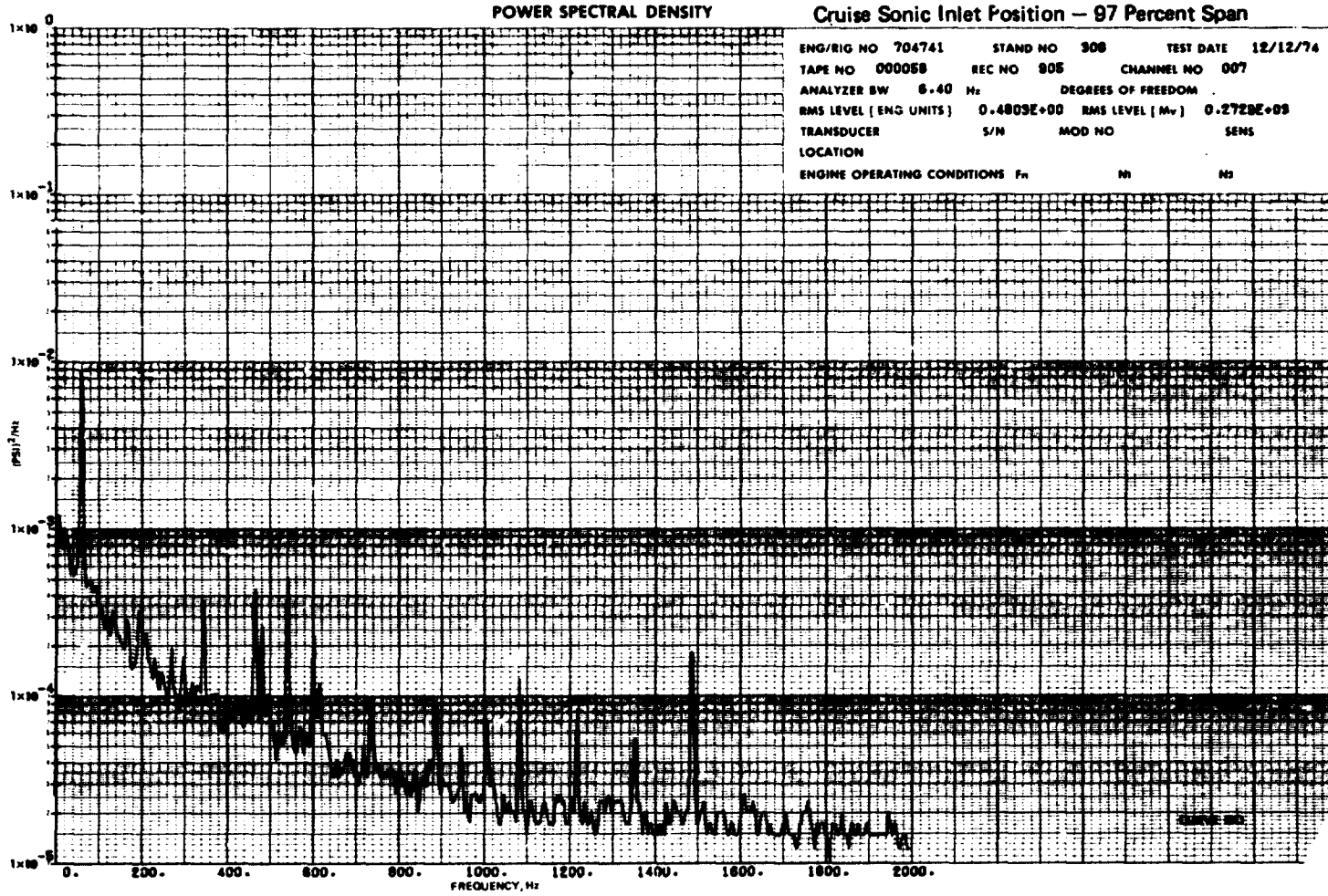




POWER SPECTRAL DENSITY

Cruise Sonic Inlet Position - 94 Percent Span





LIST OF REFERENCES

1. Sofrin, T. G. and Riloff, N.: "Two-Stage, Low Noise Advanced Technology Fan – Volume III, Acoustic Data", NASA CR-134829, PWA-5303, September 1975
2. Messenger, H. E.; Ruschak, J. T.; and Sofrin, T. G.: "Two-Stage Low Noise Advanced Technology Fan – I. Aerodynamic Structural, and Acoustic Design", NASA CR-134662, PWA-5069, September 1974.
3. Harley, K. G. and Keenan, M. J.: "Two-Stage, Low Noise Advance Technology Fan – Volume IV, Final Aerodynamic Report", NASA CR-134830, PWA-5304, September 1975
4. Sofrin, T. G. and Riloff, N.: "Two-Stage, Low Noise Advanced Technology Fan – Volume V, Final Acoustic Report", NASA CR-134831, PWA-5305