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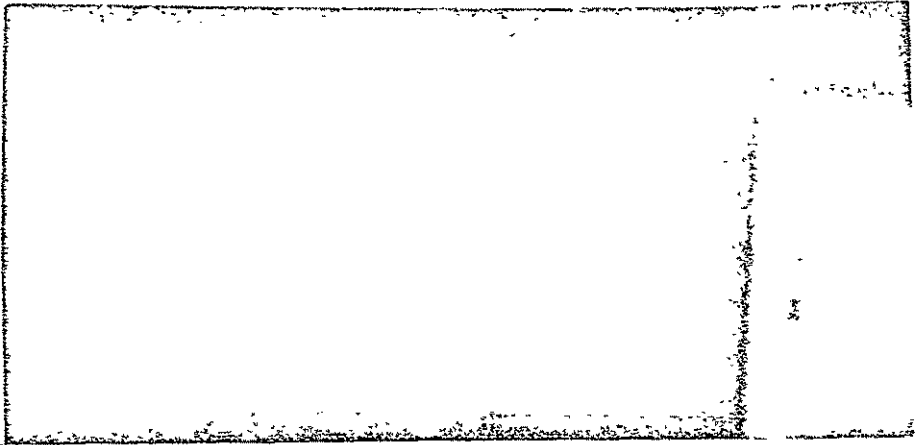
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MISSILES AND SPACE DIVISION
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REVISED LUNAR MODULE ASCENT STAGE
THERMAL MODEL HANDBOOK

Report No. 350.22

8 May 1970

Submitted By

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To

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The revised Lunar Module Ascent Stage baseline thermal model is presented in this report. This configuration was obtained by updating the Lunar Module No. 5 (LM-5) baseline thermal model (Reference 1) through the use of the Grumman Aerospace Corporation (GAC) LM-6 Ascent Stage Thermal Network baseline data listing (Reference 2) and several revisions to that thermal network provided by GAC (Reference 8). The LM-6 Ascent Stage (A/S) thermal model has been prepared for use with the Lunar Module Ascent Stage Routine (LMAR) master program tape (Reference 3). The updated LM A/S baseline thermal model represents the LM-6 through LM-9 configuration and the node diagrams and complete data tape listing are presented. The revised external node configuration of the LM-6 A/S is also presented.

2.0 INTRODUCTION

The revised LM A/S baseline thermal model has been prepared as a part of the continuing effort of the Missiles and Space Division of LTV Aerospace Corporation (MSD) to maintain the LM thermal analysis capability in an up-to-date configuration. Modifications to the LM-5 version of the MSD baseline LM thermal model (Reference 1) were implemented after review of the GAC LM-6 Ascent Stage Thermal Network (Structure) baseline data listing (Reference 2). Due to the extensive revisions required in the thermal model to obtain the LM-6 configuration, a revised handbook has been prepared. It is expected that the present baseline thermal model can be used for the LM-6 through LM-9 vehicles. Subsequent revisions to the thermal model will be documented through the Apollo Thermal Analysis Newsletter published weekly at NASA-MSC by the Thermal Simulator Coordinator (Reference 4).

3.0 DISCUSSION

3.1 Environmental Control System

The Environmental Control System (ECS) portion of the Revised LM A/S Baseline thermal model remains essentially unchanged from the LM-5 thermal model which is described in the LM A/S Thermal Model Handbook (Reference 1). However, the flow system schematics of the Heat Transport Section (HTS), the Atmosphere Revitalization Section (ARS), and the Water Management Section (WMS) have been included in Figures 1 through 8 of this report for convenience of users of the revised thermal model. A description of the 14 node crewman thermal model which has been incorporated in the LMAR is contained in Reference 1.

The only significant change in the ECS in addition to thermal connection values resulting from comparison to the GAC LM-6 baseline structure data listing was the conversion of the docking window shade from a structure node to a tube node in the cabin loop of the ARS. A complete description of the LM window characterization is given in Reference 5 which includes the heat leak, incident environmental heat flux, and window shade functions. A thermal model node configuration of the LM windows is shown in Figure 9 to clarify their thermal characterization. The resulting characterization of the docking window is identical to the forward windows characterization described in Reference 1.

3.2 Structural Thermal Model

The LM A/S Structural model which is included in the revised baseline thermal model was derived from the GAC LM-6 A/S structural thermal model listed in Reference 2. The significant revisions to the LM-6 structure thermal model are changes to the external thermal shield node configuration, the docking tunnel node configuration, the A/S engine diaphragm characterization, and the Reaction Control System plume deflector characterization. The revised structure and cabin interior node configurations are shown in figures 10 through 12.

3.2.1 External Node Configuration

The external node configuration of the LM thermal model was revised to the original GAC LTA-8/LM-5 configuration. This configuration, shown in Figure 10, is obtained from Reference 6. The external nodes shown in this figure represent the LM external thermal shield. Due to the variation of thermal effectiveness of the thermal shield with cabin pressurization, the thermal shield nodes affected have been included in the special structure lump section of the data input. This data option provides appropriate radiation factor curve number callouts to modify the radiation connections as the cabin pressure changes. Heat absorption curves have been included in the curve section of the data for external nodes which were added to the model.

3.2.2 Docking - Undocking Simulation

A simplified node configuration has been adopted for simulating LM/Command Service Module (CSM) docked and undocked conditions. Structure nodes 329, 507, and 499 have been combined into structure node 499 which is used to simulate a portion of the CM in the docked condition and space in the undocked condition. Node 333 has been eliminated. The thermal model node arrangement obtained from Reference 7 is shown in Figure 12. The CSM external nodes (786 and 787) remain the same as described in Reference 1. Simulation of the LM in the docked and undocked conditions requires that nodes 499, 786 and 787 be set at the average CSM temperature during docked conditions and set equal to the space node for undocked conditions. Temperature curve number 51 is used for node 499 and temperature curve number 52 is used for nodes 786 and 787.

3.2.3 A/S Engine Diaphragm Characterization

The A/S engine diaphragm is located inside the nozzle where it blocks a portion of the inside nozzle surface from radiation exchange with the external environment. At staging (Ascent Propulsion System burn), the diaphragm is ruptured allowing the upper portion of the nozzle interior to view the space environment. The input data for the thermal model has been modified to permit simulation of the diaphragm removal at staging and radiation exchange between the upper nodes of the nozzle interior and the space node. This is accomplished by using the radiation multiplication factor curve numbers 4 and 5 on the diaphragm node connections and the related space node connections. Prior to staging the diaphragm node radiation connections are multiplied by 1.0, and the blocked radiation connections are multiplied by zero. After the diaphragm is removed, the multiplication factor is zero for the diaphragm connections and 1.0 for the connections between the nozzle nodes and space node.

3.2.4 Reaction Control System (RCS) Plume Deflector Characterization

The RCS plume deflectors which are attached to the D/S prevent impingement of the RCS exhaust gases on the D/S and A/S external thermal coatings. Upon staging, the plume deflectors are separated from the A/S. To simulate the removal of the deflectors in the thermal model at staging, a temperature history curve is provided for the deflectors. Prior to staging, the deflector temperatures are calculated by performing a heat balance; this is achieved by setting the temperature curve to a value of -1000°F . After staging, the deflector temperatures are specified as -459.69°F to simulate the removal of radiation heat loss of the affected nodes to space. Temperature curve number 50 is used for the RCS plume deflector nodes 809, 811, 812, and 813.

4.0 THERMAL MODEL DATA LISTING

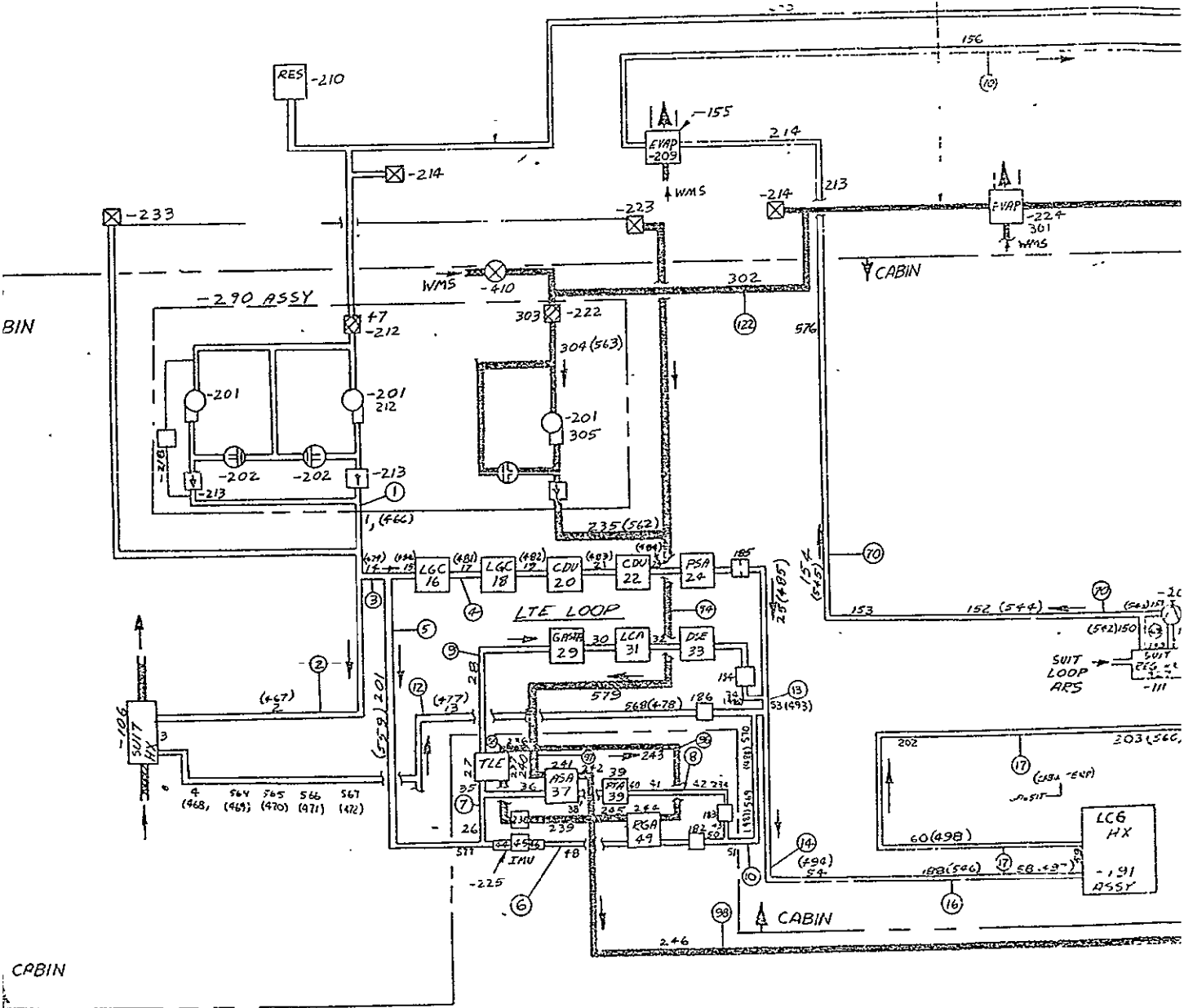
The LM-6 Master Data Tape Listing is presented in Appendix A. A complete description of the data listing and a guide to preparation procedures is given in the LMAR User's Manual (Reference 3). Although the data changes required to produce the LM-6 data tape were relatively minor except for external node changes, it is felt that presenting the complete revised baseline thermal model listing provides the user with a better guide than a list of changes to the LM-5 thermal model.

An alternate form of the LM-6 data listing appears in Appendix B. This listing, called the LM-6 Master Data Tape Handbook Listing, is obtained through the use of a utility computer routine supplied by General Electric. It reorganizes the data and prints information on tubes, fluid lumps, tube lumps, and structure lumps. For each tube and structure lump each connecting lump is given with the connection value and type (radiation or conduction). In the LMAR data listing (Appendix A) each thermal connection between nodes is listed only once and is assigned to only one of the nodes. In the handbook listing of Appendix B the thermal connection is listed at each node. An asterisk following a connecting lump indicates that the connection is "from" that node in the LMAR data listing.

A description of each node in the LM-6 (revised baseline) thermal model has been provided in Appendix C. This description contains the approximate location of the node in the vehicle thermal model, and sufficient information is given to locate and identify the node in the LM-6 node diagrams of Figures 1 through 12.

REFERENCES

1. D. P. Fay, "Lunar Module Ascent Stage Thermal Model Handbook", LTV Aerospace Corporation, Missiles and Space Division - Texas, Report No. 350.19, dated 15 December 1969.
2. S. Louie, "Final LM-6 Ascent Stage Thermal Network Baseline Data Listing", Grumman Aerospace Corporation, LMO-510-1459, dated 25 November 1969.
3. P. D. Hardi, "LMAR Master Program Tape", LTV Aerospace Corporation, Missiles and Space Division - Texas, Design Information Release No. 350-DIR-25, dated 14 October 1969.
4. J. L. Williams, "Configuration Control of Apollo Thermal Analysis Computer Routines", Memo to Messrs. J. W. Craig and W. W. Guy (NASA-MS), dated 26 August 1969.
5. E. Lee, "Status Report On the LM Thermal Network Handbooks (A/S and D/S)", Grumman Aerospace Corporation, IOM-510-76, dated 22 December 1969.
6. S. Louie, "Revised Thermal Nodal Diagrams for LM-6, 7, 8, and 9", Grumman Aerospace Corporation, LMO-510-1446, dated 12 November 1969.
7. J. Feldman, "Revision of the Docking Tunnel Nodal Configuration in the GTA-1 Computer Program - LM-6 and Subsequent", Grumman Aerospace Corporation, LMO-510-1378, dated 23 September 1969.
8. "Request for Thermal Network Modification", Nos. A/S-2 through A/S-15, Grumman Aerospace Corporation.



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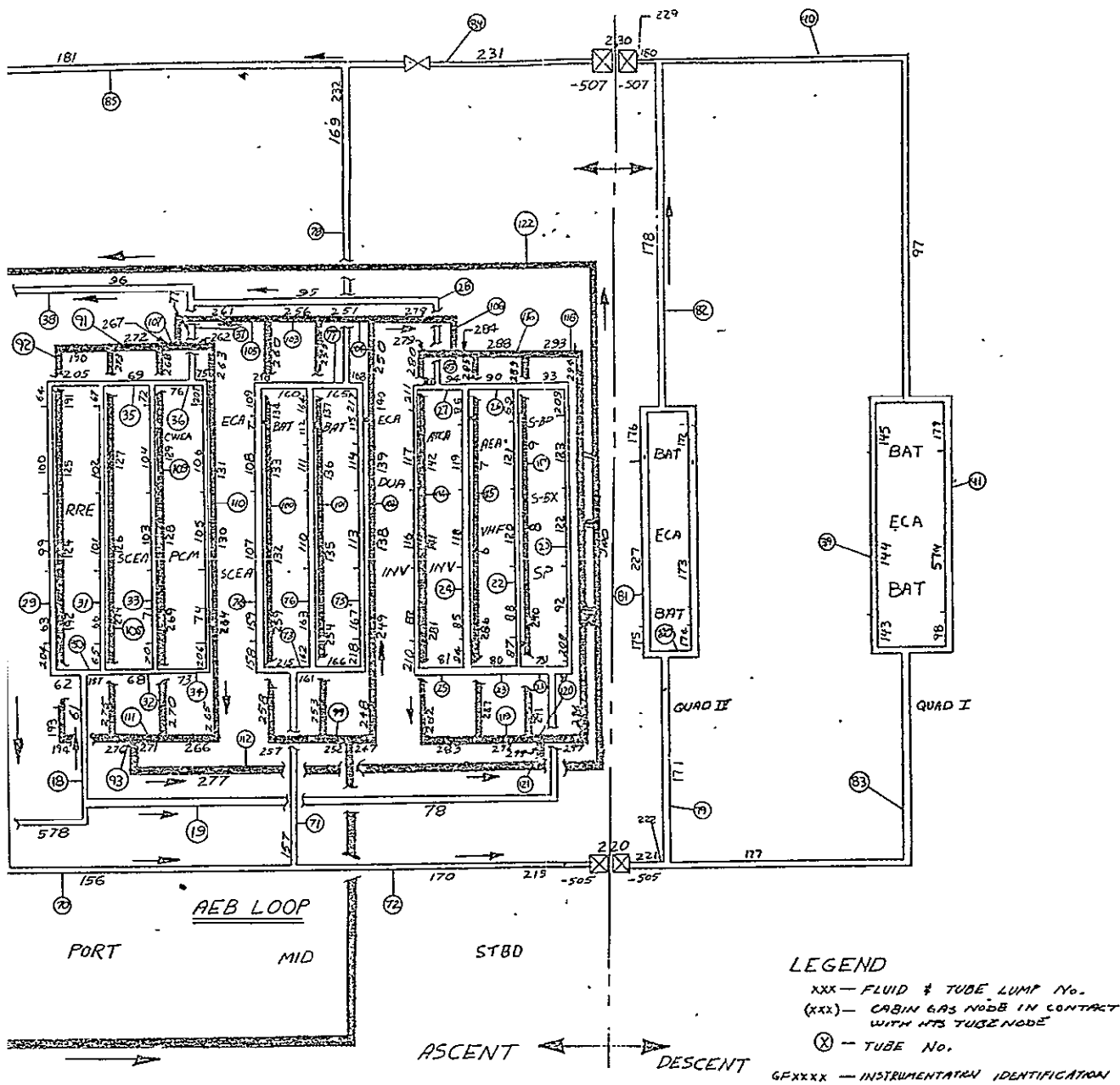
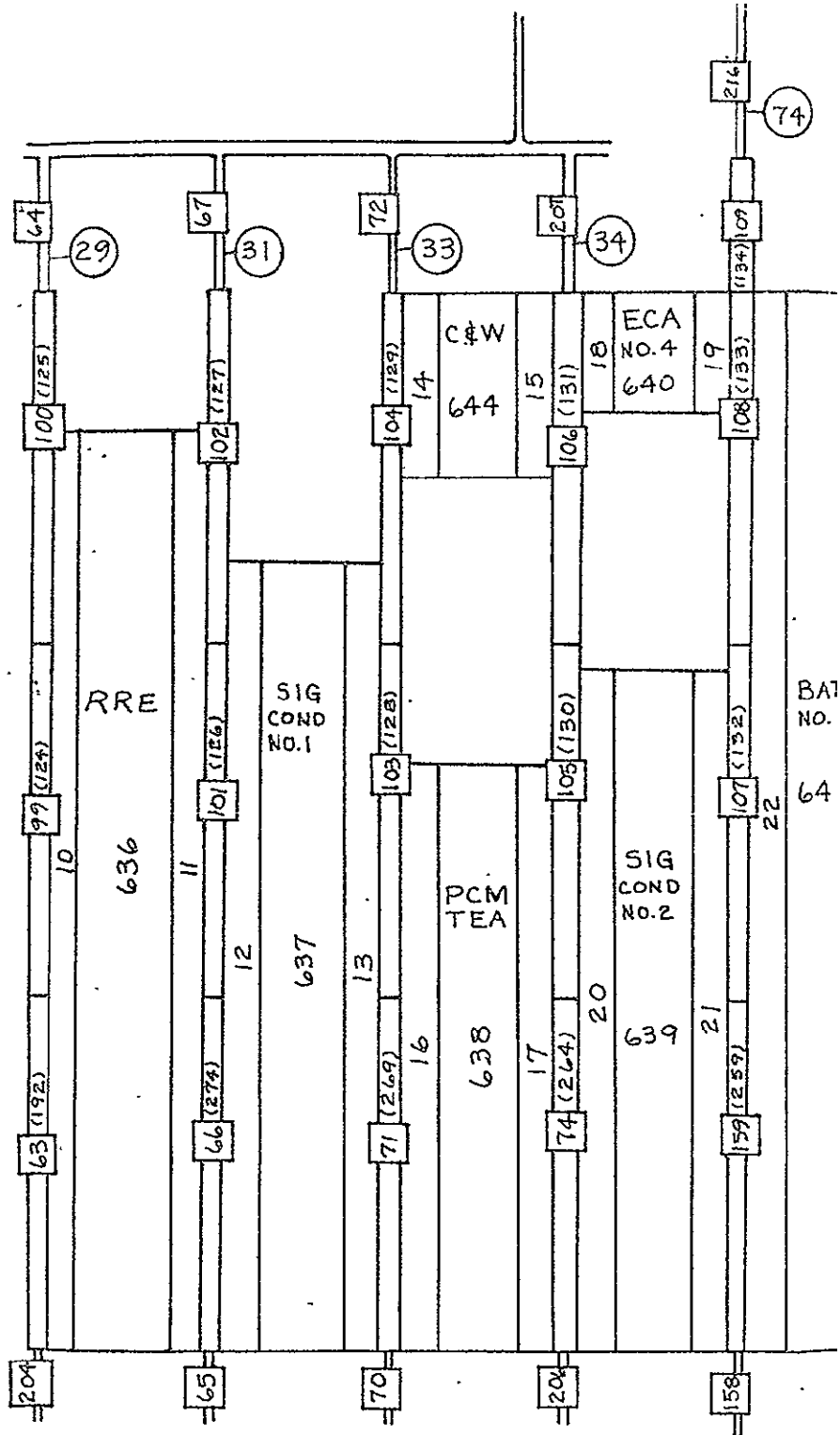


FIGURE 1 LM-6 HEAT TRANSPORT SECTION SCHEMATIC



LEGEND:

- XXX PRIMARY GLYCOL SYSTEM FLUID & TUBE NODE NO.
- (XXX) SECONDARY GLYCOL SYSTEM FLUID & TUBE NODE NO.
- (XXX) PRIMARY GLYCOL SYSTEM TUBE NO.
- XXX STRUCTURE NODE NO.

FOLDOUT FRAME 7

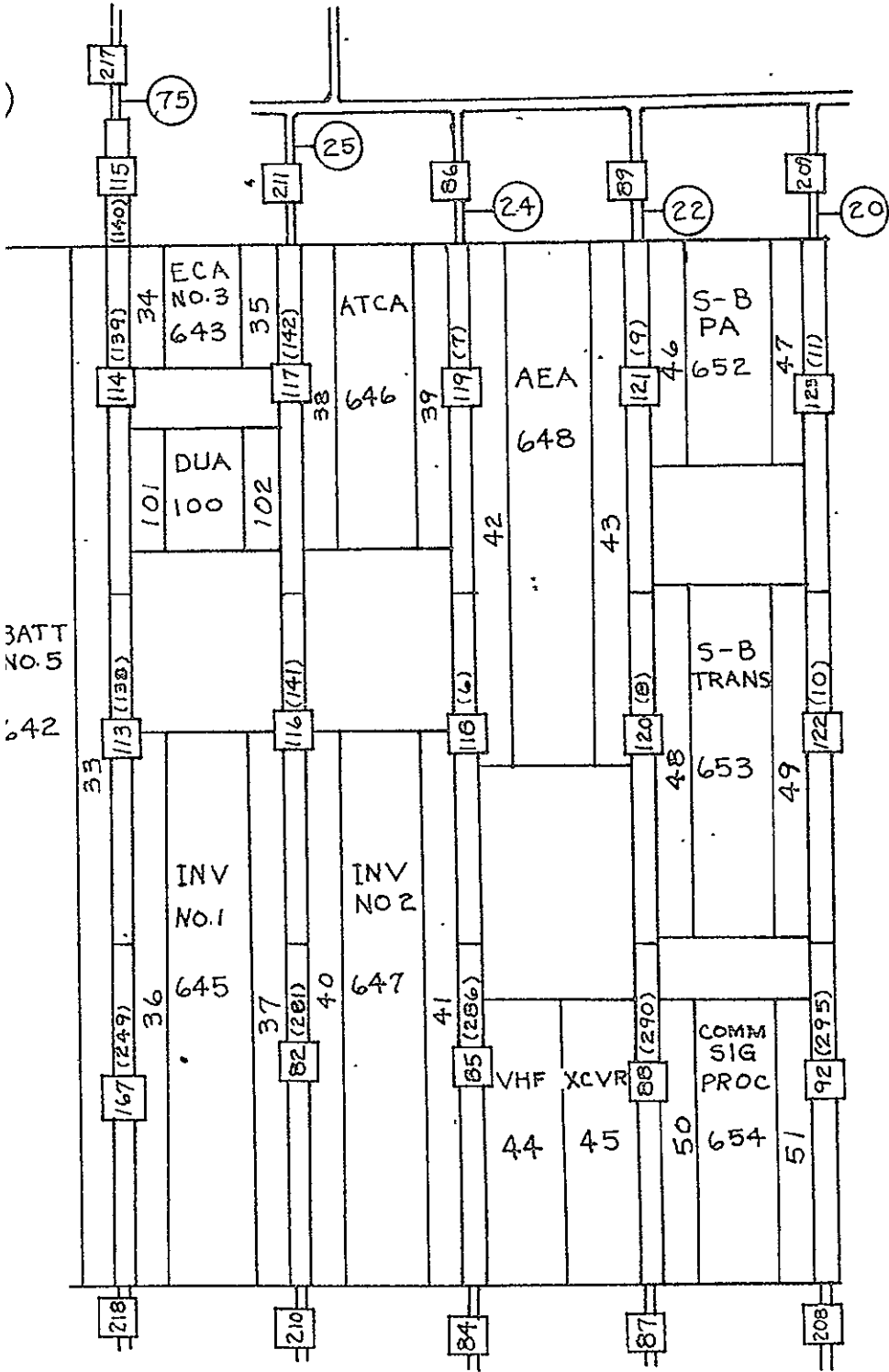


FIGURE 2 LM-6 AFT EQUIPMENT BAY THERMAL MODEL

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NOTE: ENTIRE ARS IS WITH IN CABIN

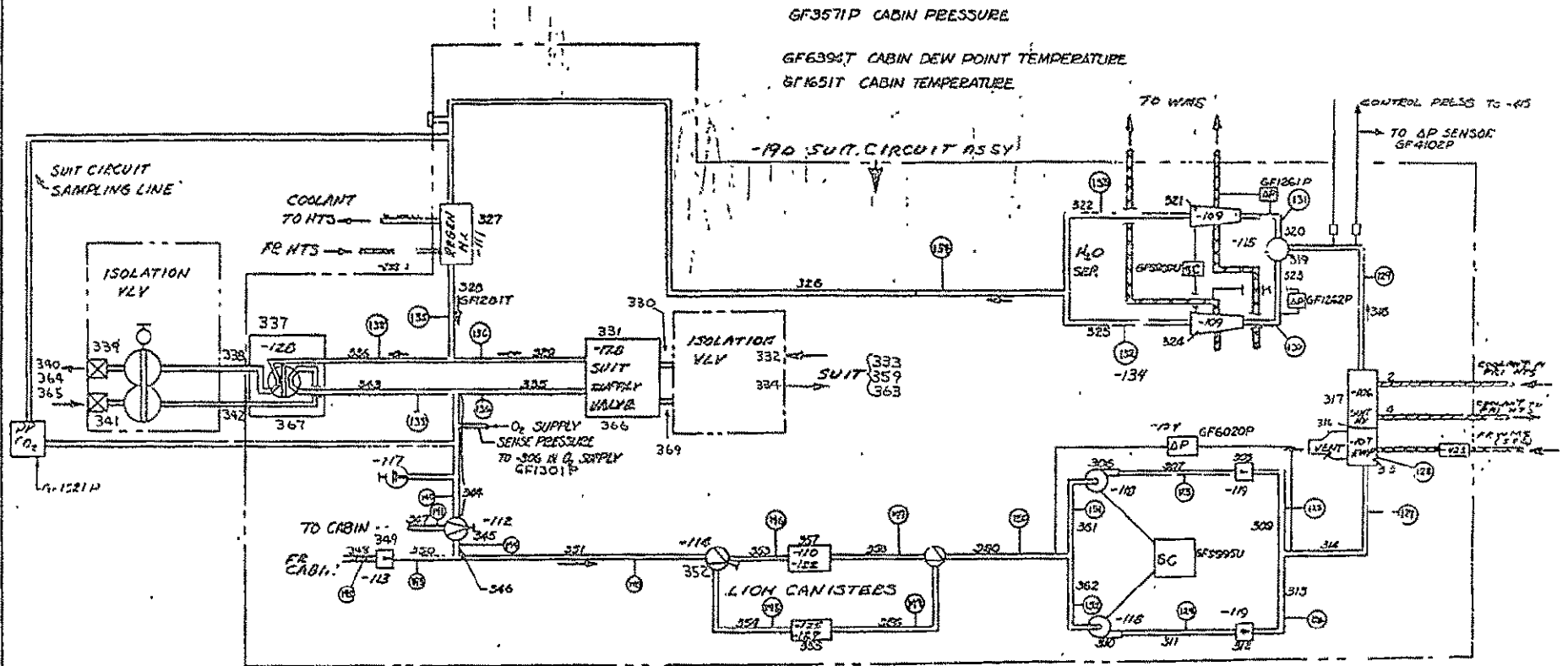
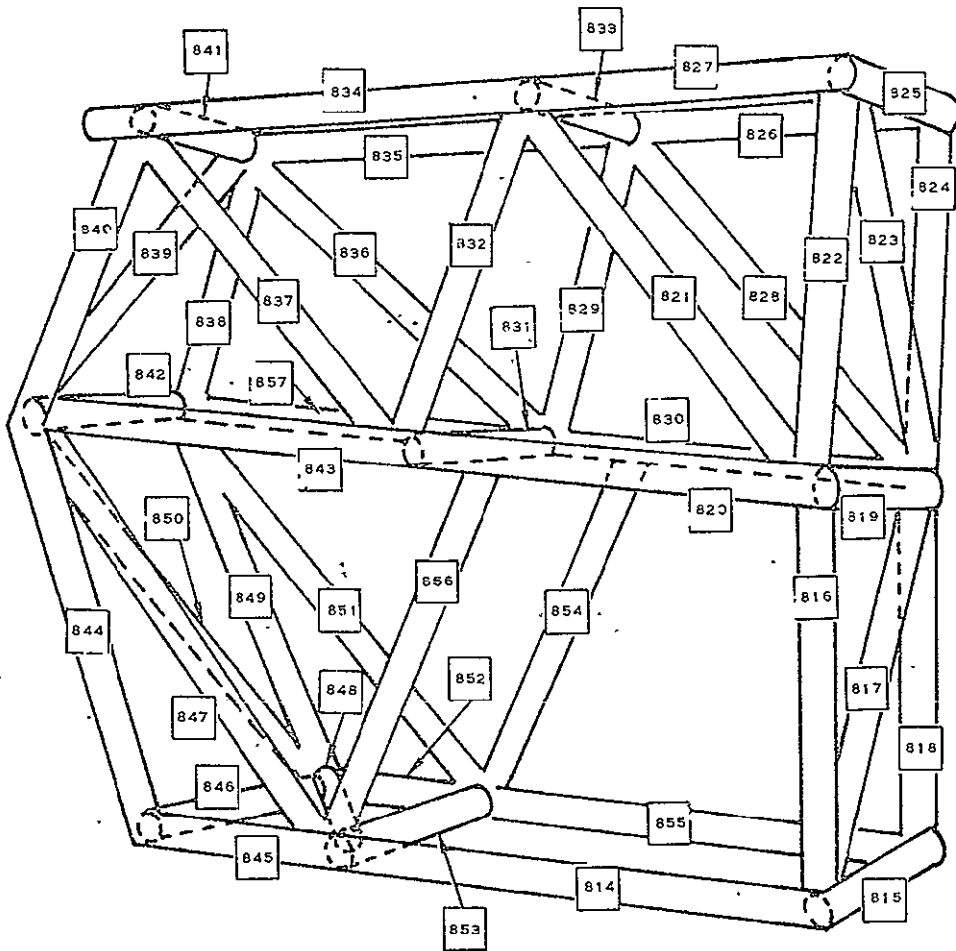


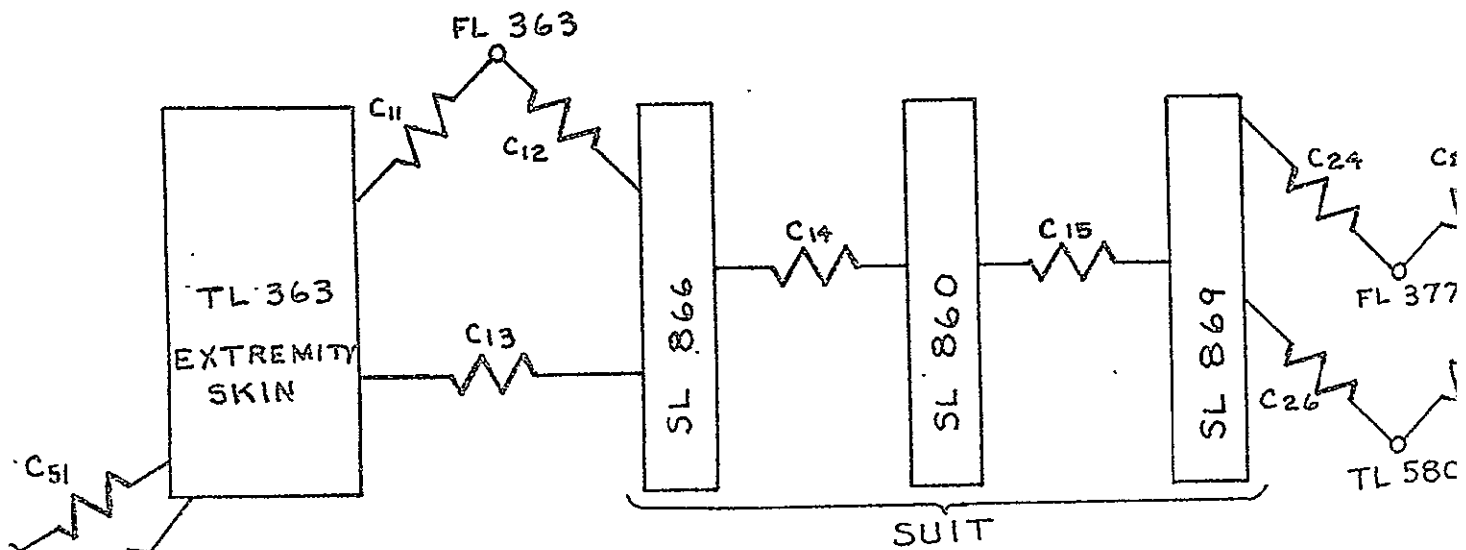
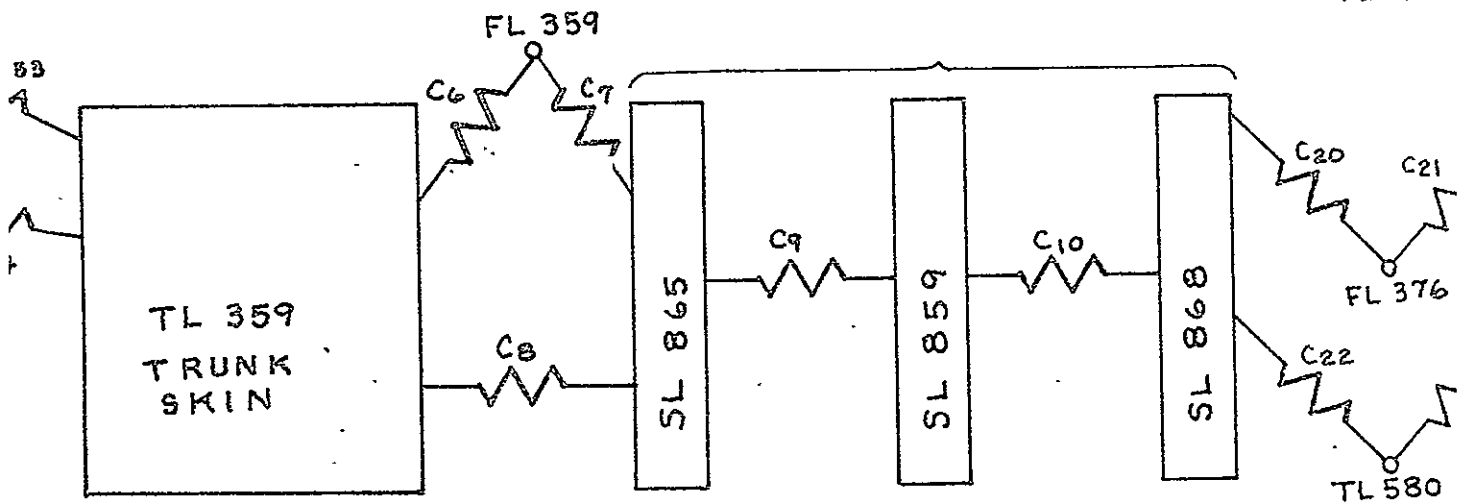
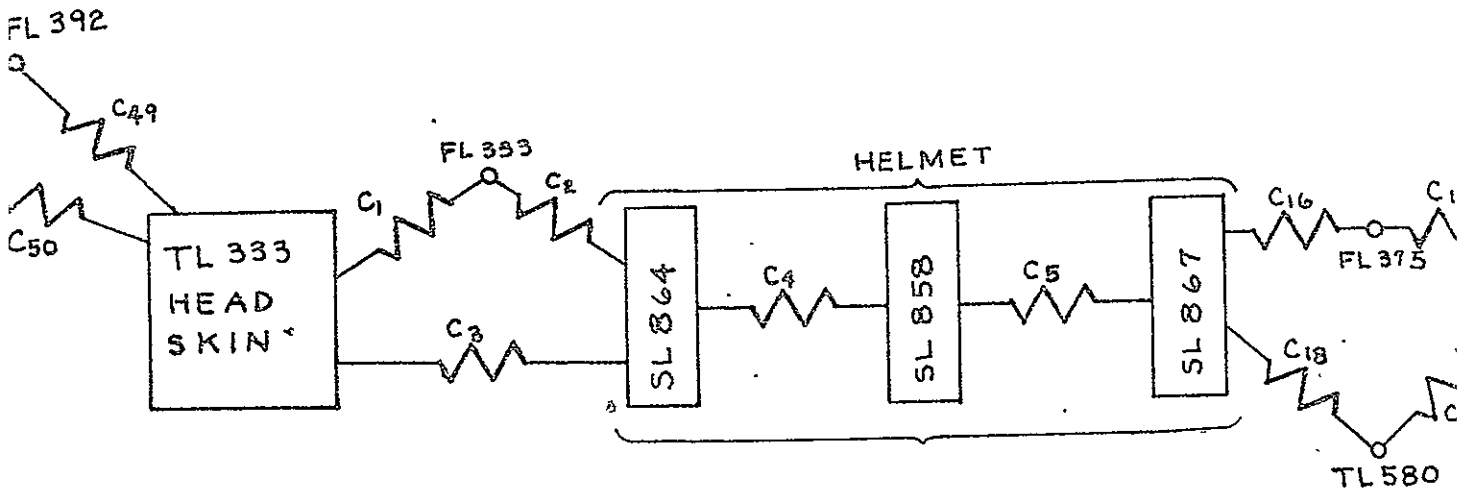
FIGURE 3 ATMOSPHERE REVITALIZATION SECTION



LEGEND

xxx STRUCTURE LUMP

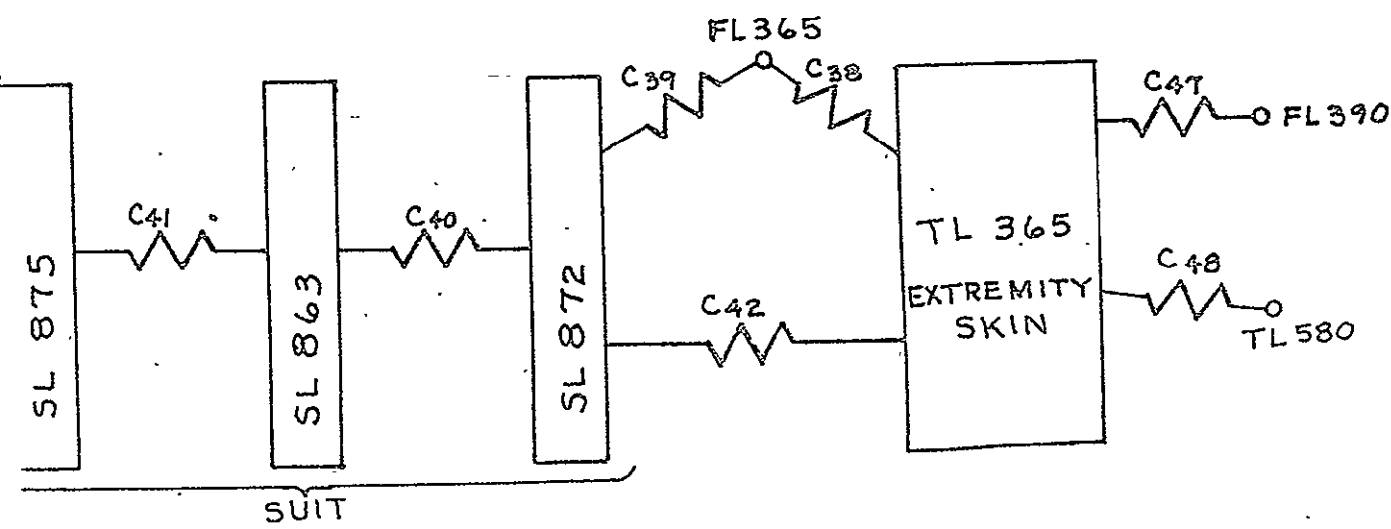
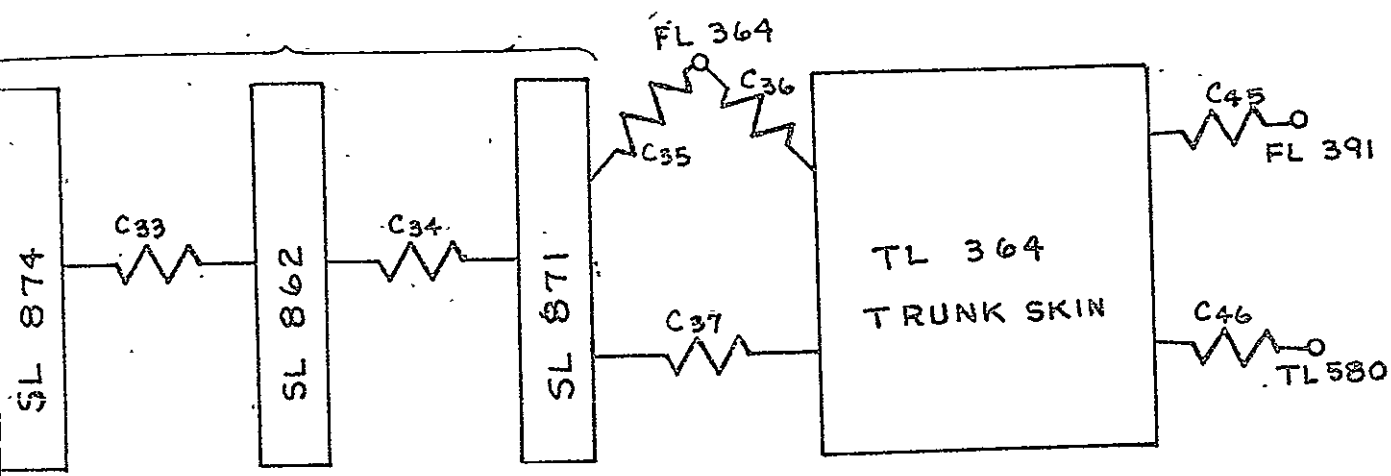
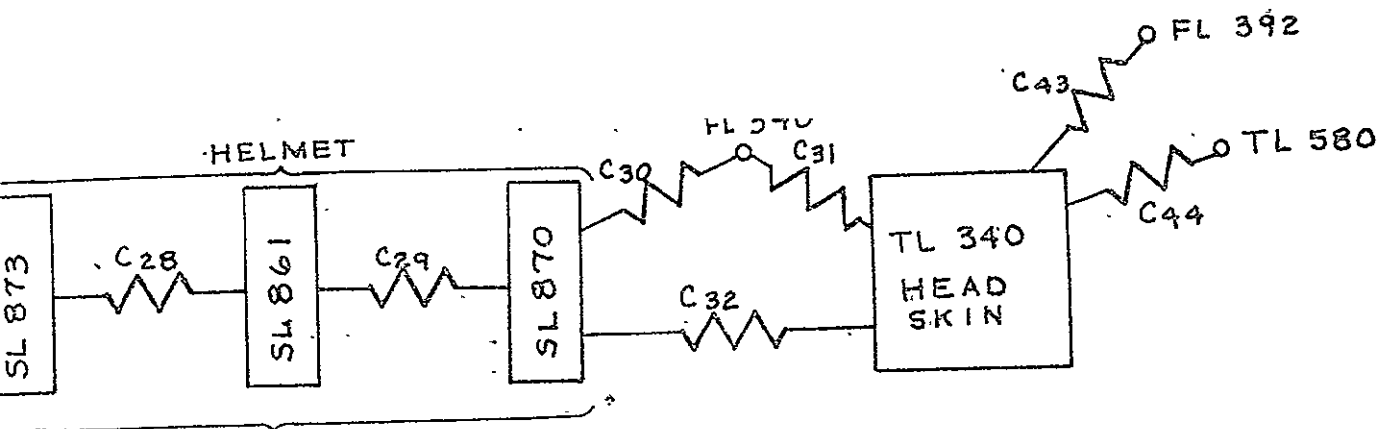
FIGURE 4 ATMOSPHERE REVITALIZATION
SECTION FRAME THERMAL
MODEL



NOTES: FL = FLUID LUMP
 TL = TUBE LUMP
 SL = STRUCTURE LUMP

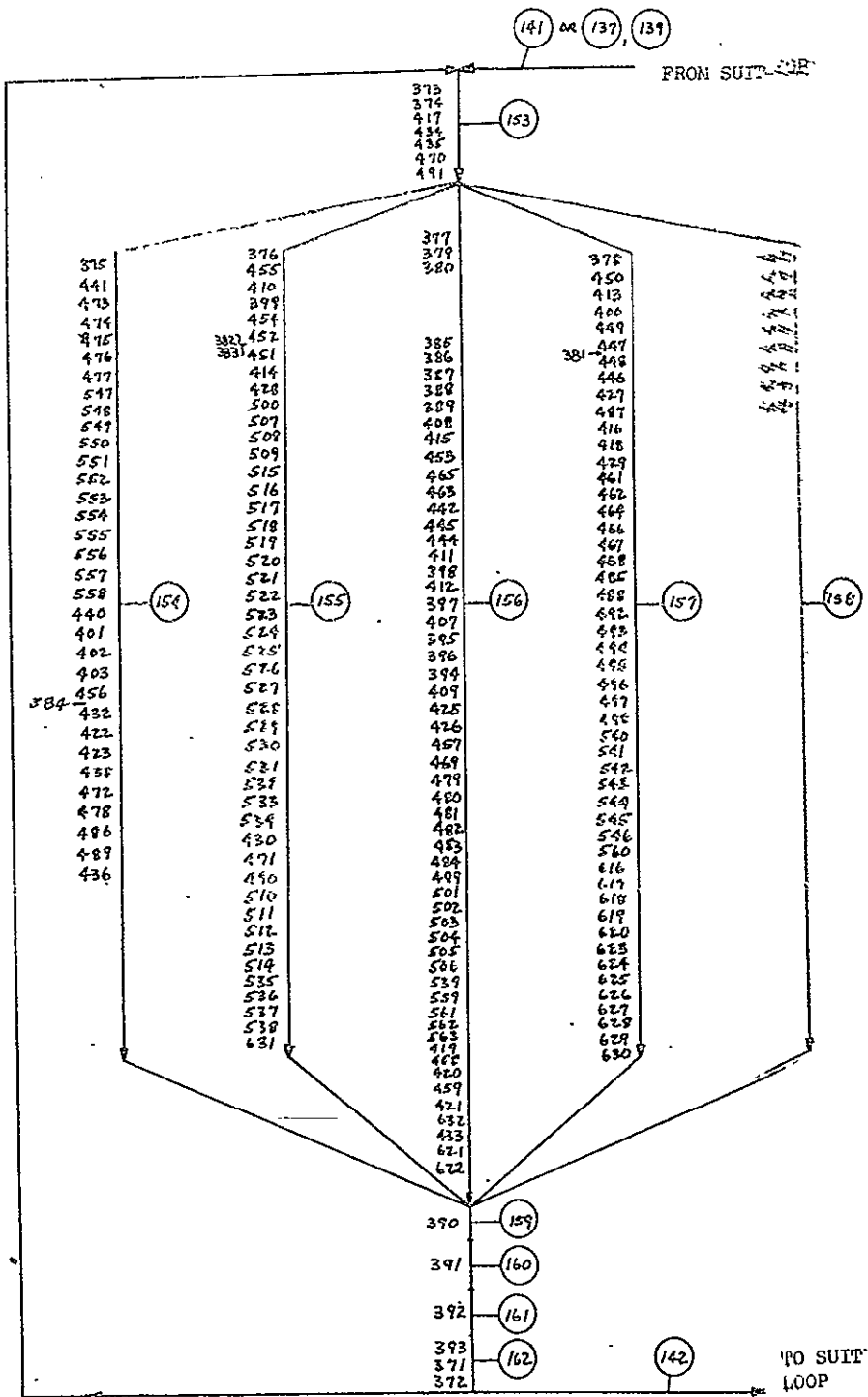
C_{xx} = THERMAL C NO. XX. SEE FOR VALUES

FOLDOUT FRAME |



SECTION
TABLE I

FIGURE 5 LM-6 SUIT THERMAL MODEL



LEGEND
 XXX - CABIN TUBE AND FLUID NODE NO.
 (XXX) TUBE NO.

FIGURE 6 LM-6 CABIN FLOW SCHEMATIC

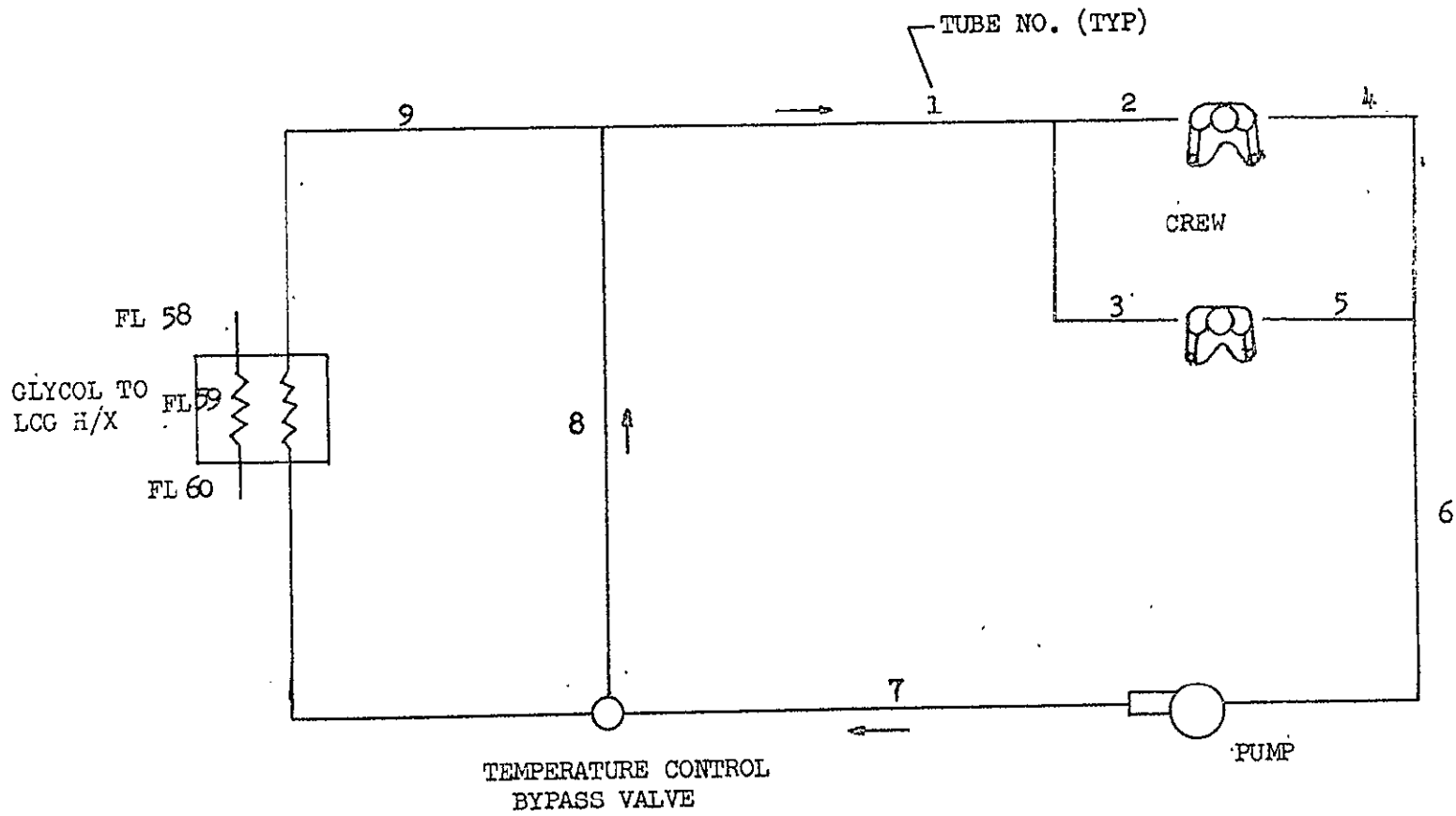
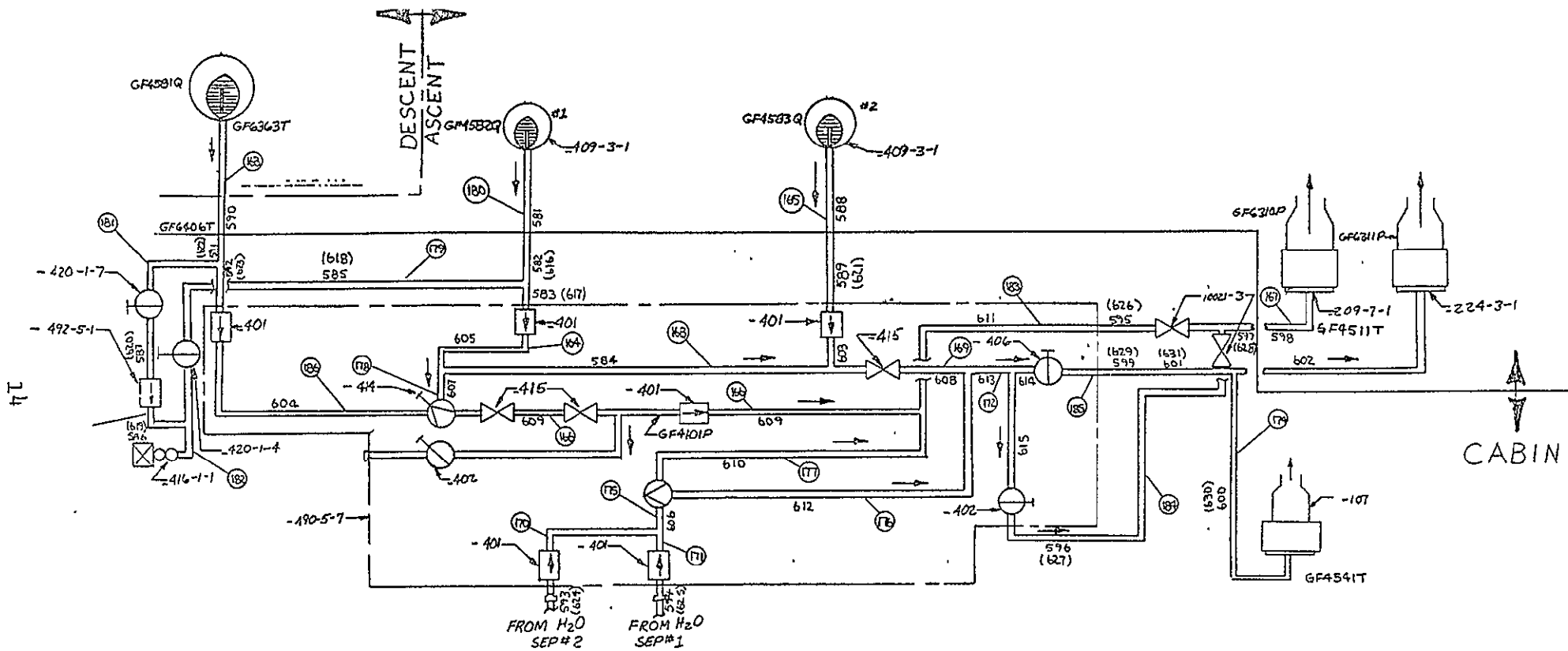


FIGURE 7 LIQUID-COOLED GARMENT FLOW
LOOP SCHEMATIC



LEGEND

xxx - TUBE + FLUID LUMP NO.
 (xxx) - CABIN GAS NODE IN CONTACT WITH WMS TUBE NODE

(xv) - TUBE NO.

FIGURE 8 WATER MANAGEMENT SECTION SCHEMATIC

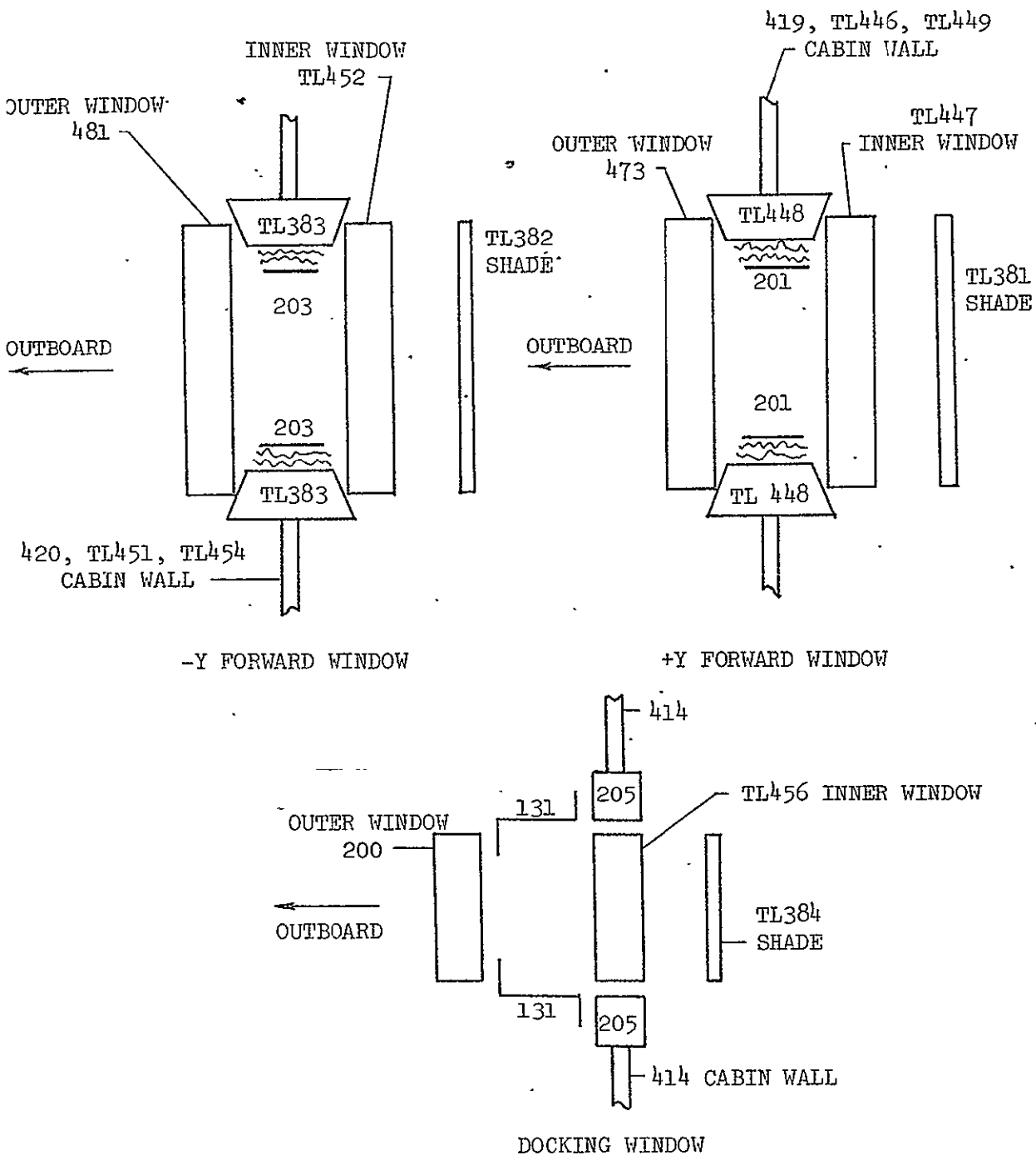


FIGURE 9 LM WINDOW THERMAL MODEL NODE CONFIGURATION

+Z

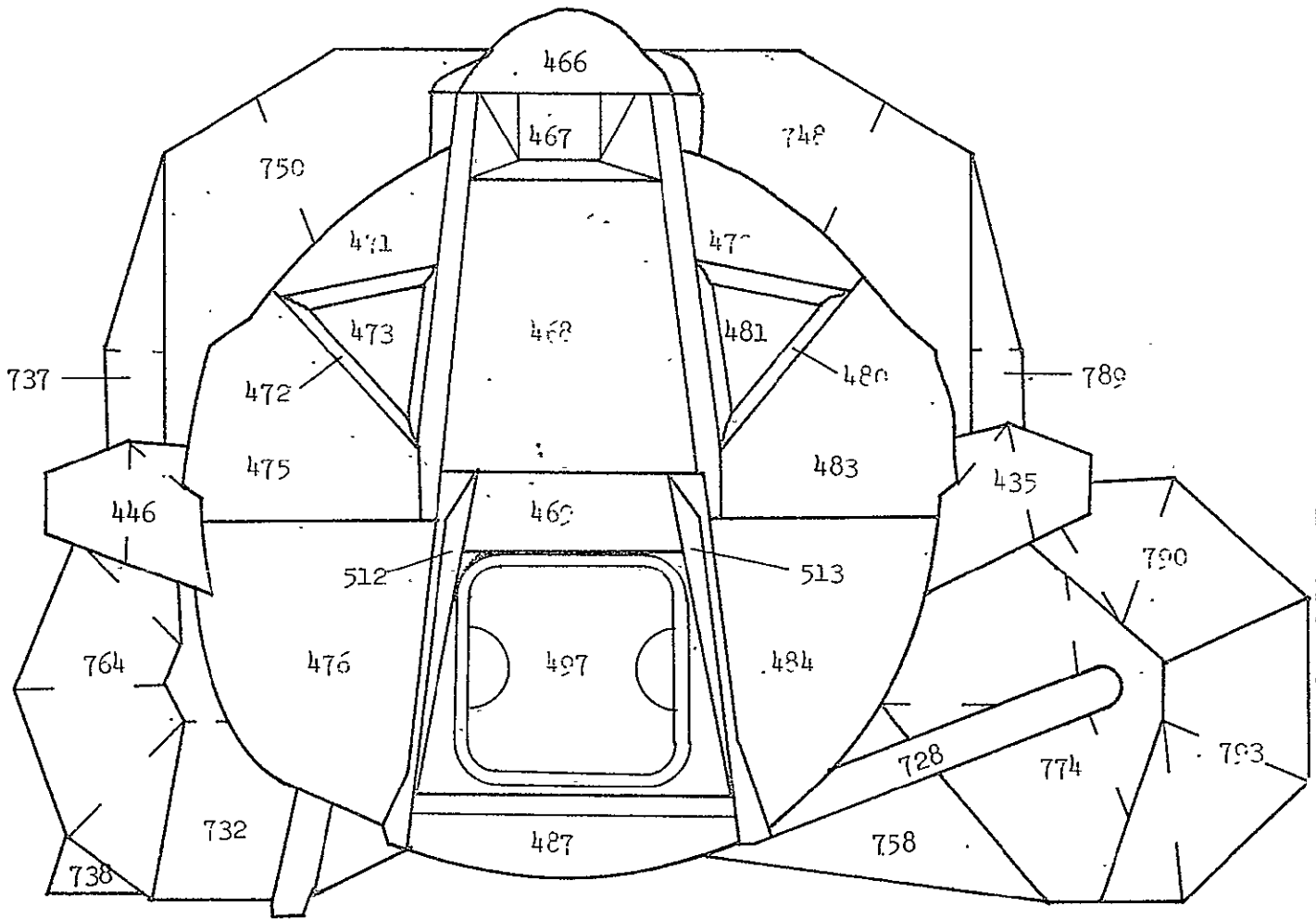


FIGURE 10a L. 6 ASCENT STAGE VEHICLE
EXTERNAL NODE CONFIGURATION

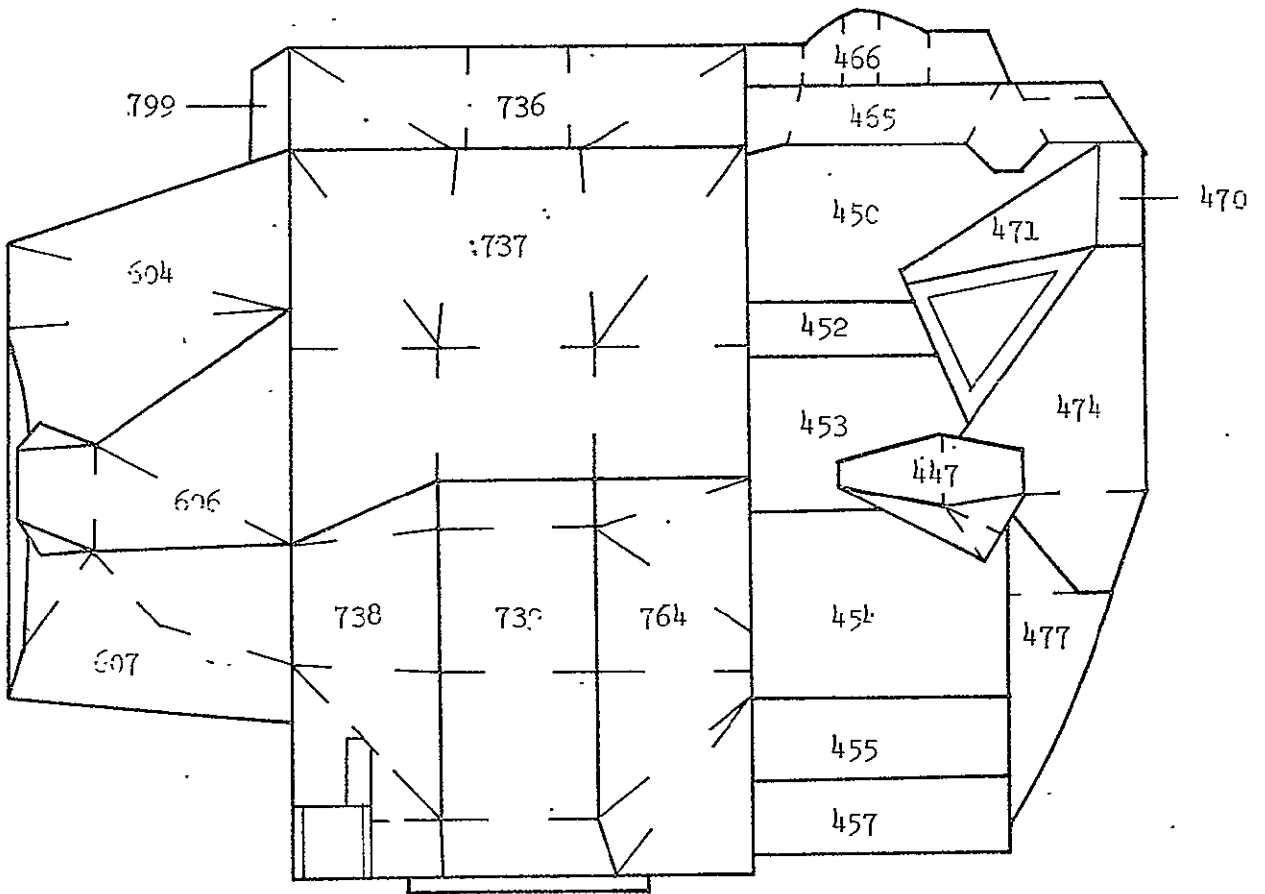
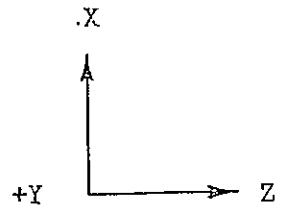


FIGURE 10b LC-6 ASCENT STAGE SERVICE
EXTERNAL NODE CONFIGURATION

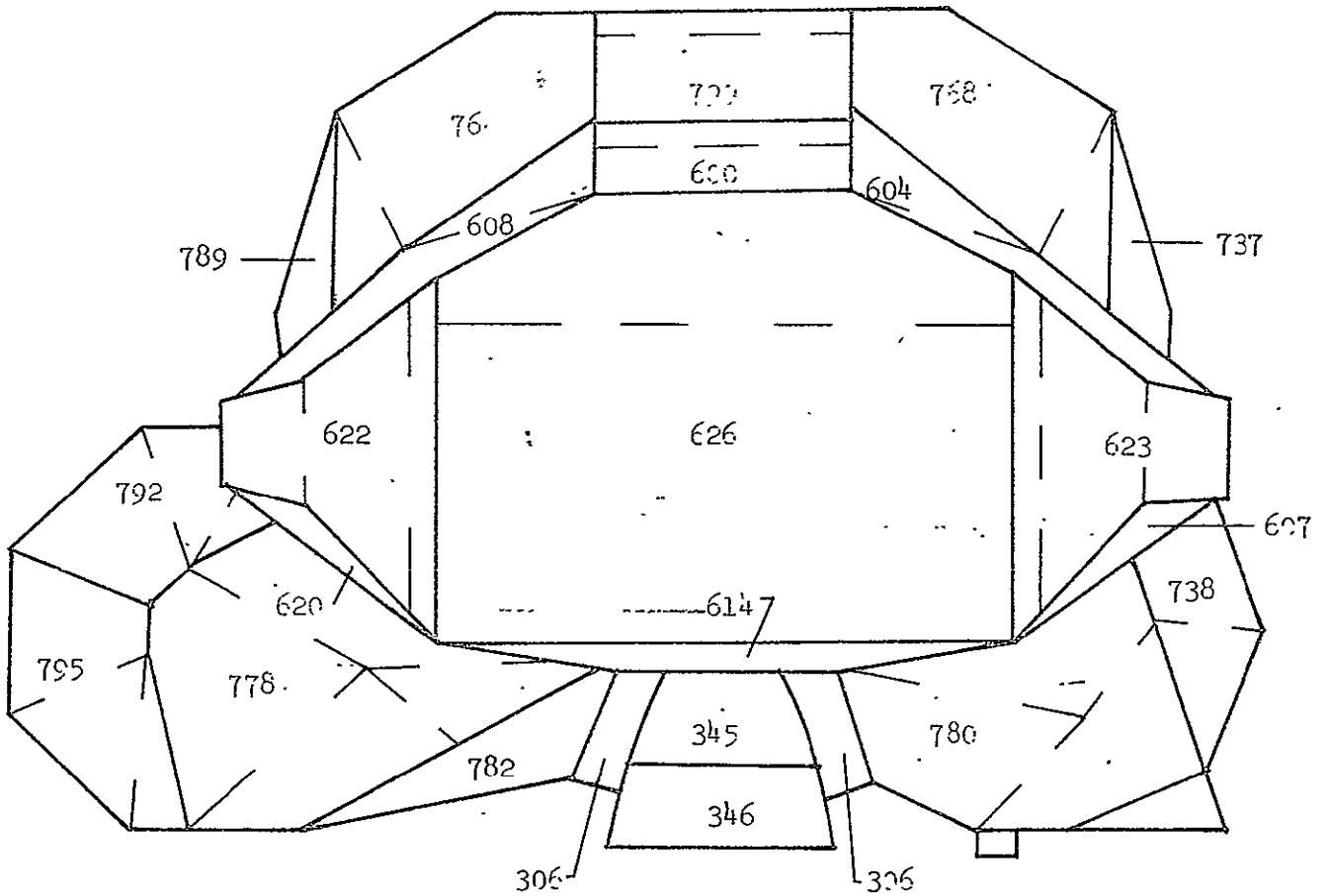
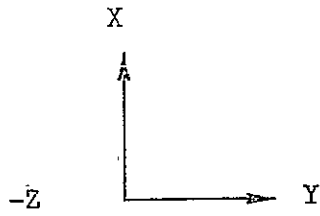


FIGURE 10c LM 6 ASCENT STAGE VEHICLE EXTERNAL
NODE CONFIGURATION

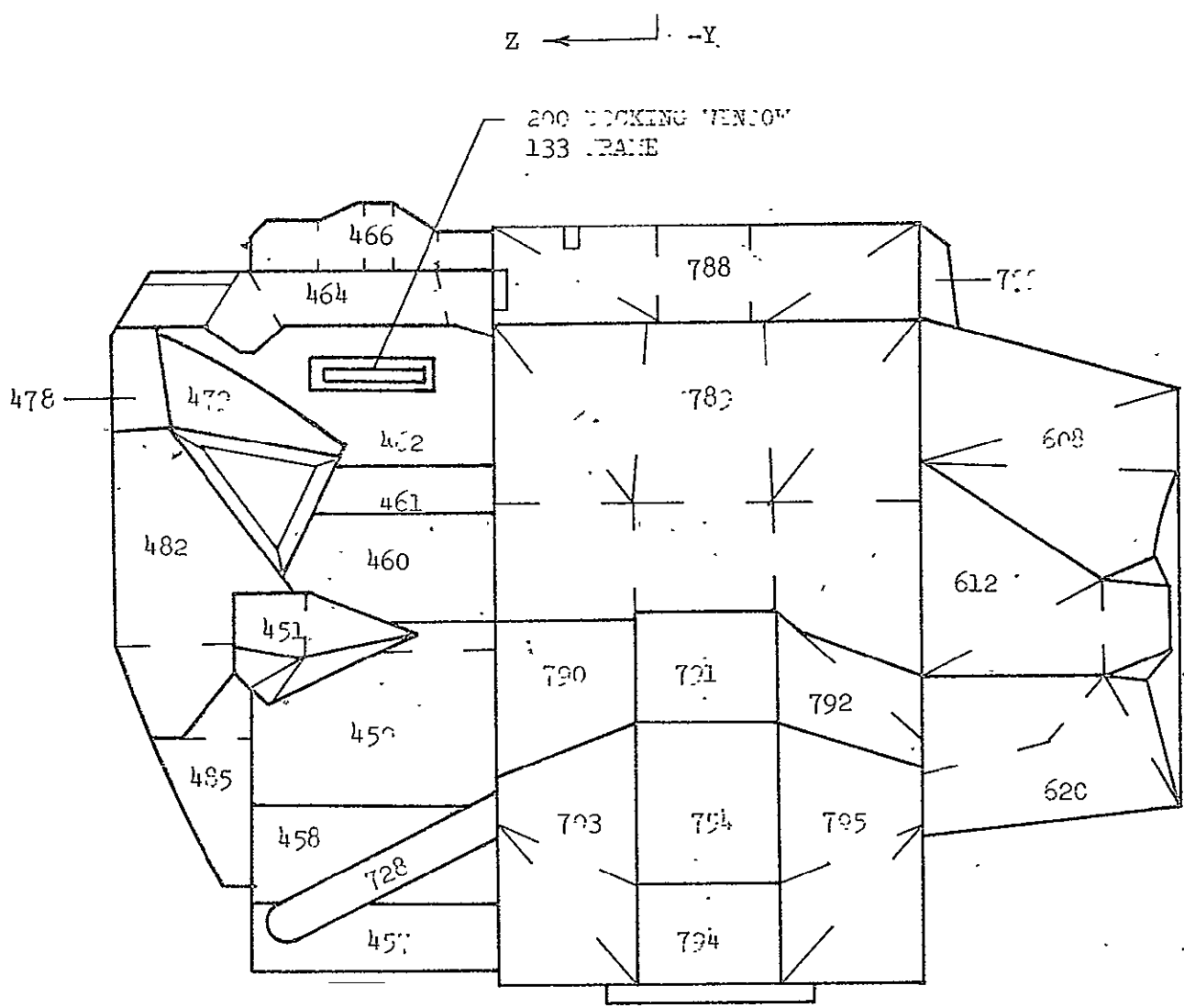


FIGURE 10d LM-6 ASCENT STAGE VEHICLE
 EXTERNAL NODE CONFIGURATION

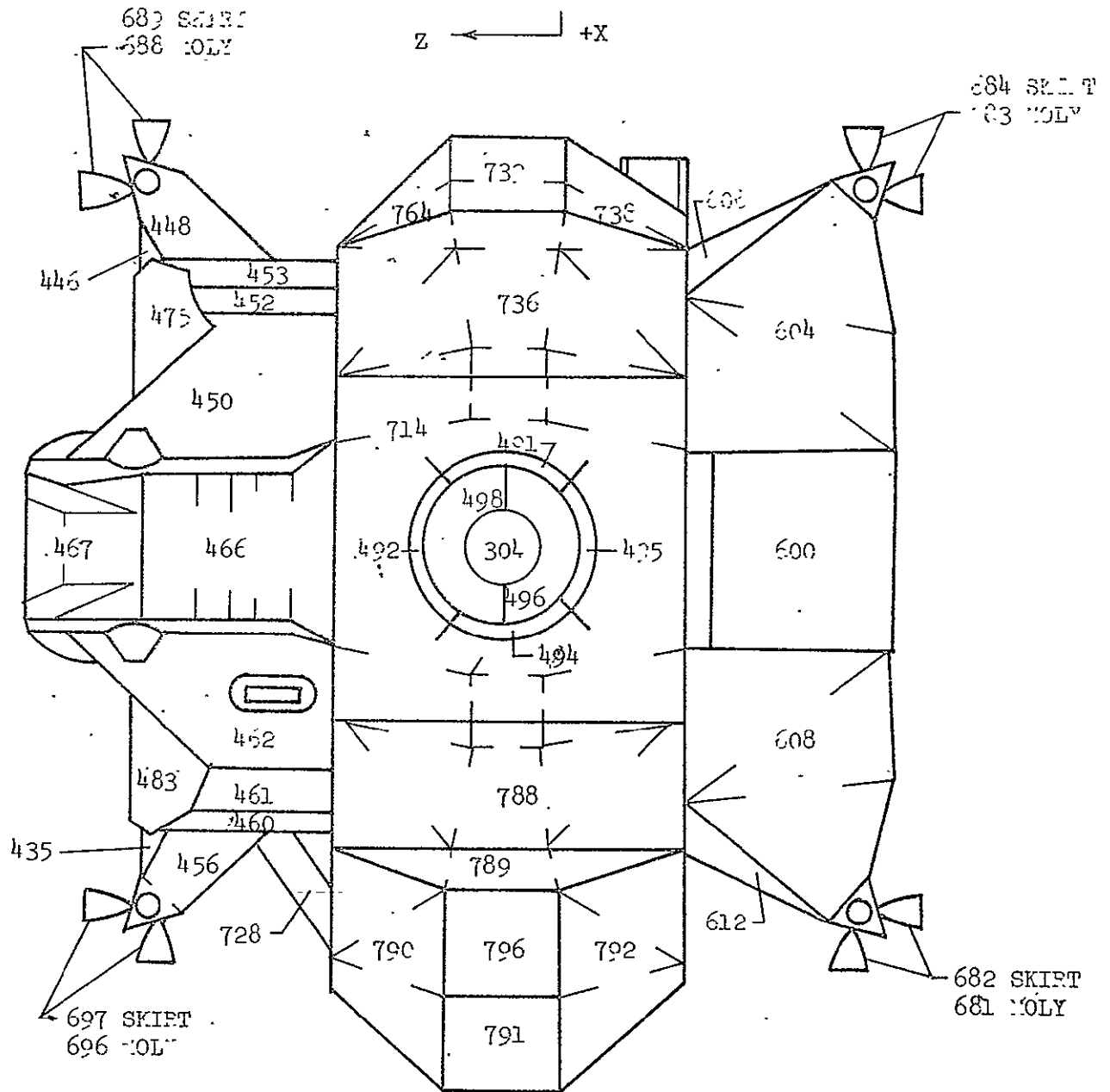


FIGURE 10e L16 ASCENT STAGE VEHICLE
EXTERNAL NODE CONFIGURATION

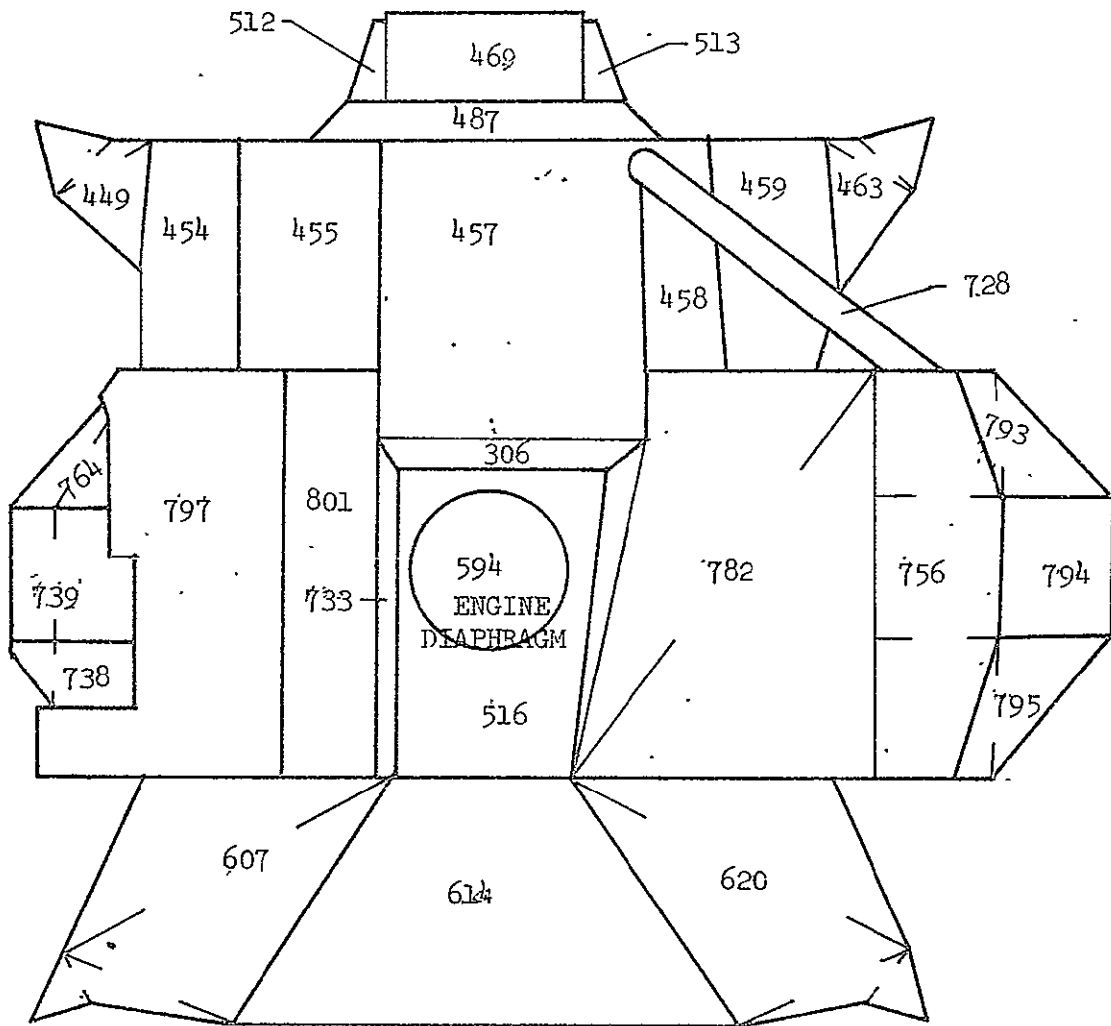
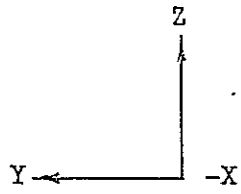
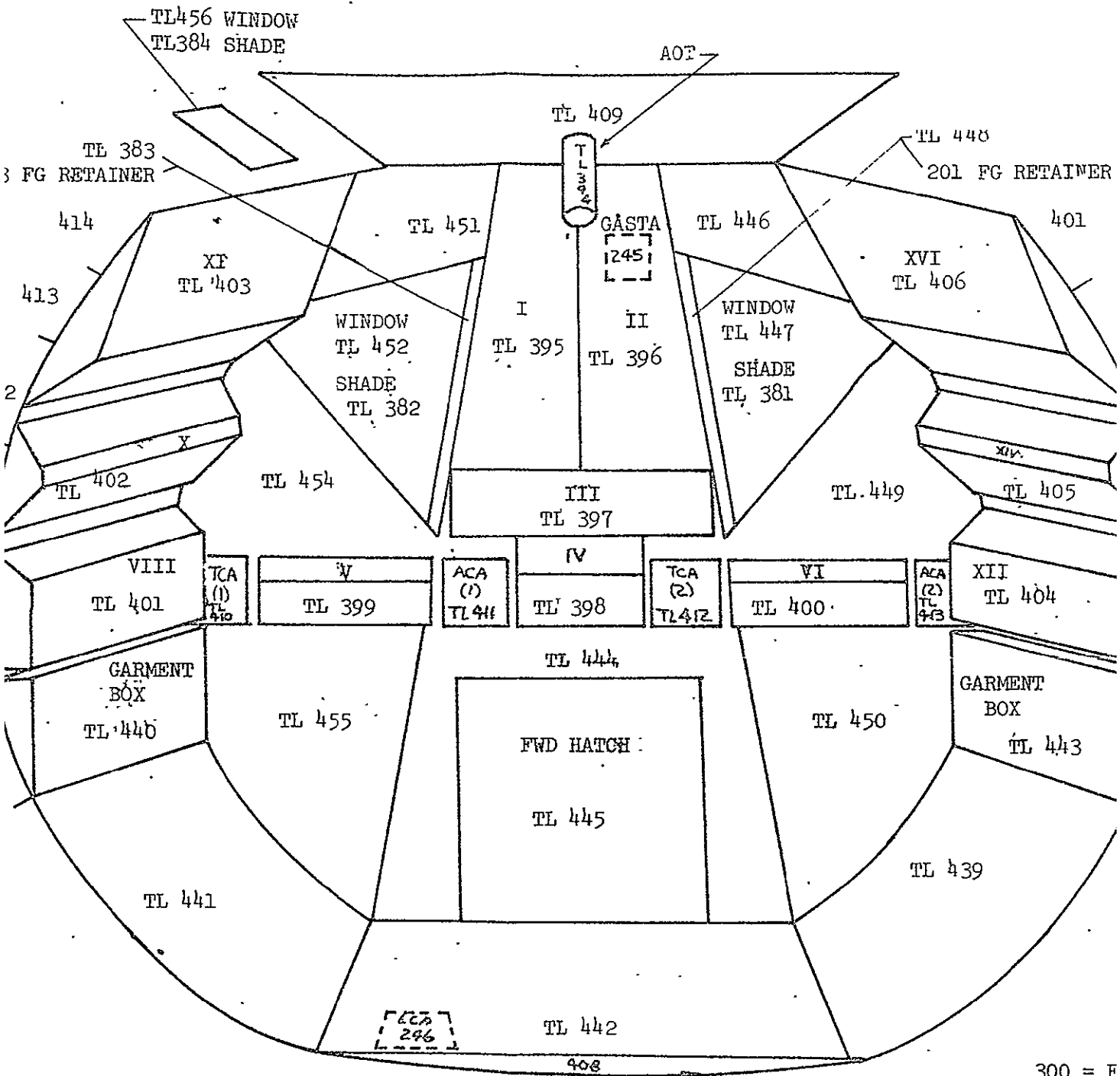
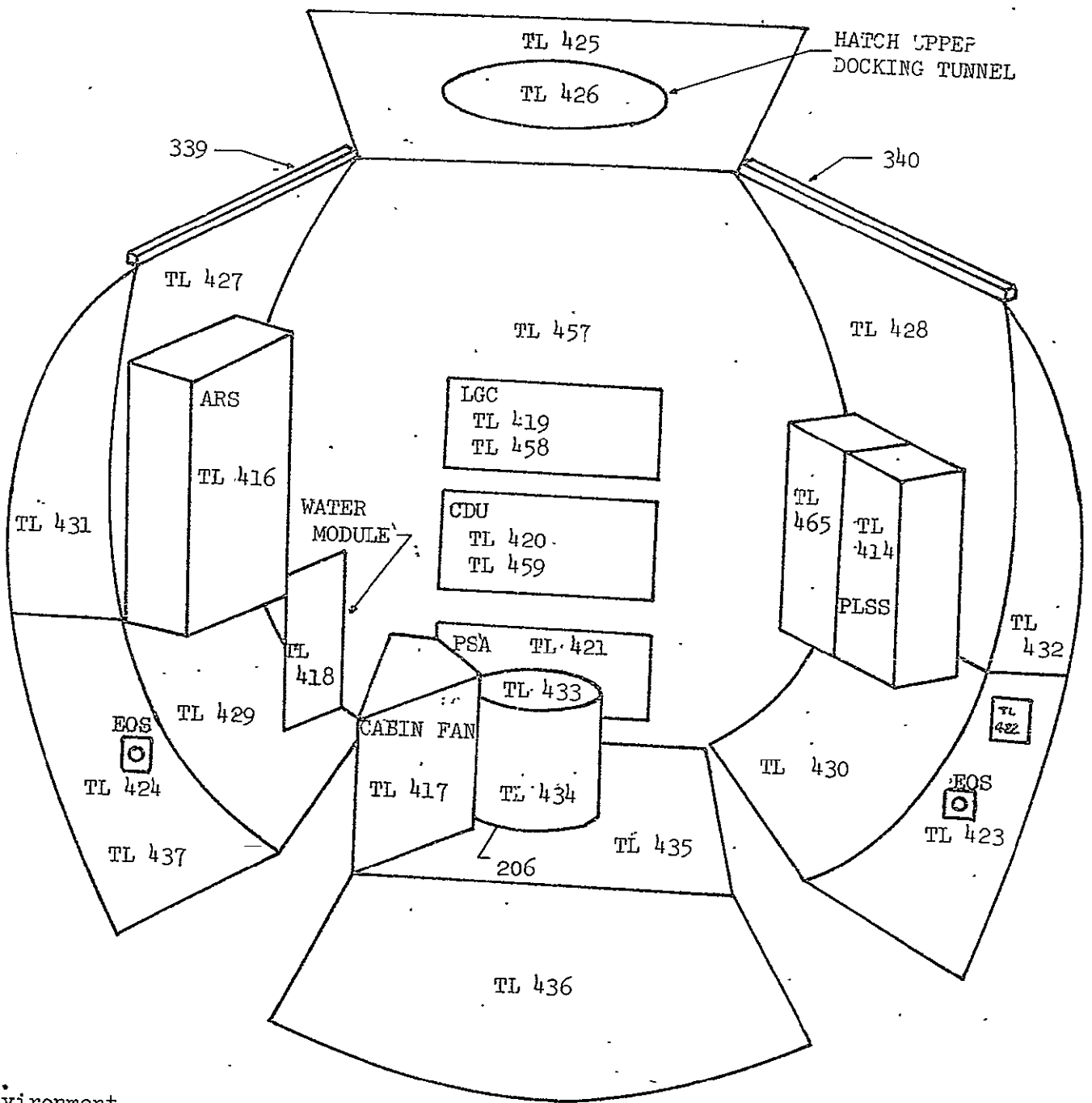


FIGURE 102 LM-6 ASCENT STAGE VEHICLE
EXTERNAL NODE CONFIGURATION



INTERNAL CABIN - VIEW LOOKING FORWARD

FIGURE 11 LM-6 CABIN INTERIOR THERMAL MODEL NODE



in Environment

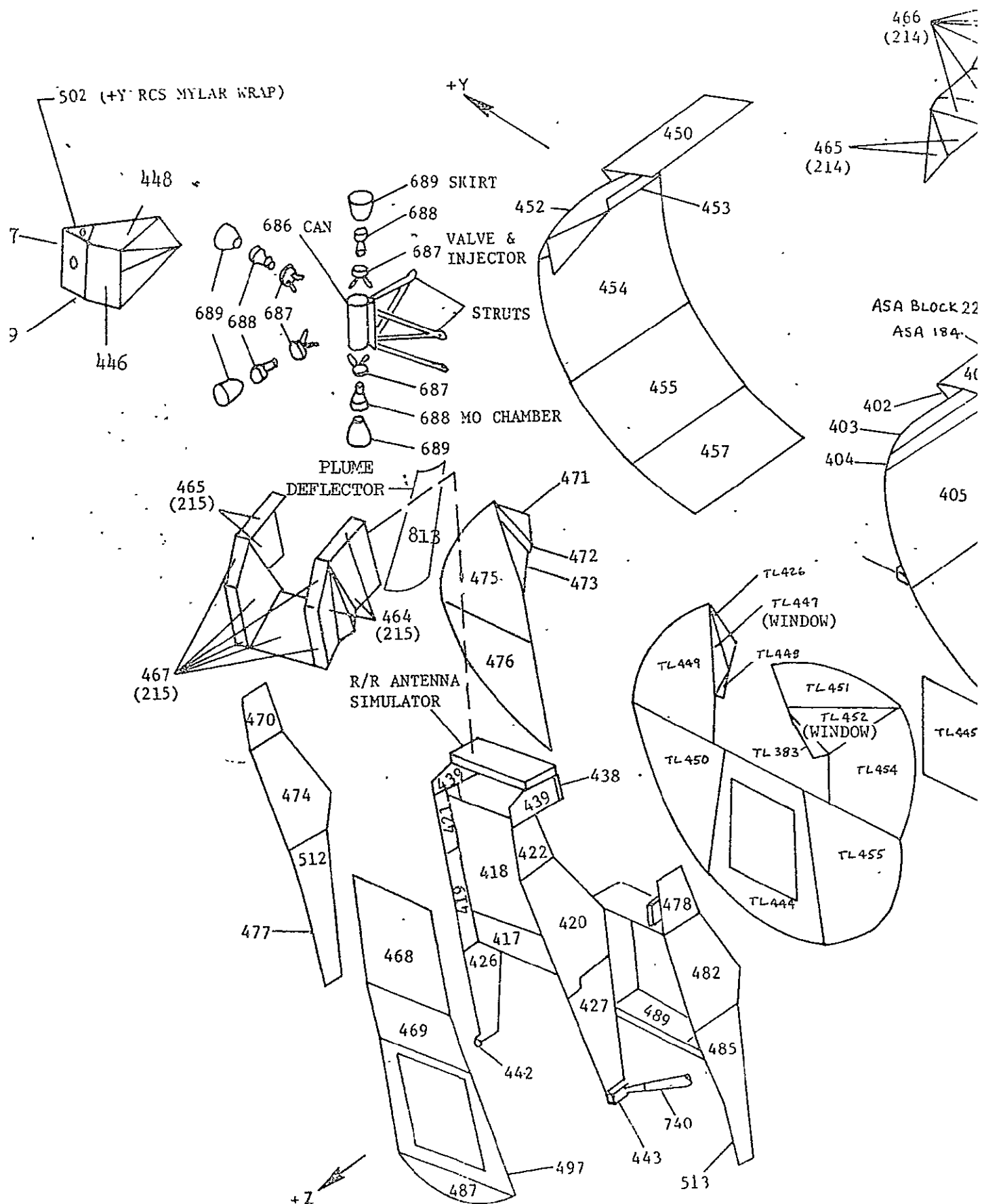
in Pressure Shell

INTERNAL MID-SECTION - VIEW LOOKING AFT

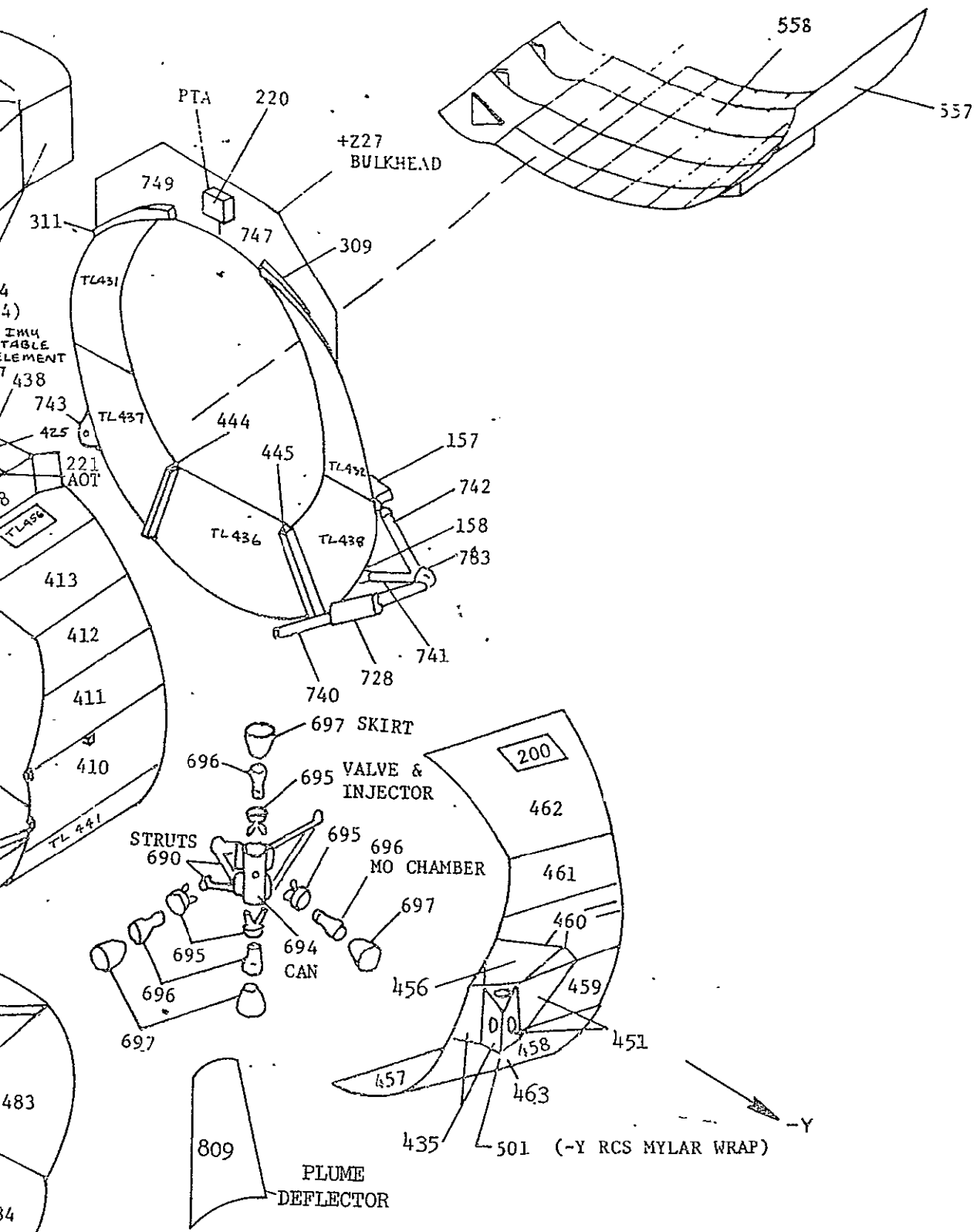
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FOLDOUT FRAME 2

500 - SPACE
NODE



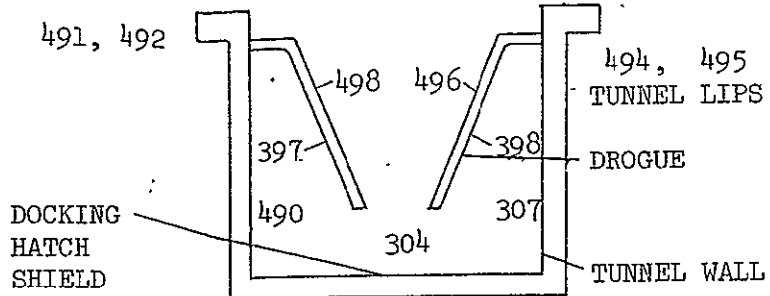
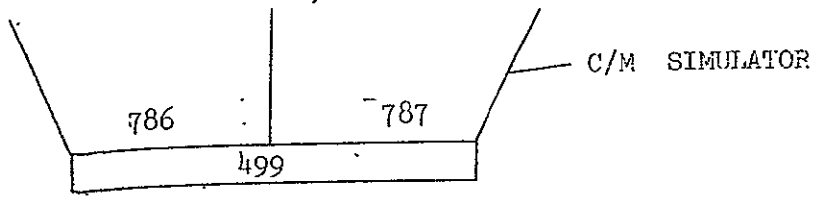
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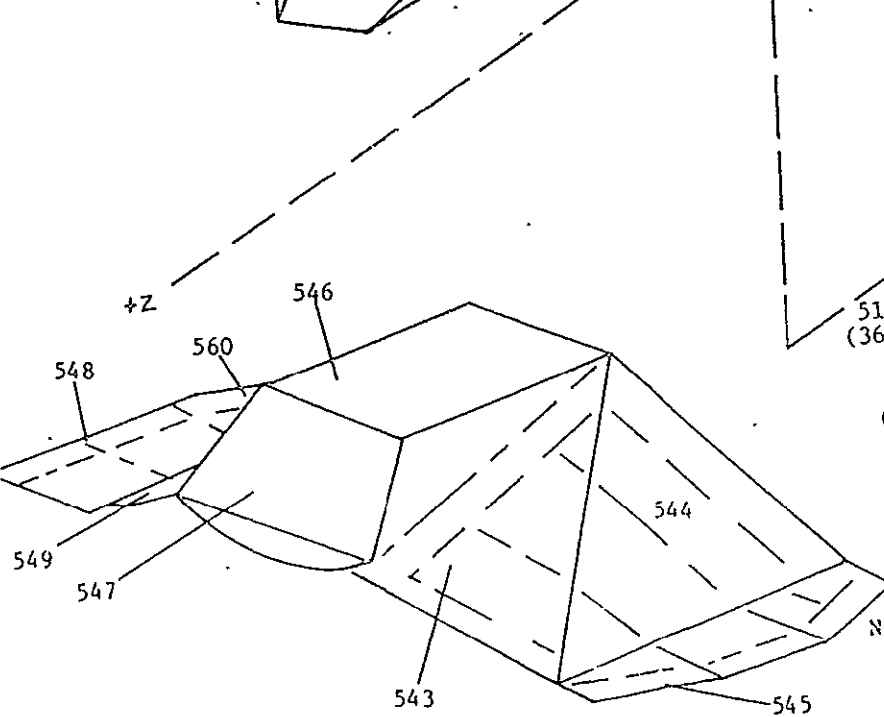
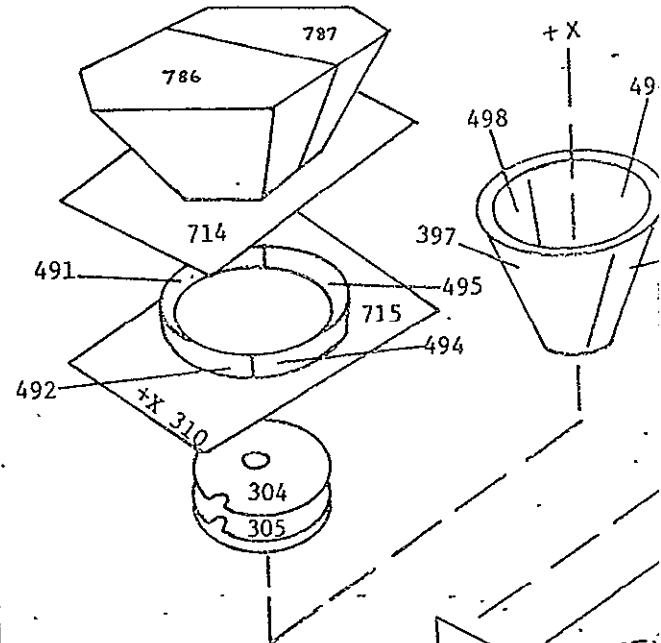
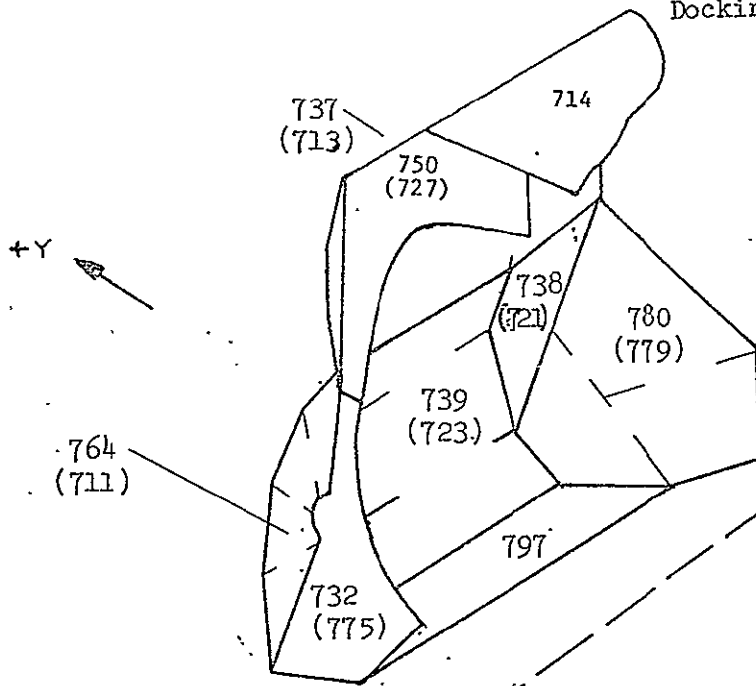
NOTE: PARENTHESIS ABOUT NODE NUMBER DENOTES INNER MYLAR

FIGURE 12a

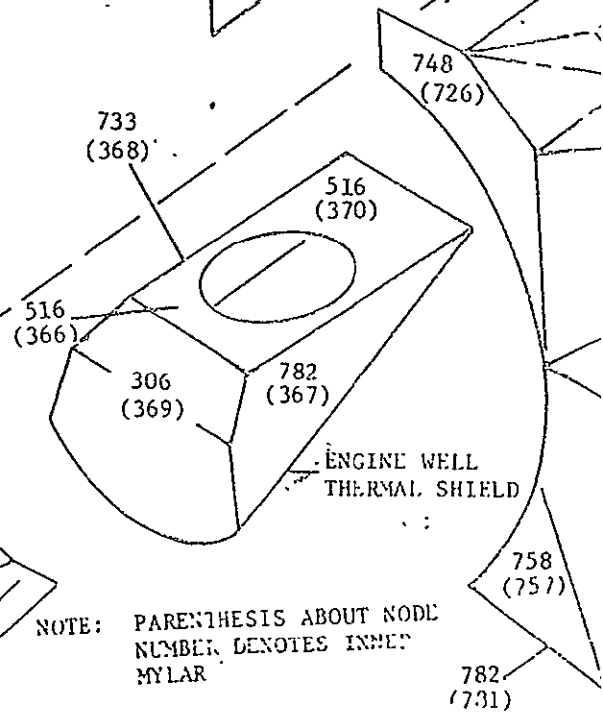
LM-6 ASCENT STAGE THERMAL MODEL NODE CONFIGURATION



Docking Tunnel Details

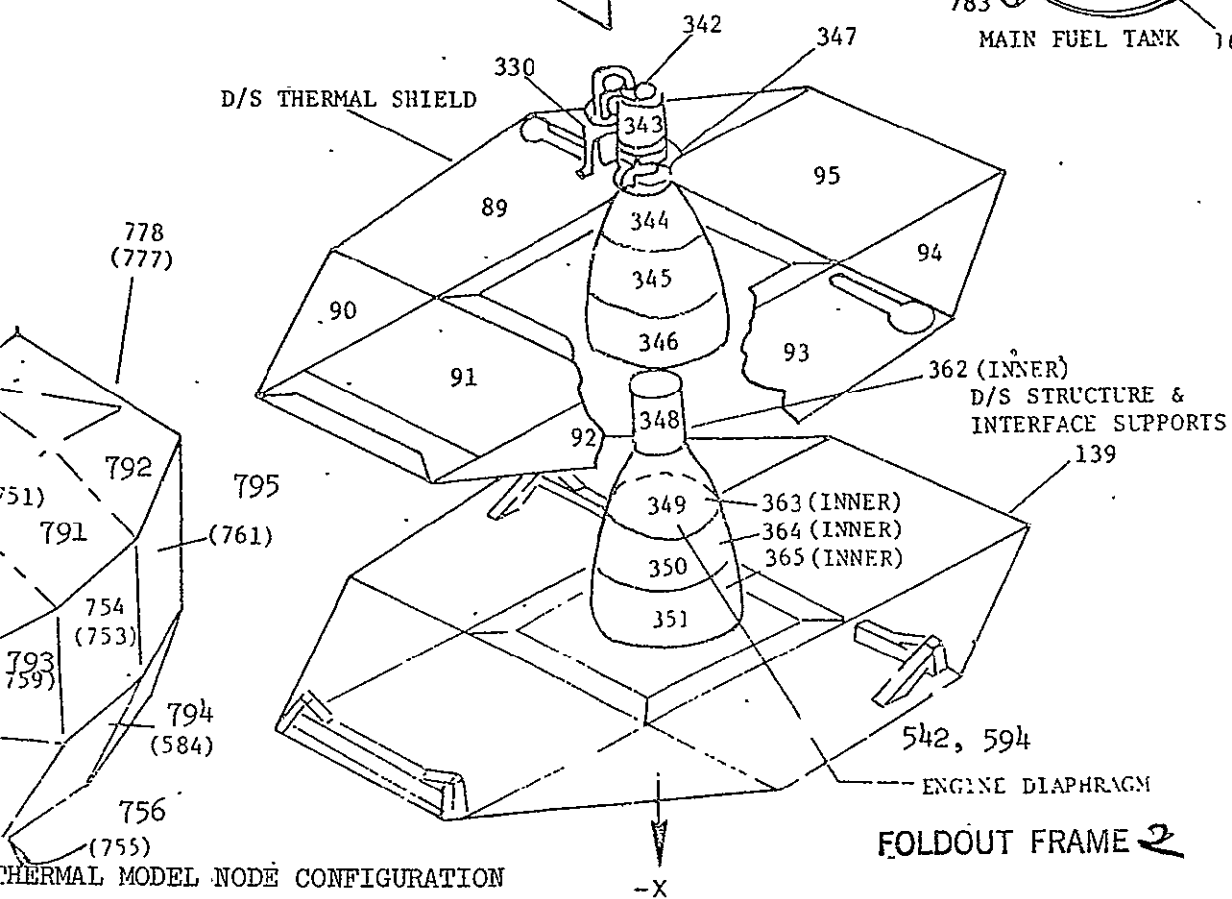
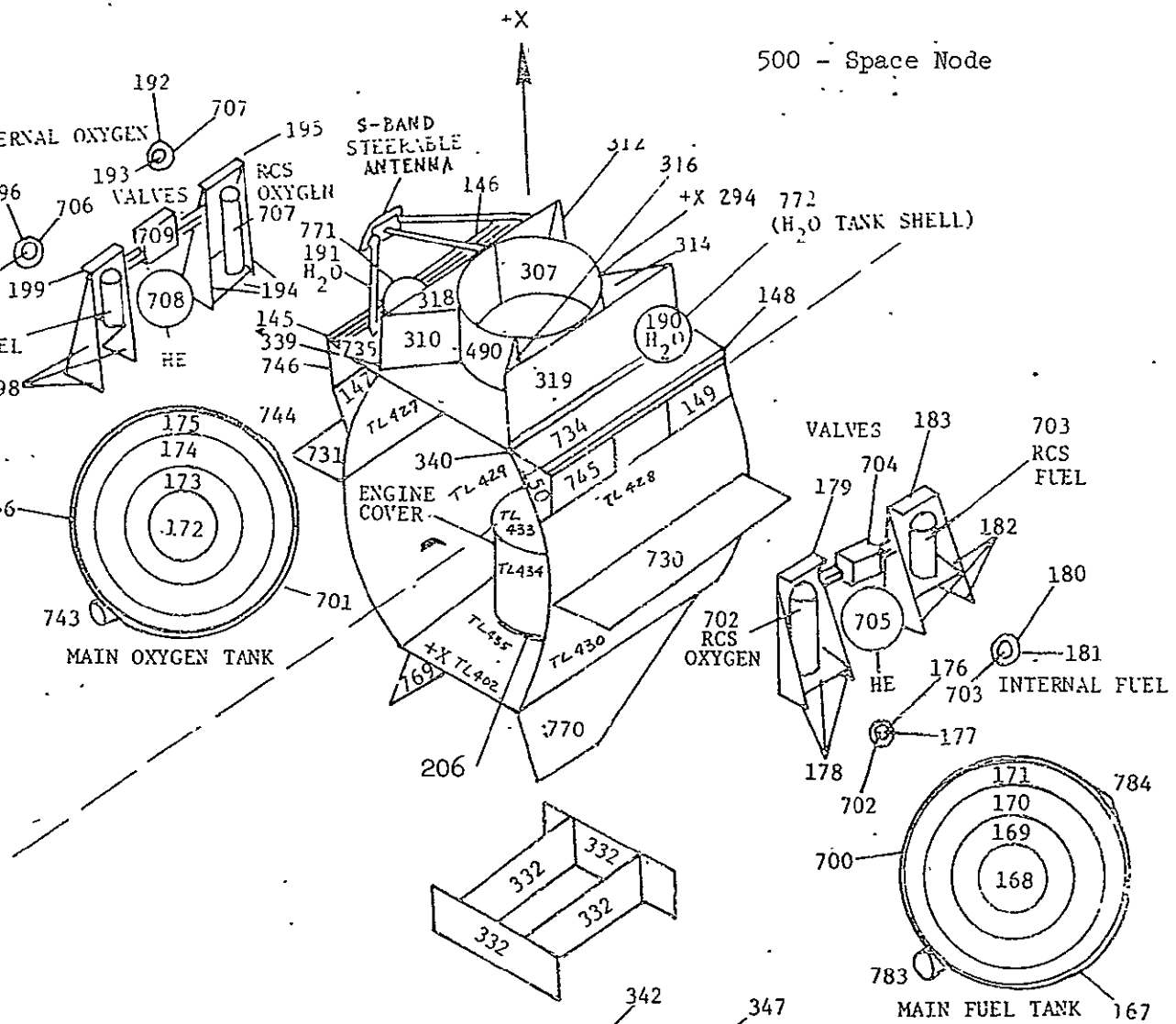


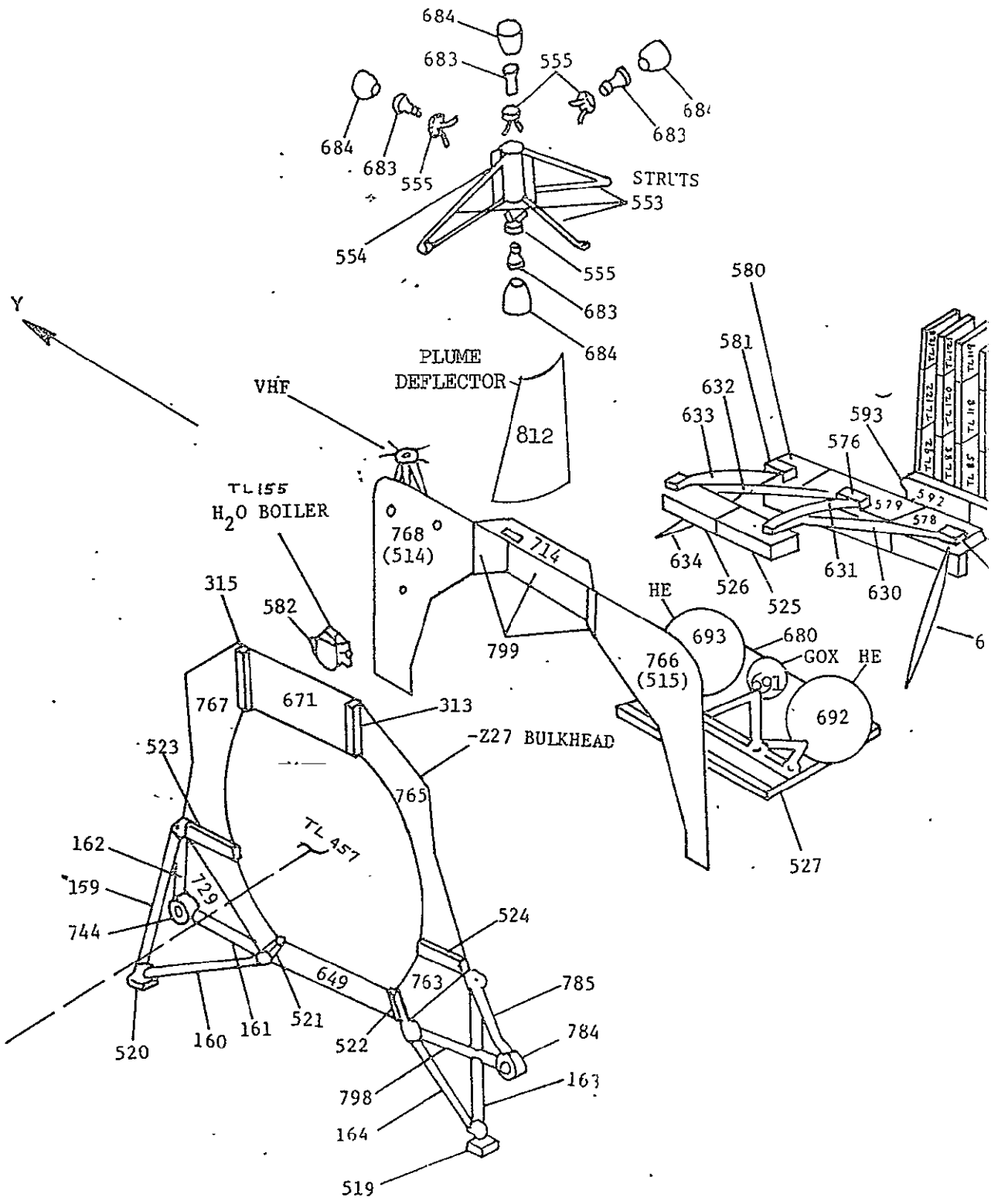
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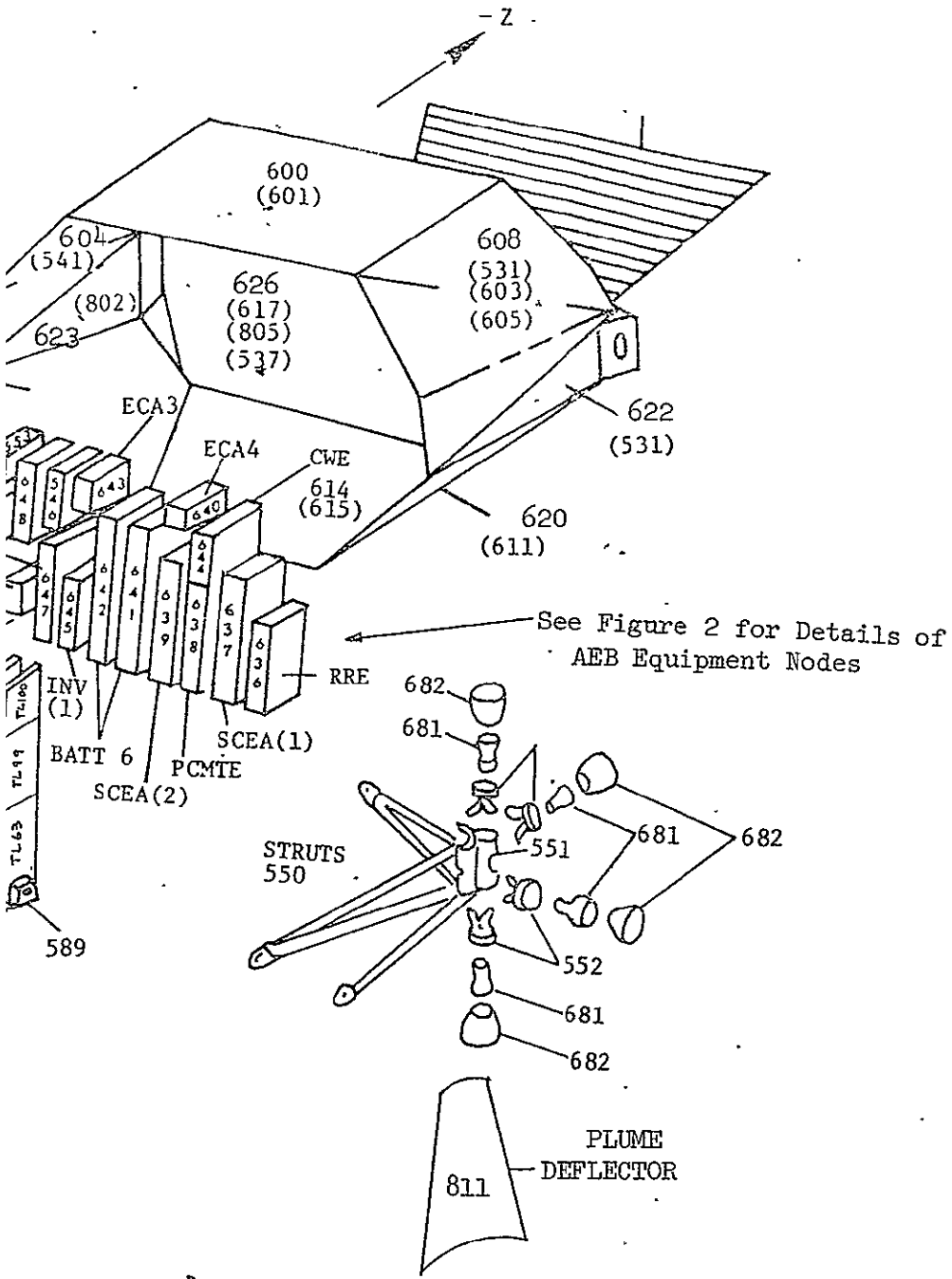
NOTE: PARENTHESIS ABOUT NODE NUMBER DENOTES INNER MYLAR

500 - Space Node





FOLDOUT FRAME /



NOTE: PARENTHESIS ABOUT NODE NUMBER DENOTES INNER MYLAR

12c IM-6 ASCENT STAGE THERMAL MODEL NODE CONFIGURATION

TABLE 1
CREWMAN THERMAL MODEL CONNECTIONS

Thermal Connection No.	Type of Connection	Values *		
		Mode 1	Mode 2	Mode 4
C1 (TL333-FL333)	Convection	** .2613(\dot{w}) ^{.33}	.2613(\dot{w}) ^{.33}	0.0
C2 (SL864-FL333)	Convection	.910	0.0	0.0
C3 (TL333-SL864)	Radiation	1.57007	0.0	0.0
C4 (SL864-SL858)	Conduction	6.35	0.0	0.0
C5 (SL858-SL867)	Conduction	7.15	0.0	0.0
C6 (TL359-FL359)	Convection	1.0452(\dot{w}) ^{.33}	1.0452(\dot{w}) ^{.33}	0.0
C7 (FL359-SL865)	Convection	3.01	3.01	0.0
C8 (TL359-SL865)	Radiation	4.87144	4.87144	0.0
C9 (SL865-SL859)	Conduction	19.8	19.8	0.0
C10 (SL859-SL868)	Conduction	21.7	21.7	0.0
C11 (TL363-FL363)	Convection	1.3065(\dot{w}) ^{.33}	1.3065(\dot{w}) ^{.33}	0.0
C12 (FL363-SL866)	Convection	3.85	3.85	0.0
C13 (TL363-SL866)	Radiation	6.23825	6.23825	0.0
C14 (SL866-SL860)	Conduction	25.3	25.3	0.0
C15 (SL860-SL869)	Conduction	27.8	27.8	0.0
C16 (SL867-FL375)	Convection	1.015	0.0	0.0
C17 (FL375-SL873)	Convection	1.015	0.0	0.0
C18 (SL867-TL580)	Radiation	1.927549	0.0	0.0
C19 (SL873-TL580)	Radiation	1.927549	0.0	0.0
C20 (SL868-FL376)	Convection	3.29	3.29	0.0
C21 (SL874-FL376)	Convection	3.29	3.29	0.0
C22 (SL868-TL580)	Radiation	6.00694	6.00694	0.0
C23 (SL874-TL580)	Radiation	6.00694	6.00694	0.0
C24 (SL869-FL377)	Convection	4.235	4.235	0.0
C25 (SL875-FL377)	Convection	4.235	4.235	0.0
C26 (SL869-TL580)	Radiation	7.71019	7.71019	0.0
C27 (SL875-TL580)	Radiation	7.71019	7.71019	0.0
C28 (SL873-SL861)	Conduction	7.15	0.0	0.0
C29 (SL870-SL861)	Conduction	6.35	0.0	0.0
C30 (SL870-FL340)	Convection	.910	0.0	0.0

TABLE 1 (Cont'd)

Thermal Connection No.	Type of Connection	Values *		
		Mode 1	Mode 2	Mode 4
C31 (TL340-FL340)	Convection	.2613(\dot{w}) ^{.33}	.2613(\dot{w}) ^{.33}	0.0
C32 (TL340-SL870)	Radiation	1.57007	0.0	0.0
C33 (SL862-SL874)	Conduction	21.7	21.7	0.0
C34 (SL871-SL862)	Conduction	19.8	19.8	0.0
C35 (FL364-SL871)	Convection	3.01	3.01	0.0
C36 (FL364-TL364)	Convection	1.0452(\dot{w}) ^{.33}	1.0452(\dot{w}) ^{.33}	0.0
C37 (TL364-SL871)	Radiation	4.87144	4.87144	0.0
C38 (FL365-TL365)	Convection	1.3065(\dot{w}) ^{.33}	1.3065(\dot{w}) ^{.33}	0.0
C39 (FL365-SL872)	Convection	3.85	3.85	0.0
C40 (SL872-SL863)	Conduction	25.3	25.3	0.0
C41 (SL863-SL875)	Conduction	27.8	27.8	0.0
C42 (SL872-TL365)	Radiation	6.23825	6.23825	0.0
C43 (FL375-TL340)	Convection	0.0	***.010673(PG) ^{.5}	0.0
C44 (TL580-TL340)	Radiation	0.0	1.948577	1.77138
C45 (TL364-FL391)	Convection	0.0	0.0	.372718(PG) ^{.5}
C46 (TL364-TL580)	Radiation	0.0	0.0	7.142306
C47 (TL365-FL390)	Convection	0.0	0.0	.462195(PG) ^{.5}
C48 (TL365-TL580)	Radiation	0.0	0.0	6.199839
C49 (TL333-FL375)	Convection	0.0	0.0106739(PG) ^{.5}	0.0
C50 (TL333-TL580)	Radiation	0.0	1.948577	1.77138
C51 (TL363-FL390)	Convection	0.0	0.0	.462195(PG) ^{.5}
C52 (TL363-TL580)	Radiation	0.0	0.0	6.199839
C53 (TL359-FL391)	Convection	0.0	0.0	.372718(PG) ^{.5}
C54 (TL359-TL580)	Radiation	0.0	0.0	7.142306

* Values for conduction connections are given in terms of conductance (BTU/°F)

Values for convection connections are given in terms of HA(BTU/°F)

Values for radiation connections are given in terms of FA(FT²)

** \dot{w} = Suit flow rate(LBM/HR)

** PG = Cabin Gas Pressure (PSIA)

APPENDIX A
LM- 6 MASTER DATA TAPE LISTING

LM-6 ASCENT STAGE DATA

0	1		2		3		4		5		6		7		8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
186	631	631	875	5	93	327	317	357	355	202	4*8	322*			10003
240.	250.	40.	600.	15	99			10	11			35.			10004
1	2	3	4	5	6	7	8	9	23	22	120.				10005
1551040.	12	1			2	3011040.		13	3159999.	1040.					10006
136	333	359	363	375	376	377	1	2	50.	1	150.	359	376		10007
98.6	98.6	93.	98.6	97.	93.	97.	93.								10008
138	340	364	365	375	376	377	1	2	50.	1	150.	364	376		10009
98.6	98.6	93.	98.6	97.	93.	97.	93.								10010
99999			.0104	3.22	201040.	.5625		21	21	21	36	34	35		10011
7	8	9	10	11	12	13	14								10012
252															10013
			.11		10.			.07992		1.0021			001FT		10014
			11		28.			.07992		1.0021			002FT		10015
		1010			10615.2			1.		1.			003FT		10016
		11			16.			.07992		1.0021			004FT		10017
		11			7.5			.07992		1.0021			005FT		10018
4009					11.85			1.		1.			006FT		10019
		11			30.			.07992		1.0021			007FT		10020
		11			22.			.07992		1.0021			008FT		10021
		11			6.			.029559		.60947			009FT		10022
1002					6145.61			1.		1.	2.27		010FT		10023
		11			12.			.029559		.60947			011FT		10024
1002					6165.61			1.		1.	2.27		012FT		10025
		11			7.			.029559		.60947			013FT		10026
1002					6134.96			1.		1.	1.87		014FT		10027
1003					6155.			1.		1.			015FT		10028
1004					61214.			1.		1.			016FT		10029
		11			5.			.029559		.60947			017FT		10030
		11			25.			.07992		1.0021			018FT		10031
1006					623.51			1.		1.			019FT		10032
		11			20.			.029559		.60947			020FT		10033
1002					6182.6			1.		1.			021FT		10034
		11			154.			.029559		.60947			022FT		10035
1001					6193.			1.		1.			023FT		10036
		11			70.			.029559		.60947			024FT		10037
4002					13.7			1.		1.	.1355		025FT		10038
		11			9.			.029559		.60947			026FT		10039
		11			35.			.029559		.60947			027FT		10040
1002					6093.04			1.		1.	2.8		028FT		10041
		11			37.			.029559		.60947			029FT		10042
1002					6179.8			1.		1.	1.63		030FT		10043
		11			45.			.029559		.60947			031FT		10044
1001					6205.82			1.		1.	.52		032FT		10045
		11			10.			.029559		.60947			033FT		10046
		11			8.			.029559		.60947			034FT		10047
1025					16.			1.		1.			035FT		10048
1002					6072.5			1.		1.	1.5		036FT		10049
		11			83.			.029559		.60947			037FT		10050
		11			108.			.029559		.60947			038FT		10051
		11			3.			.07992		1.0021			039FT		10052
		11			42.			.07992		1.0021			040FT		10053
		11			40.			.07992		1.0021			041FT		10054

LI-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
1012		204141.8		1.		1.		042FT 10055
11		34.		.07992		1.0021		043FT 10056
11		6.		.07992		1.0021		044FT 10057
1013		10155.7		1.		1.		045FT 10058
11		30.5		.07992		1.0021		046FT 10059
11		3.5		.07992		1.0021		047FT 10060
4001		1.8967		1.		1.	.333	048FT 10061
11		3.		.029559		.60947		049FT 10062
4002		1.8967		1.		1.	.333	050FT 10063
11		7.		.07992		1.0021		051FT 10064
11		17.		.07992		1.0021		052FT 10065
11		46.		.07992		1.0021		053FT 10066
11		95.		.07992		1.0021		054FT 10067
11		41.		.07992		1.0021		055FT 10068
1001		6228.35		1.		1.	.47	056FT 10069
11		14.		.029559		.60947		057FT 10070
1001		6214.72		1.		1.		058FT 10071
11		42.5		.07992		1.0021		059FT 10072
11		9.		.07992		1.0021		060FT 10073
11		8.		.07992		1.0021		061FT 10074
11		50.		.07992		1.0021		062FT 10075
1008		6282.61		1.		1.		063FT 10076
1007		6292.61		1.		1.		064FT 10077
11		4.		.029559		.60947		065FT 10078
11		5.5		.029559		.60947		066FT 10079
1001		6247.5		1.		1.	.674	067FT 10080
11		15.		.029559		.60947		068FT 10081
11		3.75		.029559		.60947		069FT 10082
1001		6205.1		1.		1.	.731	070FT 10083
11		8.5		.029559		.60947		071FT 10084
1001		6274.58		1.		1.	.71	072FT 10085
11		18.5		.029559		.60947		073FT 10086
11		18.		.029559		.60947		074FT 10087
1005		6254.58		1.		1.		075FT 10088
11		57.		.07992		1.0021		076FT 10089
11		54.		.07992		1.0021		077FT 10090
11		47.		.07992		1.0021		078FT 10091
1014		1115.5		1.		1.		079FT 10092
11		19.		.07992		1.0021		080FT 10093
1020		204241.95		1.		1.		081FT 10094
11		20.		.07992		1.0021		082FT 10095
1009		26.4		1.		1.		083FT 10096
11		76.		.07992		1.0021		084FT 10097
4013		11.025		1.		1.	.333	085FT 10098
11		88.		.07992		1.0021		086FT 10099
11		58.		.07992		1.0021		087FT 10100
11		2.5		.07992		1.0021		088FT 10101
11		0	10.5	.029556		.609		89FT 10102
11		11.		.07992		1.0021		090FT 10103
11		0	14.5	.079920		1.002		91FT 10104
11		0	7.8	.029556		.609		92FT 10105
11		0	6.8	.029556		.609		93FT 10106

LM-6 ASCENT STAGE DATA

1		2		3		4		5		6		7		8	
234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
							96.0	.079920	1.002			94FT	10107		
								.07992	1.0021			095FT	10108		
			20			.5		.00385	.22			096FT	10109		
			26			.5		.0333	.646			097FT	10110		
								.00257	.1799			098FT	10111		
								.0095	.286			099FT	10112		
								.029559	.60947			100FT	10113		
								.029559	.60947			101FT	10114		
								.029559	.60947			102FT	10115		
								.07992	1.0021			103FT	10116		
								.07992	1.0021			104FT	10117		
								1.	1.			105FT	10118		
1015								1.	1.			106FT	10119		
								.07992	1.0021			107FT	10120		
								1.0	1.0			108FT	10121		
								1.	1.			109FT	10122		
1016						16.5		.029559	.60947			110FT	10123		
								1.	1.			111FT	10124		
								1.	1.			112FT	10125		
								1.	1.			113FT	10126		
1021								1.	1.			114FT	10127		
1022								1.	1.			115FT	10128		
								1.	1.			116FT	10129		
								1.	1.			117FT	10130		
								1.	1.			118FT	10131		
4016						13.7		.086	1.04			119FT	10132		
								.07992	1.0021			120FT	10133		
								.07992	1.0021			121FT	10134		
								.029559	.60947			122FT	10135		
								1.	1.			123FT	10136		
								.029559	.60947			124FT	10137		
								.07992	1.0021			125FT	10138		
								1.	1.		.333	126FT	10139		
								1.	1.		.333	127FT	10140		
								.07992	1.0021			128FT	10141		
								.08	2.17		.333	129FT	10142		
								.07992	1.0021			130FT	10143		
								1.	1.			131FT	10144		
								.029559	.60947			132FT	10145		
								1.	1.			133FT	10146		
								1.	1.			134FT	10147		
								1.	1.			135FT	10148		
								2.93	0.			136FT	10149		
								2.93	0.			137FT	10150		
								2.93	0.			138FT	10151		
								2.93	0.			139FT	10152		
								2.93	0.			140FT	10153		
								2.93	0.			141FT	10154		
								1.61	0.			142FT	10155		
								2.93	0.			143FT	10156		
								1.61	0.			144FT	10157		
								2.93	0.			145FT	10158		
								2.93	0.						

LM-6 ASCENT STAGE DATA

U	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
		11	15024*		2*93	0*		146FT 10159
		11	702 15021.		2.93	0.		147FT 10160
		11	150210.		10.	0.		148FT 10161
		11	10.		1329.12	0.		149FT 10162
		5001	10.		990.72	111.6		150FT 10163
		11	10.		283.68	111.6		151FT 10164
		11	15.		990.72			152FT 10165
		11	200210.		990.72			153FT 10166
		11	110.		283.68			154FT 10167
		11	110.		54.72			155FT 10168
		11	360210.		1329.12			156FT 10169
		11	10.		54.72			157FT 10170
		11	1602.4762		283.68			158FT 10171
		11	1602.526		990.72			159FT 10172
		11	1602.333		1329.12			160FT 10173
		11	1602.8333		283.68			161FT 10174
		11	16022.5		990.72			162FT 10175
		11	1802.555		990.72			163FT 10176
		11	17025.		283.68			164FT 10177
		11	1602.4		990.72			165FT 10178
		11	21.		.07992	1.0021		166FT 10179
		11	55.		.07992	1.0021		167FT 10180
		11	46.		.029559	.60947		168FT 10181
		11	37.		.07992	1.0021		169FT 10182
		11	6.		.07992	1.0021		170FT 10183
		11	156.		.07992	1.0021		171FT 10184
		11	77.		.07992	1.0021		172FT 10185
		11	6C.		.07992	1.0021		173FT 10186
		11	1702.526		990.72			174FT 10187
		11	1702.4762		283.68			175FT 10188
		11	17022.5		990.72			176FT 10189
		11	1702.8333		283.68			177FT 10190
		11	1702.4		990.72			178FT 10191
		11	1902.555		990.72			179FT 10192
		11	210210.		990.72			180FT 10193
		11	220210.		990.72			181FT 10194
		11	230210.		990.72			182FT 10195
		11	240210.		990.72			183FT 10196
		11	250210.		990.72			184FT 10197
		11	260210.		283.68			185FT 10198
		11	270210.		990.72			186FT 10199
		11	280210.		990.72			187FT 10200
		11	290210.		54.72			188FT 10201
		11	300210.		54.72			189FT 10202
		11	310210.		54.72			190FT 10203
		11	320210.		990.72			191FT 10204
		11	330210.		990.72			192FT 10205
		11	340210.		990.72			193FT 10206
		11	340210.		283.68			194FT 10207
		11	350210.		990.72			195FT 10208
		11	220210.		283.68			196FT 10209
		11	360210.		1329.12			197FT 10210

L-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	c				
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890				
			11		370210.			990.72	198FT	10211		
			11		380210.			990.72	199FT	10212		
			11		380210.			54.72	200FT	10213		
			11		37025.0			990.722	201FT	10214		
			11		30025.0			990.72	202FT	10215		
			11		39025.0			990.72	203FT	10216		
			11		40025.0			990.72	204FT	10217		
			11		35025.0			990.72	205FT	10218		
			11		390210.			990.72	206FT	10219		
			11		440210.			990.72	207FT	10220		
			11		38022.5			990.72	208FT	10221		
			11		450210.			54.72	209FT	10222		
			11		470210.			990.72	210FT	10223		
			11		480210.			990.72	211FT	10224		
			11		310210.			283.68	212FT	10225		
			11		210210.			283.68	213FT	10226		
			11		490210.			283.68	214FT	10227		
			11		360210.			283.68	215FT	10228		
			11		440210.			283.68	216FT	10229		
			11		290210.			990.72	217FT	10230		
			11		2202.4762			283.68	218FT	10231		
			11		3502.8333			283.68	219FT	10232		
			11		22025.			283.68	220FT	10233		
			11		4402.333			1329.12	221FT	10234		
			11		4602.555			990.72	222FT	10235		
			11		3502.4			990.72	223FT	10236		
			11		3702.526			990.72	224FT	10237		
			11		41025.			990.72	225FT	10238		
			11		42025.			990.72	226FT	10239		
			11		43025.			990.72	227FT	10240		
			130					55.0	.029559	.60947	228FT	10241
			130					77.5	.029559	.60947	229FT	10242
			130					21.0	.029559	.60947	230FT	10243
			130					1.0	.029559	.60947	231FT	10244
			130					43.6	.029559	.60947	232FT	10245
			130					6.4	.029559	.60947	233FT	10246
			130					26.5	.029559	.60947	234FT	10247
			130					80.0	.029559	.60947	235FT	10248
			130					96.0	.029559	.60947	236FT	10249
			130					86.0	.029559	.60947	237FT	10250
			130					43.0	.029559	.60947	238FT	10251
			130					20.0	.029559	.60947	239FT	10252
			130					35.3	.029559	.60947	240FT	10253
			130					38.8	.029559	.60947	241FT	10254
			130					14.2	.029559	.60947	242FT	10255
			130					17.1	.029559	.60947	243FT	10256
			130					68.7	.029559	.60947	244FT	10257
			130					26.6	.029559	.60947	245FT	10258
			130					45.2	.029559	.60947	246FT	10259
			130					11.74	.029559	.60947	247FT	10260
			130					39.6	.029559	.60947	248FT	10261
			130					24.65	.029559	.60947	249FT	10262

LC-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
						11		10		10.4		*079920	1.002		250FT		10263
						11		0		128.5		*079920	1.002		251FT		10264
						11		1.38		1.					252FT		10265
1	0	1	1					70.	466						FL		10266
2	0	2	2					70.	467						FL		10267
3	2	2	3					70.	317						FL		10268
4	3	2	4					70.	468						FL		10269
5	0	87	5					70.	473						FL		10270
6	7	115	127					70.	118						FL		10271
7	285	115	127					70.	119						FL		10272
8	9	117	129					70.	120						FL		10273
9	289	117	129					70.	121						FL		10274
10	11	118	127					70.	122						FL		10275
11	294	118	127					70.	123						FL		10276
12	0	45	5					70.							FL		10277
13	0	12	7					70.	477						FL		10278
14	0	3	8					70.	479						FL		10279
15	0	4	9					70.	480						FL		10280
16	15	4	10					70.							FL		10281
17	16	4	11					70.	481						FL		10282
18	17	4	12					70.							FL		10283
19	18	4	13					70.	482						FL		10284
20	19	4	14					70.							FL		10285
21	20	4	11					70.	483						FL		10286
22	21	4	15					70.							FL		10287
23	22	4	9					70.	484						FL		10288
24	23	4	16					70.							FL		10289
25	185	4	17					70.	485						FL		10290
26	0	7	18					70.							FL		10291
27	35	9	19					70.	-1						FL		10292
28	27	9	20					70.							FL		10293
29	28	9	21					70.							FL		10294
30	29	9	22					70.							FL		10295
31	30	9	23					70.							FL		10296
32	31	9	24					70.							FL		10297
33	32	9	25					70.							FL		10298
34	184	9	26					70.	486						FL		10299
35	0	9	27					70.							FL		10300
36	0	8	11					70.							FL		10301
37	36	8	28					70.	-1						FL		10302
38	37	8	29					70.							FL		10303
39	38	8	30					70.							FL		10304
40	39	8	31					70.							FL		10305
41	40	8	100					70.							FL		10306
42	41	8	33					70.							FL		10307
43	183	8	34					70.							FL		10308
44	0	6	26					70.							FL		10309
45	44	6	35					70.							FL		10310
46	45	6	26					70.							FL		10311
47	233	85	133					70.							FL		10312
48	46	6	26					70.							FL		10313
49	48	6	36					70.	-1						FL		10314

LT-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
102	101	31	50	70.	-1												FL 10367
103	71	33	50	70.	-1												FL 10368
104	103	33	50	70.	-1												FL 10369
105	74	34	50	70.	-1												FL 10370
106	105	34	50	70.	-1												FL 10371
107	159	74	85	70.	-1												FL 10372
108	107	74	85	70.	-1												FL 10373
109	108	74	252	70.	-1												FL 10374
110	163	76	85	70.	-1												FL 10375
111	110	76	85	70.	-1												FL 10376
112	111	76	252	70.	-1												FL 10377
113	167	75	85	70.	-1												FL 10378
114	113	75	85	70.	-1												FL 10379
115	114	75	252	70.	-1												FL 10380
116	82	25	50	70.	-1												FL 10381
117	116	25	50	70.	-1												FL 10382
118	85	24	50	70.	-1												FL 10383
119	118	24	50	70.	-1												FL 10384
120	88	22	50	70.	-1												FL 10385
121	120	22	50	70.	-1												FL 10386
122	92	20	50	70.	-1												FL 10387
123	122	20	50	70.	-1												FL 10388
124	125	92	127	70.	99												FL 10389
125	191	92	127	70.	100												FL 10390
126	127	108	127	70.	101												FL 10391
127	273	108	127	70.	102												FL 10392
128	129	109	127	70.	103												FL 10393
129	268	109	127	70.	104												FL 10394
130	131	110	127	70.	105												FL 10395
131	263	110	127	70.	106												FL 10396
132	259	100	126	70.	107												FL 10397
133	132	100	126	70.	108												FL 10398
134	133	100	252	70.	109												FL 10399
135	254	101	126	70.	110												FL 10400
136	135	101	126	70.	111												FL 10401
137	136	101	252	70.	112												FL 10402
138	249	102	126	70.	113												FL 10403
139	138	102	126	70.	114												FL 10404
140	139	102	252	70.	115												FL 10405
141	142	114	127	70.	116												FL 10406
142	280	114	127	70.	117												FL 10407
143	0	39	93	70.													FL 10408
144	143	39	113	70.													FL 10409
145	144	39	92	70.													FL 10410
146	0	65	76	70.													FL 10411
147	0	67	77	70.	540												FL 10412
148	0	68	78	70.	541												FL 10413
149	148	68	79	70.	327												FL 10414
150	149	68	80	70.	542												FL 10415
151	0	69	2	70.	543												FL 10416
152	0	70	7	70.	544												FL 10417
153	152	70	81	70.	56												FL 10418

LM-6 ASCENT STAGE DATA

U	1		2		3		4		5		6		7		8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
154	153	70	82	70*	545										FL 10419
155	214	70	83	70.											FL 10420
156	155	70	84	70.											FL 10421
157	0	71	53	70.											FL 10422
158	215	74	49	70.											FL 10423
159	158	74	85	70.	-1										FL 10424
160	216	74	51	70.											FL 10425
161	0	73	47	70.											FL 10426
162	0	76	49	70.											FL 10427
163	162	76	85	70.	-1										FL 10428
164	112	76	49	70.											FL 10429
165	0	77	47	70.											FL 10430
166	0	75	51	70.											FL 10431
167	218	75	85	70.	-1										FL 10432
168	217	75	39	70.											FL 10433
169	0	78	86	70.											FL 10434
170	0	72	87	70.											FL 10435
171	0	79	91	70.											FL 10436
172	173	80	93	70.											FL 10437
173	174	80	113	70.											FL 10438
174	0	80	92	70.											FL 10439
175	0	81	92	70.											FL 10440
176	227	81	89	70.											FL 10441
177	0	83	251	70.											FL 10442
178	0	82	250	70.											FL 10443
179	574	41	92	70.											FL 10444
180	0	84	94	70.											FL 10445
181	0	85	95	70.											FL 10446
182	49	6	96	70.											FL 10447
183	234	8	96	70.											FL 10448
184	33	9	97	70.											FL 10449
185	24	4	98	70.											FL 10450
186	568	12	99	70.											FL 10451
187	0	30	47	70.											FL 10452
188	0	16	80	70.	546										FL 10453
189	199	86	100	70.											FL 10454
190	0	92	61	70.											FL 10455
191	190	92	13	70.											FL 10456
192	124	92	127	70.	63										FL 10457
193	192	92	13	70.											FL 10458
194	193	92	61	70.											FL 10459
195	0	45	5	70.											FL 10460
196	195	45	101	70.											FL 10461
197	196	45	102	70.											FL 10462
198	197	45	103	70.											FL 10463
199	0	86	104	70.											FL 10464
200	189	86	100	70.											FL 10465
201	0	5	18	70.	559										FL 10466
202	60	17	105	70.											FL 10467
203	202	17	106	70.	560										FL 10468
204	62	29	49	70.											FL 10469
205	64	29	51	70.											FL 10470

LN-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
206	73	34	49				70.										FL 10471
207	106	34	49				70.										FL 10472
208	91	20	49				70.										FL 10473
209	123	20	49				70.										FL 10474
210	81	25	49				70.										FL 10475
211	117	25	49				70.										FL 10476
212	47	85	107				70.										FL 10477
213	576	70	108				70.										FL 10478
214	213	70	39				70.										FL 10479
215	0	74	47				70.										FL 10480
216	109	74	49				70.										FL 10481
217	115	75	109				70.										FL 10482
218	166	75	49				70.										FL 10483
219	170	72	110				70.										FL 10484
220	219	72	111				70.										FL 10485
221	220	72	110				70.										FL 10486
222	221	72	112				70.										FL 10487
223	0	88	92				70.										FL 10488
224	223	68	93				70.										FL 10489
225	0	90	92				70.										FL 10490
226	228	90	93				70.										FL 10491
227	175	81	113				70.										FL 10492
228	225	90	113				70.										FL 10493
229	180	84	110				70.										FL 10494
230	229	84	111				70.										FL 10495
231	230	84	87				70.										FL 10496
232	169	78	114				70.										FL 10497
233	181	85	115				70.										FL 10498
234	42	8	100				70.										FL 10499
235	0	94	116				70.	562									FL 10500
236	0	95	117				70.										FL 10501
237	236	95	118				70.	27									FL 10502
238	237	95	119				70.										FL 10503
239	238	95	120				70.										FL 10504
240	0	97	121				70.										FL 10505
241	240	97	122				70.	37									FL 10506
242	241	97	74				70.										FL 10507
243	0	96	123				70.										FL 10508
244	243	96	124				70.	49									FL 10509
245	244	96	34				70.										FL 10510
246	0	98	125				70.										FL 10511
247	0	102	61				70.										FL 10512
248	247	102	13				70.										FL 10513
249	248	102	126				70.	167									FL 10514
250	140	102	13				70.										FL 10515
251	0	104	61				70.										FL 10516
252	0	99	61				70.										FL 10517
253	0	101	13				70.										FL 10518
254	253	101	126				70.	163									FL 10519
255	137	101	13				70.										FL 10520
256	0	103	61				70.										FL 10521
257	0	100	61				70.										FL 10522

LA-6 ASCERT STALL DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
258	257	160	13	70.				FL 10523
259	258	160	126	70.	159			FL 10524
260	134	100	13	70.				FL 10525
261	0	105	61	70.				FL 10526
262	0	110	61	70.				FL 10527
263	262	110	13	70.				FL 10528
264	130	110	127	70.	74			FL 10529
265	264	110	13	70.				FL 10530
266	265	110	61	70.				FL 10531
267	0	107	61	70.				FL 10532
268	0	109	13	70.				FL 10533
269	128	109	127	70.	71			FL 10534
270	269	109	13	70.				FL 10535
271	0	111	61	70.				FL 10536
272	0	91	61	70.				FL 10537
273	0	108	13	70.				FL 10538
274	126	108	127	70.	-66			FL 10539
275	274	108	13	70.				FL 10540
276	0	93	61	70.				FL 10541
277	0	112	128	70.				FL 10542
278	0	106	61	70.				FL 10543
279	0	114	61	70.				FL 10544
280	279	114	13	70.				FL 10545
281	141	114	127	70.	82			FL 10546
282	281	114	13	70.				FL 10547
283	282	114	61	70.				FL 10548
284	0	113	61	70.				FL 10549
285	0	115	13	70.				FL 10550
286	6	115	127	70.	85			FL 10551
287	286	115	13	70.				FL 10552
288	0	116	61	70.				FL 10553
289	0	117	13	70.				FL 10554
290	8	117	129	70.	88			FL 10555
291	290	117	13	70.				FL 10556
292	0	119	61	70.				FL 10557
293	0	118	61	70.				FL 10558
294	293	118	13	70.				FL 10559
295	10	118	127	70.	92			FL 10560
296	295	118	13	70.				FL 10561
297	296	118	61	70.				FL 10562
298	0	120	61	70.				FL 10563
299	0	121	128	70.				FL 10564
300	0	122	130	70.				FL 10565
301	300	122	131	70.				FL 10566
302	301	122	132	70.				FL 10567
303	302	122	133	70.				FL 10568
304	303	122	61	70.	563			FL 10569
305	304	122	134	70.				FL 10570
306	0	123	135	70.				FL 10571
307	306	123	135	70.				FL 10572
308	0	125	135	70.				FL 10573
309	308	125	136	70.				FL 10574

LP-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
310	0	124	135	70.				FL 10575
311	310	124	135	70.				FL 10576
312	0	126	135	70.				FL 10577
313	312	126	136	70.				FL 10578
314	0	127	135	70.				FL 10579
315	0	128	135	70.				FL 10580
316	315	128	137	70.				FL 10581
317	0	129	135	70.	-1			FL 10582
318	317	129	138	70.				FL 10583
319	318	129	135	70.				FL 10584
320	0	131	139	70.				FL 10585
321	320	131	135	70.				FL 10586
322	0	133	140	70.				FL 10587
323	0	130	139	70.				FL 10588
324	323	130	135	70.				FL 10589
325	0	132	140	70.				FL 10590
326	0	134	137	70.				FL 10591
327	0	135	135	70.	-1			FL 10592
328	327	135	141	70.				FL 10593
329	0	136	135	70.				FL 10594
330	329	136	135	70.				FL 10595
331	330	136	135	70.				FL 10596
332	331	136	135	70.				FL 10597
333	332	136	142	70.				FL 10598
334	363	136	135	70.				FL 10599
335	366	136	135	70.				FL 10600
336	0	138	135	70.				FL 10601
337	336	138	135	70.				FL 10602
338	337	138	135	70.				FL 10603
339	338	138	135	70.				FL 10604
340	339	138	142	70.				FL 10605
341	365	138	135	70.				FL 10606
342	341	138	135	70.				FL 10607
343	367	138	135	70.				FL 10608
344	0	140	143	70.				FL 10609
345	0	141	135	70.				FL 10610
346	0	144	144	70.				FL 10611
347	345	141	135	70.				FL 10612
348	0	142	137	70.				FL 10613
349	0	143	135	70.				FL 10614
350	349	143	138	70.				FL 10615
351	0	145	145	70.				FL 10616
352	351	145	135	70.				FL 10617
353	0	146	146	70.				FL 10618
354	0	148	146	70.				FL 10619
355	0	149	135	70.				FL 10620
356	355	149	135	70.				FL 10621
357	0	147	135	70.				FL 10622
358	357	147	135	70.				FL 10623
359	333	136	142	70.				FL 10624
360	0	150	147	70.				FL 10625
361	0	151	135	70.				FL 10626

ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
362	0	152	135		70.			FL 10627
363	359	136	142		70.			FL 10628
364	340	136	142		70.			FL 10629
365	364	138	142		70.			FL 10630
366	369	136	135		70.			FL 10631
367	342	138	135		70.			FL 10632
368	0	137	148		70.			FL 10633
369	334	136	135		70.			FL 10634
370	0	139	148		70.			FL 10635
371	393	162	148		70.			FL 10636
372	371	162	148		70.			FL 10637
373	0	153	148	70.				FL 10638
374	373	153	149		70.			FL 10639
375	0	154	150		70.			FL 10640
376	0	155	150		70.			FL 10641
377	0	156	150		70.			FL 10642
378		157	150	70.				FL 10643
379	377	156	205		70.			FL 10644
380	379	156	205		70.			FL 10645
381	447	157	213		70.			FL 10646
382	452	155	182		70.			FL 10647
383	382	155	214					FL 10648
384	456	154	181	70.				FL 10649
385	380	156	203		70.			FL 10650
386	385	156	204		70.			FL 10651
387	386	156	204		70.			FL 10652
388	387	156	204		70.			FL 10653
389	388	156	205		70.			FL 10654
390	0	159	149		70.			FL 10655
391	0	160	149		70.			FL 10656
392	0	161	149		70.			FL 10657
393	0	162	149		70.			FL 10658
394	396	156	153		70.			FL 10659
395	407	156	180		70.			FL 10660
396	395	156	181		70.			FL 10661
397	412	156	182		70.			FL 10662
398	411	156	183		70.			FL 10663
399	410	155	184		70.			FL 10664
400	413	157	185		70.			FL 10665
401	440	154	186		70.			FL 10666
402	401	154	187		70.			FL 10667
403	402	154	181		70.			FL 10668
404	443	158	188		70.			FL 10669
405	404	158	189		70.			FL 10670
406	405	158	190		70.			FL 10671
407	397	156	199		70.			FL 10672
408	389	156	225		70.			FL 10673
409	394	156	191		70.			FL 10674
410	455	155	153		70.			FL 10675
411	444	156	192		70.			FL 10676
412	398	156	193		70.			FL 10677
413	450	157	194		70.			FL 10678

L-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
414	451	155	195		70.			FL 10679
415	408	156	226		70.			FL 10680
416	487	157	196		70.			FL 10681
417	374	153	197		70.			FL 10682
418	416	157	196		70.			FL 10683
419	563	156	198		70.			FL 10684
420	458	156	198		70.			FL 10685
421	459	156	198		70.			FL 10686
422	432	154	199		70.			FL 10687
423	422	154	199		70.			FL 10688
424	431	158	200		70.			FL 10689
425	409	156	206		70.			FL 10690
426	425	156	206		70.			FL 10691
427	446	157	220		70.			FL 10692
428	414	155	223		70.			FL 10693
429	418	157	218		70.			FL 10694
430	534	155	219		70.			FL 10695
431	406	158	200		70.			FL 10696
432	384	154	199		70.			FL 10697
433	421	156	207		70.			FL 10698
434	417	153	156		70.			FL 10699
435	434	153	221		70.			FL 10700
436	489	154	199		70.			FL 10701
437	424	158	200		70.			FL 10702
438	423	154	208		70.			FL 10703
439	460	158	209		70.			FL 10704
440	558	154	180		70.			FL 10705
441	375	154	222		70.			FL 10706
442	463	156	210		70.			FL 10707
443	439	158	189		70.			FL 10708
444	445	156	210		70.			FL 10709
445	442	156	211		70.			FL 10710
446	448	157	212		70.			FL 10711
447	449	157	213		70.			FL 10712
448	381	157	214		70.			FL 10713
449	400	157	215		70.			FL 10714
450	378	157	216		70.			FL 10715
451	383	155	195		70.			FL 10716
452	454	155	182		70.			FL 10717
453	415	156	227		70.			FL 10718
454	399	155	217		70.			FL 10719
455	376	155	193		70.			FL 10720
456	403	154	181		70.			FL 10721
457	426	156	224		70.			FL 10722
458	419	156	153		70.			FL 10723
459	420	156	153		70.			FL 10724
460		158	150	70.				FL 10725
461	429	157	153		70.			FL 10726
462	461	157	153		70.			FL 10727
463	465	156	225		70.			FL 10728
464	462	157	153		70.			FL 10729
465	453	156	205		70.			FL 10730

U-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
466	464	157	158	70.	-1			FL 10731
467	466	157	158	70.	-1			FL 10732
468	467	157	158	70.	-1			FL 10733
469	457	156	159	70.	-1			FL 10734
470	435	153	160	70.	-1			FL 10735
471	430	155	161	70.	-1			FL 10736
472	438	154	162	70.	-1			FL 10737
473	441	154	163	70.	-1			FL 10738
474	473	154	163	70.	-1			FL 10739
475	474	154	163	70.				FL 10740
476	475	154	163	70.				FL 10741
477	476	154	163	70.	-1			FL 10742
478	472	154	162	70.	-1			FL 10743
479	469	156	159	70.	-1			FL 10744
480	479	156	174	70.	-1			FL 10745
481	480	156	174	70.	-1			FL 10746
482	481	156	174	70.	-1			FL 10747
483	482	156	174	70.	-1			FL 10748
484	483	156	174	70.	-1			FL 10749
485	468	157	175	70.	-1			FL 10750
486	478	154	176	70.	-1			FL 10751
487	427	157	164	70.	-1			FL 10752
488	485	157	175	70.	-1			FL 10753
489	486	154	162	70.	-1			FL 10754
490	471	155	161	70.	-1			FL 10755
491	470	153	160	70.	-1			FL 10756
492	488	157	158	70.	-1			FL 10757
493	492	157	158	70.	-1			FL 10758
494	493	157	158	70.	-1			FL 10759
495	494	157	158	70.	-1			FL 10760
496	495	157	158	70.	-1			FL 10761
497	496	157	158	70.	-1			FL 10762
498	497	157	158	70.	-1			FL 10763
499	484	156	159	70.				FL 10764
500	428	155	165	70.				FL 10765
501	499	156	159	70.				FL 10766
502	501	156	174	70.				FL 10767
503	502	156	174	70.				FL 10768
504	503	156	174	70.				FL 10769
505	504	156	174	70.				FL 10770
506	505	156	159	70.				FL 10771
507	500	155	165	70.				FL 10772
508	507	155	165	70.				FL 10773
509	508	155	165	70.				FL 10774
510	490	155	177	70.				FL 10775
511	510	155	177	70.				FL 10776
512	511	155	177	70.				FL 10777
513	512	155	177	70.				FL 10778
514	513	155	177	70.				FL 10779
515	509	155	178	70.				FL 10780
516	515	155	178	70.				FL 10781
517	516	155	178	70.				FL 10782

LM-6 ASCENT STAGE DATA

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1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
518	517	155	178	70.				FL 10783
519	518	155	178	70.				FL 10784
520	519	155	178	70.				FL 10785
521	520	155	178	70.				FL 10786
522	521	155	178	70.				FL 10787
523	522	155	178	70.				FL 10788
524	523	155	178	70.				FL 10789
525	524	155	178	70.				FL 10790
526	525	155	178	70.				FL 10791
527	526	155	178	70.				FL 10792
528	527	155	178	70.				FL 10793
529	528	155	178	70.				FL 10794
530	529	155	178	70.				FL 10795
531	530	155	178	70.				FL 10796
532	531	155	178	70.				FL 10797
533	532	155	178	70.				FL 10798
534	533	155	178	70.				FL 10799
535	514	155	161	70.				FL 10800
536	535	155	178	70.				FL 10801
537	536	155	178	70.				FL 10802
538	537	155	161	70.				FL 10803
539	506	156	159	70.	-1			FL 10804
540	498	157	158	70.	-1			FL 10805
541	540	157	158	70.	-1			FL 10806
542	541	157	158	70.	-1			FL 10807
543	542	157	158	70.	-1			FL 10808
544	543	157	158	70.	-1			FL 10809
545	544	157	158	70.	-1			FL 10810
546	545	157	158	70.	-1			FL 10811
547	477	154	179	70.				FL 10812
548	547	154	163	70.				FL 10813
549	548	154	179	70.				FL 10814
550	549	154	179	70.				FL 10815
551	550	154	179	70.				FL 10816
552	551	154	179	70.				FL 10817
553	552	154	163	70.				FL 10818
554	553	154	179	70.				FL 10819
555	554	154	179	70.				FL 10820
556	555	154	163	70.				FL 10821
557	556	154	163	70.				FL 10822
558	557	154	179	70.				FL 10823
559	539	156	159	70.	-1			FL 10824
560	546	157	158	70.	-1			FL 10825
561	559	156	159	70.				FL 10826
562	561	156	159	70.	-1			FL 10827
563	562	156	159	70.	-1			FL 10828
564	4	2	166	70.	469			FL 10829
565	564	2	53	70.	470			FL 10830
566	565	2	167	70.	471			FL 10831
567	566	2	4	70.	472			FL 10832
568	13	12	1	70.	476			FL 10833
569	51	10	29	70.	487			FL 10834

LE-6 ASCEKT STAGE DATA

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571	52	11	62	70.	490			FL 10836
572	571	11	169	70.	491			FL 10837
573	572	11	170	70.	492			FL 10838
574	98	41	113	70.				FL 10839
575	0	89	7	70.	539			FL 10840
576	154	70	171	70.		6		FL 10841
577	201	5	172	70.				FL 10842
578	203	17	41	70.				FL 10843
579	235	94	173	70.				FL 10844
580	436	154	142	70.				FL 10845
581	0	180	228	70.				FL 10846
582	581	180	229	70.	616			FL 10847
583	0	164	230	70.	617			FL 10848
584	0	168	231	70.				FL 10849
585	0	179	232	70.	618			FL 10850
586	0	182	233	70.	619			FL 10851
587	0	181	234	70.	620			FL 10852
588	0	165	235	70.				FL 10853
589	588	165	236	70.	621			FL 10854
590	0	163	237	70.				FL 10855
591	590	163	238	70.	622			FL 10856
592	0	186	239	70.	623			FL 10857
593	0	170	240	70.	624			FL 10858
594	0	171	241	70.	625			FL 10859
595	611	183	242	70.	626			FL 10860
596	615	184	243	70.	627			FL 10861
597	0	167	244	70.	628			FL 10862
598	597	167	245	70.				FL 10863
599	614	185	246	70.	629			FL 10864
600	0	174	247	70.	630			FL 10865
601	0	173	248	70.	631			FL 10866
602	601	173	249	70.				FL 10867
603	589	165	231	70.				FL 10868
604	592	186	231	70.				FL 10869
605	583	164	231	70.				FL 10870
606	0	175	231	70.				FL 10871
607	0	178	231	70.				FL 10872
608	0	169	231	70.				FL 10873
609	0	166	231	70.				FL 10874
610	0	177	231	70.				FL 10875
611	0	183	231	70.				FL 10876
612	0	176	231	70.				FL 10877
613	0	172	231	70.				FL 10878
614	0	185	231	70.				FL 10879
615	0	184	231	70.				FL 10880
616	560	157	218	70.	-1			FL 10881
617	616	157	196	70.	-1			FL 10882
618	617	157	196	70.	-1			FL 10883
619	618	157	196	70.	-1			FL 10884
620	619	157	196	70.	-1			FL 10885
621	433	156	224	70.	-1			FL 10886

LM-6 ASCENT STAGE DATA

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623	620	157	196				70.	-1									FL 10888
624	623	157	218				70.	-1									FL 10889
625	624	157	218				70.	-1									FL 10890
626	625	157	196				70.	-1									FL 10891
627	626	157	196				70.	-1									FL 10892
628	627	157	220				70.	-1									FL 10893
629	628	157	218				70.	-1									FL 10894
630	629	157	196				70.	-1									FL 10895
631	538	155	223				70.	-1									FL 10896
432																	10897
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.6	.6																001TT 10899
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4.833																	002TT 10901
1.62	1.62																002TT 10902
.0098		1					2	144.									003TT 10903
4.833								18.85									004TT 10904
.83	.83																004TT 10905
.0046							2	8.85									005TT 10906
.44	.44																005TT 10907
.182								9.1									006TT 10908
.19								9.1									007TT 10909
.0183		1					2	35.4									008TT 10910
2.185																	008TT 10911
1.75	1.75																008TT 10912
.0134		1					2	25.9									009TT 10913
2.185																	009TT 10914
1.29	1.29																009TT 10915
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.23	.23																010TT 10917
.38		2						72.72									11 TT 10918
.0244		3.5															11 TT 10919
.0046							2	9.42									11 TT 10920
.47	.47																012TT 10921
.38		2						72.72									012TT 10922
.0215		3.5															13 TT 10923
.0027							2	5.5									13 TT 10924
.27	.27																014TT 10925
.1656		2						61.56									014TT 10926
.0485		3.5															15 TT 10927
.4426		2						193.248									15 TT 10928
.0181		1.635															16 TT 10929
.0019							3	3.93									16 TT 10930
.098	.098	.195															017TT 10931
.0153			1					225.05									017TT 10932
6.575																	018TT 10933
1.45	1.45																018TT 10934
.1629			1					55.296									019 TT 10935
.6494																	019TT 10936
.0077		2						312.19									020TT 10937

LINE ASCII 151400 DATA

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.0307							021TT	10942
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.665	1.66	.665	3.33	1.66	1.66	2.5	022TT	10945
.0549			2			39.024	23 TT	10946
.3379	2.03						23 TT	10947
.0207		3		4		42.66	024TT	10948
1.68	1.26		1.68				024TT	10949
.8	1.6	.8	1.73				024TT	10950
.053		2				1225.	25 TT	10951
.2577	.376						25 TT	10952
.0044		1		2.		7.07	026TT	10953
2.04							026TT	10954
.36	.36						026TT	10955
.0135.			3			321.33	027TT	10956
2.52	2.52	2.52					027TT	10957
.466	.466	.466					027TT	10958
.0046						27.31	028TT	10959
.469	.469						028TT	10960
.102			1			282.	029TT	10961
.1019							029TT	10962
.0143			1			222.55	030TT	10963
1.68							030TT	10964
1.46	1.46						030TT	10965
.3405			2			132.12	31 TT	10966
.0235	3.43						31 TT	10967
.0174			2			227.43	032TT	10968
2.52	30.05						032TT	10969
1.72	1.72						032TT	10970
.0965			1			77.76	033TT	10971
.1858							033TT	10972
.0039			1			16.09	034TT	10973
5.06							034TT	10974
.78							034TT	10975
.0031						14.88	035TT	10976
.64							035TT	10977
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5.06							038TT	10983
.70*	.70						038TT	10984
.0576			1			12.902	039 TT	10985
.1389							039TT	10986
.032			3			450.69	040TT	10987
5.06	5.06	2.52					040TT	10988
1.74	1.74	1.49	1.49				040TT	10989
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LM-6 ASCENT STAGE DATA

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.0061									11.79									04211 10993
2.41																		04211 10994
.6	.6																	04211 10995
.0018									3.54									04311 10996
4.83																		04311 10997
.18	.18																	04311 10998
.0256									49.5									04411 10999
4.83																		04411 11000
1.21	2.42	1.21																04411 11001
.0244									47.1									04511 11002
2.41		16.86																04511 11003
1.17	2.33	1.17																04511 11004
.0208									40.1									04611 11005
4.83																		04611 11006
1.02	2.04	1.02																04611 11007
.0037									7.07									04711 11008
.35	.35																	04711 11009
.0208									40.1									04811 11010
1.21																		04811 11011
3.96																		04811 11012
.0186									230.57									04911 11013
1.74	1.74																	04911 11014
.0022									13.51									05011 11015
.42																		05011 11016
.297																		51 11 11017
1.05		.1351																11 11 11018
3.65	.1950	.412																51 11 11019
.0012									11.83									05211 11020
.12																		05211 11021
.0012									11.83									05311 11022
.24																		05311 11023
.129																		5411 11024
1.590	.1759	.1650							2.570									5411 11025
.0043									27.02									05511 11026
.402	.402																	05511 11027
.0043									17.02									05611 11028
.805																		05611 11029
.357																		57 11 11030
1.05	.1650	.0976							5.733									57711 11031
.0043									17.02									05811 11032
.56																		05811 11033
.0104									117.04									05911 11034
.202																		05911 11035
.0281									246.10									06011 11036
2.74	2.74																	06011 11037
.0022									13.51									06111 11038
.408																		06111 11039
.341																		06211 11040
1.05	.0885	.0885							4240.									06211 11041
.0043									17.02									06311 11042

LN-6 ASCENT STAGE DATA

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.239																	065TT 11047
.341				1	3												66 TT 11048
1.05	.1638			.2620				5.733									66 TT 11049
.347				1	2			0	6								67 TT 11050
1.05	.262			5.733													67 TT 11051
2.88	.302	.232	.240	.175	.302												67 TT 11052
.0104									117.04								068TT 11053
1.96																	068TT 11054
.058				1					295.21								069TT 11055
1.21																	069TT 11056
4.81	5.82																069TT 11057
.0098							2		18.85								070TT 11058
.92	.92																070TT 11059
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1.18	1.18																071TT 11062
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.546				2					112.608								073 TT 11065
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2.04																	074TT 11068
.157	.157																074TT 11069
.0019							2		3.93								075TT 11070
.20	.20																075TT 11071
.179																	076 TT 11072
.2090	.0000	.0570	.0000						63.072								TT 11073
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.321	.321																077TT 11075
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1.61																	078TT 11077
2.	2.																078TT 11078
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1.035																	079TT 11081
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4.83																	080TT 11083
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.802																	081TT 11086
1.5	1.5	3.															081TT 11087
									4.71								082TT 11088
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.056				1					34.272								084TT 11091
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.18	.18																085TT 11094

LM-6 ASCENT STAGE DATA

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.27 .27																								088	TT	11102			
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LN=6 ASCEND STAGE DATA

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0.07		1		8	1		288.	
.459								
9.12	3.38216.1	37.065.0433.08	2.2	61.2862.19				
0.35		1		50.4				
9999.								
2.32		2	4	12	3		2433.6	
147.8.0000147.8.000012.83.00003.564.00009.689.0000135.7.0000								
38.8822.24139.677.7540.0925.4132.0134.5577.8462.7312.8931.871166.920.0								
369.2								
.9800	0	0	1	0	3	1	201.6	144.0
1.306.0000								
19.6924.3519.00	87.3							
1.000	0	0	1	0	4	1	201.6	144.0
2.758.0000								
19.0024.3519.69	14.8	87.3						
.9800	0	0	1	0	4	1	201.6	144.0
1.306.0000								
25.0612.1827.2719.04	94.2							
1.000	0	0	1	0	3	1	201.6	144.0
2.758.0000								
25.0612.1819.04	94.2							
1.780	0	0	2	1	10	1	1238.4	144.0
1.217.0000.2250.00001.289.0000								
502.631.5217.7514.5059.9819.7622.30120.489.9430.97553.8								
.6		1	1				73.44	
9999.								
.0000								
.0859		2	9	5	1		2088.	
73.10.000012.35.000077.16.0000163.4.0000	13.7	0.	13.7	0.	13.7	0.	13.7	0.
13.7	0.	13.7	0.	13.7	0.			
561.713.97194.879.1123.59861.4								

LM-6 ASCCOT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
3.660	0	0	1	0	1	1	1008.	144.0
1.036								
65.28301.1								
1.900	0	0	3	2	1	1	518.4	144.0
4.873.0000	21.37.0000	07.937.0000	015.43.0000	010.29.0000				
139.1	217.							
6.2			2		1		316.8	
53.6	26.5	245.						
3.7			4		1		302.4	
0.869	55.432.6717.	89270.8						
3.234			3		1		288.	
18761.71	368.11.168							
4.800	0	0	0	2	0		37.44	144.0
3.2053.825								
2.140	0	0	1	0	2	0	36.	144.0
3.509.0000								
31.014.600								
2.140	0	0	1	0	2	0	36.	144.0
3.489.0000								
31.0131.01								
4.010	0	0	0	14	1	1	849.6	144.0
6.271.0000	6.271.0000	01.915.0000	01.915.0000	01.915.0000	01.915.0000	01.915.0000	0.8625.0000	0.0000
0.8625.0000	1.376.0000	02.659.0000	05.234.0000	02.618.0000	00.7160.0000	0.7160.0000		
10.2	77.68							
3.530	0	0	1	1	0	2	1022.4	144.0
0.845.0000	298.1.0000							
17.14	79.5							
5.949	0	0	2	4	5	11	1468.8	144.0
11.03.0000	2.923.0000	01.394.0000	06.681.0000	03.411.0000	0.3155.0000			
2.36219.7314.	1232.0874.36	4.39	5.121.119	4.30	2.74	6.95	3.48689.56.678	
9.6978.909								
5.949	0	0	2	5	12	5	1008.	144.0
3.664.0000	11.03.0000	01.230.0000	03.878.0000	06.681.0000	01298.0000	0.3155.0000		
307.5198.814.	3627.4352.83354.381.0290.6816.2147.9615.629.61165.9	6.738						
5.1209.6948.441								
2.648		3	4	2	5		1238.4	
25.08	2.014	1.411	5.625	1.367	2.903	120.46		
197.535.73	.300515.541.1690.37	8.04						
2.648		2	5	3	7		907.2	
25.08	2.014	5.625	2.558	1.742	1298.	171.5		
544724.4098.915.5662.180.2996537.647.8459.66	10.2							
1.112	0	0	1	5	0	5	403.2	144.0
6.917.0000	10.19.0000	03.403.0000	03.539.0000	04.389.0000	014.22.0000			
1.000	2.09247.71.805.2046							
1.021		1	5		3		388.8	
2.923.0000	14.22.0000	01.591.0000	03.403.0000	04.389.0000	03.539.0000			
180.51.8 ⁹ 53.028								
8900	0	0	0	3	6		432.	144.0
25.8834.46	5.22	3.7837.92	5.5716.26	1.13101.7				
1.09		1	1	6	6		1368.	
2.538	1.03							
114.665.861.34155.6853.56134.8105.3239.3	34.8	82.8177.4	18.4	85.4472.4				

LR-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	t
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	
3.52		2	6	1	8	1310.4	141	TT 11251
2.119	25.42	1.519	1.519	2.361	2.153	.5144		TT 11252
0.117								11253
93.57	2.26	36.343	7522.47	62.6	94.7	94.7204.8		TT 11254
2.335	0	0	0	3	0	6	705.6	142
1.905	0.0000	2.289	0.0001	591.0000	0			TT 11255
40.3067	7540.40	3.4722	1.8	70.1				TT 11256
2.041	0	0	1	4	0	4	475.2	143
4.486	0.0004	1.81	0.0003	319.0000	0.905	0.0000	1.561	0.0000
1.3202	33.448	87	4.58					TT 11259
2.041	0	0	1	4	0	5	475.2	144
4.486	0.0001	591.0000	1.561	0.0001	363	0.0000	3.119	0.0000
1.32	233.423	3233.47	5.39					TT 11262
1.171		2	2	2	3	590.4	145	TT 11263
5.747	0.0003	119.0000	9078.0000	15.26	0.0000			TT 11264
24.3339	54147	219.1619	22					TT 11265
16.82	0	0	1	1	6	2	1310.4	146
5853	0.0000	8333	0.0000					TT 11267
115.987	32238	7749	3632	9367	78398	3434.6		TT 11268
1.171		2	2	5	2	590.4	147	TT 11269
5.747	0.0003	319.0000	9078.0000	1.592	0.0000			TT 11270
47.0634	4824	7839	5440	85	19	219.22		TT 11271
25.35	0	0	0	3	8	3	2030.4	148
5583	0.0000	5583	0.0000	8111	0.0000			TT 11272
49.4268	38193	547	0337	8316	8421	06187	0476	81218
16.82		1	1	6	2	1310.4	149	TT 11273
5167	8333							TT 11274
52.871	115.967	7032	9038	5287	47391	9434.6		TT 11275
9730	0	0	1	5	3	5	360.	144.0
6625	0.0000	1493	0.0001	861.0000	1.861	0.0000	6.528	0.0000
25.512	3353	6622	1182	16.41	9091	31874	10	
3.530	0	0	0	0	2	2	892.8	144.0
24.7478	5317	18329	8					TT 11281
307		1	4	1	2	547.2	152	TT 11282
16.94	0.0005	100.0000	5.750	0.0005	1.74	0.0005	0.000	0.0000
26.46333	3	4.1						TT 11285
731				2	288.			TT 11286
77.6151	45							153TT 11287
1330	0	0	2	2	0	5	59.04	153TT 11288
13.61	0.0002	159.0000	2.159	0.0002	1.8944	0.0000		TT 11289
1.35937	24.770	113.59	6.11					TT 11290
6700	0	0	1	4	0	2	547.2	144.0
2.567	0.0005	136.0000	5.369	0.0005	0.20	94.0000	18.22	0.0000
9.956275	2							TT 11293
8760	0	0	1	2	3	3	432.	144.0
7.445	0.0003	817.0000	1.175	0.0003				TT 11294
34.4821	2724	0912	82158	513	30			TT 11295
3070		1	4	2	2	547.2	157	TT 11296
16.95	5.75	5.1	51.74	5.0				TT 11297
3.62226	233.413328	7						TT 11298
731		1		2	288.			TT 11299
2.153								158TT 11300
								158TT 11301
								158TT 11302

LM-6 ASCENT STAGE DATA

0		1			2			3			4			5			6			7			8							
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9		
51.4577.78																											158TT	11303		
2.760			4	1	2	2	300.96																				159	TT	11304	
2.159.0000	16.94	00002	2.159.0000	0.8943	0.0000	9999.																						TT	11305	
.000012.843	.17137	.18																										TT	11306	
.67		2	4	1	2	547.2																					160	TT	11307	
13.61	2.567	5.369	5.136	20.94	18.22																							TT	11308	
9.1979.957266.3																												TT	11309	
.8760	0	0	1	2	2	2	432.	144.0																			161	TT	11310	
7.445.0000	1.175	00003.817	0000																									TT	11311	
24.0921	2.2711	7.188	.13																									TT	11312	
0.12		1	1	3	83.52																						162	TT	11313	
2.246																												TT	11314	
19.4	21.7421	.2	43.49																									TT	11315	
4.079		1	14	7	71	1900.8																					163	TT	11316	
3.876	0.00	0.00	0.00	9.459	5.403	5.403																						TT	11317	
.2727	0.358	8.418	8.418	9.459	3.040	3.157																						TT	11318	
3.157																												TT	11319	
96.1194.7411	1.7284	.1624	.1129	.7465	.0666	65.5111	.940	.9811	.940	.9743	.7551	.72																TT	11320	
52.1969.2633	.6140	.9940	.99	6.08	6.08	13.2514	6.68	6.98	5.9437	.4421	3.351	.83																TT	11321	
86.1240.8940	.8934	.4434	.4437	.614	.977	33.3	33.67	.7439	.1938	.7639	.5989	.598																TT	11322	
9.5984	.4304	.8361	5.576	4.182	2.852	2.095	.296	1.08	.7985	.7985	0.114	.8833	13.20															TT	11323	
14.70109	.249	.6737	5.333	.247	.7289	.1758	1.7469	.7799	.5799	.5794	.4214	.8264	.669															TT	11324	
6.4052.2802	.2055	.285	.8133	0.0797	.1139	.8815																					TT	11325		
.0507		1	2	97.9																						164	TT	11326		
1.2																												TT	11327	
4.8	4.8																											TT	11328	
.0212			3	333.52																								TT	11329	
5.06	5.06	5.06																										TT	11330	
2.33	2.33	2.33																										TT	11331	
.732			1	1	55.296																							166	TT	11332
1.036						11015.																						TT	11333	
65.2830	1.1																											TT	11334	
.0193			3	330.47																								TT	11335	
5.06	5.06	5.06																										TT	11336	
1.0	1.0	2.4																										TT	11337	
.005						27.92																						TT	11338	
.51	.51																											TT	11339	
.0069						30.15																						170	TT	11341
1.4						110.97																						TT	11342	
.0096			1	15.24																								TT	11343	
1.9																												TT	11344	
.0031						12.902																						173	TT	11346
3.2						14.88																						TT	11347	
.116		1	5	1	3190.4																							TT	11348	
1.31	1.31	6.57	6.57	6.57	6.57																							TT	11349	
4.1	3.5	9.3	1.8																									TT	11350	
.0049						18.02																						TT	11351	
.92																												TT	11352	
.0027						14.27																						TT	11353	
																												TT	11354	

LH-6 ASCENT STAGE DATA

U	1		2		3		4		5		6		7		8	
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
.52																1771T 11355
.0027								3200.								1781T 11356
.56								14.27								1791T 11357
																1791T 11358
																1801T 11359
								3896.								1811T 11360
								4150.								1821T 11361
								5133.								1831T 11362
.0293								1390.								1841T 11363
2.8 2.8								248.10								1841T 11364
																1851T 11365
								3150.								1861T 11366
								3180.								1871T 11367
								1425.								1881T 11368
								1425.								1891T 11369
.0702			1	4		1		1115.25								1891T 11370
.73	6.57		6.57			6.57		6.57								1891T 11371
6.8 6.8																1901T 11372
1.16								144.								1911T 11373
.0671			1			1		1110.24								1911T 11374
.73																1911T 11375
5.5 5.5																1921T 11376
																1931T 11377
.0049						1		94.4								1931T 11378
.92																1941T 11379
.818								1								TT 11380
.0000																1951T 11381
1.082			1					1440.								1951T 11382
6.1																1961T 11383
.0043								6.06								1971T 11384
.052								6.06								1981T 11385
.069								97.								1991T 11386
.0129								18.18								2001T 11387
1.624						2		144.								2001T 11388
4.09	4.09															2011T 11389
.0086								12.12								2021T 11390
.484						2		144.								2021T 11391
5.42	5.42															2031T 11392
.322								144.								2041T 11393
.0345								64.64								2051T 11394
.542								144.								2061T 11395
.0345								18.18								2071T 11396
.242						3		144.								2071T 11397
4.699	11.75		11.75													2081T 11398
.169								72.								2091T 11399
.3								370.								2101T 11400
.595								280.8								2111T 11401
.19								229.								2121T 11402
.056								78.78								2131T 11403
.44								144.								2141T 11404
.0216								30.3								2151T 11405
.272								6.06								2161T 11406
.67								144.								

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
0.172								24.24							217TT	11407	
0.056								78.78							218TT	11408	
0.6						2		1440.							219TT	11409	
3.82	3.82														219TT	11410	
0.0474								66.66							220TT	11411	
0.94						2		1440.							221TT	11412	
5.35	5.35														221TT	11413	
2.47									1123.2					222	TT	11414	
3.61									1404.					223	TT	11415	
0.0366						1	1	260.13							224TT	11416	
5.06															224TT	11417	
2.33	2.33	2.33													224TT	11418	
0.0027							1	5.5							225TT	11419	
0.6															225TT	11420	
									10.022						226TT	11421	
									28.06						227TT	11422	
									16.035						228TT	11423	
0.128						1		3	24.75						229TT	11424	
2.41															229TT	11425	
0.6	1.21	0.6													229TT	11426	
0.0281						1		3	54.2						230TT	11427	
1.606															230TT	11428	
1.33	2.66	1.33													230TT	11429	
0.0336						1		2	64.9						231TT	11430	
1.21															231TT	11431	
3.2	3.2														231TT	11432	
0.0098						1		2	18.85						232TT	11433	
1.606															232TT	11434	
0.927	0.927														232TT	11435	
									7.52						233TT	11436	
									30.07						234TT	11437	
0.0061						1		2	11.79						235TT	11438	
4.833															235TT	11439	
0.59	0.59														235TT	11440	
									22.05						236TT	11441	
									3.66						237TT	11442	
									7.31						238TT	11443	
									4.27						239TT	11444	
									3.05						240TT	11445	
									5.49						241TT	11446	
0.143						1		2	29.1						242TT	11447	
1.36															242TT	11448	
1.48	1.48														242TT	11449	
0.0177						1		2	36.1						243TT	11450	
1.02															243TT	11451	
1.84	1.84														243TT	11452	
0.3410								3	6870.						244TT	11453	
0.157	0.252								5.73						244TT	11454	
0.0305						1		2	59.						245TT	11455	
1.20															245TT	11456	
2.4	2.4														245TT	11457	
0.0226						1		2	43.6						246TT	11458	

L-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
1.05	.1410	.0629	5.73 ¹				297TT	11563
.0012				21.83			298TT	11564
.12 .12							298TT	11565
.378		.3			5160.		299TT	11566
.0621	.0621	5.733					299TT	11567
.0021				23.51			300TT	11566
*201 *201							300TT	11569
.378		1 .3			430L.		301TT	11570
1.05	.0621	.0870	5.733				301TT	11571
.0018				13.01			302TT	11572
.35							302TT	11573
.0537		1		388.19			303TT	11574
1.21							303TT	11575
2.77 5.54 2.77							303TT	11576
.0354				158.13			304TT	11577
6.75							304TT	11578
.0015		1		12.51			305TT	11579
16.86							305TT	11580
.29							305TT	11581
.384		4		10068.624			306TT	11582
.0450.0000.2820.0000.0450.0000.045.55							TT	11583
.0067		1		111.02			307TT	11584
8.43							307TT	11585
1.3							307TT	11586
.0084		0 0	0 1	14.52			308 TT	11587
1.633.							308 TT	11588
.0031		0 1	0 1	4.75			309 TT	11589
18.95							TT	11590
.5439							309 TT	11591
.0029		0 1	0 1	3.48			310 TT	11592
20.15							TT	11593
.5320							310 TT	11594
.0064		0 0	0 1	10.42			311 TT	11595
1.142							311 TT	11596
.0527		0 2 0 0	0	86.71			312 TT	11597
3.72	4.97						312 TT	11598
.05		1	1	182.18			313TT	11599
1.18							313TT	11600
4.8 4.8							313TT	11601
.0002				.12			314TT	11602
.0008				.356			315TT	11603
.0003				.098			316TT	11604
.0002				.156			317TT	11605
.0012		1	1	22.4			318TT	11606
9.17							318TT	11607
2.2							318TT	11608
.0004			2	.785			319TT	11609
.04 .04							319TT	11610
.0046			2	8.85			320TT	11611
.43 .43							320TT	11612
.001			2	1.965			321TT	11613
.1 .1							321TT	11614

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
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.001							2		1.965						32211	11615	
.1	.1														32211	11616	
.0002							2		.393						32311	11617	
.02	.02														32311	11618	
.0003							2		.59						32411	11619	
.028	.028														32411	11620	
									.61						32511	11621	
									1.52						32611	11622	
									.3						32711	11623	
									.5						32811	11624	
									1.5						32911	11625	
.0009							2		1.77						33011	11626	
.086	.086														33011	11627	
.0096			1				2		29.5						331	TT	11628
1.61															33111	11629	
1.42	1.42														33111	11630	
									25.1						332	TT	11631
									73.16						33311	11632	
.0446			1				2		86.1						33411	11633	
1.61															33411	11634	
2.05	6.15														33411	11635	
.0012									11.83						33511	11636	
.2															33511	11637	
.3694									124.5						33611	11638	
.192									144.						33711	11639	
.0018							1		13.01						33811	11640	
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.52															33911	11643	
.086									144.						34011	11644	
.2									144.						34111	11645	
.062									144.						34211	11646	
.0821			0	2	0	0	0		134.42						343	TT	11647
2.48	2.480														343	TT	11648
.512							6		20137.248						344	TT	11649
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.0354									158.13						34511	11651	
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.341			1	3					6870.						34611	11653	
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3.54															34711	11656	
6.															34711	11657	
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.1858															34811	11659	
									83.18						34911	11660	
.2065									1						35011	11661	
37.5															35011	11662	
1.42									1						35111	11663	
18.13															35111	11664	
.07		1				8	1	288.							35211	11665	
.4561															TT	11666	

LF-6 ASCENT STAGE DATA

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.8944	2.153						TT	11669
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.469		1		1			354TT	11671
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43.49								11673
2.67			1	1	4		355TT	11674
.0000.0000							TT	11675
1.791			1				356TT	11676
.0000							TT	11677
.468			1				357TT	11678
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*0000.0000*0000.0000							TT	11683
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				46.1			361TT	11685
				55.12			362TT	11686
				28.04			363TT	11687
				37.08			364TT	11688
				5.01			365TT	11689
.0952		1	1	1156.34			366TT	11690
3.07							366TT	11691
9.16 9.16							366TT	11692
.047			1	277.17			367TT	11693
1.64							367TT	11694
4.47 4.47							367TT	11695
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4.57							368TT	11697
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392.584.4942.1355.9067.70155.6							TT	11699
.0001				252.			370TT	11700
				3940.			371TT	11701
.0232		1	1	33.5207			372 TT	11702
2.85	.951						TT	11703
				47.2338			373 TT	11704
				12.7988			374 TT	11705
.1021		1		1.0500			375 TT	11706
.10							TT	11707
				26.5726			376 TT	11708
				3.8640			377 TT	11709
				16.1265			378 TT	11710
.0338		1	1	48.7575			379 TT	11711
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				58.5090			380 TT	11713
.0363		2	2	52.4143			381 TT	11714
2.84	1.42	2.84	.712				TT	11715
				26.2071			382 TT	11716
				12.1893			383 TT	11717
				21.5142			384 TT	11718

LM-6 ASCENT STAGE DATA

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								8.6544						386	TT	11720	
								10.4219						387	TT	11721	
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126.5	1.42														TT	11724	
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								7.1551						391	TT	11726	
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126.5	1.42														TT	11729	
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2.21															TT	11733	
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1.10	2.21														TT	11735	
.0027								4.979						397	TT	11736	
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.0405		3						75.398						399	TT	11738	
2.84	.475	.475													TT	11739	
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1.11	1.11														TT	11745	
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1.11	1.11														TT	11747	
.0060		1						11.153						404	TT	11748	
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1.11	.512	2.21													TT	11753	
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20.15															TT	11763	
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7.46	4.975	2.431												412	TT	11766	
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LF-6 ASCENT STAGE DATA

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13	234		70.																				TL 11824	
14	236		70.																				TL 11825	
15	237		70.																				TL 11826	
16	11		70.				419	457															TL 11827	
17	238		70.																				TL 11828	
18	13		70.				458	457															TL 11829	
19	239		70.																				TL 11830	
20	15		70.				420	457															TL 11831	
21	238		70.																				TL 11832	
22	15		70.				459	457															TL 11833	
23	237		70.																				TL 11834	
24	16		70.				421	457															TL 11835	
25	240		70.																				TL 11836	
26	18		70.				438	438	400														TL 11837	
27	19		70.				810																TL 11838	
28	20		70.				421	419	419	421	418												TL 11839	
29	21		70.				245																TL 11840	
30	22		70.				455	454	441	436	482	442	455	436									TL 11841	
441	454	485	482																				TL 11842	
31	23		70.				246	408															TL 11843	
32	24		70.				432	438	436	436	432	442	436										TL 11844	
33	25		70.				422	432															TL 11845	
34	241		70.																				TL 11846	
35	27		70.				439	421	419	439	421	419											TL 11847	
36	28		70.				400	438															TL 11848	
37	29		70.				184																TL 11849	
38	30		70.				438	438	400														TL 11850	
39	31		70.				220	749															TL 11851	
40	32		70.				734	319	734	319													TL 11852	
41	192		70.																				TL 11853	
42	34		70.				734	734															TL 11854	
43	35		70.				734																TL 11855	
44	192		70.																				TL 11856	
45	36		70.			223	317	352	221	425	438	214	400	747									11857	
749																								11858
46	192		70.																				TL 11859	
47	37		70.																				TL 11860	
48	38		70.				425	400	438														TL 11861	
49	39		70.				224																TL 11862	
50	40		70.				319	734	438	734	319	400	438										TL 11863	
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52	226		70.																				TL 11865	
53	248		70.																				TL 11866	
54	249		70.																				TL 11867	
55	250		70.																				TL 11868	
56	290		70.																				TL 11869	
57	251		70.																				TL 11870	
58	252		70.																				TL 11871	
59	3		70.																				TL 11872	
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61	49		70.				590	591															TL 11874	

LM-6 ASCENT STAGE DATA

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114	429	70.	33	34	101	579		TL 11928
115	192	70.						TL 11929
116	422	70.	117	37	40			TL 11930
117	423	70.	35	38	102	580		TL 11931
118	430	70.	119	41	42	693		TL 11932
119	431	70.	39	42	580			TL 11933
120	426	70.	121	43	48	693		TL 11934
121	425	70.	43	46	580	48		TL 11935
122	262	70.	123	49	299	531	537	539
123	432	70.	47	49	581	299	531	537
680							539	601
124	183	70.					680	TL 11937
125	183	70.						TL 11938
126	256	70.						TL 11939
127	256	70.						TL 11940
128	371	70.						TL 11941
129	371	70.						TL 11942
130	182	70.						TL 11943
131	182	70.						TL 11944
132	181	70.						TL 11945
133	181	70.						TL 11946
134	192	70.						TL 11947
135	180	70.						TL 11948
136	180	70.						TL 11949
137	192	70.						TL 11950
138	178	70.						TL 11951
139	178	70.						TL 11952
140	192	70.						TL 11953
141	185	70.						TL 11954
142	185	70.						TL 11955
143	413	70.	4	4				TL 11956
144	306	70.	80	82	85	4		TL 11957
145	414	70.	4	4				TL 11958
146	82	70.						TL 11959
147	282	70.						TL 11960
148	284	70.						TL 11961
149	3	70.						TL 11962
150	287	70.						TL 11963
151	227	70.						TL 11964
152	234	70.						TL 11965
153	3	70.						TL 11966
154	253	70.						TL 11967
155	293	70.						TL 11968
156	294	70.	457	398				TL 11969
157	295	70.	591	592	299			TL 11970
158	53	70.	592					TL 11971
159	297	70.	107	21	22	591		TL 11972
160	289	70.	541					TL 11973
161	61	70.	591					TL 11974
162	298	70.	541	617				TL 11975
163	299	70.	23	24	591			TL 11976
								TL 11977
								TL 11978

LM-6 ASCENT STAGE DATA

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164					298					70.				541	617																						TL	11979			
165					300					70.				541	617																						TL	11980			
166					296					70.				591																							TL	11981			
167					301					70.				113	33	36	591																				TL	11982			
168					302					70.				617																							TL	11983			
169					303					70.				163	617	299	541																				TL	11984			
170					304					70.				299																								TL	11985		
171					308					70.				3																								TL	11986		
172					310					70.				3	3																							TL	11987		
173					306					70.				74	76	78	3																					TL	11988		
174					309					70.				3	3																							TL	11989		
175					410					70.				3	3																							TL	11990		
176					411					70.				3	3																							TL	11991		
177					412					70.				3	1	2																						TL	11992		
178					311					70.				3																									TL	11993	
179					414					70.				4	4																								TL	11994	
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182					314					70.																														TL	11997
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185					316					70.																														TL	12000
186					317					70.																														TL	12001
187					61					70.				590																										TL	12002
188					287					70.																														TL	12003
189					325					70.																														TL	12004
190					176					70.				617																										TL	12005
191					179					70.				617																										TL	12006
192					183					70.																														TL	12007
193					176					70.				590																										TL	12008
194					176					70.				590																										TL	12009
195					233					70.																														TL	12010
196					326					70.																														TL	12011
197					327					70.																														TL	12012
198					328					70.																														TL	12013
199					329					70.																														TL	12014
200					325					70.																														TL	12015
201					332					70.																														TL	12016
202					192					70.																														TL	12017
203					333					70.																														TL	12018
204					53					70.				590																										TL	12019
205					56					70.				617																										TL	12020
206					53					70.				591																										TL	12021
207					335					70.				617																										TL	12022
208					53					70.				592																										TL	12023
209					53					70.				541																										TL	12024
210					65					70.				592																										TL	12025
211					65					70.				541																										TL	12026
212					336					70.																														TL	12027
213					337					70.																														TL	12028
214					338					70.				457	299																								TL	12029	
215					50					70.				591																										TL	12030

LM-6 ASCLENT STAGE DATA

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219				340																															TL 12034																													
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223				3																															TL 12038																													
224				3																															TL 12039																													
225				3																															TL 12040																													
226				3																															TL 12041																													
227				306													75		77																TL 12042																													
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229				342																															TL 12044																													
230				341																															TL 12045																													
231				345																															TL 12046																													
232				317																															TL 12047																													
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234				192																															TL 12049																													
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265				182																															TL 12080																													
266				179																															TL 12081																													
267				176																															TL 12082																													

LI-6 ASCENT STAGE DATA

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268		179		70.		617																	TL 12084	
269		371		70.																			TL 12085	
270		179		70.		590																	TL 12086	
271		176		70.		590																	TL 12087	
272		176		70.		617																	TL 12088	
273		179		70.		617																	TL 12089	
274		183		70.																			TL 12090	
275		179		70.		590																	TL 12091	
276		176		70.		590																	TL 12092	
277		184		70.		590		591.															TL 12093	
278		176		70.		541																	TL 12094	
279		176		70.		541																	TL 12095	
280		179		70.		541																	TL 12096	
281		185		70.																			TL 12097	
282		179		70.		592																	TL 12098	
283		176		70.		592																	TL 12099	
284		176		70.		541																	TL 12100	
285		179		70.		541																	TL 12101	
286		186		70.																			TL 12102	
287		179		70.		592																	TL 12103	
288		176		70.		541																	TL 12104	
289		179		70.		541																	TL 12105	
290		187		70.																			TL 12106	
291		179		70.		592																	TL 12107	
292		176		70.		592																	TL 12108	
293		176		70.		541																	TL 12109	
294		179		70.		541																	TL 12110	
295		188		70.																			TL 12111	
296		179		70.		592																	TL 12112	
297		176		70.		592																	TL 12113	
298		176		70.		592																	TL 12114	
299		184		70.		592		591															TL 12115	
300		189		70.		457		526		580		590		591		457		299					TL 12116	
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302		191		70.		457		457		299													TL 12118	
303		192		70.																			TL 12119	
304		259		70.																			TL 12120	
305		336		70.																			TL 12121	
306		195		70.		825																	TL 12122	
307		186		70.																			TL 12123	
308		177		70.																			TL 12124	
309		198		70.																			TL 12125	
310		195		70.		822																	TL 12126	
311		196		70.																			TL 12127	
312		197		70.																			TL 12128	
313		199		70.																			TL 12129	
314		196		70.																			TL 12130	
315		200		70.		834		835															TL 12131	
316		201		70.																			TL 12132	
317		202		70.		838		840															TL 12133	
318		199		70.																			TL 12134	

LA-6 ASCENT STAGE DATA

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1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
319	203.	70.						TL 12135
320	204	70.						TL 12136
321	205	70.						TL 12137
322	199.	70.						TL 12138
323	206	70.						TL 12139
324	205	70.						TL 12140
325	199	70.						TL 12141
326	201	70.						TL 12142
327	207	70.		0.5	814	855		TL 12143
328	201	70.						TL 12144
329	196	70.						TL 12145
330	208	70.						TL 12146
331	209	70.						TL 12147
332	192	70.						TL 12148
333	210	70.		864				TL 12149
334	192	70.						TL 12150
335	192	70.						TL 12151
336	192	70.						TL 12152
337	208	70.						TL 12153
338	209	70.						TL 12154
339	192	70.						TL 12155
340	210	70.		870				TL 12156
341	192	70.						TL 12157
342	211	70.						TL 12158
343	192	70.						TL 12159
344	212	70.						TL 12160
345	213	70.						TL 12161
346	214	70.						TL 12162
347	192	70.						TL 12163
348	201	70.						TL 12164
349	215	70.						TL 12165
350	199	70.						TL 12166
351	199	70.						TL 12167
352	216	70.						TL 12168
353	217	70.						TL 12169
354	218	70.						TL 12170
355	219	70.		854	856			TL 12171
356	220	70.						TL 12172
357	221	70.		830	820			TL 12173
358	199	70.						TL 12174
359	222	70.						TL 12175
360	196	70.						TL 12176
361	199	70.						TL 12177
362	201	70.						TL 12178
363	223	70.						TL 12179
364	222	70.						TL 12180
365	223	70.						TL 12181
366	208	70.						TL 12182
367	208	70.						TL 12183
368	192	70.						TL 12184
369	211	70.						TL 12185
370	192	70.						TL 12186

LH-6 ASCENT STAGE DATA

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371		192		70.													TL 12187
372		192		70.													TL 12188
373		167		70.		435	435	300									TL 12189
374		192		70.													TL 12190
375		192		70.													TL 12191
376		192		70.													TL 12192
377		192		70.													TL 12193
378		192		70.													TL 12194
379		192		70.													TL 12195
380		192		70.													TL 12196
381		113		70.		381	448	394	402	446	409	403	406	432			TL 12197
447	300																TL 12198
382		352		70.		382	383	452	394	405	409	406	403	431			TL 12199
451	300																TL 12200
383		353		70.		383	420	481	409	203	300	481	482				TL 12201
384		354		70.		384	456	300									TL 12202
385		192		70.													TL 12203
386		192		70.													TL 12204
387		192		70.													TL 12205
388		192		70.													TL 12206
389		192		70.													TL 12207
390		192		70.													TL 12208
391		192		70.													TL 12209
392		192		70.													TL 12210
393		192		70.													TL 12211
394		100		70.		394	221	409	395	396	300						TL 12212
395	395	101	70.000000			395	451	418	432	300	418						TL 12213
396	396	102	70.000000			396	446	418	300	418	245						TL 12214
397	397	103	70.000000			397	420	418	419	417	398	300	417	418			TL 12215
398	398	104	70.000000			398	444	445	444	300	417						TL 12216
399		105	70.000000			399	455	455	454	442	444	300					TL 12217
400	400	106	70.000000			231	450	444	449	450	442	300					TL 12218
401	401	107	70.000000			401	402	440	410	411	441	440	442	454			TL 12219
455	445	438	300	411	410												TL 12220
402	402	108	70.000000			233	403	411	412	432	442	454	300	412			TL 12221
411																	TL 12222
403		109		70.		403	412	413	402	396	442	451	454	432			TL 12223
300	413	412															TL 12224
404	404	110	70.000000			404	405	443	405	404	450	442	439	449			TL 12225
405	437	443	300	404	405												TL 12226
405	405	111	70.000000			405	406	404	403	406	449	431	300	403			TL 12227
404																	TL 12228
406		112		70.		406	403	431	300	402	403						TL 12229
407		192		70.													TL 12230
408		192		70.													TL 12231
409	409	115	70.000000			409	446	451	401	400	414	418	403	402			TL 12232
442	395	397	405	406	446	396	432	448	451	300	400	414					TL 12233
410	410	116	70.000000			0	455	455	454	442	300						TL 12234
411	411	117	70.000000			0	444	442	454	455	444	300					TL 12235
412	412	118	70.000000			0	444	449	450	444	442	300					TL 12236
413	413	119	70.000000			0	450	449	450	442	300						TL 12237
414	414	120	70.000000			0	430	428	730	428	435	426	425	430			TL 12238

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
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433	434	416	427	417	300												TL 12239
415		192*		70.													TL 12240
416	416	122	70.00000	0	429	427	731	339	838	849	830	818					TL 12241
824	835	854	427	425	429	417	426	300									TL 12242
417		123	70.			435	435	300									TL 12243
418	418	124	70.00000	0	429	427	435	731	769	429	300						TL 12244
419		125	70.	419	457	427	300										TL 12245
420	420	126	70.00000	420	421	457	418	427	300								TL 12246
421	421	127	70.00000	421	429	435	457	300									TL 12247
422	422	128	70.00000	422	438	440											TL 12248
423	423	129	70.00000	0	438	440	438										TL 12249
424	424	130	70.00000	0	437	437	443										TL 12250
425	425	131	70.00000	0	307	490	310	312	314	316	339	340					TL 12251
671	749	400	747	525	526	435	300										TL 12252
426	426	132	70.00000	0	425	304	304	300									TL 12253
427	427	133	70.00000	400	457	431	339	767	731	147	431	426					TL 12254
425	435	434	735	708	198	194	767	731	147	300	706	711	707				TL 12255
428	428	134	70.00000	400	430	457	340	730	765	270	150	465					TL 12256
430	433	434	419	457	416	427	429	435	426	425	300	703	705				TL 12257
719	702																TL 12258
429		135	70.	400	457	435	427	729	769	731	549	417					TL 12259
435	769	300	166	701	731												TL 12260
430		136	70.	400	457	435	763	730	770	270	544	421					TL 12261
417	435	757	763	770	300	167	700	730									TL 12262
431	431	137	70.00000	0	437	731	311	403	404	147	194	731					TL 12263
300	706	707															TL 12264
432	432	138	70.00000	0	428	150	157	309	411	412	300	703					TL 12265
702																	TL 12266
433	433	139	70.00000	0	465	416	426	343	342	332	330	344					TL 12267
300																	TL 12268
434		140	70.00000	0	433	206	433	420	421	416	418	429					TL 12269
417	435	342	343	330	344	332	300										TL 12270
435		141	70.			436	457	769	770	649	527	206	332				TL 12271
436	344	332	366	369	649	769	770	300									TL 12272
436	436	142	70.00000	0	445	408	444	769	369	770	332	300					TL 12273
408																	TL 12274
437	437	143	70.00000	400	429	731	405	444	743	769	300	701					TL 12275
731																	TL 12276
438	438	144	70.00000	400	430	445	158	157	410	770	300	167					TL 12277
700	730																TL 12278
439		145	70.		450	437	440	405	436	437	300	408					TL 12279
558																	TL 12280
440	440	146	70.00000	0	441	410	441	442	454	455	445	438					TL 12281
300	410																TL 12282
441	441	147	70.00000	0	455	438	441	410	442	455	445	438					TL 12283
436	408	557															TL 12284
442	442	148	70.00000	0	440	441	408	455	444	445	439	398					TL 12285
405	406	436	300	408	246												TL 12286
443		149	70.		439	405	450	439	437	445	449	442					TL 12287
300	405																TL 12288
444	444	150	70.00000	0	445	489	426	427	408	417	436	425					TL 12289
434	500	300	497	487	408												TL 12290

LM-4 ASCENT STAGE DATA

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445	445	151	70.000000	0	439	436	497	300									TL 12291
446	446	152	70.000000	0	448	401	402	418	421	396	300	471					TL 12292
447		153	70.	447	473	201											TL 12293
448		154	70.000000	448	449	447	473	419	474	300	472	473					TL 12294
201																	TL 12295
449	449	155	70.000000	449	450	403	404	419	417	475	300						TL 12296
450	450	156	70.000000	0	444	405	426	439	436	437	476	300					TL 12297
426																	TL 12298
451		157	70.		383	413	414	418	422	457	395	479					TL 12299
300																	TL 12300
452		158	70.	447	383	203	481										12301
453		192	70.														TL 12302
454		160	70.	449	383	455	411	412	420	417	434	483					TL 12303
300																	TL 12304
455	455	161	70.000000	0	444	427	410	438	436	484	300						TL 12305
456		162	70.	456	205	384	200	131	300								TL 12306
457		163	70.	400	425	700	701	702	765	729	763	671					TL 12307
649	550	553	767	649	525	526	416	427	429	435	426	425	434				TL 12308
300	550	551	553	554	692	691	693	680	625	603	627	575	565				TL 12309
578	590	579	591	601	617	613	615	611	619	609	621	539	531				TL 12310
537	605	10	12	16	20	22	24	36	40	38	42	44	46				TL 12311
48	635	18	34	14	50	580	592	299	541	802	805	11	13				TL 12312
17	21	23	33	37	41	39	43	45	47	49	19	35	15				TL 12313
51																	TL 12314
458		125	70.		419	457	427	300									TL 12315
459	420	126	70.000000	420	421	457	418	427	300								TL 12316
460		192	70.														TL 12317
461	461	192	70.000000	0													TL 12318
462	462	192	70.000000	0													TL 12319
463		370	70.														TL 12320
464	464	192	70.000000	0													TL 12321
465		369	70.		457	416	420	419	427	300							TL 12322
466		1	70.		429	457											TL 12323
467		2	70.		429	429	580										TL 12324
468		4	70.		429	429	580										TL 12325
469		229	70.		457	429	580	457									TL 12326
470		230	70.		435	435	580	457									TL 12327
471		231	70.		430	430	580										TL 12328
472		232	70.		438	438	580										TL 12329
473		5	70.		441	580											TL 12330
474		5	70.		441	580											TL 12331
475		5	70.		441	580											TL 12332
476		5	70.		441	580											TL 12333
477		8	70.		441	441	580										TL 12334
478		235	70.		438	438	580										TL 12335
479		9	70.		457	457	580										TL 12336
480		10	70.		457	580											TL 12337
481		12	70.		457	580											TL 12338
482		14	70.		457	580											TL 12339
483		12	70.		457	580											TL 12340
484		10	70.		457	580											TL 12341
485		17	70.		435	429	580										TL 12342

LM-6 ASCENT STAGE DATA

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590	381	70.			457	437	761	769								TL 12447
591	382	70.														TL 12448
592	383	70.														TL 12449
593	384	70.														TL 12450
594	385	70.														TL 12451
595	386	70.														TL 12452
596	387	70.														TL 12453
597	388	70.														TL 12454
598	389	70.			155	457										TL 12455
599	390	70.														TL 12456
600	391	70.														TL 12457
601	392	70.														TL 12458
602	393	70.			301	457										TL 12459
603	375	70.			418											TL 12460
604	375	70.			418											TL 12461
605	375	70.			418											TL 12462
606	375	70.			418											TL 12463
607	375	70.			418											TL 12464
608	375	70.			418											TL 12465
609	375	70.			418											TL 12466
610	375	70.			418											TL 12467
611	375	70.			418											TL 12468
612	375	70.			418											TL 12469
613	375	70.			418											TL 12470
614	375	70.			418											TL 12471
615	375	70.			418											TL 12472
616	394	70.			429	457										TL 12473
617	395	70.			418											TL 12474
618	396	70.			418	429										TL 12475
619	397	70.														TL 12476
620	398	70.														TL 12477
621	399	70.			418	429	457									TL 12478
622	400	70.			457											TL 12479
623	401	70.			418											TL 12480
624	402	70.			418	429										TL 12481
625	403	70.			418	429										TL 12482
626	404	70.			418											TL 12483
627	405	70.			418											TL 12484
628	406	70.			427	429	457									TL 12485
629	407	70.			418	429										TL 12486
630	408	70.														TL 12487
631	409	70.			427	428										TL 12488
18																TL 12489
381	1	1	1	1	1	1	1	1	1	1						TL 12490
382	1	1	1	1	1	1	1	1	1	1						TL 12491
384	1	1														TL 12492
426	3															TL 12493
439						3										TL 12494
441									3							TL 12495
444						3	3									TL 12496
445		3														TL 12497
446		3	1													TL 12498

LM-6 ASCENT STAGE DATA

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1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
132.5241.965.33791.2252.911.511.22	9.50	3.33.24.19	6.7427.81	4.4736.66				12551
175.918.551.9572.032140.5574.50.41421.94								12552
.1672	0	0	0	144.0			24	ST 12553
.7880.0000.4661.0000							25	ST 12554
.2905	0	0	3	0	144.0		26	ST 12555
.7880.00008.678.0000.3556.0000								ST 12556
1.070	0	0	2	1	144.0		27	ST 12557
1.411.00001.411.0000								ST 12558
2.939								ST 12559
.1672	0	0	1	0	144.0		28	ST 12560
.7880.0000								ST 12561
.2905	0	0	4	0	144.0		29	ST 12562
20.74.00001.583.00008.678.00001.411.0000								ST 12563
1.070	0	0	1	1	144.0		30	ST 12564
14.22.0000								ST 12565
2.939								ST 12566
.0850	0	0	1	0	144.0		31	ST 12567
3.325.0000								ST 12568
.0998	0	0	0	0	144.0		32	ST 12569
1.221	0	0	2	0	144.0		33	ST 12570
5.060.00004.137.0000								ST 12571
.6140	0	0	2	0	144.0		34	ST 12572
8.981.00009.189.0000								ST 12573
.2810			1					ST 12574
3.405.0000								ST 12575
.2830	0	0	1	0	144.0		36	ST 12576
3.348.0000								ST 12577
.4730	0	0	1	0	144.0		37	ST 12578
4.324.0000								ST 12579
.6140	0	0	1	0	144.0		38	ST 12580
8.981.0000								ST 12581
.0566	0	0	0	0	144.0		39	ST 12582
3.5			0	11			40	ST 12583
4.7613.22050.0441.5044.1050.2573.1370.3531.1610.9313.55								ST 12584
3.5			1	14				ST 12585
46.30.0000								ST 12586
6.2035.8385.7886.35359.0558.9325.8130.6928.1243.580.00039.260.00029.58								ST 12587
355.3			0	0			42	ST 12588
301.5			0	0			43	ST 12589
33.67			1	0			44	ST 12590
.1093.0000								ST 12591
1.672			4	2			45	ST 12592
2.721	17.76		25.74		11.34			ST 12593
4.8155.703								ST 12594
.5309	0	0	1	0	144.0		46	ST 12595
16.91.0000								ST 12596
31.74			1	0			47	ST 12597
.0692								ST 12598
1.539	0	0	1	2	144.0		48	ST 12599
14.29.0000								ST 12600
4.5136.268								ST 12601
								ST 12602

LP-6 ASCENT STAGE DATA

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.5309	0	0	1	0		144.0										49	ST 12603	
16.91	.0000																ST 12604	
0.400			1	0												50	ST 12605	
.2933	.0000																ST 12606	
42.50			1	0												51	ST 12607	
.4139	.0000																ST 12608	
42.50			1	0												52	ST 12609	
.4139	.0000																ST 12610	
33.67			1	0												53	ST 12611	
.1093	.0000																ST 12612	
16.72	0	0	4	3		144.0										54	ST 12613	
2.733	.0000	17.76	.0000	25.74	.0000	11.39	.0000										ST 12614	
4.8151	.9605	7.03															ST 12615	
.5309	0	0	2	0		144.0										55	ST 12616	
25.74	.0000	16.91	.0000														ST 12617	
31.74			1	0													56	ST 12618
.0692	.0000																ST 12619	
1.539	0	0	3	4		144.0											57	ST 12620
2.095	.0000	14.29	.0000	20.74	.0000												ST 12621	
4.513	.8921	11.1726	.268														ST 12622	
.5309	0	0	2	0		144.0										58	ST 12623	
1.583	.0000	16.91	.0000														ST 12624	
.1260						3		144.0									59	ST 12625
21.79	15.6459	61															ST 12626	
.1524	0	0	0	0		144.0											60	ST 12627
.0894	0	0	0	0		144.0											61	ST 12628
2.688			1	5													062	ST 12629
6.944	.0000																ST 12630	
4.1254	.3491	4.58	.5834	.5834													ST 12631	
2.250	0	0	0	6		144.0											63	ST 12632
13.0716	.8429	4.069	.2115	.474	.246												64	ST 12633
4.0 ⁶			1	3		144.0											ST 12634	
2.933	.0000																ST 12635	
8.39216	.312	.398															ST 12636	
1.200				7													65	ST 12637
15.8547	.0963	.39135	.920	.3712	.6812	.68											ST 12638	
.388				6													066	ST 12639
1.0421	.6931	.8235	.0792	.3561	.953												067	ST 12640
1.15			1	1													ST 12641	
.4056	.0000																ST 12642	
3.005																	ST 12643	
1.56				1													68	ST 12644
2.805																	ST 12645	
2.400	0	0	0	0		144.0											69	ST 12646
3.325	0	0	0	1		144.0											70	ST 12647
136.1																		ST 12648
3.447	0	0	0	0		144.0											71	ST 12649
1.137	0	0	0	1		144.0											72	ST 12650
140.4																		ST 12651
.3138																	073	ST 12652
.6000	0	0	1	0		144.0											74	ST 12653
.8708	.0000																	ST 12654

LM-6 ASCENT STAGE DATA

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LM-6 ASCENT STAGE DATA

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12.15	0	0	1	0	144.0											108	ST 12727
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.0000	0	0	0	2	144.0											114	ST 12740
131.6202.5																	ST 12741
.0000				2	144.0											115	ST 12742
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33.33																	ST 12745
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LM-6 ASCENT STAGE DATA

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84.1450.741	.416							ST 12764
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14.10.0000	3.333.0000	1.081.0000						ST 12766
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1.814.0000								ST 12768
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89.69								ST 12779
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1.814.0000								ST 12783
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1.251	?						135	ST 12786
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11.40	11.40							ST 12790
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244.6								ST 12810

LM-6 ASCENT STAGE DATA

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LM-6 ASCENT STAGE DATA

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LM-6 ASCENT STAGE DATA

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.1200 0 0 1 0 144.0																																								217	ST 12962																																																
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.0920																																								218	ST 12964																																																
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LM-A ASCENT STAGE DATA

0		1					2					3					4					5					6					7					8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
0.18	.0076	0.3571	.058	9.8315	5.554	.550	.5397	.7920	.3260	.5783	.237	.0046	.1364							12967																			12968																				12969																						12970																							12971																							12972																							12973																							12974																							12975																							12976																							12977																							12978																							12979																							12980																							12981																							12982																							12983																							12984																							12985																							12986																							12987																							12988																							12989																							12990																							12991																							12992																							12993																							12994																							12995																							12996																							12997																							12998																							12999																							13000																							13001																							13002																							13003																							13004																							13005																							13006																							13007																							13008																							13009																							13010																							13011																							13012																							13013																							13014																							13015																							13016																							13017																							13018																						

LM40 ACCOUNT STATE DATA

0	1	2	3	4	5	6	7	8
12345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901
15.35.0000	2.74.0000	15.35.0000	03.253.0000	14.39.0000	005.511.0000			ST 13019
.5250	0.	0	0	1	144.0			242 ST 13020
9.59								ST 13021
.5250	0	0	0	1	144.0			243 ST 13022
9.59								ST 13023
.3990	0	0	1	1	144.0			244 ST 13024
1.970.0000								ST 13025
13.41								ST 13026
.195				1				245 ST 13027
1.749								ST 13028
.212		0	0					246 ST 13029
.228		0	0					247 ST 13030
.212		0	0					248 ST 13031
.218		0	0					249 ST 13032
.212		2	0					24 ST 13033
3.84	5.73							250 ST 13034
.228		2	0					251 ST 13035
3.84	5.73							251 ST 13036
.218		2	0					252 ST 13037
3.84	5.73							252 ST 13038
.195		2	3					253 ST 13039
3.84	5.73							253 ST 13040
3.650.1950.4120								253 ST 13041
.218		2	6					254 ST 13042
3.84	5.73							254 ST 13043
2.880.3020.2320.2400.1950.4120								254 ST 13044
.218			6					255 ST 13045
1.7482.1472.7362.0930.30402.89								ST 13046
.5000	0	0	0	0	144.0			256 ST 13047
.0400	0	0	1	0	144.0			257 ST 13048
4.342.0000								ST 13049
.1750	0	0	1	2	144.0			258 ST 13050
8.067.0000								ST 13051
4.8023.832								ST 13052
.0910	0	0	2	1	144.0			259 ST 13053
7.931	.3311							ST 13054
2.655								ST 13055
.1750	0	0	1	0	144.0			260 ST 13056
4.342.0000								ST 13057
.0400	0	0	0	0	144.0			261 ST 13058
3.780	-0	0	2	3	144.0			262 ST 13059
16.73.00002.058.0000								ST 13060
.04173.4502.827								ST 13061
0.1	0	0	0		144.0			263 ST 13062
.0820	0	0	0	7	144.0			264 ST 13063
31.7226.5017.946.61611.2322.5920.93								ST 13064
.0400	0	0	1	0	144.0			265 ST 13065
3.094.0000								ST 13066
.1750	0	0	1	2	144.0			266 ST 13067
8.472.0000								ST 13068
3.5706.831								ST 13069
.0910	0	0	1	1	144.0			267 ST 13070

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
8.472,0000								ST 13071
1.450								ST 13072
.1750	0	0	1	0	144.0		268	ST 13073
3.094,0000								ST 13074
.0400	0	0	0	0	144.0		269	ST 13075
.0000	0	0	0	3	144.0		270	ST 13076
4.5973,7802,178								ST 13077
.1957			7				271	ST 13078
17.77977,00,59360,24	9.17	9.200,003						ST 13079
.2020	0	0	0	5	144.0		272	ST 13080
74.698,2088,2081,7351,735								ST 13081
0.1			9				273	ST 13082
.0224,9081,1873551,5,01223,2370,012,0238,0058								ST 13083
.0528	0	0	0	1	144.0		274	ST 13084
12.31								ST 13085
.0434	0	0	0	0	144.0		275	ST 13086
.0459	0	0	0	0	144.0		276	ST 13087
.3632			16				277	ST 13088
.0149,0037,04561,19017,711,164,0506,0095,0429,05153057,24940,137,453								ST 13089
57.84,1355								13090
.0581	0	0	0	0	144.0		278	ST 13091
.0795	0	0	0	1	144.0		279	ST 13092
17.20								ST 13093
2.08			16				280	ST 13094
12.3526,29185,55,708	8.96	2,54,1022	0.5	.599441,66,0041,02440,278,0498				13095
.0041	2,65							13096
.1230	0	0	0	2	144.0		281	ST 13097
11,6911,69								ST 13098
0.1			23				282	ST 13099
.5095102,223,890,168,0213,01030,010,0947,0453,059,099529,28113,97,132								13100
.1705,0042,07220,113,0134,0396184,9,1927,0032								13101
.3170			42				283	ST 13102
7,1577,1569,4689,4682,1012,1018,1898,1891,4441,4449,5499,5498,7928,792								ST 13103
8,7928,7921,4441,4444,4614,4614,8874,8874,6524,6526,1642,0552,3832,388								ST 13104
2,4092,4094,6161,4181,41837,4523,4022,4020,178,61616,673,2433,3254,616								ST 13105
.1504			16				284	ST 13106
.0462,5245,0863,0557,0084,0504,4945,0662,01891061,4196,7163,0366,0551								ST 13107
23,803,656								13108
.0581			1	144.0			285	ST 13109
8,991								13110
.0459			1	144.0			286	ST 13111
8,991								13112
.0434			1	144.0			287	ST 13113
4,106								13114
.0528	0	0	0	2	144.0		288	ST 13115
12,314,226								ST 13116
.1411	0	0	2	0	144.0		289	ST 13117
59,79,000059,79,0000								ST 13118
.1537	0	0	2	0	144.0		290	ST 13119
486,1,000060,65,0000								ST 13120
.1493	0	0	2	0	144.0		291	ST 13121
482,9,000060,28,0000								ST 13122

LM-6 ASCENT STAGE DATA

0		-1		2		3		4		5		6		7		8			
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
.1493	0	C	2	0				144.0							292	ST	13123		
482.9.0000	60.28.0000																ST	13124	
.1537	0	C	2	0				144.0							293	ST	13125		
486.1.0000	60.65.0000																ST	13126	
.1411	0	C	2	0				144.0							294	ST	13127		
59.79.0000	59.79.0000																ST	13128	
3.400	0	0	0	0				144.0							295	ST	13129		
2.187			2	0											296	ST	13130		
.1551	.1902														296	ST	13131		
2.327			2	0											297	ST	13132		
.5362	.5362														297	ST	13133		
1.527			2	0											298	ST	13134		
.7982	.7982														298	ST	13135		
2.360			2	0											299	ST	13136		
.6145	.6145														299	ST	13137		
1.7			2												300	ST	13138		
.2394.0000	.2394.0000																ST	13139	
22.4			2												301	ST	13140		
.0628.0000	.0628.0000																ST	13141	
22.4			2												302	ST	13142		
.0628.0000	.0628.0000																ST	13143	
1.7			2												303	ST	13144		
.2394.0000	.2394.0000																ST	13145	
1.247			2	0											304	ST	13146		
.8122	.5435														304	ST	13147		
1.091			2	0											305	ST	13148		
.0893.0000	.0893.0000																ST	13149	
1.533			2	0											306	ST	13150		
.2088	.2088														306	ST	13151		
1.62			2												307	ST	13152		
.0893.0000	.0893.0000																ST	13153	
2.127			2	0											308	ST	13154		
.1060	.1060														308	ST	13155		
.2615				1				144.0							309	ST	13156		
62.04																	13157		
2.700	0	0	0	0				144.0							310	ST	13158		
1.110			2	0											311	ST	13159		
.2042	.2042														311	ST	13160		
1.247			2	0											312	ST	13161		
.1424	.1424														312	ST	13162		
.680			2	0											313	ST	13163		
.7104	.7104														313	ST	13164		
3.4															314	ST	13165		
.8173	0	0	4	0				144.0							315	ST	13166		
.8819.0000	1.77.0000	3.600.0000	3.600.0000														ST	13167	
12.64		4	55												316	ST	13168		
1.644.0000	5.612.0000	5.612.0000	5.612.0000														ST	13169	
.2660.2655	1.9881.984.186	1.18572.2692.2652.2472.2422.2472.242.186	1.1857														ST	13170	
1.1651.1621.1841.1821.1461.1481.3181.315.6203.61	.45390.4501.06	1.059															ST	13171	
.2103.2099	1.6991.6962.0462.0421.2231.2232.2645.05	1.1862.21828.6950.92															ST	13172	
17.9234.0213.0113.017.8647.8627.46510.316.5326.216.24212.2643.73																	ST	13173	
.2340	0	0	0	1				144.0							317	ST	13174		

LM-6, ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
28.52																	ST 13175
.3370	0	0	1	2			144.0								318		ST 13176
10.94.0000																	ST 13177
35.4188.28																	ST 13178
.2340	0	0	0	1			144.0								319		ST 13179
28.52																	ST 13180
.3370	0	0	1	2			144.0								320		ST 13181
10.94.0000																	ST 13182
35.4188.28	0.000																ST 13183
.5250	0	0	3	2			144.0								321		ST 13184
2.778.0000	3.946.0000	3.946.0000															ST 13185
33.9633.96																	ST 13186
.3780	0	0	0	3			144.0								322		ST 13187
25.5225.5267.21																	ST 13188
1.970	0	0	2	1			144.0								323		ST 13189
.0694.0000	.2089.0000																ST 13190
68.76																	ST 13191
.2340	0	0	0	1			144.0								324		ST 13192
28.52																	ST 13193
.3370	0	0	1	2			144.0								325		ST 13194
10.94.0000																	ST 13195
35.4188.28																	ST 13196
.525			2	2											326		ST 13197
2.778	3.946																ST 13198
33.9633.96																	ST 13199
1.350		1	10														ST 13200
4.327.0000																	ST 13201
1.0511.7911.7911.1321.1311.1711.1681.05312.7121.34																	ST 13202
7.490		1	7												328		ST 13203
15.87																	ST 13204
5.2325.23212.28.4415.44061.3491.347																	ST 13205
7.490		1	1												329		ST 13206
15.87																	ST 13207
12.72																	ST 13208
.3780			4												330		ST 13209
25.5225.5267.2185.16																	ST 13210
1.970	0	0	1	1			144.0								331		ST 13211
.0694.0000																	ST 13212
68.78																	ST 13213
.2340	0	0	1	1			144.0								332		ST 13214
.2089.0000																	ST 13215
28.52																	ST 13216
.3370	0	0	1	2			144.0								333		ST 13217
10.94.0000																	ST 13218
35.4188.28																	ST 13219
3.5			19												334		ST 13220
11.8747.255.0777.0396.3377.8764.2626.17136.4236.6257.4148.9533.3714.47																	ST 13221
11.9215.8530.3835.9232.75																	ST 13222
3.5		1	15												335		ST 13223
46.30.0000																	ST 13224
19.423.9152.95410.353.03111.368.57930.5340.2650.0128.2677.2146.9929.94																	ST 13225
37.22																	ST 13226

LM-6 ASCENT SIZE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
1.698	0	0	2	19	144.0		336	ST 13227
106.8.000066.90.0000								ST 13228
8.51715.401.4982.159.03630.4229.035.214.70567.2855.6163.7904.4053.624								ST 13229
2.4728.6834.404.9979.5924								ST 13230
1.458	0	0	2	18	144.0		337	ST 13231
127.6.000066.11.0000								ST 13232
.59695.5055.1772.8753.91612.812.4663.7255.942.5581.93831.32421.617.278								ST 13233
4.13016.8824.077.774								ST 13234
1.942	0	0	2	1	144.0		338	ST 13235
6.375.00007.705.0000								ST 13236
3.069								ST 13237
1.120		2	6	144.0			339	ST 13238
38.93.000056.97.0000								ST 13239
5.7882.1213.3923.5735.88913.59								ST 13240
1.458	0	0	2	18	144.0		340	ST 13241
127.6.000066.11.0000								ST 13242
1.11916.8824.077.7742.2273.7255.942.5580.94021.32421.567.278.66075.505								ST 13243
5.1772.8753.9163.195								ST 13244
1.698	0	0	2	18	144.0		341	ST 13245
106.8.000066.90.0000								ST 13246
9.27117.6628.535.1244.404.9980.59231.49822.589.03530.26.42967.2855.616								ST 13247
3.79 4.4053.6313.658								ST 13248
1.120	0	0	2	6	144.0		342	ST 13249
56.96.000038.93.0000								ST 13250
5.7882.1213.3923.5735.89213.59								ST 13251
1.942	0	0	2	1	144.0		343	ST 13252
6.375 7.704								ST 13253
3.069								ST 13254
.2398			16				344	ST 13255
.0381.8062.6384.0818.0182.032 2.212.01122017.00981.09113.0714.6923.47								13256
.1678.1951								13257
.1352	0	0	3	144.0			345	ST 13258
8.01310.0523.55								ST 13259
.0195			22				346	ST 13260
20.08.02750.004.0104.0159.306 6.474.0238.01860.008.0345.0269.0188.0094								13261
830.20.0506.653.06081.4815.87410.07.0052								13262
.0792	0	0	0	1	144.0		347	ST 13263
17.14								ST 13264
.467		2	25					ST 13265
6.378 926.1								ST 13266
1449.263.4274.849.21.10431.696.1885.0776.1109.0791.18881.346.2206.2583								13267
4.406.5964.0088.0864.0087.08633.7462.110.04442.438.0527								13268
.96			5				349	ST 13269
2.44 2.44 35.42 13.36 13.36								ST 13270
.1065			27				350	ST 13271
254.81.894.0782.0038.0351.0435.305730.27.2934.2260.1759.4286.3596.3087								ST 13272
.1331578.4.6114.8122.8122.0057.00532.5415.185 9.17.0384.0758.5095								13273
.0792	0	0	0	1	144.0		351	ST 13274
5.715								ST 13275
.1174			27				352	ST 13276
93.8153.05.5095.0138.0474.1843.110 .085 .065 .149612.834.466.44360.068								ST 13277
0.0610.097848.20.2330.0520.0235.0354.65 2.9521.1810.0300.1752.272								13278

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
.1352	0	0	3	144.0			353	ST 13279
8.01310.057.649								ST 13280
.1504		20					354	ST 13281
.0106.0498.0545.0860.4151.0506.4942.0663.01891059.4190.0443.8212.0420								ST 13282
3.65623.89.0563.032421.90176.5								ST 13283
.1436	0	0	3	144.0			355	ST 13284
31.3728.5432.86								ST 13285
.2398		22					356	ST 13286
.0515.8706.6824.09232.470.0426.0147.0042.0117.00631932.01351.2214.59								ST 13287
.199314.6623.41.0204.8562.75347.563.1977.								ST 13288
.1574	0	0	3	144.0			357	ST 13289
30.5030.9646.27								ST 13290
0.1		13					358	ST 13291
.0148.1554.13672.7192.854.0129.0055.0036707.9.497512.44.0420.3360								ST 13292
.1147	0	0	2	144.0			359	ST 13293
19.7426.55								ST 13294
.0532	0	0	0	144.0			360	ST 13295
.0532	0	0	1	144.0			361	ST 13296
17.12								ST 13297
.3758			5				362	ST 13298
119.3155.056.8719.71126.3								ST 13299
.5440	0	0	0	144.0			363	ST 13300
3.355	0	0	1	2	144.0		364	ST 13301
2.094.0000								ST 13302
9.51 2.489								ST 13303
3.355	0	0	3	144.0			365	ST 13304
5.3739.49020.04								ST 13305
.584		20					366	ST 13306
42.8664.1413.412.895.4106.0086.4346.4945.0284.0113.0218.0206.0041.0530								13307
.59341.202.0062.0058.1136.0953								13308
2.215	0	0	3	3	144.0		367	ST 13309
17.28.0000.4661.000016.33.0000								ST 13310
5.17834.176.182								ST 13311
2.215	0	0	3	5	144.0		368	ST 13312
12.97.000023.96.000017.28.0000								ST 13313
.91391.9375.17834.176.182								ST 13314
.0820		2	1	144.0			369	ST 13315
653.6.00007.300.0000								ST 13316
16.37								ST 13317
.3180	0	0	2	0	144.0		370	ST 13318
3.577.000021.05.0000								ST 13319
.1480	0	0	1	0	144.0		371	ST 13320
7.075.0000								ST 13321
3.656	0	0	2	0	144.0		372	ST 13322
92.59.000092.59.0000								ST 13323
.2194	0	0	4	0	144.0		373	ST 13324
92.59.00003.731.000092.59.00002.834.0000								ST 13325
.2905	0	0	4	2	144.0		374	ST 13326
1.549.0000.3556.00001.411.0000.7880.0000								ST 13327
5.5004.535								ST 13328
.2905	0	0	1	2	144.0		375	ST 13329
16.41.0000								ST 13330

LM-6 ASCENT STAGE DATA

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1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
5.5064.535								
1.179	0	0	2	4	144.0			ST 13331
10.41.0000	23.96.0000						376	ST 13332
1.48317.3426.277.962								ST 13333
.5399								ST 13334
12.39489.1.0115.0073.14994.016.0099.2041.0276.1564.0052.0033.033							377	ST 13335
1.132	0	0	1	4	144.0			ST 13336
9.212.0000							378	ST 13337
1.48317.3426.277.962								ST 13338
.3747	0	0	0	15	144.0			ST 13339
12.39554.4.2338.14963.776.0048.1579.0214.1564.0039.0077.02600.196.0381							379	ST 13340
.0193								ST 13341
.1573	0	0	0	5	144.0			13342
32.0415.7220.9839.8640.74							380	ST 13343
0.1								ST 13344
.0045.0230.0031.0295.0040326.4.0239.0431.0036.1879.00336.2641.2476.293							381	ST 13345
.17591.501								ST 13346
.1024	0	0	0	2	144.0			ST 13347
15.5718.89							382	ST 13348
.474								ST 13349
6.433328.2							383	ST 13350
.1588								ST 13351
16.638.03510.4321.0119.450.00024.66							384	ST 13352
.1588								ST 13353
139.463.09758.272.53.575 2.0192.3381.1751.4694.10683.921.1870.0001.031							385	ST 13354
3.0601.34119.27.0863.0248.2505.0078.3896.1412.0137.0248.0291.03212.278								13355
.0153.0034								13356
.0451	0	0	0	3	144.0			13357
1.6446.11415.85							386	ST 13358
.2832								ST 13359
5.593134.6.0108.133419.09.3896.0212.0216.1022.0399.0671.10730.1574.226							387	ST 13360
3.357.0125.0489.0644.0821.03270.181.0083.7343.0530.1145.7073								13361
.0484	0	0	0	1	144.0			ST 13362
15.54							388	ST 13363
0.1								ST 13364
.0330.4852.1693.0074636.0.01085.35812.711.076.0127							389	ST 13365
.0638	0	0	0	1	144.0			ST 13366
18.45							390	ST 13367
0.1								ST 13368
.05608.7905.159.0180.0130.0128.0088.0097.0223.0659.4242.1708.0671.0093							391	ST 13369
.0070.0155648.2.03347.732.0060.0052.0141.4726.15285.529.2499.6602								ST 13370
.5440	0	0	0	2	144.0			ST 13371
1.7063.869							392	ST 13372
1.849	0	0	1	2	144.0			ST 13373
7.287.0000							393	ST 13374
1.4835.830								ST 13375
.3651								ST 13376
11.38569.4.2835.0146129.247.95.1651							394	ST 13377
1.849	0	0	3	5	144.0			ST 13378
7.287.000016.33.000014.22.0000							395	ST 13379
1.4832.3872.2911.89051.55								ST 13380
.3651								ST 13381
							396	ST 13382

UPPER ASCENT STAGE DATA

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11.38578.43.357114.247.95.0196.1861.0381.7942.0129								ST 13383
1.700	0	0	0	5	144.0			397 ST 13384
1.19516.7315.3418.774.766								ST 13385
1.700	0	0	0	3	-144.0			398 ST 13386
18.7715.354.766								ST 13387
.7500	0	0	1	3	144.0			399 ST 13388
7.503.0000								ST 13389
45.4649.15140.1								ST 13390
.7500	0	0	1	3	144.0			400 ST 13391
12.19.0000								ST 13392
45.3736.86140.1								ST 13393
.1224			1		144.0			401 ST 13394
44.06								13395
.9123			26					402 ST 13396
15.30617.4.0128.0878.3566.0203.0211.0920.0303.0581.1199.10432.45621.52								13397
.0083.1184.1295.1687.0233.1424.00794.106.0369.0920.70432.377								13398
.1078			2		144.0			403 ST 13399
7.8527.220								13400
0.1			2					404 ST 13401
236.44.406								SL 13402
.1191	0	0	0		144.0			405 ST 13403
.6580	0	0	0	27	144.0			406 ST 13404
9.13621.75806.30.140.0062.0468.06022.2632.9431.618.1681.39861.007.0								375 ST 13405
.0069.00741.564.45256.264256.8.0163.0071.1615.8631.0087.01511.786								ST 13406
.1508	0	0	0	0	144.0			407 ST 13407
.1052			28					408 ST 13408
18.81554.41.543.0268.0486.0438.74634.5551.490.1232.41360.998.0447.0289								ST 13409
0.0041.756247.814.600.6560.010.0187.2146.80921.2.0.893.1031.01411.019								ST 13410
.1502	0	0	0	0	144.0			409 ST 13411
.729			24					410 ST 13412
186.717.3725.67.0486.8571.5634.2077.0420.0207.0695.0432.09605.934.0128								ST 13413
0.010.2269.2215.0486.27451.166.12141.10 4.3461.780								ST 13414
3.656	0	0	5	0	144.0			411 ST 13415
92.59.000092.59.00002.934.00004.030.00005.711.0000								ST 13416
2.194	0	0	4	0	144.0			412 ST 13417
92.59.000092.59.00004.711.00006.912.0000.								ST 13418
.3470	0	0	1	0	144.0			413 ST 13419
4.121.0000								ST 13420
.0000	0	0	0	18	144.0			414 ST 13421
5526.0140.1406.9141.0116.1025.0178.0050.2143125.073.131.76271.33.6533								ST 13422
127.46.6535.3056.324								ST 13423
.0000	0	0	0	34	144.0			415 ST 13424
.009 5642.0217.01562.97055.74.17865.3351.6274.136.04442.9617.04348.85								ST 13425
7.8829.141157.321.31.2961.0102.03662.907.3117.0097.04053.117.118713.01								ST 13426
1.43921.01.50659.1716.80315.67								13427
.4830	0	0	1	0	144.0			416 ST 13428
5.719.0000								ST 13429
.0431			10					417 ST 13430
1206.5.9812.1122.465.1142.0101.1058.12753.821.0100								ST 13431
0.1			27					418 ST 13432
.0045.0049.01395.87311.62.1582.0178.0333.0159.0208.0359.0058.0053707.0								ST 13433
.06808.182.0817.5559.0041.0367.56345.604.5544.0156.8523.0062.0031								ST 13434

LR-6 ASCENT STAGE DATA

C	1	2	3	4	5	6	7	8
1	2	3	4	5	6	7	8	
2	3	4	5	6	7	8		
3	4	5	6	7	8			
4	5	6	7	8				
5	6	7	8					
6	7	8						
7	8							
8								
.0580	0	0	0	6		144.0	419	ST 13435
8.9697.4652.14723.404.9341.966								ST 13436
.0510	0	0	0	5		144.0	420	ST 13437
6.5322.09370.174.2276.486								ST 13438
.20	1	22	5				421	ST 13439
23.3 17.6 23.3 20. 23.3 20.9 23.3 26.2 23.3 10.12							421	ST 13440
.20	1	22	2				422	ST 13441
14.1523.2 14.1523.2							422	ST 13442
.1159	1	22	3		144.		423	ST 13443
17. 23.2 17. 14.1517. 22.4							423	ST 13444
.1521	1	22	2		144.		424	ST 13445
17.6 23.2 17.6 14.15							424	ST 13446
.1159	1	22	3		144.		425	ST 13447
17. 22.4 17. 14.1517. 23.3							425	ST 13448
2.0	1	22	5.				426	ST 13449
16.6519.1 16.6517. 16.6522.4 16.6517. 16.6519.1							426	ST 13450
2.0	1	22	4				427	ST 13451
19.1 21.3 19.1 14.9 19.1 17. 19.1 23.1							427	ST 13452
2.0	1	22	6				428	ST 13453
22.8 19.1 22.8 17.6 22.8 11.3122.8 13.5522.8 16.6522.8 17.							428	ST 13454
0.20	1	22	6				429	ST 13455
17.6 13.5517.6 13.5517.6 21.7 17.6 19.1 17.6 16.6517.6 17.							429	ST 13456
.2	1	22	6				430	ST 13457
21.7 13.5521.7 16.6521.7 13.5521.7 19.1 21.7 22.4 21.7 17.							430	ST 13458
.82	1	22	7				431	ST 13459
17.6 13.5517.6 13.5517.6 21.7 17.6 16.6517.6 17. 17.6 19.1 17.6 22.4431							431	ST 13460
.82	1	22	2				432	ST 13461
13.5513.5513.5513.55							432	ST 13462
.0925	1	22	1		144.		433	ST 13463
13.5511.32							433	ST 13464
.0925	1	22	3		144.		434	ST 13465
13.5516.7 13.5511.3213.5521.1							434	ST 13466
.82	1	22	7				435	ST 13467
22.8 13.5522.8 13.1 22.8 21.7 22.8 17.6 22.8 16.6522.8 22.4 22.8 17.							435	ST 13468
.82	1	22	7				436	ST 13469
16.7 19.1 16.7 14.9 16.7 21.3 16.7 23.1 16.7 22.0516.7 11.3116.7 13.74365							437	ST 13470
.13	1	22	5		144.		437	ST 13471
19.1 22.4 19.1 17. 19.1 22.8 19.1 23.1 19.1 21.3							437	ST 13472
.105	1	22	4		144.		438	ST 13473
14.9 21.3 14.9 21.3 14.9 16.7 14.9 19.1							438	ST 13474
.1139	1	22	7		144.		439	ST 13475
16.7 21.3. 16.7 22.0516.7 21.1 16.7 11.3116.7 22.8 16.7 19.1 16.7 14.9							439	ST 13476
.0771	1	22	2		144.		440	ST 13477
11.3121.1 11.3122.1							440	ST 13478
.1438	1	22	2		144.		441	ST 13479
21. 15.1521.1 22.8							441	ST 13480
.1502	1	22	5		144.		442	ST 13481
22.1 14.4522.1 19.6 22.1 11.3122.1 13.5522.1 22.8							442	ST 13482
.1572	1	22	5		144.		443	ST 13483
23.1 21.3 23.1 22.0523.1 14.4923.1 14.9 23.1 19.1							443	ST 13484
.1572	1	22	4		144.		444	ST 13485
23.1 21.1 23.1 21.3 23.1 15.1523.1 14.9							444	ST 13486

LM-6 ASCENT STAGE DATA

U	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
.0985	1	22	3	144.			445ST	13487
14.4520.55	14.4521.3	14.459.54					445ST	13488
.13	1	22	3	144.			446ST	13489
19.0515.1	19.059.54	19.0515.1					446ST	13490
.0975	1	22	6	144.			447ST	13491
15.1521.2	15.1526.2	15.1526.2	15.1521.3	15.159.54	15.1521.1		447ST	13492
.0711	1	22	4	144.			448ST	13493
9.54 23.1	9.54 23.1	9.54 21.1	9.54 22.05				448ST	13494
.0965	1	22	5	144.			449ST	13495
16.6515.15	16.6515.15	16.6519.05	16.6521.3	16.6521.3			449ST	13496
1.0	1	22	3				450 ST	13497
21.3 21.2	21.3 26.2	21.3 19.6					450ST	13498
1.0	1	22	2				451 ST	13499
21.2 14.15	21.2 19.6						451ST	13500
1.0	1	22	5				452 ST	13501
10.1223.3	10.1226.2	10.1220.9	10.1217.6	10.1221.2			452ST	13502
1.0	1	22	6				453 ST	13503
18.4919.98	18.4926.2	18.4920.55	18.4910.12	18.4910.12	18.4920.9		453ST	13504
1.0	1	22	5				454 ST	13505
26.2 21.2	26.2 15.15	26.2 21.3	26.2 17.6	26.2 20.9			454ST	13506
1.0	1	22	3				455 ST	13507
20.9 17.6	20.9 21.2	20.9 26.2					455ST	13508
1.0	1	22	2				456 ST	13509
20.5514.15	20.5521.3						456ST	13510
1.0	1	22	4				457 ST	13511
26.2 21.15	26.2 21.15	26.2 14.	26.2 26.2				457ST	13512
1.0	1	22	5				458 ST	13513
26.2 21.2	26.2 21.3	26.2 14.15	26.2 14.45	26.2 17.6			458ST	13514
1.0	1	22	5				459 ST	13515
10.1223.3	10.1226.2	10.1217.6	10.1220.9	10.1221.2			459ST	13516
1.0	1	22	0				460 ST	13517
.136	1	22	4	144.			461ST	13518
20. 14.6	20. 17.6	20. 10.12	20. 26.2				461ST	13519
.159	1	22	4	144.			462ST	13520
23.3 20.	23.3 17.6	23.3 10.12	23.3 26.2				462ST	13521
.136	1	22	5	144.			463ST	13522
20. 14.6	20. 20.9	20. 26.2	20. 10.12	20. 17.6			463ST	13523
.1452							464ST	13524
3.952							465 ST	13525
4.22							466ST	13526
.07							467 ST	13527
0.70							468 ST	13528
1.40							469 ST	13529
1.80							470 ST	13530
0.35							471 ST	13531
0.70							472 ST	13532
0.90							473 ST	13533
0.35							474 ST	13534
0.70							475 ST	13535
0.90							476 ST	13536
320.							477ST	13537
2.82							477ST	13538

LM-5 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
.85		2															
1.299		1.299															478 ST 13539
.85		0	0														478 ST 13540
2.187		0	0														479ST 13541
2.327		0	0														480 ST 13542
1.247		0	0														481 ST 13543
1.527		0	0														482 ST 13544
.6991		0	0														483 ST 13545
2.360		0	0														484 ST 13546
8.809		0	0														485 ST 13547
1.091		0	0														486 ST 13548
1.533		0	0														487 ST 13549
2.127		0	0														488 ST 13550
1.32		1															489 ST 13551
.4320		0	0														490 ST 13552
1.32		0	0														490 ST 13553
1.11		0	0														491 ST 13554
1.247		0	0														492 ST 13555
.680		0	0														493 ST 13556
.7		0	0														494 ST 13557
330.9		3	0														495 ST 13558
.0292	.0369	.0292															496 ST 13559
330.9		1															ST 13560
.0595																	497ST 13561
355.3		1															497ST 13562
.5652																	498ST 13563
277.9		2															498ST 13564
.0633	.0633																499ST 13565
277.9		2															499ST 13566
.0799	.1286																500ST 13567
301.5		1															500ST 13568
1.221																	501ST 13569
33.67		1															501ST 13570
1.093																	502ST 13571
31.74		1															502ST 13572
.4666																	503ST 13573
31.74		1															503ST 13574
.4666																	504ST 13575
1.0		1															504ST 13576
.5383																	505ST 13577
1.		2	1														505ST 13578
26.21	117.7																506ST 13579
11.08																	506ST 13580
																	506ST 13581
0.1				4													507 ST 13582
512.510.34.01320.797																	508ST 13583
1.		1															508ST 13584
23.15																	509ST 13585
1.		1															509ST 13586
23.15																	510ST 13587
.655		2	1														510ST 13588
																	511 ST 13589
																	511 ST 13590

LI-6 ASCENT STAGE DATA

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1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
1.18							511	ST 13591
1.258							512	13592
8.342	1.429	2					512	13593
1.32		2	2				513ST	13594
.788	9.198						513ST	13595
0.000	1.36						513ST	13596
.04			1				514ST	13597
95.73							514ST	13598
.04							515ST	13599
0.1			3				516	ST 13600
125.0.0037,1885								13601
.12			1				517ST	13602
21.74							517ST	13603
		36					518	ST 13604
810.826.08.6444.0310.1184.11001.05943.561.811.7564.59252.7031.1841.760							ST	13605
.5982.0080.0067.0129.013253.142.03816.546.7131.382.4498.0249.0088.3991							ST	13606
.36661.57119.65.01077.361.03191.280.9788							ST	13607
1.000		1					519	ST 13608
.1108.0000							ST	13609
1.000		1					520	ST 13610
1.877.0000							ST	13611
0.1		48					521	ST 13612
208.714.2925.291.2694.0431.93529.4418.12130.411.936.30464.05.33661.149							ST	13613
7.660.3111.0221.0064.0047.0230.0083.0154.0036.040672.8922.3811.214.615							ST	13614
.83052.613.7193.0030.0033.0578.284113.40.40795.089.3503.07481.952.0656							ST	13615
.3952.884127.90.0053.011816.20							ST	13616
.3495		45					522	ST 13617
4277.509419.6360.514.385.0598.1776.02551.744.1727.16242.971.0207.1963							ST	13618
6.19857.4859.919.145.0140.00364.6512.2447.237.1377341.4.4675.0041.0322							ST	13619
.7540119.3.1558.3872.00851.07128.70.015076.99.0074.00401.6622.6549.686							ST	13620
.0035.04111.070							ST	13621
.2330		39					523	ST 13622
1.519.0462.4461.10346.82362.1928.913.2824.4251.3692.1056.770.0123.3198							ST	13623
.0177358.43.086.40725.20662.99.2765.03541.1096.577.0108.05091.365.0031							ST	13624
.0137.0038114.84.1843.7693.439.003911.33.14333.360.1259							ST	13625
.2330		39					524	ST 13626
10.15.4057.0728.12383.4703.43728.7061.202.574.1669.30552.105.0406.0486							ST	13627
.0560.0133.0034367.11.77778.465.224.3953.0354.27481.108.0177.461315.80							ST	13628
2.140.3072.10852.91997.439.262.01381.243.5745.00633.054							ST	13629
.233		45					525	ST 13630
12.7659.3719.50.5094.5330.0455.0574.45791.244.1359.09811.65669.8561.86							ST	13631
6.184.1690.0207.00446.6584.4318.769.0119.0031.1375360.5.3690.0469.0233							ST	13632
.007738.27.1852.04091.168.0500.087241.75.0966.0038.05001.4201.291.4948							ST	13633
1.223.00881.790							ST	13634
0.016							526	ST 13635
1 464 70.							SL	13636
2 464 70.							SL	13637
3 464 70.							SL	13638
4 464 70.							SL	13639
5 464 70.							SL	13640
6 464 70.							SL	13641
7 464 70.							SL	13642

LF-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
8	464	70.						SL 13643
9	464	70.						SL 13644
10	480	70.						SL 13645
11	480	70.						SL 13646
12	481	70.						SL 13647
13	481	70.						SL 13648
14	482	70.						SL 13649
15	482	70.						SL 13650
16	483	70.						SL 13651
17	483	70.						SL 13652
18	484	70.						SL 13653
19	484	70.						SL 13654
20	485	70.						SL 13655
21	485	70.						SL 13656
22	486	70.						SL 13657
23	486	70.						SL 13658
24	486	70.						SL 13659
25	2	70.00000	0					SL 13660
26	3	70.00000	26					SL 13661
27	4	70.00000	27					SL 13662
28	5	70.00000	26					SL 13663
29	6	70.00000	0					SL 13664
30	7	70.	30					SL 13665
31	8	70.00000	27					SL 13666
32	9	70.00000	26					SL 13667
33	486	70.						SL 13668
34	484	70.						SL 13669
35	484	70.						SL 13670
36	487	70.						SL 13671
37	487	70.						SL 13672
38	488	70.						SL 13673
39	488	70.						SL 13674
40	487	70.						SL 13675
41	487	70.						SL 13676
42	489	70.						SL 13677
43	489	70.						SL 13678
44	490	70.	651	45				SL 13679
45	491	70.	651					SL 13680
46	492	70.						SL 13681
47	492	70.						SL 13682
48	493	70.						SL 13683
49	493	70.						SL 13684
50	494	70.						SL 13685
51	494	70.						SL 13686
52	1	70.						SL 13687
53	1	70.						SL 13688
54	1	70.						SL 13689
55	1	70.						SL 13690
56	1	70.						SL 13691
57	1	70.						SL 13692
58	1	70.						SL 13693
59	1	70.						SL 13694

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
60	1			70.													SL 13695
61	1			70.													SL 13696
62	1			70.													SL 13697
63	1			70.													SL 13698
64	1			70.													SL 13699
65	1			70.													SL 13700
66	1			70.													SL 13701
67	1			70.													SL 13702
68	1			70.													SL 13703
69	1			70.													SL 13704
70	1			70.													SL 13705
71	1			70.													SL 13706
72	1			70.													SL 13707
73	1			70.													SL 13708
74	519			70.00			26										SL 13709
75	519			70.00			26										SL 13710
76	520			70.00			27										SL 13711
77	520			70.00			27										SL 13712
78	519			70.00			28										SL 13713
79	519			70.00			28										SL 13714
80	519			70.00			30										SL 13715
81	519			70.00			30										SL 13716
82	520			70.00			31										SL 13717
83	520			70.00			31										SL 13718
84	519			70.00			32										SL 13719
85	519			70.00			32										SL 13720
86	1			.000000		0											SL 13721
87	1			.000000		0											SL 13722
88	1			.000000		0											SL 13723
89	10			70.000000		0	782	500	455	457	306	346	516	90	94		SL 13724
96																	SL 13725
90	11			70.000000			500	477	487	454	455	457	512	513	346		SL 13726
516	782			91													SL 13727
91	12			70.000000		0	774	500	782	484	476	487	455	457	458		SL 13728
497	512			513	306	733	516	92	345	89							SL 13729
92	13			70.			782	774	500	346	758	485	487	458	459		SL 13730
512	513			733	516	93	94	345	89	90							SL 13731
93	14			70.000000		0	782	500	457	458	459	306	733	346	516		SL 13732
614	94			345	89	90	91										SL 13733
94	15			70.			778	500	782	306	733	346	516	95	96		SL 13734
345	90			91													SL 13735
95	16			70.			733	778	780	500	516	614	782	306	346		SL 13736
96	345			89	90	91	92	93									SL 13737
96	17			70.			780	733	500	346	306	516	782	614	345		SL 13738
90	91			92	93												SL 13739
97	1			.000000		0											SL 13740
98	1			70.													SL 13741
99	1			70.													SL 13742
100	478			70.0	100	101	102										SL 13743
101	479			70.0													SL 13744
102	479			70.0													SL 13745
103	1			.000000		0											SL 13746

LP-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
104	1	.00000	0																SL 13747
105	1	.00000	0																SL 13748
106	1	.00000	0																SL 13749
107	1	.00000	0																SL 13750
108	1	.00000	0																SL 13751
109	1	.00000	0																SL 13752
110	1	.00000	0																SL 13753
111	1	.00000	0																SL 13754
112	1	.00000	0																SL 13755
113	1	.00000	0																SL 13756
114	1	.00000	0																SL 13757
115	1	.00000	0																SL 13758
116	1	.00000	0																SL 13759
117	1	.00000	0																SL 13760
118	1	.00000	0																SL 13761
119	1	70.																	SL 13762
120	1	.00000	0																SL 13763
121	1	.00000	0																SL 13764
122	1	.00000	0																SL 13765
123	1	.00000	0																SL 13766
124	1	.00000	0																SL 13767
125	1	.00000	0																SL 13768
126	1	.00000	0																SL 13769
127	1	.00000	0																SL 13770
128	1	.00000	0																SL 13771
129	1	.00000	0																SL 13772
130	1	.00000	0																SL 13773
131	21	70.	205																SL 13774
132	22	70.00000	0																SL 13775
133	477	70.0	1																SL 13776
134	1	.00000	0																SL 13777
135	1	.00000	0																SL 13778
136	1	.00000	0																SL 13779
137	1	.00000	0																SL 13780
138	23	70.00000	0	733	516	306	500	782	89	90	91	92							SL 13781
93	94	95	96	345	346	614	458	756	364	365	594	457							SL 13782
139	24	70.																	SL 13783
140	1	.00000	0																SL 13784
141	1	.00000	0																SL 13785
142	1	.00000	0																SL 13786
143	1	.00000	0																SL 13787
144	1	.00000	0																SL 13788
145	25	70.00000	0	746	735														SL 13789
146	26	70.00000	0	145	767	746													SL 13790
147	27	70.00000	0	746	146	731													SL 13791
148	28	70.00000	0	149															SL 13792
149	29	70.00000	0	182	183	765	150												SL 13793
150	30	70.00000	0	765	730														SL 13794
151	1	.00000	0																SL 13795
152	1	.00000	0																SL 13796
153	1	.00000	0																SL 13797
154	1	.00000	0																SL 13798

U.S. AIR FORCE DATA

0	1	2	3	4	5	6	7	8					
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890					
155	1	.00000	0					SL 13794					
156	1	.00000	0					SL 13800					
157	31	70.00000	0	730				SL 13801					
158	32	70.00000	0					SL 13802					
159	33	70.00000	0	523	520			SL 13803					
160	34	70.00000	0	521	520			SL 13804					
161	35	70.00000	0	521				SL 13805					
162	36	70.00000	0	523				SL 13806					
163	37	70.00000	0	524				SL 13807					
164	38	70.00000	0	519				SL 13808					
165	39	70.00000	0					SL 13809					
166	40	70.00000	0	743	744	731	769	775	779	721	723	725	SL 13810
160	159												SL 13811
167	41	70.00000	0	700	783	784	785	798	751	753	759	761	SL 13812
165	770	763	777	771	755								SL 13813
168	42	70.0	0										SL 13814
169	498	70.	168										SL 13815
170	497	70.	169										SL 13816
171	496	70.0	700	170	167								SL 13817
172	43	70.0											SL 13818
173	501	70.	172										SL 13819
174	500	70.	175	173									SL 13820
175	499	70.	701	166									SL 13821
176	44	70.00000	0	702									SL 13822
177	44	70.	176										SL 13823
178	45	70.	730	179	745	182	730	719					SL 13824
179	46	70.00000	0	148									SL 13825
180	47	70.00000	0	703									SL 13826
181	503	70.	180										SL 13827
182	48	70.00000	0	183	730	719							SL 13828
183	49	70.00000	0	148									SL 13829
184	50	70.00000	0	222									SL 13830
185	1	.00000	0										SL 13831
186	1	.00000	0										SL 13832
187	1	.00000	0										SL 13833
188	1	.00000	0										SL 13834
189	1	.00000	0										SL 13835
190	51	70.00000	0	772									SL 13836
191	52	70.00000	0	771									SL 13837
192	53	70.00000	0	707									SL 13838
193	502	70.	192										SL 13839
194	54	70.00000	0	731	195	146	198	731	147	711			SL 13840
195	55	70.00000	0	146	145								SL 13841
196	56	70.00000	0	706									SL 13842
197	504	70.	196										SL 13843
198	57	70.00000	0	731	199	746	731	147	767	711			SL 13844
199	58	70.00000	0	746	145								SL 13845
200	59	70.00000	200	131	414	500							SL 13846
201	515	70.											SL 13847
202	467	70.											SL 13848
203	514	70.	481										SL 13849
204	495	70.											SL 13850

LI-5 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8		
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890		
205	511	70.		132	414	131		SL 13851		
206	505	70.		347				SL 13852		
207	1	.00000	0					SL 13853		
208	1	.00000	0					SL 13854		
209	1	.00000	0					SL 13855		
210	1	.00000	0					SL 13856		
211	1	.00000	0					SL 13857		
212	1	.00000	0					SL 13858		
213	1	.00000	0					SL 13859		
214	60	70.00000	0					SL 13860		
215	61	70.00000	0					SL 13861		
216	1	.00000	0					SL 13862		
217	1	.00000	0					SL 13863		
218	1	.00000	0					SL 13864		
219	1	.00000	0					SL 13865		
220	62	70.00000	220	747	438	214	400	747	749	SL 13866
221	63	70.00000	0	222	425	438	214	400	500	SL 13867
222	64	120.0		221	438	214	400			SL 13868
223	1	.00000								13869
224	66	70.00000	224	221	222	425	438	214	400	SL 13870
225	1	.00000	0							SL 13871
226	1	.00000	0							SL 13872
227	1	.00000	0							SL 13873
228	1	.00000	0							SL 13874
229	1	.00000	0							SL 13875
230	1	.00000	0							SL 13876
231	1	.00000	0							SL 13877
232	1	.00000	0							SL 13878
233	1	.00000	0							SL 13879
234	1	.00000	0							SL 13880
235	1	.00000	0							SL 13881
236	1	.00000	0							SL 13882
237	1	.00000	0							SL 13883
238	1	.00000	0							SL 13884
239	1	.00000	0							SL 13885
240	1	.00000	0							SL 13886
241	1	.00000	0							SL 13887
242	1	.00000	0							SL 13888
243	1	.00000	0							SL 13889
244	1	.00000	0							SL 13890
245	67	70.00000	245	418	418					SL 13891
246	68	70.	246	408						SL 13892
247	1	.00000	0							SL 13893
248	1	.00000	0							SL 13894
249	1	.00000	0							SL 13895
250	1	.00000	0							SL 13896
251	1	.00000	0							SL 13897
252	1	.00000	0							SL 13898
253	1	.00000	0							SL 13899
254	1	.00000	0							SL 13900
255	1	.00000	0							SL 13901
256	1	.00000	0							SL 13902

LINE-6 ASCII of STACK DATA

U	1.	2	3	4	5	6	7	8						
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890						
257	1	.000000	0					SL 13903						
258	1	.000000	0					SL 13904						
259	1	.000000	0					SL 13905						
260	1	.000000	0					SL 13906						
261	1	.000000	0					SL 13907						
262	1		0					SL 13908						
263	1		0					SL 13909						
264	1		0					SL 13910						
265	1	.000000	0					SL 13911						
266	1		0					SL 13912						
267	1	.000000	0					SL 13913						
268	1	.000000	0					SL 13914						
269	1	.000000	0					SL 13915						
270	73	70.000000	0					SL 13916						
271	1	.000000	0					SL 13917						
272	1	50.						SL 13918						
273	506	70.	273	810	418	500		SL 13919						
274	1	.000000	0					SL 13920						
275	1		0					SL 13921						
276	1	.000000	0					SL 13922						
277	1	.000000	0					SL 13923						
278	1	.000000	0					SL 13924						
279	1	.000000	0					SL 13925						
280	1	.000000	0					SL 13926						
281	1	.000000	0					SL 13927						
282	1	.000000	0					SL 13928						
283	1	.000000	0					SL 13929						
284	1	.000000	0					SL 13930						
285	1	.000000	0					SL 13931						
286	1	.000000	0					SL 13932						
287	1	.000000	0					SL 13933						
288	1	.000000	0					SL 13934						
289	1	.000000	0					SL 13935						
290	1	.000000	0					SL 13936						
291	1	.000000	0					SL 13937						
292	1	.000000	0					SL 13938						
293	1	.000000	0					SL 13939						
294	1	.000000	0					SL 13940						
295	1	.000000	0					SL 13941						
296	1	.000000	0					SL 13942						
297	1	.000000	0					SL 13943						
298	1	.000000	0					SL 13944						
299	79	70.		10	11	12	13	14	15	16	17	18	SL 13945	
19	20	21	22	23	24	33	34	35	37	38	39	40	41	SL 13946
42	43	44	45	46	47	48	49	50	51	692	691	693	680	SL 13947
625	603	627	578	590	579	591	601	617	613	615	611	619	609	SL 13948
621	539	531	537	605	635	580	592							SL 13949
300	80	70.000000	0											SL 13950
301	1	.000000	0											SL 13951
302	1	.000000	0											SL 13952
303	1	.000000	0											SL 13953
304	81	70.	304	397	398	491	492	494	495	496	496	307		SL 13954

LI-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8					
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890					
490								SL 13955					
305	1	.000000	0					SL 13956					
306	82	70.000000	306	733	346	345	500	516	782	457	614	547	SL 13957
90	92												SL 13958
307	83	70.	307	490	318	319	490						SL 13959
308	1	0.0											SL 13960
309	84	70.000000	0	747	734								SL 13961
310	85	70.000000	0	318	749	715	490						SL 13962
311	86	70.000000	0	749									SL 13963
312	87	70.000000	0	318	307	671	715	315					SL 13964
313	88	70.000000	0										SL 13965
314	89	70.		671	313	319	715	307			464		SL 13966
315	90	70.	315	671									SL 13967
316	91	70.		747	319	715	490						SL 13968
317	92	130.											13969
318	93	70.000000	400	771	315	339	715	749	735	713	711		SL 13970
319	94	70.000000	400	772	340	715	313	747	734	717	719		SL 13971
320	1	.000000	0										SL 13972
321	1	.000000	0										SL 13973
322	1	.000000	0										SL 13974
323	1	.000000	0										SL 13975
324	1	.000000	0										SL 13976
325	1	.000000	0										SL 13977
326	1	.000000	0										SL 13978
327	1	.000000	0										SL 13979
328	1	.000000	0										SL 13980
329	1	70.											SL 13981
330	95	70.000000	0	332	344								SL 13982
331	1	.000000	0										SL 13983
332	96	70.000000	0	769	770	366	649	769	770	369			SL 13984
333	1	70.											SL 13985
334	1	.000000	0								000		SL 13986
335	1	.000000	0										SL 13987
336	1	.000000	0										SL 13988
337	1	.000000	0										SL 13989
338	1	.000000	0										SL 13990
339	97	70.000000	400	735									SL 13991
340	98	70.000000	400	734									SL 13992
341	1	.000000	0										SL 13993
342	99	70.000000	0	330	348	343							SL 13994
343	100	70.000000	0	330	344	330	344	332	366				SL 13995
344	101	70.000000	0	349	332	366							SL 13996
345	102	70.	345	350	346	516	782	500	733	614	457	89	SL 13997
90													SL 13998
346	103	70.	346	351	516	733	782	500	614	457	91		13999
347	104	70.000000	0	343	344								SL 14000
348	105	70.000000	0	343	349								SL 14001
349	106	70.000000	0	350	363								SL 14002
350	107	70.000000	0	364	351								SL 14003
351	108	70.000000	0	365									SL 14004
352	512	70.		425	221								14005
353	1	70.000000											SL 14006

LR-6 ASCENT STAGE DATA

1	2	3	4	5	6	7	8					
354	70.						SL 14007					
355	70.00000						SL 14008					
356							SL 14009					
357							SL 14010					
358							SL 14011					
359	.00000	0					SL 14012					
360	.00000	0					SL 14013					
361	.00000	0					SL 14014					
362	70.00000	0	348	500	342	363	542	364	365	136	SL 14015	
363	70.00000	0	500	542	364	365	362				SL 14016	
364	70.		500	365							SL 14017	
365	70.		500	364							SL 14018	
366	70.00000	0	649								SL 14019	
367	70.00000	0	700								SL 14020	
368	70.00000	0	701								SL 14021	
369	70.00000	0									SL 14022	
370	70.00000	0	660	615							SL 14023	
371	.00000	0									SL 14024	
372	.00000	0									SL 14025	
373	.00000	0									SL 14026	
374	70.00000										SL 14027	
375	.00000	0									SL 14028	
376	.00000	0									SL 14029	
377	.00000	0									SL 14030	
378	.00000	0									SL 14031	
379	.00000	0									SL 14032	
380	.00000	0									SL 14033	
381	.00000	0									SL 14034	
382	.00000	0									SL 14035	
383	.00000	0									SL 14036	
384	.00000	0									SL 14037	
385	.00000	0									SL 14038	
386	.00000	0									SL 14039	
387	.00000	0									SL 14040	
388	.00000	0									SL 14041	
389	.00000	0									SL 14042	
390	.00000	0									SL 14043	
391	.0	0									SL 14044	
392	.0	0									SL 14045	
393	.0	0									SL 14046	
394	.0	0									SL 14047	
395	.0	0									SL 14048	
396	.0	0									SL 14049	
397	70.		498	307	490						SL 14050	
398	70.		496	307	490						SL 14051	
399	.0	0									SL 14052	
400	70.	400	749	416	421	422	747	438	401	414	439	SL 14053
401	468											SL 14054
401	70.	400	749	311	402							SL 14055
402	70.	400	403									SL 14056
403	70.	400	311	404								SL 14057
404	70.	400	405									SL 14058

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
405	129	70.		0													SL 14059
406	1	.0		0													SL 14060
407	1	.0		0													SL 14061
408	130	70.		0	440	441	457										SL 14062
409	1	.0		0													SL 14063
410	131	70.		0	411	690	501										SL 14064
411	132	70.		400	412												SL 14065
412	133	70.		400	413												SL 14066
413	134	70.		400	414	309											SL 14067
414	135	70.		400	309	205											SL 14068
415	1	.000000		0													SL 14069
416	1	.000000		0													SL 14070
417	136	70.000000		400	426	427	419	420									SL 14071
418	137	70.		400	417	810	420										SL 14072
419	138	70.000000		0	418	417	426	420									SL 14073
420	139	70.			418	417	427	442									SL 14074
421	140	70.000000		0	419	418											SL 14075
422	141	70.000000		0	418	420											SL 14076
423	1	.000000		0													SL 14077
424	1	.000000		0													SL 14078
425	142	70.			438	400	224	438	214	400							SL 14079
426	143	70.000000		0													SL 14080
427	144	70.000000		400													SL 14081
428	1	.000000		0													SL 14082
429	1	.000000		0													SL 14083
430	1	.000000		0													SL 14084
431	1	.000000		0													SL 14085
432	1	.000000		0													SL 14086
433	1	.000000		0													SL 14087
434	1	.000000		0													SL 14088
435	526	.000000		0													SL 14089
436	1	.000000		0													SL 14090
437	1	.000000		0													SL 14091
438	145	70.000000		0	414	401	439	747	749	214							SL 14092
439	146	70.		439	401	422	421	467	215								SL 14093
440	147	70.000000		0	444	442											SL 14094
441	148	70.000000		0	445	443											SL 14095
442	149	70.000000			426	139											SL 14096
443	150	70.000000			427	139											SL 14097
444	151	70.000000		0	769												SL 14098
445	152	70.000000		0	770												SL 14099
446	263	70.00		446													SL 14100
447	526	.000000		447													SL 14101
448	526	.000000		448													SL 14102
449	526	70.00		449													SL 14103
450	153	70.000000		450	401	402	465	750	500	786	448						SL 14104
451	516	.000000		451	500	435	459										SL 14105
452	154	70.000000		452	403	750	500	786	448	450							SL 14106
453	155	70.00		453	404	750	500	786	447	448	449	450	452				SL 14107
454	156	70.00		454	405	500	89	91	92	93	95	96	136				SL 14108
306	345	346															SL 14109
455	157	70.00		455	500	457	558	92	93	94	95	96	138				SL 14110

04-6 ASCEND STAGE DATA

0	1	2	3	4	5	6	7	8
306	345	346	454					14111
456	109	70.00	0	450	500			SL 14112
457	158	70.00	457	500	733	516	782	458
96	454							557
458	159	70.00	458	774	758	500	782	557
96	306	345	346	454	455			89
459	160	70.00	459	410	758	774	500	89
138	306	345	346	435	455	457	456	90
460	161	70.00000	460	411	748	500	786	435
461	162	70.00000	461	412	748	500	786	450
462	163	70.00000	462	414	413	414	748	500
452	456	460	461					464
463	110	70.00	463	91	92	93	94	95
455	457	458	459	500				138
464	164	70.00000	464	748	500	214	215	435
465	165	70.00000	465	750	500	214	215	446
466	166	70.00	466	500	214	786	448	450
461	462	464	465					452
467	167	70.00	467	500	215	786	448	450
461	462	464	465	466				452
468	168	70.00000	468	418	500	417		453
469	169	70.00000	469	487	513	512	497	500
470	170	70.00	470	421	475	471	500	446
466								448
471	171	70.00000	471	475	500	446	448	453
472	172	70.	472	475	474	500	473	465
473	173	70.	473	475	474	500	201	448
471								453
474	174	70.	474	419	475	476	500	89
455	457							90
475	175	70.	475	500	446	448	450	452
467								453
476	176	70.	476	477	500	89	90	91
345	346	454	455	457	458	474		92
477	177	70.	477	426	500	89	91	346
474								454
478	178	70.	478	422	483	479	500	435
464	466							456
479	179	70.00000	479	482	483	500	435	456
480	180	70.00000	480	483	482	500		459
481	181	70.	481	480	483	482	500	435
469	478	479						456
482	182	70.	482	420	484	500	91	92
459	463							93
483	183	70.	483	500	435	450	456	459
466	467							460
484	184	70.	484	485	500	90	92	93
455	457	458	459	463	476			138
485	185	70.	485	427	500	91	93	346
463	482							455
486	1	.00000	0					457
487	186	70.	487	513	500	497	512	89
								93
								95
								138
								306

LF-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
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345	346	455	457	458	459	476	484										14163
488	1	.000000		0													SL 14164
489	187	70.000000		0	417	427	442	426	443								SL 14165
490	188	70.		490	318	319											SL 14166
491	189	70.		491	492	495	496	318	490	307	500	499					SL 14167
492	190	70.		492	715	490	498	500	499								SL 14168
493	1	70.															SL 14169
494	191	70.		494	492	495	307	319	490	496							SL 14170
495	192	70.		495	715	307	496										SL 14171
496	193	70.		496	498	499	498	495	307	490	491	492	494				SL 14172
497	194	70.000000		497	513	512	500	473	475	481	483						SL 14173
498	195	70.		498	499	492	307	490	491	494	495						SL 14174
499	215	60.		499	304	307	397	398	490	494	495						SL 14175
500	197	-459.69															SL 14176
501	198	70.000000		0	435	451	456	463									SL 14177
502	199	70.000000		0	405	686	466	447	448	449							SL 14178
503	1	70.000000															SL 14179
504	1	70.000000															SL 14180
505	1	70.000000															SL 14181
506	1	70.000000															SL 14182
507	1	70.															SL 14183
508	1	.000000		0													SL 14184
509	1	.000000		0													SL 14185
510	1	.000000		0													SL 14186
511	1	.000000		0													SL 14187
512	204	70.000000		512	513	500	426	481									SL 14188
513	205	70.000000		513	427	500											SL 14189
514	206	70.000000		0													SL 14190
515	207	70.000000		0	717												SL 14191
516	208	70.0		516	500	733	782	614	546	454	455	458	459				14192
463	476	484	487														14193
517	1	.000000		0													SL 14194
518	1	.000000		0													SL 14195
519	209	70.000000			163	139											SL 14196
520	210	70.000000			139												SL 14197
521	211	70.000000		0	649	729	769										SL 14198
522	212	70.000000		0	649	763	770	164									SL 14199
523	213	70.000000		0	767	729	731										SL 14200
524	214	70.000000		0	730	763	765										SL 14201
525	32	70.000000		0													SL 14202
526	216	70.000000		0													SL 14203
527	217	70.000000		0	649												SL 14204
528	1	.000000		0													SL 14205
529	1	.000000		0													SL 14206
530	1	.000000		0													SL 14207
531	218	70.000000		0	537	551											SL 14208
532	1	70.000000															SL 14209
533	1	70.															SL 14210
534	1	70.															SL 14211
535	1	70.															SL 14212
536	1	70.															SL 14213
537	224	70.000000		0													SL 14214

LIFE ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8			
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890			
538	1	.000000	0					SL 14215			
539	225	70.000000	0	531	537			SL 14216			
540	1	70.000000						SL 14217			
541	227	70.		805	575	680	617	802	299	554	SL 14218
542	228	70.000000	0	520							SL 14219
543	229	70.000000		546	367	781					SL 14220
544	230	70.000000		543	781						SL 14221
545	231	70.000000		544	167	755					SL 14222
546	232	70.000000		547	614	366	370				SL 14223
547	233	70.000000		558	557	369					SL 14224
548	234	70.000000		701	725						SL 14225
549	513	70.		540	548	724	725				SL 14226
550	235	70.000000	0	577	589	551	693				SL 14227
551	236	70.000000	0	550	693	552					SL 14228
552	237	70.000000	0	551	681						SL 14229
553	238	70.	0	581	593	554	692				SL 14230
554	239	70.000000	0	553	692	555	551				SL 14231
555	240	70.	0	554	683						SL 14232
556	241	70.000000	0	590	591	592	680	649	527		SL 14233
557	242	70.000000		408							SL 14234
558	243	70.000000		408							SL 14235
559	1	.000000	0								SL 14236
560	244	70.000000		546	368						SL 14237
561	1	.000000	0								SL 14238
562	1	.000000	0								SL 14239
563	1	.000000	0								SL 14240
564	1	.000000	0								SL 14241
565	111	70.0		299							SL 14242
566	1	0.0									SL 14243
567	1	0.0									SL 14244
568	1	0.0									SL 14245
569	1	0.0									SL 14246
570	1	0.0									SL 14247
571	1	0.0									SL 14248
572	1	0.0									SL 14249
573	1	0.0									SL 14250
574	1	0.0									SL 14251
575	121	70.0		299	531	537	539				14252
576	256	70.000000	0								SL 14253
577	257	70.000000	400	578							SL 14254
578	258	70.000000	400	579	601	617					SL 14255
579	259	70.000000	400	580	576	601					SL 14256
580	260	70.000000	400	581							SL 14257
581	261	70.000000	0								SL 14258
582	262	70.000000	0	313	671	671	787	500			SL 14259
583	1	70.000000									SL 14260
584	264	70.000000	0	167	700	753	759	761	773	777	SL 14261
585	1	.000000	0								SL 14262
586	1	.000000	0								SL 14263
587	1	.000000	0								SL 14264
588	1	.000000	0								SL 14265
589	265	70.000000	0	590							SL 14266

LM-8 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8						
1.234567890	1.234567890	1.234567890	1.234567890	1.234567890	1.234567890	1.234567890	1.234567890	1.234567890						
590	266	70.00000	0	591	601	617		SL 14267						
591	267	70.00000		592	601			SL 14268						
592	268	70.00000	0	593				SL 14269						
593	269	70.00000	0					SL 14270						
594	270	70.00000	0	364	365	542		SL 14271						
595	1	.00000	0					SL 14272						
596	1	.00000	0					SL 14273						
597	1	.0	0					SL 14274						
598	1	.00000	0					SL 14275						
599	1	.00000	0					SL 14276						
600	271	70.00000	600	601	500	787	799	766	768	466	SL 14277			
601	272	70.00000	0	617	609	621	565	575			SL 14278			
602	1										SL 14279			
603	274	70.00000	0	601							SL 14280			
604	200	70.0	604	450	452	500	541	600			SL 14281			
605	275	70.00000	0								SL 14282			
606	201	70.0	606	500	541	600	604				SL 14283			
607	202	70.0	607	89	90	91	92	93	94	95	96	138	SL 14284	
306	345	346	454	455	457	458	500	516	541				SL 14285	
608	203	70.0	608	460	461	462	500	531	600	603	604	605	SL 14286	
609	276	70.00000	0										SL 14287	
610	1	70.											SL 14288	
611	278	70.00000	0										SL 14289	
612	508	70.0	612	500	531	600	608						SL 14290	
613	279	70.00000	0	615									SL 14291	
614	280	70.0	614	613	615	500	733	782	89	90	91	92	SL 14292	
94	454	455	457	458	459	607							SL 14293	
615	281	70.00000	0	611	619								SL 14294	
616	1	70.0											SL 14295	
617	283	70.		10	11	12	13	14	15	16	17	18	SL 14296	
19	20	21	22	23	24	33	34	35	36	37	38	39	40	SL 14297
41	42	43	44	45	46	47	49	50	51	613	539	531	537	SL 14298
605	635	580	592	48										SL 14299
618	1	70.0												SL 14300
619	285	70.00000	0	607										SL 14301
620	219	70.0	620	89	90	91	92	93	94	95	96	138		SL 14302
306	345	346	455	457	458	459	463	482	484	485	500	516	531	SL 14303
539	607	609	611	614										SL 14304
621	286	70.00000	0	607										SL 14305
622	226	70.0	622	93	94	95	96	500	516	531	537	607		SL 14306
614	620													SL 14307
623	273	70.0	623	94	95	96	500	516	541	607	614	620		SL 14308
624	1	.00000	0											SL 14309
625	287	70.00000	0	604										SL 14310
626	277	70.0	626	89	91	93	94	95	96	138	306	345		SL 14311
316	500	516	607	614	617	620								SL 14312
627	288	70.00000	0	601	604									SL 14313
628	1	.00000	0											SL 14314
629	289	70.00000	0	524	577									SL 14315
630	290	70.00000	0	525	577									SL 14316
631	291	70.00000	0	525	576									SL 14317
632	292	70.00000	0	526	576									SL 14318

LINE ASCENT SOURCE DATA

0	1	2	3	4	5	6	7	8						
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890						
633	293	70.000000	0	526	581			SL 14319						
634	294	70.000000	0	523	581			SL 14320						
635	295	70.000000	0					SL 14321						
636	296	70.	636	10	11			SL 14322						
637	297	70.	637	12	13			SL 14323						
638	298	70.	638	16	17			SL 14324						
639	299	70.	639	20	21			SL 14325						
640	300	70.	640	18	19			SL 14326						
641	301	70.	641	22	23			SL 14327						
642	302	70.	642	24	33			SL 14328						
643	303	70.	643	34	35			SL 14329						
644	304	70.	644	14	15			SL 14330						
645	305	70.	645	36	37			SL 14331						
646	306	70.	646	38	39			SL 14332						
647	307	70.	647	40	41			SL 14333						
648	308	70.	648	42	43			SL 14334						
649	309	70.000000	0	331				SL 14335						
650	1	.000000	0					SL 14336						
651	310	70.						SL 14337						
652	311	70.	652	46	47			SL 14338						
653	312	70.	653	48	49			SL 14339						
654	313	70.	654	50	51			SL 14340						
655	314	70.						SL 14341						
656	1	.000000	0					SL 14342						
657	1	.000000	0					SL 14343						
658	1	.000000	0					SL 14344						
659	1	.000000	0					SL 14345						
660	1	.000000	0					SL 14346						
661	1	.000000	0					SL 14347						
662	1	.000000	0					SL 14348						
663	1	.000000	0					SL 14349						
664	1	.000000	0					SL 14350						
665	1	.000000	0					SL 14351						
666	1	.000000	0					SL 14352						
667	1	.000000	0					SL 14353						
668	1	.000000	0					SL 14354						
669	1	.000000	0					SL 14355						
670	1	.000000	0					SL 14356						
671	315	70.000000	671	767	313	525	526	SL 14357						
672	1	.000000	0					SL 14358						
673	1	.000000	0					SL 14359						
674	1	.000000	0					SL 14360						
675	1	.000000	0					SL 14361						
676	1	.000000	0					SL 14362						
677	1	.000000	0					SL 14363						
678	1	.000000	0					SL 14364						
679	1	.000000	0					SL 14365						
680	316	70.	400	527	590	591	592	14	15	16	17	18	SL 14366	
19	20	21	22	23	24	33	34	35	36	37	38	39	40	SL 14367
41	42	43	44	45	46	47	48	49	50	51	10	11	12	SL 14368
13	575	565	578	590	579	591	601	617	613	615	611	619	609	SL 14369
621	539	531	537	605	635	580	592							SL 14370

U-6 ASSISTANT SECRETARY DATA

0	1	2	3	4	5	6	7	8						
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890						
681	317	70.000000	681	500				SL 14371						
682	318	70.000000	682	681	681	500		SL 14372						
683	319	70.000000	683	500				SL 14373						
684	320	70.000000	684	683	683	500		SL 14374						
685	321	70.000000	0	686	404	405	404	SL 14375						
686	322	70.000000	0	405	404	685		SL 14376						
687	323	70.000000	0	686	688	686		SL 14377						
688	324	70.000000	688	500				SL 14378						
689	325	70.000000	689	688	688	500		SL 14379						
690	326	70.		699	411	410	411	SL 14380						
691	327	70.		690	11	12	13	16	17	20	21	10	SL 14381	
692	328	70.		680	691	693	680	12	23	24	33	SL 14382		
693	329	70.		690	690							SL 14383		
694	330	70.000000	0	410	411	690	501					SL 14384		
695	331	70.000000	0	694	694							SL 14385		
696	332	70.000000	696	695	500							SL 14386		
697	333	70.000000	697	696	696	500						SL 14387		
698	1	.000000	0									SL 14388		
699	1	.000000	0									SL 14389		
700	334	70.000000	0	763	781	783	784	785	798	741	742	167	SL 14390	
165	730	751	753	757	759	761	770	773	777				SL 14391	
701	335	70.000000	0	166	166	743	744	161	162	160	159	721	SL 14392	
723	725	729	731	769	775	779							SL 14393	
702	336	70.000000	0	179	178	726	717	704	772	705	703	719	SL 14394	
515	747	730	745	150	734	319	765	178	182	179	183		SL 14395	
703	337	70.000000	0	183	182	747	730	745	150	734	319	765	SL 14396	
178	182	179	183	704	772	705	726	717	719	515			SL 14397	
704	338	70.000000	0	178	182	719							SL 14398	
705	339	70.000000	0	182	178	730	150	178	182	717	719		SL 14399	
706	340	70.000000	0	199	198	514	713	711	727	767	194	198	SL 14400	
195	199	709	771	708	749	731	746	147	735	318			SL 14401	
707	341	70.000000	0	195	194	514	713	711	727	198	195	199	SL 14402	
709	771	708	706	749	731	146	147	735	318	767			SL 14403	
708	342	70.000000	0	194	198	731	147	194	198	713	711		SL 14404	
709	343	70.000000	0	194	198	711							SL 14405	
710	1	70.000000											SL 14406	
711	345	70.000000	0	727	514	713							SL 14407	
712	1	70.000000											SL 14408	
713	347	70.000000	0	514									SL 14409	
714	348	70.0	714	716	715	500	787	786	715	448	450	452	SL 14410	
453	456	460	461	462	464	465	466	467	470	475	478	483	600	SL 14411
604	606	608	612											SL 14412
715	349	70.		747	749	671	772	771						SL 14413
716	1	70.000000												SL 14414
717	351	70.000000	0	726										SL 14415
718	1	70.000000												SL 14416
719	353	70.000000	0	726	515	717								SL 14417
720	1	70.000000												SL 14418
721	355	70.000000	0	775	779	723								SL 14419
722	1	70.000000												SL 14420
723	357	70.000000	0	725	775	779								SL 14421
														SL 14422

Line ASCII - PAGE DATA

0	1	2	3	4	5	6	7	8
12345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901
724	1	70.						SL 14470
725	359	70.000000	0	775	779			SL 14474
726	360	70.000000	0					SL 14475
727	361	70.000000	0	713				SL 14476
728	362	70.	728	500	774	758	92	458
729	363	70.000000	0					SL 14477
730	364	70.000000	400	182	719	763		SL 14478
731	365	70.000000	400	769	711	729		SL 14479
732	282	70.0		89	90	91	92	93
345	346	454	455	457	458	459	474	477
733	366	70.0	733	500	782	560	89	90
463	476	484	485	487	607	620	622	623
734	367	70.000000	400	313	148	765	726	717
735	368	70.000000	400	311	749	315	772	749
736	284	70.0	736	448	450	452	453	462
500	600	604	606	608	713	714		
737	344	70.0	737	446	447	448	449	450
600	604	606	711	713	714	736		
738	346	70.0	738	89	90	91	93	94
345	346	454	455	457	500	516	607	614
739	350	70.0	739	89	90	91	92	93
306	345	346	454	455	457	500	516	607
723	732	733	738					
740	369	70.000000	0	728	443	728		
741	370	70.000000	0	158	742			
742	371	70.000000	0	157				
743	372	70.000000	0	166	701			
744	373	70.000000	0	146	161	701	162	
745	374	70.000000	0	179	149	150	148	717
746	375	70.000000	0	749	713	711		719
747	376	70.000000	747	745	734	748	438	214
748	377	70.0	748	726	500	786	450	451
478	479	481	483	714				
749	378	70.000000	0	747	750	438	214	400
750	379	70.0	750	727	500	786	447	448
471	473	475	714	736	737			
751	380	70.000000	0	753	759	761	773	777
752	1	70.000000						
753	382	70.000000	0	759	761			
754	383	70.000000	754	753	500			
755	384	70.000000	0	753	759	761	773	777
756	385	70.000000	756	500	92	93	94	91
516	782	614	610	457	458	345	545	89
482	484	485	607	620	626	732		
757	386	70.000000	0	763	770	781		
758	387	70.0	758	757	500	89	90	91
306	345	346	455	457	463	476	482	484
732	733	756						
759	388	70.000000	0	773				
760	1	70.000000						
761	390	70.000000	0	777				
762	1	70.000000						

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
763	392	70.000000	0	710	781												SL 14475
764	352	70.000000	764	89	90	91	93	95	96	138	306	345					SL 14476
346	454	455 457	474	476	477	500	516	607	614	711	721	723					SL 14477
732	733	738 739															14478
765	393	70.000000	400	313	766	717											SL 14479
766	394	70.000000	766	515	500	787	604	608	612	714							SL 14480
767	395	70.000000	400	315	735	147	768	731	735	318	713						SL 14481
768	396	70.0	768	514	500	787	604	606	608	714	736	737					SL 14482
766																	SL 14483
769	397	70.000000	0	729	770	366	649	368									SL 14484
770	398	70.000000	0	649	366	367											SL 14485
771	399	70.000000	0	339	735	318	713										SL 14486
772	400	70.000000	0	340	734	319	717										SL 14487
773	401	70.000000	0	167													SL 14488
774	402	70.0	774	773	500	89	90	93	94	95	138	306					SL 14489
345	346	455 457	463	476	482	484	485	487	516	614	620	732					SL 14490
733	756	758															SL 14491
775	403	70.000000	0	732	764												SL 14492
776	1	70.000000															SL 14493
777	405	70.000000	0														SL 14494
778	406	70.0	778	165	777	500	89	90	91	92	93	96					SL 14495
138	306	345 346	457	458	482	516	607	614	620	622	623	626					SL 14496
733	738	739 756															SL 14497
779	407	70.000000	0														SL 14498
780	408	70.0	780	779	500	89	90	91	92	93	94	138					SL 14499
306	345	346 455	457	458	516	607	614	620	622	623	626	733					SL 14500
738	739	756 764	778														SL 14501
781	409	70.000000	0														SL 14502
782	410	70.0	782	500	543	544	454	455	459	463	476	482					SL 14503
484	485	487 620	622	623	626	732	738	739	758	764	774	778					SL 14504
780																	SL 14505
783	411	70.000000	0	167	700	741	742	740									SL 14506
784	412	70.000000	0	167	700	785	798										SL 14507
785	413	70.000000	0	524													SL 14508
786	414	70.0		500	446	447	448	464	465	470	473	475					SL 14509
600	604	606 608	612	736	737	766	768										14510
787	415	70.0		799	500	435	447	448	450	451	452	453					SL 14511
456	459	460 461	462	464	465	466	467	470	471	473	475	478					SL 14512
479	481	483 604	608	612	736	737	748	750	786								SL 14513
788	354	70.0	788	450	456	460	461	462	464	466	467	483					SL 14514
500	600	604 608	612	714	717	748	766	786	787								SL 14515
789	356	70.0	789	435	451	456	459	460	461	462	464	466					SL 14516
481	500	600 608	612	714	717	719	748	766	786	787	788						SL 14517
790	358	70.0	790	91	92	458	459	463	482	484	485	500					SL 14518
620	751	758 774															SL 14519
791	381	70.0	791	461	462	464	466	467	500	600	608	612					SL 14520
714	748	751 786	787	788	789												SL 14521
792	389	70.0	792	93	94	95	138	500	614	620	751	778					SL 14522
782																	SL 14523
793	391	70.0	793	91	92	93	94	95	138	306	345	346					SL 14524
457	458	459 463	482	484	485	500	516	584	614	620	733	756					SL 14525
758	759	774 782															SL 14526

LH-4 ASCENT STAGE DATA

1		2		3		4		5		6		7		8	
234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
794	404	70.0		794	500	584									SL 14527
795	418	70.0		795	89	91	92	93	94	95	96	138	306		SL 14528
345	346	457	458	500	516	584	614	620	626	733	756	761	778		SL 14529
780	782	792	793												SL 14530
796	196	70.0		796	435	451	456	460	461	462	464	466	467		SL 14531
500	600	604	608	612	714	748	751	766	786	787	788	789	791		SL 14532
797	518	70.0		797	89	90	91	92	93	94	95	96	138		SL 14533
306	345	346	454	455	457	458	474	476	477	500	516	548	549		SL 14534
607	614	620	626	732	733	738	739	756	764	778	780	782			SL 14535
798	416	70.00000		0	522										SL 14536
799	417	70.0		799	500	671	604	608	714	736	766	766	786		SL 14537
788															SL 14538
800	1	70.0													SL 14539
801	521	70.0		801	89	90	91	92	93	94	95	96	138		SL 14540
306	345	346	454	455	457	458	459	463	474	476	477	484	485		SL 14541
487	500	516	548	549	607	614	620	622	623	626	732	733	738		SL 14542
739	756	758	764	774	778	780	782	793	795	797					SL 14543
802	419	70.00000		0	805	680	575	617	299	607					SL 14544
803	1	.00000		0											SL 14545
804	1	.00000		0											SL 14546
805	420	70.00000		0	680	575	617	299	623						SL 14547
806	1	70.													SL 14548
807	1	70.													SL 14549
808	1	70.													SL 14550
809	522	70.0			89	90	91	92	93	94	95	96	138		SL 14551
306	345	346	454	455	457	458	459	463	476	477	482	484	485		SL 14552
487	500	516	607	614	620	726	732	733	739	756	758	764	774		SL 14553
778	780	782	790	793	795	797	801								SL 14554
810	465	70.		655											SL 14555
811	523	70.0			89	90	91	92	93	94	95	96	138		SL 14556
306	345	346	455	457	458	500	516	607	614	620	622	623	626		SL 14557
733	738	739	756	758	764	774	778	780	782	792	793	795	797		SL 14558
801	809														SL 14559
812	524	70.0			89	90	91	92	93	94	95	96	138		SL 14560
306	345	346	454	455	457	458	477	500	516	607	614	620	622		SL 14561
623	626	732	733	738	739	756	764	778	780	782	795	797	801		SL 14562
809	811														SL 14563
813	525	70.0			89	90	91	92	93	94	95	96	138		SL 14564
306	345	346	454	455	457	458	459	463	474	476	477	484	485		SL 14565
487	500	516	607	614	620	732	733	738	739	756	758	764	774		SL 14566
778	780	782	797	801	809	811	812								SL 14567
814	421	70.			853	856	848	847	845						SL 14568
815	422	70.			814	855									SL 14569
816	423	70.			814	815	817								SL 14570
817	424	70.			814	815									SL 14571
818	425	70.			817	815	855								SL 14572
819	426	70.			820	816	817	818	830						SL 14573
820	427	70.			843	831	816	837							SL 14574
821	428	70.			820	822	833	827	819	816					SL 14575
822	429	70.			827	825	823	820	819	816					SL 14576
823	430	70.			825	819	827	830	817	818					SL 14577
824	431	70.			825	826	823	819	818	830	817				SL 14578

LM-6 ASCENT STAGE DATA

0										1										2										3										4										5										6										7										8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
1	1	2	2	3	3	4	4	5	5	6	6	7	7	14631	8	8	9	9	342	10	343	11	344	12	345	13	346	14	14632	347	15	552	16	555	16	687	16	695	16	89	50	90	50	14633	91	50	92	50	93	50	94	50	95	50	96	50	138	50	14634	499	51	786	52	787	52	809	50	811	50	812	50	813	50	14635	126														14636	138	1													14637							4	4	4						14638	168	11													14639	169	12	50												14640	170	13	51												14641	171	14	52	53	54										14642	172	15													14643	173	16	55												14644	174	17	56	57											14645	175	18	58	59											14646	176	8													14647	177	8													14648	180	7													14649	181	7													14650	192	8													14651	193	8													14652	196	7													14653	197	7													14654	304	1	3	3	3	3	3	3	3	3	3	3	3		14655	306	1		3	3									S	14656	362	1	0	5	0	4	4	5	5	0					14657	363	1	5	4	5	5	5								14658	364	1	5	4											14659	365	1	5	5											14660	435	1													14661	442	1	0	4											14662	443	1	0	4											14663	447	1													14664	448	1													14665	449	1													14666	450	1	3	3				3							14667	451	1													14668	452	1	3	0	0	3									14669	453	1	3	0	0	3		0							14670	454	1	3		3	3	3	3	3	3	3	3	3	3	14671	455	1				3	3	3	3	3	3	3	3	3	14672														3	3	14673	456	1													14674	457	1								3	3	3			14675	458	1							3	3	3	3	3		3	14676	3															14677	459	1	3			0	3	3	3	3	3	3	3		3	14678	3															14679	460	1	3	0	0	3	0									14680	461	1	3	0	0	3	0									14681	462	1	0	3	3	0	0	0								14682

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8		
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
																		14683
463	1	3	3	3	3	3	3	3		3	3							14684
																		14685
464	1			3	3												S	14686
465	1			3	3												S	14687
466	1		3	3														14688
																		14689
467	1		3	3														14690
																		14691
468	1	3	0	3														14692
469	1							3									S	14693
470	1	3															S	14694
471	1																	14695
474	1	3						3	3	3	3							14696
475	1																	14697
476	1			3	3	3	3	3	3	3			3	3				14698
																		14699
477	1	3		3	3	3	3											14700
478	1	3															S	14701
479	1																	14702
482	1	3				3	3	3	3									14703
483	1																	14704
484	1			3	3	3	3	3		3	3							14705
																		14706
485	1	3		3	3	3	3	3	3	3			3	3				14707
487	1							3	3	3	3			3	3			14708
																		14709
497	1						3		3									14710
512	1				3	3												14711
513	1	3															S	14712
516	1								0									14713
																		14714
519	1	0	4															14715
520	1	4																14716
543	1		3	3													S	14717
544	1		3														S	14718
545	1			3														14719
546	1			3	3													14720
547	1			3													S	14721
548	1		3														S	14722
549	1			3	3													14723
557	1	3															S	14724
558	1	3															S	14725
560	1			3													S	14726
591	10																	14727
594	1	4	4	0														14728
600	1	3	0	3	0	0	0											14729
604	1				3													14730
606	1			3														14731
607	1	3	3	3	3	3	3	3	3	3	3			3	3			14732
																		14733
608	1							3		3			3					14734

LM-6 ASCENT STAGE DATA

	0		1		2		3		4		5		6		7		8			
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
782	1																			14787
			3																	14788
788	1	*																		14789
			3					3	3											14790
789	1													3						14791
										3	3	3								14792
790	1	3	3													3				14793
																				14794
791	1																3			14795
	3	3																		14796
792	1	3	3	3	3							3								14797
793	1	3	3	3	3	3	3	3	3		3	3								14798
						3											3			14799
																				14800
794	1		3																	14801
795	1	3	3	3	3	3	3	3	3	3	3			3	3					14802
						3								3						14803
																				14804
796	1																			14805
																				14806
797	1	3	3	3	3	3	3	3	3	3	3						3	3		14807
	3																			14808
																				14809
799	1		3											3						14810
801	1	3	3	3	3	3	3	3	3	3	3			3			3	3		14811
																				14812
																				14813
																				14814
31	4	1																		14815
																				14816
																				14817
10	50	1																		14818
																				14819
10	51	1																		14820
																				14821
10	52	1																		14822
																				14823
30	6	1																		14824
																				14825
30	7	1																		14826
																				14827
30	8	1																		14828
																				14829
30	9	1																		14830
																				14831
30	10	1																		14832
																				14833
30	11	1																		14834
																				14835
30	12	1																		14836
																				14837
30	13	1																		14838
																				14838

D/S INTERSTAGE CONDUCTANCE CONNECTIONS

D/S TEMP. HISTORY UNSTAGED=-1000 STAGED=-459.69

DOCKING TUNNEL RAD CONN DOCKED=700 UNDOCKED=-459.

CSM SIMULATOR DOCKED=-50 UNDOCKED=-459.69

RCS +Y,-Y HE TANK NORMALIZED DEPLETION

RCS +,-Y NORMALIZED FUEL TANK DEPLETION

RCS +,-Y NORMALIZED OXID DEPLETION

APS HE NORMALIZED DEPLETION

GOX TANK NORMALIZED DEPLETION

MAIN FUEL NODE 168 DEPLETION

MAIN FUEL NODE 169 DEPLETION

MAIN FUEL NODE 170 DEPLETION

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
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30	14	1															14839
			1.0														14840
30	15	1															14841
			1.0														14842
30	16	1															14843
			1.0														14844
30	17	1															14845
			1.0														14846
30	18	1															14847
			1.0														14848
31	50	1															14849
			1.0														14850
31	51	1															14851
			1.0														14852
31	52	1															14853
			1.0														14854
31	53	1															14855
			1.0														14856
31	54	1															14857
			1.0														14858
31	55	1															14859
			1.0														14860
31	56	1															14861
			1.0														14862
31	57	1															14863
			1.0														14864
31	58	1															14865
			1.0														14866
31	59	1															14867
			1.0														14868
32	2	1															14869
			0.0														14870
32	1	1															14871
			1.0														14872
32	3	1															14873
			1.20														14874
32	4	1															14875
			1.0														14876
32	5	1															14877
			0.0														14878
30	1	1															14879
			1.0														14880
24	1602	1															14881
			.95														14882
24	1702	1															14883
			1.59														14884
24	1802	1															14885
			1.65														14886
24	1902	1															14887
			2.18														14888
24	2002	1															14889
			1.124														14890

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
24	4702		1														14943
			.697														14944
24	4802		1														14945
			.978														14946
24	4902		1														14947
			.78														14948
0	20	14															14949
	0.	200.		250.		300.		400.		500.		600.		10000.			14950
	700.	800.		900.		1000.		1500.		2000.		2000.		10000.			14951
	0.	135.1		125.2		117.9		106.4		101.5		99.1		99.1			14952
	96.2	93.5		90.		87.		80.		78.6		78.6		78.6			14953
0	22	14															14954
	0.	210.		250.		300.		400.		500.		600.		10000.			14955
	700.	800.		900.		1000.		1500.		2000.		2000.		10000.			14956
	0.	339.		318.		298.		271.		255.		245.		245.			14957
	238.	232.		226.		221.		208.		204.		204.		204.			14958
0	23	14															14959
	0.	200.		250.		300.		400.		500.		600.		10000.			14960
700.	800.		900.		1000.		1500.		2000.		2000.		10000.				14961
0.	314.8		298.3		286.4		266.9		253.4		242.9		242.9				14962
235.4	228.		223.		219.		208.5		208.5		208.5		208.5				14963
0	24	14															14964
	0.	200.		250.		300.		400.		500.		600.		10000.			14965
	700.	800.		900.		1000.		1500.		2000.		2000.		10000.			14966
	0.	37.9		34.8		32.8		29.9		28.6		28.6		28.6			14967
	27.6	26.9		25.7		24.7		22.2		21.5		21.5		21.5			14968
0	102		1														14969
			.867														14970
0	202		1														14971
			1.4244														14972
0	302		1														14973
			4.0886														14974
0	402		1														14975
			2.056														14976
0	502		1														14977
			1.548														14978
0	602		1														14979
			.0665														14980
0	702		1														14981
			5.335														14982
0	26		1														14983
			0.02														14984
1	11		9														14985
	0.0		40.		70.		80.		90.		120.		160.				14986
	200.		600.		62.42		62.42		62.27		62.17		62.11				14987
	61.73		61.01		60.13		42.37										14988
4	12		6														14989
	0.0		32.		120.		180.		200.		600.		.327				14990
	.327		.372		.389		.392		.356								14991
5	13		7														14992
	0.		32.		60.		90.		120.		200.		600.				14993
	1.009		1.009		1.000		.997		.997		1.004		1.362				14994

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8		
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	
2	14	7															14995	
0.	32.	60.	100.	150.	200.	600.											14996	
6000.	1,202	.7527	.4583	.2888	.2055	.0583											14997	
1	7	12	WATER VISCOSITY CURVE,														14998	
-40.	0.	20.	40.	60.	80.	100.											14999	
120.	140.	160.	180.	200.	66.45	66.00											15000	
65.84	65.61	65.36	65.05	64.6 ⁹	64.30	63.8 ⁹											15001	
63.44	63.00	62.52	DENSITY 35-65 GLYCOL-WATER LEM ECS														15002	
2	10	19	VISCOSITY 35-65 GLYCOL-WATER LEM ECS														15003	
-50.	0.	10.	20.	30.	40.	50.											15004	
60.	70.	80.	90.	100.	110.	120.											15005	
130.	140.	150.	175.	200.	166.67	8,055											15006	
5.722	4,388	3.388	2.777	2.305	1.944	1.638											15007	
1.402	1.208	1.041	.913	.805	.719	.641											15008	
.580	.469	.391	WMS TURBULENT FLOW FRICTION FACTOR														15009	
3	130	7	4.0	10.0	25.0	100.0	1000.0											15010
0.	2.0	10.0	8.25	6.25	4.50	3.75											15011	
0.	12.5	10.0	FRICTION FACTOR CURVE														15012	
3	11	15	4.	4.5	5.	5.5	6.											15013
0.	2.	4.	4.5	5.	5.5	6.											15014	
7.	8.	10.	12.	14.	100.	1000.											15015	
10000.	0.	8.	10.	9.6	9.3	9.											15016	
8.8	8.45	8.15	7.75	7.45	7.2	4.475											15017	
2.875	2.	K 35-65 GLYCOL-WATER LEM ECS														15018		
4	8	2	.2695	.2790													15019	
-40.	200.	CP 35-65 GLYCOL-WATER LEM ECS														15020		
5	9	12	20.	40.	60.	80.	100.											15021
-40.	0.	20.	40.	60.	80.	100.											15022	
120.	140.	160.	180.	200.	.80	.832											15023	
.8435	.8545	.8640	.8730	.8810	.8890	.8965											15024	
.9035	.9105	.9170	PRIMARY PUMP CURVE ITEM 290														15025	
11	15	3	35000.0	328.	258.	0.0											15026	
0.0	32000.0	35000.0	328.	258.													15027	
11	99	15	SECONDARY PUMP CURVE														15028	
0.0	7500.	10000.	12500.	15000.	17500.	20000.											15029	
22500.	25000.	27500.	30000.	32500.	33750.	34750.											15030	
35000.	262.0	257.4	255.4	252.0	248.3	244.4											15031	
240.2	235.1	230.5	226.4	222.1	212.2	198.0											15032	
158.0	0.0	HEAT TRANS. COEFF. FOR COLDRAILS														15033		
24	1	1															15034	
		1.	HEAT TRANS COEFF FOR GLYCOL SIDE 106 H/X														15035	
24	106	1															15036	
1.			HEAT TRANS COEFF FOR GLYCOL SIDE 101 H/X														15037	
24	101	1															15038	
1.			HEAT TRANS COEFF FOR GLYCOL SIDE 111 H/X														15039	
24	111	1															15040	
1.			HEAT TRANS COEFF FOR COLD SIDE 204 REGEN														15041	
24	2041	1															15042	
1.			HEAT TRANS COEFF FOR HOT SIDE 204 REGEN														15043	
24	2042	1															15044	
1.			HEAT TRANS COEFF. FOR -607 COLDPLATE														15045	
24	607	13															15046	

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0	1		2		3		4		5		6		7		8			
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
	0.	15.	20.	25.	30.	35.	40.										15047	
	45.	50.	55.	60.	65.	200.	230.										15048	
	277.	340.	339.	365.	388.	410.	428.										15049	
	445.	462.	479.	495.	585.												15050	
24	609	13	HEAT TRANS COEFF FOR -609 COLDPLATE													15051		
	0.	15.	20.	25.	30.	35.	40.										15052	
	45.	50.	55.	60.	65.	100.	36.										15053	
	37.	37.5	38.	38.5	38.9	39.	39.2										15054	
	39.5	39.8	40.	40.1	41.												15055	
24	612	13	HEAT TRANS COEFF FOR -612 COLDPLATE													15056		
	0.	15.	20.	25.	30.	35.	40.										15057	
	45.	50.	55.	60.	65.	100.	10.										15058	
	20.4	34.	47.	61.	75.	88.	103.										15059	
	118.	132.	147.	162.	270.												15060	
24	613	13	HEAT TRANS COEFF FOR -613 COLDPLATE													15061		
	0.	15.	20.	25.	30.	35.	40.										15062	
	45.	50.	55.	60.	65.	100.	230.										15063	
	276.	314.	348.	376.	402.	429.	450.										15064	
	473.	492.	512.	530.	644.												15065	
24	614	13	HEAT TRANS COEFF FOR -614 COLDPLATE													15066		
	0.	15.	20.	25.	30.	35.	40.										15067	
	45.	50.	55.	60.	65.	100.	215.										15068	
	288.	338.	377.	412.	448.	475.	495.										15069	
	510.	525.	539.	549.	582.												15070	
24	615	13	HEAT TRANS COEFF FOR -615 COLDPLATE													15071		
	0.	15.	20.	25.	30.	35.	40.										15072	
	45.	50.	55.	60.	65.	100.	250.										15073	
	264.	273.	280.	286.	291.	296.	300.										15074	
	304.	308.	310.	312.	319.												15075	
24	616	13	HEAT TRANS COEFF FOR -616 COLDPLATE													15076		
	0.	15.	20.	25.	30.	35.	40.										15077	
	45.	50.	55.	60.	65.	100.	185.										15078	
	210.	230.	245.	259.	270.	282.	292.										15079	
	301.	310.	320.	328.	370.												15080	
24	617	13	HEAT TRANS COEFF FOR -617 COLDPLATE													15081		
	0.	15.	20.	25.	30.	35.	40.										15082	
	45.	50.	55.	60.	65.	100.	35.										15083	
	59.	81.	103.	120.	140.	153.	165.										15084	
	177.	190.	200.	207.	235.												15085	
24	618	13	HEAT TRANS COEFF FOR -618 COLDPLATE													15086		
	0.	15.	20.	25.	30.	35.	40.										15087	
	45.	50.	55.	60.	65.	100.	120.										15088	
	142.	159.	175.	188.	201.	211.	222.										15089	
	232.	241.	250.	257.	308.												15090	
24	619	13	HEAT TRANS COEFF FOR -619 COLDPLATE													15091		
	0.	15.	20.	25.	30.	35.	40.										15092	
	45.	50.	55.	60.	65.	100.	110.										15093	
	135.	154.	170.	185.	197.	209.	220.										15094	
	230.	240.	247.	255.	292.												15095	
24	620	13	HEAT TRANS COEFF FOR -620 COLDPLATE													15096		
	0.	15.	20.	25.	30.	35.	40.										15097	
	45.	50.	55.	60.	65.	90.	340.										15098	

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0										1										2										3										4										5										6										7										8																			
										378.										402.										430.										449.										465.										480.										495.										15099																			
										510.										520.										530.										540.										588.																														15100																			
24					621					11					HEAT TRANS COEFF FOR -621 COLDPLATE																																								15101																																												
										0.										10.										15.										20.										25.										30.										35.										15102																			
										40.										45.										50.										65.										100.										171.										256.										15103																			
										339.										421.										502.										585.										670.										755.										840.										15104																			
										1090.																																																																																15105									
24					622					14					HEAT TRANS COEFF FOR -622 COLDPLATE																																																		15106																																		
										0.										20.										25.										30.										35.										40.										45.										15107																			
										50.										55.										60.										65.										70.										75.										100.										15108																			
										100.										155.										184.										210.										235.										260.										282.										15109																			
										305.										328.										350.										370.										390.										411.										508.										15110																			
24					623					19					HEAT TRANS COEFF FOR -623 COLDPLATE																																																		15111																																		
										0.										15.										20.										25.										30.										35.										40.										15112																			
										45.										50.										55.										60.										65.										70.										75.										15113																			
										80.										85.										90.										95.										100.										150.										257.										15114																			
										379.										510.										650.										810.										965.										1140.										1310.										15115																			
										1490.										1670.										1800.										2100.										2300.										2400.										2800.										15116																			
										3000.										3200.										3300.																																																												15117									
24					624					11					HEAT TRANS COEFF FOR -624 COLDPLATE																																																		15118																																		
										0.										10.										15.										20.										25.										30.										35.										15119																			
										40.										45.										50.										90.										100.										120.										176.										15120																			
										231.										286.										342.										399.										451.										505.										560.										15121																			
										975.																																																																																15122									
24					625					11					HEAT TRANS COEFF FOR -625 COLDPLATE																																																		15123																																		
										0.										10.										15.										20.										25.										30.										35.										15124																			
										40.										45.										50.										100.										400.										445.										500.										15125																			
										540.										575.										600.										630.										650.										670.										690.										15126																			
										835.																																																																																15127									
24					626					11					HEAT TRANS COEFF FOR -626 COLDPLATE																																																		15128																																		
										0.										10.										15.										20.										25.										30.										35.										15129																			
										40.										45.										50.										100.										100.										170.										230.										15130																			
										284.										333.										382.										430.										472.										515.										560.										15131																			
										910.																																																																																15132									
24					627					12					HEAT TRANS COEFF FOR -627 COLDPLATE																																																		15133																																		
										0.										15.										20.										25.										30.										35.										40.										15134																			
										45.										50.										55.										60.										100.										100.										200.										15135																			
										225.										248.										268.										286.										302.										319.										331.										15136																			
										344.										358.										440.																																																												15137									
24					628					9					HEAT TRANS COEFF FOR -628 COLDPLATE																																																		15138																																		
										0.										5.										10.										15.										20.										25.										30.										15139																			
										35.										60.										100.										185.										310.										409.										500.										15140																			
										581.										645.										740.										1070.																																																		15141									
24					629					8					HEAT TRANS COEFF FOR -629 COLDPLATE																																																		15142																																		
										0.										5.										10.										15.										20.										25.										30.										15143																			
										60.										200.										204.										350.										475.										590.										700.										15144																			
										805.										1350.																																																																						15145									
24					2609					7					HEAT TRANS COEFF FOR -609 C/P RED PASSAGE																																																		15146																																		
										0.										25.8										32.2										38.6										48.3										64.4										150.										15147																			
										90.										92.										94.										95.										96.										97.										97.										15148																			
24					2623					12					HEAT TRANS COEFF FOR -623 C/P RED PASSAGE																																																		15149																																		
										0.										35.										50.										60.										65.										70.										75.										15150																			

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	1	2	3	4	5	6	7	8
234567890	234567890	234567890	234567890	234567890	234567890	234567890	234567890	234567890
	80.	85.	90.	100.	150.	100.	261.	15151
	320.	355.	370.	390.	400.	420.	430.	15152
	445.	475.	595.					15153
24 1502	1							15154
		2.55						15155
16 2 6	2	1						15156
				SEC				
100. 222. 250. 270. 290. 310. 32.0	90.	1.0	32. 55.75	32. 57.90	32.			15157
0.45 32. 61.90 32. 63.40 32. 64.65								15158
16 1 6 2 1								15159
				PRI				
100. 222. 250. 270. 290. 310. 32. 90.	1.0	32. 32.80	32. 33.25	32.				15160
3.90 32. 34.50 32. 35.10 32. 35.70								15161
33 5001	1	1	1					15162
				CABIN DELTA P				
		.0072						15163
33 1013	6	3	1					15164
				DELTA P CURVE FOR CABIN HX ITEM 101				
0. 30. 223. 5256. 5288. 0300. 0	32. 55.5	80. 1. 0. 0. 0. 0. 2565						15165
2208. 01691. 114. 8147. 63591. 377. 9954. 74611. 6811. 189. 8861. 6951. 245. 902								15166
33 1010	5	4	1					15167
				DELTA P CURVE FOR SUIT HX ITEM 106				
0. 30. 96. 138. 250. 31.7 40.1 50.4 100. 1. 0. 0. 0. 0.								15168
0371. 022. 006. 006. 163. 1427. 1154. 1154. 2428. 22. 1863. 1863. 4563. 425								15169
3727. 3727								15170
33 1014	12	4	1					15171
				DELTA P CURVE FOR SUIT HX ITEM 111				
0. 54. 66. 78. 90. 102. 114. 126. 138. 150. 250. 350. 50. 70.								15172
90. 120. 1. 0. 0. 0. 0. 138. 099. 074. 067. 163. 117. 092								15173
0785. 19. 137. 11. 092. 22. 159. 128. 104. 255. 1845. 1475. 118. 292								15174
21. 1675. 1325. 33. 2375. 189. 147. 372. 2675. 2125. 163. 416. 298. 239								15175
18. 86. 575. 46. 34. 1.78 1.11. 885. 642								15176
33 1015	12	1	1					15177
				DELTA P CURVE FOR 203 SENSOR				
0. 35. 50. 75. 100. 125. 150. 175. 200. 225. 250. 300. 50. 1.								15178
0. 010. 02. 046. 082. 13. 185. 248. 325. 405. 51. 78								15179
33 1012	10	3	1					15180
				DELTA P CURVE FOR 204 REGEN COLDSIDE				
0. 30. 60. 90. 120. 150. 180. 210. 240. 270. 32. 50. 80. 1.								15181
0. 0. 0. 0036. 0081. 0011. 0101. 0081. 0072. 0199. 0163. 0137. 0316. 0271								15182
0226. 047. 0389. 0325. 066. 0516. 0434. 0868. 065. 0543. 1085. 0795. 0659. 1355								15183
0972. 0799								15184
33 1020	10	1	1					15185
				DELTA P CURVE FOR 204 REGEN HOTSIDE				
0. 90. 100. 125. 150. 175. 200. 225. 250. 300. 67.5 1. 0. 070								15186
082. 114. 15. 189. 23. 274. 32. 46								15187
33 1009	8	5	1					15188
				DELTA P CURVE FOR -209 SUBLIMATOR				
0. 50. 100. 150. 175. 200. 250. 300. 45. 60. 80. 100. 120. 1.								15189
0. 0. 0. 0. 0. 5149. 4408. 4010. 3902. 38661. 019. 8671. 7949. 7660								15190
75871. 5251. 3191. 1921. 1241. 0731. 7851. 5361. 3981. 2931. 2102. 0271. 7561. 590								15191
4561. 3372. 5362. 1861. 9871. 7631. 5723. 0532. 6232. 3922. 0591. 792								15192
33 1016	1	1	1					15193
				DELTA P CURVE FOR 221 FREON BOILER				
0. 0. 0. 1265								15194
33 1017	6	5	1					15195
				DELTA P CURVE FOR -224 SUBLIMATOR				
0. 100. 150. 200. 250. 300. 40. 60. 80. 100. 120. 1. 0. 0.								15196
0. 0. 0. 451. 3865. 329. 314. 307. 684. 581. 506. 455. 398. 931								15197
785. 686. 61. 5391. 191. 1. 01. 889. 785. 669. 1. 481. 2591. 135. 99. 832								15198
33 1004	9	2	1					15199
				DELTA P CURVE FOR -612 COLDPLATE				
0. 15. 20. 25. 30. 35. 40. 45. 60. 32. 100. 1. 0. 0.								15200
0385. 0265. 064. 044. 093. 0645. 129. 087. 169. 114. 211. 142. 260. 175								15201
43. 285								15202

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0		1		2		3		4		5		6		7		8		
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	
33	1003	9	1	1	DELTA P CURVE FOR -615 COLDPLATE												15203	
0.	15.	20.	25.	30.	35.	40.	45.	60.	32.	1.	0.	.041	.062				15204	
.086	.112	.142	.174	.21	.325												15205	
33	1002	13	2	1	DELTA P CURVE FOR -618 COLDPLATE												15206	
0.	15.	20.	25.	30.	35.	40.	45.	60.	80.	100.	120.	150.	32.				15207	
100.	1.	0.	0.	.024	.0132	.035	.0192	.047	.0261	.061	.0345	.086	.044				15208	
.0925	.0545	.110	.068	.17	.11	.265	.179	.375	.265	.5	.365	.75	.55				15209	
33	1001	11	2	1	DELTA P CURVE FOR -621 COLDPLATE												15210	
0.	15.	20.	25.	30.	35.	40.	60.	80.	100.	200.	32.	100.	1.				15211	
0.	0.	.09	.051	.129	.071	.172	.095	.224	.124	.27	.158	.345	.192				15212	
.7	.392	.015	.7	1.5	1.01	3.	2.											15213
33	1006	14	2	1	DELTA P CURVE FOR -623 COLDPLATE												15214	
0.	15.	20.	25.	30.	35.	40.	45.	50.	60.	70.	80.	90.	100.				15215	
32.	100.	1.	0.	0.	.043	.027	.063	.043	.084	.057	.11	.074	.139				15216	
.093	.17	.115	.210	.139	.25	.169	.35	.234	.48	.31	.61	.40	.79				15217	
.50	.95	.6															15218	
33	1005	12	2	1	DELTA P CURVE FOR -625 COLDPLATE												15219	
0.	10.	15.	20.	25.	30.	35.	40.	45.	60.	100.	200.	32.	100.				15220	
1.	0.	0.	.056	.04	.091	.066	.131	.095	.176	.13	.228	.17	.29				15221	
.22	.365	.275	.445	.34	.75	.68	1.7	1.5	3.4	3.							15222	
33	1008	8	2	1	DELTA P CURVE FOR -628 COLDPLATE												15223	
0.	5.	10.	15.	20.	25.	30.	40.	32.	100.	1.	0.	0.	.033				15224	
.027	.085	.072	.152	.131	.24	.21	.35	.305	.48	.43	.88	.79					15225	
33	1007	8	2	1	DELTA P CURVE FOR -629 COLDPLATE												15226	
0.	5.	10.	15.	20.	25.	30.	40.	32.	100.	1.	0.	0.	.035				15227	
.028	.082	.072	.145	.13	.23	.21	.34	.31	.49	.445	.95	.85					15228	
33	1021	7	1	1	DELTA P CURVE FOR INTERSTAGE FLEX HOSE												15229	
0.	37.	56.	75.	94.	150.	220.	1.	1.	0.	.0165	.025	.033	.042				15230	
.0675	.0675															15231		
33	1022	5	1	1	DELTA P CURVE FOR INTERSTAGE DISCONNECT												15232	
0.	75.	100.	150.	220.	1.	1.	0.	.09	.10	.13	.13						15233	
33	1025	4	5	1	DELTA P CURVE FOR JMU												15234	
0.	31.5	40.0	50.0	30.0	40.0	50.0	75.0	100.0	1.0	0.0	0.0	0.0	0.0	0.0				15235
0.0	0.4	0.34	0.3	0.240	1.970	5.260	4.660	4.040	3.330	2.73	0.670	6.360	5.71				15236	
0.4680	.402															15237		
33	2001	11	2	1	DELTA P CURVE FOR -623 C/P REDUNDANT PASS.												15238	
0.	35.	50.	60.	65.	70.	75.	80.	85.	90.	100.	32.	100.	1.				15239	
0.	0.	.067	.035	.102	.061	.131	.083	.15	.095	.169	.110	.190	.126				15240	
.215	.142	.24	.16	.265	.18	.34	.23											15241
33	4001	5	6	1	DELTA P CURVE FOR LUMP 63												15242	
0.	30.	60.	90.	120.	30.	40.	60.	80.	100.	120.	1.	0.	0.				15243	
0.	0.	0.	0.	1.80	1.42	.99	.76	.58	.39	3.0	3.02	2.15	1.7				15244	
1.35	1.03	5.5	4.82	3.55	2.04	2.32	1.9	7.6	6.79	5.11	4.16	3.46	2.9				15245	
33	4002	3	6	1	DELTA P CURVE LUMPS 66,71,74,82,85,88,92												15246	
0.	20.	120.	30.	40.	60.	80.	100.	120.	1.	0.	0.	0.	0.				15247	
0.	0.	1.22	1.06	.65	.51	.39	.30	7.6	6.2	4.72	3.7	2.8	2.1				15248	
33	4009	6	6	1	DELTA P CURVE LUMPS 7,8,9 AND 10												15249	
0.	20.	40.	60.	80.	90.	30.	40.	60.	80.	100.	120.	1.	0.				15250	
0.	0.	0.	0.	0.	1.3	1.02	.74	.56	.45	.39	1.97	1.6	1.15				15251	
.9	.74	.65	2.75	2.28	1.65	1.31	1.1	1.	3.7	3.12	2.34	1.91	1.6				15252	
1.36	4.3	3.67	2.78	2.29	1.93	1.66											15253	
33	4013	6	6	1	DELTA P CURVE LUMPS 159,163 AND 167												15254	

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
12345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901	2345678901
0.	20.	40.	60.	80.	90.	30.	40.	60.
0.	0.	0.	0.	0.	.90	.68	.51	.4
.98	.8	.65	3.16	2.7	2.05	1.65	1.4	1.12
1.7	5.1	4.42	3.5	2.95	2.46	2.		
33	4016	4	6	1	DELTA P CURVE LUMPS 172,227 AND 228			
0.	30.	60.	90.	30.	40.	60.	80.	100.
0.	0.	0.	1.35	1.08	.82	.6	.48	.39
.9	4.55	4.01	3.05	2.56	2.20	1.80		
33	4047	5	6	1	GLYCOL FILTER DELTA P CURVE			
0.	100.	200.	300.	400.	30.	40.	60.	80.
0.	0.	0.	0.	.0414	.0339	.0231	.0171	.0126
.0257	.0204	.1246	.1026	.0706	.0526	.0391	.0309	.168
14	1	4						
0.		10.45		10.46		24.		650.
520.							650.	520.
15	2	1			EFF. CURVE FOR MAN			
		8.						
24	102	1			O2 TO MAN HEAT TRANS. COEFF.			
		2.						
34	21	1			PSEUDO HUMIDITY CURVE			
		0.						
34	20	1			TV-4 CABIN PRESS			
		4.8						
34	1	1			SUIT FAN			
		1.						
34	2	1			LIQH CANNISTER TV-3			
			1.0					
34	3	1			WATER SEPARATOR TV-3			
			1.0					
34	4	1			SUIT-CABIN DIV VALVE			
		1.						
34	5	1			CABIN FAN			
		1.						
34	7	4			D/S FLOW CONTROL			
0.		9.45		9.458		24.		1.
0.							1.	0.
34	9	1			SUIT HEATER			
		0.						
34	10	1			PRIGLY			
		1.						
34	11	4			SECONDARY GLYCOL			
	0.0	8.45		8.458		24.		0.0
	1.0						0.0	1.0
34	12	4			PRISUB			
0.		9.45		9.458		24.		1.
0.							1.	0.
34	13	6			SECONDARY SUBLIMATOR			
	0.0	8.45		8.458		9.45		9.458
	0.0	1.0		1.0		0.0		0.0
34	22	1			IMU HTR			
		1.0						
34	23	1			ASA HTR			

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
																	15307
34	36	1	1.0														15308
																	15309
34	34	1	2.0														15310
																	15311
34	35	1	0.0														15312
																	15313
35	1	1	1.0														15314
																	15315
10	1	1	1.0														15316
																	15317
10	2	1	70.														15318
																	15319
10	3	1	70.														15320
																	15321
10	4	1	70.														15322
																	15323
10	5	1	70.														15324
																	15325
10	6	1	70.														15326
																	15327
10	7	1	70.														15328
																	15329
10	8	1	70.														15330
																	15331
10	9	1	70.														15332
																	15333
10	10	1	70.														15334
																	15335
10	11	1	70.														15336
																	15337
10	12	1	70.														15338
																	15339
10	13	1	70.														15340
																	15341
10	14	1	70.														15342
																	15343
10	15	1	70.														15344
																	15345
10	16	1	70.														15346
																	15347
19	26	4	140.														15348
0.	0.	9.45		9.46													15349
																	15350
19	30	4															15351
0.	0.	9.45		9.46													15352
																	15353
19	27	4															15354
0.	0.	9.45		9.46													15355
																	15356
19	200	1															15357
																	15358

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
19	220	1		PTA CASE 1,2				15359
		213.						15360
19	223	1		IMU CASE 1,2				15361
		97.2						15362
19	224	1		RG A CASE 1,2,3				15363
		31.06						15364
19	397	1		PANEL 3 TL397 CASE 1,2,3				15365
		10.41						15366
19	231	1		PANEL 6 TL400				15367
		0.						15368
19	233	1		PANEL 10 TL402				15369
		0.						15370
19	245	1		GASTA CASE 1,2				15371
		62.13						15372
19	246	1		LCA CASE 1,2,3				15373
		88.74						15374
19	273	1		TRACKING LIGHT ASSY				15375
								15376
19	381	1		ABS HEAT +Y WINDOW SHADE				15377
								15378
19	382	1		ABS HEAT -Y WINDOW SHADE				15379
								15380
19	383	1		ABS HEAT -Y FG RETAINER				15381
								15382
19	384	1		ABS HEAT ON DOCK WINDOW SHADE				15383
								15384
19	394	1		AOT				15385
		31.74						15386
19	395	1		PANEL 1 TL395 CASE 1,2				15387
		206.2						15388
19	396	1		PANEL 2 TL396 CASE 1,2				15389
		27.48						15390
19	398	1		PANEL 4 TL398 CASE 1,2				15391
		17.07						15392
19	399	1		PANEL 5 TL399 CASE 1,2,3				15393
		11.95						15394
19	400	1		WIRING DISSIPATION				15395
		0.						15396
19	401	1		PANEL 8 TL 401				15397
		0.						15398
19	403	1		PANEL 11 TL 403				15399
		0.						15400
19	404	1		PANEL 12 TL404 CASE 1,2,3				15401
		9.56						15402
19	405	1		PANEL 14 TL405 CASE 1,2,3				15403
		31.41						15404
19	406	1		PANEL 16 TL406				15405
		0.						15406
19	409	1		FLOOD LIGHTS/				15407
		233.86						15408
19	419	1		LGC				15409
		133.15						15410

LM-6 ASCENT STAGE DATA

0		1		2		3		4		5		6		7		8	
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
19	.420	1															15411
		95.9															15412
19	421	1															15413
		290.1															15414
19	422	1															15415
		9.215															15416
19	439	1															15417
		0.															15418
19	447	1															15419
		0.															15420
19	448	1															15421
		0.															15422
19	449	1															15423
		0.															15424
19	456	1															15425
		0.															15426
19	636	1															15427
		399.44															15428
19	637	1															15429
		42.68															15430
19	638	1															15431
		35.15															15432
19	639	1															15433
		35.51															15434
19	640	4															15435
0.		9.45	9.46							0.			18.77				15436
18.77		0.								0.			0.				15437
19	641	4															15438
0.		9.45	9.46							0.			511.95				15439
511.95		0.								0.			0.				15440
19	642	4															15441
0.		9.45	9.46							0.			511.95				15442
511.95		0.								0.			0.				15443
19	643	4															15444
0.		9.45	9.46							0.			18.77				15445
18.77		0.								0.			0.				15446
19	644	1															15447
		46.42															15448
19	645	1															15449
		0.															15450
19	646	1															15451
		143.35															15452
19	647	1															15453
		245.74															15454
19	648	1															15455
		290.1															15456
19	651	1															15457
		23.38															15458
19	652	1															15459
		193.86															15460
19	653	1															15461
		120.48															15462

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
19	654	1						15463
								15464
19	655	1						15465
								15466
19	100	1						15467
								15468
19	473	1						15469
								15470
19	481	1						15471
								15472
19	307	1						15473
								15474
19	490	1						15475
								15476
19	492	1						15477
								15478
19	494	1						15479
								15480
19	495	1						15481
								15482
19	491	1						15483
								15484
19	499	1						15485
								15486
19	671	1						15487
								15488
19	747	1						15489
								15490
19	315	1						15491
								15492
19	304	1						15493
								15494
19	496	1						15495
								15496
19	498	1						15497
								15498
9	306	1						15499
								15500
9	345	1						15501
								15502
9	346	1						15503
								15504
9	435	1						15505
								15506
9	446	1						15507
								15508
9	447	1						15509
								15510
9	448	1						15511
								15512
9	449	1						15513
								15514

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
9	450	1		ABSORBED HEAT ON NODE NO. 450				15515
								15516
9	451	1		ABSORBED HEAT ON NODE NO. 451		451		15517
								15518
9	452	1		ABSORBED HEAT ON NODE NO. 452				15519
								15520
9	453	1		ABSORBED HEAT ON NODE NO. 453				15521
								15522
9	454	1		ABSORBED HEAT ON NODE NO. 454				15523
								15524
9	455	1		ABSORBED HEAT ON NODE NO. 455				15525
								15526
9	457	1		ABSORBED HEAT ON NODE NO. 457				15527
								15528
9	458	1		ABSORBED HEAT ON NODE NO. 458				15529
								15530
9	459	1		ABSORBED HEAT ON NODE NO. 459				15531
								15532
9	460	1		ABSORBED HEAT ON NODE NO. 460				15533
								15534
9	461	1		ABSORBED HEAT ON NODE NO. 461				15535
								15536
9	462	1		ABSORBED HEAT ON NODE NO. 462				15537
								15538
9	463	1		ABSORBED HEAT ON NODE NO. 463		463		15539
								15540
9	464	1		ABSORBED HEAT ON NODE NO. 464				15541
								15542
9	465	1		ABSORBED HEAT ON NODE NO. 465				15543
								15544
9	466	1		ABSORBED HEAT ON NODE NO. 466				15545
								15546
9	467	1		ABSORBED HEAT ON NODE NO. 467				15547
								15548
9	468	1		ABSORBED HEAT ON NODE NO. 468				15549
								15550
9	469	1		ABSORBED HEAT ON NODE NO. 469				15551
								15552
9	470	1		ABSORBED HEAT ON NODE NO. 470				15553
								15554
9	471	1		ABSORBED HEAT ON NODE NO. 471				15555
								15556
9	472	1		ABSORBED HEAT ON NODE NO. 472				15557
								15558
9	474	1		ABSORBED HEAT ON NODE NO. 474				15559
								15560
9	475	1		ABSORBED HEAT ON NODE NO. 475				15561
								15562
9	476	1		ABSORBED HEAT ON NODE NO. 476				15563
								15564
9	477	1		ABSORBED HEAT ON NODE NO. 477				15565
								15566

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
9	478	1						15567
9	479	1						15568
9	480	1						15569
9	482	1						15570
9	483	1						15571
9	484	1						15572
9	485	1						15573
9	487	1						15574
9	497	1						15575
9	512	1						15576
9	513	1						15577
9	516	1						15578
9	600	1						15579
9	604	1						15580
9	606	1						15581
9	607	1						15582
9	608	1						15583
9	612	1						15584
9	614	1						15585
9	620	1						15586
9	622	1						15587
9	623	1						15588
9	626	1						15589
9	681	1						15590
9	682	1						15591
9	683	1						15592

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
9	684	1	ABSORBED HEAT ON NODE NO. 684					15619
								15620
9	688	1	ABSORBED HEAT ON NODE NO. 688					15621
								15622
9	689	1	ABSORBED HEAT ON NODE NO. 689					15623
								15624
9	696	1	ABSORBED HEAT ON NODE NO. 696					15625
								15626
9	697	1	ABSORBED HEAT ON NODE NO. 697					15627
								15628
9	714	1	ABSORBED HEAT ON NODE NO. 714					15629
								15630
9	728	1	ABSORBED HEAT ON NODE NO. 728					15631
								15632
9	733	1	ABSORBED HEAT ON NODE NO. 733					15633
								15634
9	736	1	ABSORBED HEAT ON NODE NO. 736					15635
								15636
9	737	1	ABSORBED HEAT ON NODE NO. 737					15637
								15638
9	738	1	ABSORBED HEAT ON NODE NO. 738					15639
								15640
9	739	1	ABSORBED HEAT ON NODE NO. 739					15641
								15642
9	748	1	ABSORBED HEAT ON NODE NO. 748					15643
								15644
9	750	1	ABSORBED HEAT ON NODE NO. 750					15645
								15646
9	754	1	ABSORBED HEAT ON NODE NO. 754					15647
								15648
9	756	1	ABSORBED HEAT ON NODE NO. 756					15649
								15650
9	758	1	ABSORBED HEAT ON NODE NO. 758					15651
								15652
9	764	1	ABSORBED HEAT ON NODE NO. 764					15653
								15654
9	766	1	ABSORBED HEAT ON NODE NO. 766					15655
								15656
9	768	1	ABSORBED HEAT ON NODE NO. 768					15657
								15658
9	774	1	ABSORBED HEAT ON NODE NO. 774					15659
								15660
9	778	1	ABSORBED HEAT ON NODE NO. 778					15661
								15662
9	780	1	ABSORBED HEAT ON NODE NO. 780					15663
								15664
9	782	1	ABSORBED HEAT ON NODE NO. 782					15665
								15666
9	788	1	ABSORBED HEAT ON NODE NO. 788					15667
								15668
9	789	1	ABSORBED HEAT ON NODE NO. 789					15669
								15670

LM-6 ASCENT STAGE DATA

0	1	2	3	4	5	6	7	8
1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890	1234567890
9	790	1				ABSORBED HEAT ON NODE NO.	790	15671
								15672
9	791	1				ABSORBED HEAT ON NODE NO.	791	15673
								15674
9	792	1				ABSORBED HEAT ON NODE NO.	792	15675
								15676
9	793	1				ABSORBED HEAT ON NODE NO.	793	15677
								15678
9	794	1				ABSORBED HEAT ON NODE NO.	794	15679
								15680
9	795	1				ABSORBED HEAT ON NODE NO.	795	15681
								15682
9	796	1				ABSORBED HEAT ON NODE NO.	796	15683
								15684
9	797	1				ABSORBED HEAT ON NODE NO.	797	15685
								15686
9	799	1				ABSORBED HEAT ON NODE NO.	799	15687
								15688
9	801	1				ABSORBED HEAT ON NODE NO.	801	15689
								15690
								15691

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APPENDIX B

LM-6 MASTER DATA TAPE
HANDBOOK LISTING

TUBE 1 CONTAINS 1 FLUID LUMPS
1

TUBE 2 CONTAINS 7 FLUID LUMPS
2 3 4 564 565 566 567

TUBE 3 CONTAINS 1 FLUID LUMPS
14

TUBE 4 CONTAINS 12 FLUID LUMPS
15 16 17 18 19 20 21 22 23 24 185 25

TUBE 5 CONTAINS 2 FLUID LUMPS
201 577

TUBE 6 CONTAINS 7 FLUID LUMPS
44 45 46 48 49 182 50

TUBE 7 CONTAINS 1 FLUID LUMPS
26

TUBE 8 CONTAINS 10 FLUID LUMPS
36 37 38 39 40 41 42 184 183 43

TUBE 9 CONTAINS 10 FLUID LUMPS
35 27 28 29 30 31 32 33 184 34

TUBE 10 CONTAINS 3 FLUID LUMPS
51 569 570

TUBE 11 CONTAINS 4 FLUID LUMPS
52 571 572 573

TUBE 12 CONTAINS 3 FLUID LUMPS
13 568 186

TUBE 13 CONTAINS 1 FLUID LUMPS
53

TUBE 14 CONTAINS 1 FLUID LUMPS
54

TUBE 15 CONTAINS 3 FLUID LUMPS
55 56 57

TUBE 16 CONTAINS 1 FLUID LUMPS
188

TUBE 17 CONTAINS 6 FLUID LUMPS
58 59 60 202 203 578

TUBE 18 CONTAINS 1 FLUID LUMPS
61

TUBE 19 CONTAINS 1 FLUID LUMPS
78

TUBE 20 CONTAINS 7 FLUID LUMPS
91 206 92 122 123 209 93

TUBE 21 CONTAINS 1 FLUID LUMPS
79

TUBE 22 CONTAINS 5 FLUID LUMPS
87 88 120 121 89

TUBE 23 CONTAINS 1 FLUID LUMPS
80

TUBE 24 CONTAINS 5 FLUID LUMPS
84 85 118 119 86

TUBE 25 CONTAINS 7 FLUID LUMPS
81 210 82 116 117 211 83

TUBE 26 CONTAINS 1 FLUID LUMPS
90

TUBE 27 CONTAINS 1 FLUID LUMPS
94

TUBE 28 CONTAINS 1 FLUID LUMPS
95

TUBE 29 CONTAINS 7 FLUID LUMPS
62 204 63 99 100 64 205

TUBE 30 CONTAINS 1 FLUID LUMPS
187

TUBE 31 CONTAINS 5 FLUID LUMPS
65 66 101 102 67

TUBE 32 CONTAINS 1 FLUID LUMPS
68

TUBE 33 CONTAINS 5 FLUID LUMPS
70 71 103 104 72

TUBE 34 CONTAINS 7 FLUID LUMPS
73 206 74 105 106 207 75

TUBE 35 CONTAINS 1 FLUID LUMPS
69

TUBE 36 CONTAINS 1 FLUID LUMPS
76

TUBE 37 CONTAINS 1 FLUID LUMPS
77

TUBE 38 CONTAINS 1 FLUID LUMPS
96

TUBE 39 CONTAINS 1 FLUID LUMPS

143	144	145		
TUBE 97	40	CONTAINS	1	FLUID LUMPS
TUBE 98	41 57 ^a	CONTAINS	3	FLUID LUMPS
TUBE	42	CONTAINS	0	FLUID LUMPS
TUBE	43	CONTAINS	0	FLUID LUMPS
TUBE	44	CONTAINS	0	FLUID LUMPS
TUBE 12	45 19 ^k	CONTAINS	5	FLUID LUMPS
	198	198	198	198
TUBE	46	CONTAINS	0	FLUID LUMPS
TUBE	47	CONTAINS	0	FLUID LUMPS
TUBE	48	CONTAINS	0	FLUID LUMPS
TUBE	49	CONTAINS	0	FLUID LUMPS
TUBE	50	CONTAINS	0	FLUID LUMPS
TUBE	51	CONTAINS	0	FLUID LUMPS
TUBE	52	CONTAINS	0	FLUID LUMPS
TUBE	53	CONTAINS	0	FLUID LUMPS
TUBE	54	CONTAINS	0	FLUID LUMPS
TUBE	55	CONTAINS	0	FLUID LUMPS
TUBE	56	CONTAINS	0	FLUID LUMPS
TUBE	57	CONTAINS	0	FLUID LUMPS
TUBE	58	CONTAINS	0	FLUID LUMPS
TUBE	59	CONTAINS	0	FLUID LUMPS
TUBE	60	CONTAINS	0	FLUID LUMPS
TUBE	61	CONTAINS	0	FLUID LUMPS
TUBE	62	CONTAINS	0	FLUID LUMPS
TUBE	63	CONTAINS	0	FLUID LUMPS
TUBE	64	CONTAINS	0	FLUID LUMPS
TUBE 144	65	CONTAINS	1	FLUID LUMPS

TUBE 66 CONTAINS 4 FLUID LUMPS

TUBE 67 CONTAINS 1 FLUID LUMPS
147

TUBE 68 CONTAINS 3 FLUID LUMPS
148 149 150

TUBE 69 CONTAINS 1 FLUID LUMPS
151

TUBE 70 CONTAINS 8 FLUID LUMPS
152 153 154 156 213 214 155

TUBE 71 CONTAINS 1 FLUID LUMPS
157

TUBE 72 CONTAINS 5 FLUID LUMPS
170 219 220 221 222

TUBE 73 CONTAINS 1 FLUID LUMPS
161

TUBE 74 CONTAINS 8 FLUID LUMPS
215 158 159 107 108 109 216 160

TUBE 75 CONTAINS 8 FLUID LUMPS
166 218 167 113 114 115 217 168

TUBE 76 CONTAINS 6 FLUID LUMPS
162 163 110 111 112 164

TUBE 77 CONTAINS 1 FLUID LUMPS
165

TUBE 78 CONTAINS 2 FLUID LUMPS
169 232

TUBE 79 CONTAINS 1 FLUID LUMPS
171

TUBE 80 CONTAINS 3 FLUID LUMPS
174 173 172

TUBE 81 CONTAINS 3 FLUID LUMPS
175 227 170

TUBE 82 CONTAINS 1 FLUID LUMPS
178

TUBE 83 CONTAINS 1 FLUID LUMPS
177

TUBE 84 CONTAINS 4 FLUID LUMPS
180 220 230 231

TUBE 85 CONTAINS 4 FLUID LUMPS
181 233 47 212

TUBE 86 CONTAINS 3 FLUID LUMPS
 199 189 200

TUBE 87 CONTAINS 1 FLUID LUMPS
 5

TUBE 88 CONTAINS 2 FLUID LUMPS
 223 224

TUBE 89 CONTAINS 1 FLUID LUMPS
 575

TUBE 90 CONTAINS 3 FLUID LUMPS
 225 228 226

TUBE 91 CONTAINS 1 FLUID LUMPS
 272

TUBE 92 CONTAINS 7 FLUID LUMPS
 190 191 125 124 192 193 194

TUBE 93 CONTAINS 1 FLUID LUMPS
 276

TUBE 94 CONTAINS 2 FLUID LUMPS
 235 579

TUBE 95 CONTAINS 4 FLUID LUMPS
 236 237 238 239

TUBE 96 CONTAINS 3 FLUID LUMPS
 243 244 245

TUBE 97 CONTAINS 3 FLUID LUMPS
 240 241 242

TUBE 98 CONTAINS 1 FLUID LUMPS
 246

TUBE 99 CONTAINS 1 FLUID LUMPS
 252

TUBE 100 CONTAINS 7 FLUID LUMPS
 257 258 259 132 133 134 260

TUBE 101 CONTAINS 6 FLUID LUMPS
 253 254 135 136 137 255

TUBE 102 CONTAINS 7 FLUID LUMPS
 247 248 249 138 139 140 250

TUBE 103 CONTAINS 1 FLUID LUMPS
 256

TUBE 104 CONTAINS 1 FLUID LUMPS
 251

TUBE 105 CONTAINS 1 FLUID LUMPS
261

TUBE 106 CONTAINS 1 FLUID LUMPS
278

TUBE 107 CONTAINS 1 FLUID LUMPS
267

TUBE 108 CONTAINS 5 FLUID LUMPS
273 127 126 274 275

TUBE 109 CONTAINS 5 FLUID LUMPS
268 129 128 269 270

TUBE 110 CONTAINS 7 FLUID LUMPS
262 263 131 130 264 265 266

TUBE 111 CONTAINS 1 FLUID LUMPS
271

TUBE 112 CONTAINS 1 FLUID LUMPS
277

TUBE 113 CONTAINS 1 FLUID LUMPS
284

TUBE 114 CONTAINS 7 FLUID LUMPS
279 280 142 141 281 282 283

TUBE 115 CONTAINS 5 FLUID LUMPS
285 7 6 286 287

TUBE 116 CONTAINS 1 FLUID LUMPS
288

TUBE 117 CONTAINS 5 FLUID LUMPS
289 9 8 290 291

TUBE 118 CONTAINS 7 FLUID LUMPS
293 294 11 10 295 296 297

TUBE 119 CONTAINS 1 FLUID LUMPS
292

TUBE 120 CONTAINS 1 FLUID LUMPS
298

TUBE 121 CONTAINS 1 FLUID LUMPS
299

TUBE 122 CONTAINS 6 FLUID LUMPS
300 301 302 303 304 305

TUBE 123 CONTAINS 2 FLUID LUMPS
306 307

TUBE 124 CONTAINS 2 FLUID LUMPS

310 311
 TUBE 125 CONTAINS 2 FLUID LUMPS
 308 309
 TUBE 126 CONTAINS 2 FLUID LUMPS
 312 313
 TUBE 127 CONTAINS 1 FLUID LUMPS
 314
 TUBE 128 CONTAINS 2 FLUID LUMPS
 315 316
 TUBE 129 CONTAINS 3 FLUID LUMPS
 317 318 319
 TUBE 130 CONTAINS 2 FLUID LUMPS
 323 324
 TUBE 131 CONTAINS 2 FLUID LUMPS
 320 321
 TUBE 132 CONTAINS 1 FLUID LUMPS
 325
 TUBE 133 CONTAINS 1 FLUID LUMPS
 322
 TUBE 134 CONTAINS 1 FLUID LUMPS
 326
 TUBE 135 CONTAINS 2 FLUID LUMPS
 327 328
 TUBE 136 CONTAINS 11 FLUID LUMPS
 329 330 331 332 333 359 363 334 369 36A 335
 TUBE 137 CONTAINS 1 FLUID LUMPS
 368
 TUBE 138 CONTAINS 11 FLUID LUMPS
 336 337 338 339 340 364 365 341 342 367 343
 TUBE 139 CONTAINS 1 FLUID LUMPS
 370
 TUBE 140 CONTAINS 1 FLUID LUMPS
 344
 TUBE 141 CONTAINS 2 FLUID LUMPS
 345 347
 TUBE 142 CONTAINS 1 FLUID LUMPS
 348
 TUBE 143 CONTAINS 2 FLUID LUMPS
 349 350

TUBE 144 CONTAINS 1 FLUID LUMPS
346

TUBE 145 CONTAINS 2 FLUID LUMPS
351 352

TUBE 146 CONTAINS 1 FLUID LUMPS
353

TUBE 147 CONTAINS 2 FLUID LUMPS
357 358

TUBE 148 CONTAINS 1 FLUID LUMPS
354

TUBE 149 CONTAINS 2 FLUID LUMPS
355 356

TUBE 150 CONTAINS 1 FLUID LUMPS
360

TUBE 151 CONTAINS 1 FLUID LUMPS
361

TUBE 152 CONTAINS 1 FLUID LUMPS
362

TUBE 153 CONTAINS 7 FLUID LUMPS
373 374 417 434 435 470 491

TUBE 154 CONTAINS 35 FLUID LUMPS
375 441 473 474 475 476 477 497 548 549 550 551 552 553
554 555 556 557 558 440 411 402 403 454 384 432 422 423
438 472 478 486 489 436 520

TUBE 155 CONTAINS 48 FLUID LUMPS
376 455 410 399 454 452 382 383 451 414 428 500 507 508
509 515 516 517 518 519 520 521 522 523 524 525 526 527
528 529 530 531 532 533 534 430 471 490 510 511 512 513
514 535 536 537 538 631

TUBE 156 CONTAINS 55 FLUID LUMPS
377 379 380 385 386 387 388 389 408 415 453 465 463 442
445 444 411 398 412 397 407 395 396 394 409 425 426 457
469 474 480 481 482 483 484 499 501 502 503 504 505 506
539 559 561 562 563 419 458 420 459 421 433 621 622

TUBE 157 CONTAINS 50 FLUID LUMPS
378 450 413 400 449 447 331 448 446 427 487 416 418 429
461 462 464 466 467 468 485 488 492 493 494 495 496 497
498 540 541 542 543 544 545 546 560 616 617 618 619 620
623 624 625 626 627 628 629 630

TUBE 158 CONTAINS 9 FLUID LUMPS
460 434 443 404 465 466 431 424 437

TUBE 159 CONTAINS 1 FLUID LUMPS

390

TUBE 160 CONTAINS 1 FLUID LUMPS
391

TUBE 161 CONTAINS 1 FLUID LUMPS
392

TUBE 162 CONTAINS 3 FLUID LUMPS
393 37 372

TUBE 163 CONTAINS 2 FLUID LUMPS
590 59

TUBE 164 CONTAINS 2 FLUID LUMPS
583 604

TUBE 165 CONTAINS 3 FLUID LUMPS
588 589 603

TUBE 166 CONTAINS 1 FLUID LUMPS
609

TUBE 167 CONTAINS 2 FLUID LUMPS
597 598

TUBE 168 CONTAINS 1 FLUID LUMPS
584

TUBE 169 CONTAINS 1 FLUID LUMPS
608

TUBE 170 CONTAINS 1 FLUID LUMPS
593

TUBE 171 CONTAINS 1 FLUID LUMPS
594

TUBE 172 CONTAINS 1 FLUID LUMPS
613

TUBE 173 CONTAINS 2 FLUID LUMPS
601 602

TUBE 174 CONTAINS 1 FLUID LUMPS
605

TUBE 175 CONTAINS 1 FLUID LUMPS
606

TUBE 176 CONTAINS 1 FLUID LUMPS
612

TUBE 177 CONTAINS 1 FLUID LUMPS
610

TUBE 178 CONTAINS 1 FLUID LUMPS
607

TUBE 179	CONTAINS	1 FLUID LUMPS
565		
TUBE 180	CONTAINS	2 FLUID LUMPS
581 582		
TUBE 181	CONTAINS	1 FLUID LUMPS
567		
TUBE 182	CONTAINS	1 FLUID LUMPS
586		
TUBE 183	CONTAINS	2 FLUID LUMPS
611 595		
TUBE 184	CONTAINS	2 FLUID LUMPS
615 596		
TUBE 185	CONTAINS	2 FLUID LUMPS
614 599		
TUBE 186	CONTAINS	2 FLUID LUMPS
592 604		

F L U I D L U M P D A T A

LUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN2	WETTED PERIMETER (IN)
1	1	0	10.000	.080	1.002
2	2	0	28.000	.080	1.002
3	2	2	15.200	1.000	1.000
4	2	3	14.000	.080	1.002
5	87	0	7.500	.080	1.002
6	115	7	.947	1.000	1.000
7	115	285	.947	1.000	1.000
8	117	9	8.330	.080	2.170
9	117	289	8.330	.080	2.170
10	118	11	.947	1.000	1.000
11	118	294	.947	1.000	1.000
12	45	0	7.500	.080	1.002
13	12	0	30.000	.080	1.002
14	3	0	27.000	.080	1.002
15	4	0	4.000	.030	.609
16	4	15	5.610	1.000	1.000
17	4	16	1.000	.030	.609
18	4	17	5.610	1.000	1.000
19	4	18	7.000	.030	.609
20	4	19	4.960	1.000	1.000
21	4	20	12.000	.030	.609
22	4	21	5.000	1.000	1.000
23	4	22	4.000	.030	.609
24	4	23	14.000	1.000	1.000
25	4	185	5.000	.030	.609
26	7	0	25.000	.080	1.002
27	9	35	.510	1.000	1.000
28	9	27	20.000	.030	.609
29	9	28	2.600	1.000	1.000
30	9	29	154.000	.030	.609
31	9	30	3.000	1.000	1.000
32	9	31	70.000	.030	.609
33	9	32	3.700	1.000	1.000
34	9	184	9.000	.030	.609
35	9	0	35.000	.030	.609
36	8	0	17.000	.030	.609
37	8	36	3.040	1.000	1.000
38	8	37	37.000	.030	.609
39	8	38	9.800	1.000	1.000
40	8	39	45.000	.030	.609
41	8	40	1.000	.030	.609
42	8	41	10.000	.030	.609
43	8	183	8.000	.030	.609
44	6	0	9.000	.030	.609
45	6	44	4.000	1.000	1.000
46	6	45	9.000	.030	.609
47	85	233	.980	1.000	1.000
48	6	46	9.000	.030	.609
49	6	48	2.500	1.000	1.000

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	WETTED PERIMETER (IN)
50	6	182	83.000	.030	.609
51	10	0	108.000	.030	.609
52	11	0	10.000	.080	1.002
53	13	0	3.000	.080	1.002
54	14	0	42.000	.080	1.002
55	15	0	40.000	.080	1.002
56	15	55	41.800	1.000	1.000
57	15	56	34.000	.080	1.002
58	17	0	6.000	.080	1.002
59	17	58	55.700	1.000	1.000
60	17	59	34.000	.080	1.002
61	18	0	30.500	.080	1.002
62	29	0	3.500	.080	1.002
63	29	204	.897	1.000	1.000
64	29	100	1.000	.030	.609
65	31	0	1.000	.030	.609
66	31	65	.897	1.000	1.000
67	31	102	3.000	.030	.609
68	32	0	7.000	.080	1.002
69	35	0	7.000	.080	1.002
70	33	0	3.000	.030	.609
71	33	70	.897	1.000	1.000
72	33	104	3.000	.030	.609
73	34	0	7.000	.080	1.002
74	34	206	.897	1.000	1.000
75	34	207	3.500	.080	1.002
76	34	0	3.500	.080	1.002
77	37	0	17.000	.080	1.002
78	19	0	46.000	.080	1.002
79	21	0	1.500	.080	1.002
80	23	0	7.000	.080	1.002
81	25	0	7.000	.080	1.002
82	25	210	.897	1.000	1.000
83	25	211	3.500	.080	1.002
84	24	0	1.000	.030	.609
85	24	84	.897	1.000	1.000
86	24	119	1.000	.030	.609
87	22	0	3.000	.030	.609
88	22	87	.897	1.000	1.000
89	22	121	1.000	.030	.609
90	26	0	7.000	.080	1.002
91	20	0	3.500	.080	1.002
92	20	208	.897	1.000	1.000
93	20	209	7.000	.080	1.002
94	27	0	3.500	.080	1.002
95	28	0	17.000	.080	1.002
96	38	0	95.000	.080	1.002
97	40	0	128.500	.080	1.002
98	41	0	6.800	.030	.609

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN2	WETTED PERIMETER (IN)
99	29	63	.897	1.000	1.000
100	29	99	.897	1.000	1.000
101	31	66	.897	1.000	1.000
102	31	101	.897	1.000	1.000
103	33	71	.897	1.000	1.000
104	33	103	.897	1.000	1.000
105	34	74	.897	1.000	1.000
106	34	105	.897	1.000	1.000
107	74	159	1.025	1.000	1.000
108	74	107	1.025	1.000	1.000
109	74	108	.380	1.000	.000
110	76	163	1.025	1.000	1.000
111	76	110	1.025	1.000	1.000
112	76	111	.380	1.000	.000
113	75	167	1.025	1.000	1.000
114	75	113	1.025	1.000	1.000
115	75	114	.380	1.000	.000
116	25	82	.897	1.000	1.000
117	25	116	.897	1.000	1.000
118	24	85	.897	1.000	1.000
119	24	118	.897	1.000	1.000
120	22	88	.897	1.000	1.000
121	22	120	.897	1.000	1.000
122	20	92	.897	1.000	1.000
123	20	122	.897	1.000	1.000
124	92	125	.947	1.000	1.000
125	92	191	.947	1.000	1.000
126	108	127	.947	1.000	1.000
127	108	273	.947	1.000	1.000
128	109	129	.947	1.000	1.000
129	109	268	.947	1.000	1.000
130	110	131	.947	1.000	1.000
131	110	263	.947	1.000	1.000
132	100	259	1.070	1.000	.000
133	100	132	1.070	1.000	.000
134	100	133	.380	1.000	.000
135	101	254	1.070	1.000	.000
136	101	135	1.070	1.000	.000
137	101	136	.380	1.000	.000
138	102	249	1.070	1.000	.000
139	102	138	1.070	1.000	.000
140	102	139	.380	1.000	.000
141	114	142	.947	1.000	1.000
142	114	280	.947	1.000	1.000
143	39	0	6.800	.030	.609
144	39	143	3.700	1.000	1.000
145	39	144	7.800	.030	.609
146	65	0	57.000	.080	1.002
147	67	0	54.000	.080	1.002

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	WETTED PERIMETER (IN)
148	68	0	47.000	.080	1.002
149	68	148	5.500	1.000	1.000
150	68	149	19.000	.080	1.002
151	69	0	28.000	.080	1.002
152	70	0	30.000	.080	1.002
153	70	152	41.950	1.000	1.000
154	70	153	20.000	.080	1.002
155	70	214	24.400	1.000	1.000
156	70	155	74.000	.080	1.002
157	71	0	46.000	.080	1.002
158	74	215	3.000	.030	.609
159	74	158	1.025	1.000	1.000
160	74	216	7.000	.080	1.002
161	73	0	3.500	.080	1.002
162	76	0	3.000	.030	.609
163	76	162	1.025	1.000	1.000
164	76	112	3.000	.030	.609
165	77	0	3.500	.080	1.002
166	75	0	7.000	.080	1.002
167	75	218	1.025	1.000	1.000
168	75	217	3.000	.080	1.002
169	78	0	88.000	.080	1.002
170	72	0	58.000	.080	1.002
171	79	0	14.500	.080	1.002
172	80	173	4.800	.030	.609
173	80	174	3.700	1.000	1.000
174	80	0	7.800	.030	.609
175	81	0	7.800	.030	.609
176	81	227	10.500	.030	.609
177	83	0	128.500	.080	1.002
178	82	0	10.400	.080	1.002
179	41	574	7.800	.030	.609
180	84	0	96.000	.080	1.002
181	85	0	90.000	.080	1.002
182	6	49	.500	.004	.220
183	8	234	.500	.004	.220
184	9	33	.500	.033	.646
185	4	24	.500	.003	.180
186	17	568	.500	.010	.286
187	30	0	3.500	.080	1.002
188	14	0	19.000	.080	1.002
189	86	199	1.000	.030	.609
190	92	0	8.000	.080	1.002
191	92	190	7.000	.030	.609
192	92	124	.947	1.000	1.000
193	92	192	7.000	.030	.609
194	92	193	8.000	.080	1.002
195	45	0	7.500	.080	1.002
196	45	195	2.500	.030	.609

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	WETTED PERIMETER (IN)
197	45	196	.500	.030	.609
198	45	197	.500	.080	1.002
199	86	0	1.500	.080	1.002
200	86	189	1.000	.030	.609
201	5	0	25.000	.080	1.002
202	17	60	1.000	1.000	1.000
203	17	202	73.000	.080	1.002
204	29	62	3.000	.030	.609
205	29	64	7.000	.080	1.002
206	34	73	3.000	.030	.609
207	34	106	3.000	.030	.609
208	20	91	3.000	.030	.609
209	20	123	3.000	.030	.609
210	25	81	3.000	.030	.609
211	25	117	3.000	.030	.609
212	85	47	15.000	1.000	1.000
213	70	576	4.500	1.000	1.000
214	70	213	3.000	.080	1.002
215	74	0	3.500	.080	1.002
216	74	109	3.000	.030	.609
217	75	115	6.500	.030	.609
218	75	166	3.000	.030	.609
219	72	170	1.000	1.000	1.000
220	72	219	1.000	1.000	1.000
221	72	220	1.000	1.000	1.000
222	72	221	134.000	.080	1.002
223	88	0	7.800	.030	.609
224	88	223	4.800	.030	.609
225	90	0	7.800	.030	.609
226	90	228	6.800	.030	.609
227	81	175	3.700	1.000	1.000
228	90	225	3.700	1.000	1.000
229	84	180	1.000	1.000	1.000
230	84	229	1.000	1.000	1.000
231	84	230	58.000	.080	1.002
232	78	169	.500	.086	1.040
233	85	181	71.000	.080	1.002
234	8	42	1.000	.030	.609
235	94	0	83.000	.080	1.002
236	95	0	55.000	.030	.609
237	95	236	.510	1.000	1.000
238	95	237	.500	.007	.289
239	95	238	50.000	.030	.609
240	97	0	13.000	.030	.609
241	97	240	1.240	1.000	1.000
242	97	241	18.000	.030	.609
243	96	0	25.000	.030	.609
244	96	243	2.500	1.000	1.000
245	96	244	8.000	.030	.609

FLUID LUMP DATA

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	NETTED PERIMETER (IN)
246	98	0	70.000	.080	1.002
247	102	0	8.000	.080	1.002
248	102	247	7.000	.030	.609
249	102	248	1.070	1.000	.000
250	102	140	7.000	.030	.609
251	104	0	8.000	.080	1.002
252	99	0	8.000	.080	1.002
253	101	0	7.000	.030	.609
254	101	253	1.070	1.000	.000
255	101	137	7.000	.030	.609
256	103	0	8.000	.080	1.002
257	100	0	8.000	.080	1.002
258	100	257	7.000	.030	.609
259	00	258	1.070	1.000	.000
260	00	134	7.000	.030	.609
261	05	0	8.000	.080	1.002
262	10	0	8.000	.080	1.002
263	10	262	7.000	.030	.609
264	10	130	.947	1.000	1.000
265	10	264	7.000	.030	.609
266	10	265	8.000	.080	1.002
267	07	0	8.000	.080	1.002
268	09	0	7.000	.030	.609
269	109	128	.947	1.000	1.000
270	109	269	7.000	.030	.609
271	111	0	8.000	.080	1.002
272	91	0	8.000	.080	1.002
273	108	0	7.000	.030	.609
274	108	126	.947	1.000	1.000
275	108	274	7.000	.030	.609
276	93	0	8.000	.080	1.002
277	112	0	48.000	.080	1.002
278	106	0	8.000	.080	1.002
279	114	0	8.000	.080	1.002
280	114	279	7.000	.030	.609
281	114	141	.947	1.000	1.000
282	114	281	7.000	.030	.609
283	114	282	8.000	.080	1.002
284	113	0	8.000	.080	1.002
285	115	0	7.000	.030	.609
286	115	6	.947	1.000	1.000
287	115	286	7.000	.030	.609
288	114	0	8.000	.080	1.002
289	117	0	7.000	.030	.609
290	117	8	8.330	.080	2.170
291	117	290	7.000	.030	.609
292	119	0	8.000	.080	1.002
293	118	0	8.000	.080	1.002
294	118	293	7.000	.030	.609

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	WETTED PERIMETER (IN)
295	118	10	.947	1.000	1.000
296	118	295	7.000	.030	.609
297	118	296	8.000	.080	1.002
298	120	0	8.000	.080	1.002
299	121	0	48.000	.080	1.002
300	122	0	5.000	.080	1.002
301	122	300	10.600	1.000	1.000
302	122	301	10.000	.030	.609
303	122	302	.980	1.000	1.000
304	122	303	8.000	.080	1.002
305	122	304	8.000	1.000	1.000
306	123	0	1.000	2.930	.000
307	123	306	1.000	2.930	.000
308	125	0	1.000	2.930	.000
309	125	308	16.000	2.930	.000
310	124	0	1.000	2.930	.000
311	124	310	1.000	2.930	.000
312	124	0	1.000	2.930	.000
313	124	12	16.000	2.930	.000
314	127	0	1.000	2.930	.000
315	128	0	1.000	2.930	.000
316	128	115	2.000	2.930	.000
317	129	0	1.000	2.930	.000
318	129	317	3.000	2.930	.000
319	129	118	1.000	2.930	.000
320	131	0	8.000	2.930	.000
321	131	320	1.000	2.930	.000
322	133	0	3.000	2.930	.000
323	130	0	8.000	2.930	.000
324	130	323	1.000	2.930	.000
325	132	0	3.000	2.930	.000
326	134	0	2.000	2.930	.000
327	135	0	1.000	2.930	.000
328	135	327	2.000	1.610	.000
329	136	0	1.000	2.930	.000
330	136	329	1.000	2.930	.000
331	136	330	1.000	2.930	.000
332	136	331	1.000	2.930	.000
333	136	332	1.000	2.930	.000
334	136	363	1.000	2.930	.000
335	136	366	1.000	2.930	.000
336	138	0	1.000	2.930	.000
337	138	336	1.000	2.930	.000
338	138	337	1.000	2.930	.000
339	138	338	1.000	2.930	.000
340	138	339	1.000	2.930	.000
341	138	365	1.000	2.930	.000
342	138	341	1.000	2.930	.000
343	138	367	1.000	2.930	.000

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	WETTED PERIMETER (IN)
344	140	0	13.000	1.610	.000
345	141	0	1.000	2.930	.000
346	144	0	5.000	2.930	.000
347	141	345	1.000	2.930	.000
348	142	0	2.000	2.930	.000
349	143	0	1.000	2.930	.000
350	143	349	3.000	2.930	.000
351	145	0	3.000	2.930	.000
352	145	351	1.000	2.930	.000
353	146	0	4.000	2.930	.000
354	148	0	4.000	2.930	.000
355	149	0	1.000	2.930	.000
356	149	355	1.000	2.930	.000
357	147	0	1.000	2.930	.000
358	147	357	1.000	2.930	.000
359	136	333	1.000	2.930	.000
360	150	0	1.000	2.930	.000
361	151	0	1.000	2.930	.000
362	152	0	1.000	2.930	.000
363	136	359	1.000	2.930	.000
364	138	340	1.000	2.930	.000
365	138	364	1.000	2.930	.000
366	136	369	1.000	2.930	.000
367	138	342	1.000	2.930	.000
368	137	0	10.000	10.000	.000
369	136	334	1.000	2.930	.000
370	139	0	10.000	10.000	.000
371	162	393	10.000	10.000	.000
372	162	371	10.000	10.000	.000
373	153	0	10.000	10.000	.000
374	153	373	10.000	1329.120	.000
375	154	0	10.000	990.720	111.600
376	155	0	10.000	990.720	111.600
377	156	0	10.000	990.720	111.600
378	157	0	10.000	990.720	111.600
379	156	377	5.000	990.720	.000
380	156	379	5.000	990.720	.000
381	157	447	10.000	283.680	.000
382	155	452	10.000	990.720	.000
383	155	382	10.000	283.680	.000
384	154	456	10.000	990.720	.000
385	156	380	5.000	990.720	.000
386	156	385	5.000	990.720	.000
387	156	386	5.000	990.720	.000
388	156	387	5.000	990.720	.000
389	156	388	5.000	990.720	.000
390	159	0	10.000	1329.120	.000
391	160	0	10.000	1329.120	.000
392	161	0	10.000	1329.120	.000

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN2	WETTED PERIMETER (IN)
393	167	0	10.000	1329.120	.000
394	156	396	10.000	990.720	.000
395	156	407	10.000	990.720	.000
396	156	395	10.000	990.720	.000
397	156	412	10.000	990.720	.000
398	156	411	10.000	990.720	.000
399	155	410	10.000	990.720	.000
400	157	413	10.000	283.680	.000
401	154	440	10.000	990.720	.000
402	154	401	10.000	990.720	.000
403	154	402	10.000	990.720	.000
404	158	443	10.000	54.720	.000
405	158	404	10.000	54.720	.000
406	158	405	10.000	54.720	.000
407	156	397	10.000	990.720	.000
408	156	389	5.000	990.720	.000
409	156	394	10.000	990.720	.000
410	155	455	10.000	990.720	.000
411	156	444	10.000	990.720	.000
412	156	398	10.000	990.720	.000
413	157	450	10.000	283.680	.000
414	155	451	10.000	990.720	.000
415	156	408	5.000	990.720	.000
416	157	487	10.000	283.680	.000
417	153	374	10.000	1329.120	.000
418	157	416	10.000	283.680	.000
419	156	563	10.000	990.720	.000
420	156	458	10.000	990.720	.000
421	156	459	10.000	990.720	.000
422	154	432	10.000	990.720	.000
423	154	422	10.000	990.720	.000
424	158	431	10.000	54.720	.000
425	156	409	10.000	990.720	.000
426	156	425	10.000	990.720	.000
427	157	446	5.000	283.680	.000
428	155	414	.400	990.720	.000
429	157	418	.476	283.680	.000
430	155	534	.833	283.680	.000
431	158	406	10.000	54.720	.000
432	154	384	10.000	990.720	.000
433	156	421	10.000	990.720	.000
434	153	417	10.000	1329.120	.000
435	153	434	.333	1329.120	.000
436	154	489	10.000	990.720	.000
437	158	424	10.000	54.720	.000
438	154	423	2.500	990.720	.000
439	158	460	10.000	54.720	.000
440	154	558	10.000	990.720	.000
441	154	375	.555	990.720	.000

F L U I D L U M P D A T A

FLUID LUMP	UBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	WETTED PERIMETER (IN)
442	154	463	10.000	990.720	.000
443	158	439	0.000	54.720	.000
444	156	445	0.000	990.720	.000
445	156	442	0.000	990.720	.000
446	157	448	0.000	283.680	.000
447	157	449	0.000	283.680	.000
448	157	381	0.000	283.680	.000
449	157	400	0.000	283.680	.000
450	157	378	0.000	283.680	.000
451	155	383	0.000	990.720	.000
452	155	454	0.000	990.720	.000
453	156	415	5.000	990.720	.000
454	155	399	0.000	990.720	.000
455	155	376	0.000	990.720	.000
456	154	403	10.000	990.720	.000
457	156	426	.526	990.720	.000
458	156	419	10.000	990.720	.000
459	154	420	10.000	990.720	.000
460	158	0	10.000	990.720	111.600
461	157	429	10.000	990.720	.000
462	157	461	10.000	990.720	.000
463	156	465	5.000	990.720	.000
464	157	462	10.000	990.720	.000
465	156	453	5.000	990.720	.000
466	157	464	.476	283.680	.000
467	157	466	.476	283.680	.000
468	157	467	.476	283.680	.000
469	156	457	.526	990.720	.000
470	153	435	.333	1329.120	.000
471	155	430	.833	283.680	.000
472	154	438	2.500	990.720	.000
473	154	441	.555	990.720	.000
474	154	473	.555	990.720	.000
475	154	474	.555	990.720	.000
476	154	475	.555	990.720	.000
477	154	476	.555	990.720	.000
478	154	472	2.500	990.720	.000
479	156	469	.526	990.720	.000
480	156	479	.526	990.720	.000
481	156	480	.526	990.720	.000
482	156	481	.526	990.720	.000
483	156	482	.526	990.720	.000
484	156	483	.526	990.720	.000
485	157	468	.476	283.680	.000
486	154	478	2.500	990.720	.000
487	157	427	5.000	283.680	.000
488	157	485	.476	283.680	.000
489	154	486	2.500	990.720	.000
490	155	471	.833	283.680	.000

F L U I D L U M P D A T A

FLUID LUMP	TUBE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN ²	WETTED PERIMETER (IN)
		470	.333	1329.120	.000
491	153	470	.333	1329.120	.000
492	157	488	.476	283.680	.000
493	157	492	.476	283.680	.000
494	157	493	.476	283.680	.000
495	157	494	.476	283.680	.000
496	157	495	.476	283.680	.000
497	157	496	.476	283.680	.000
498	157	497	.476	283.680	.000
499	156	484	.526	990.720	.000
500	156	428	.400	990.720	.000
501	156	499	.526	990.720	.000
502	156	501	.526	990.720	.000
503	156	502	.526	990.720	.000
504	156	503	.526	990.720	.000
505	156	504	.526	990.720	.000
506	156	505	.526	990.720	.000
507	155	500	.400	990.720	.000
508	155	507	.400	990.720	.000
509	156	508	.400	990.720	.000
510	155	490	.833	283.680	.000
511	155	510	.833	283.680	.000
512	155	511	.833	283.680	.000
513	155	512	.833	283.680	.000
514	155	513	.833	283.680	.000
515	155	509	.400	990.720	.000
516	155	515	.400	990.720	.000
517	155	516	.400	990.720	.000
518	155	517	.400	990.720	.000
519	155	518	.400	990.720	.000
520	155	519	.400	990.720	.000
521	155	520	.400	990.720	.000
522	155	521	.400	990.720	.000
523	155	522	.400	990.720	.000
524	155	523	.400	990.720	.000
525	155	524	.400	990.720	.000
526	155	525	.400	990.720	.000
527	155	526	.400	990.720	.000
528	155	527	.400	990.720	.000
529	155	528	.400	990.720	.000
530	155	529	.400	990.720	.000
531	155	530	.400	990.720	.000
532	155	531	.400	990.720	.000
533	155	532	.400	990.720	.000
534	155	533	.400	990.720	.000
535	155	514	.833	283.680	.000
536	155	535	.400	990.720	.000
537	155	536	.400	990.720	.000
538	155	537	.833	283.680	.000
539	156	506	.526	990.720	.000

F L U I D L U M P D A T A

FLUID LUMP	TURE NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN2	WETTED PERIMETER (IN)
540	157	498	.476	283.680	.000
541	157	540	.476	283.680	.000
542	157	541	.476	283.680	.000
543	157	542	.476	283.680	.000
544	157	543	.476	283.680	.000
545	157	544	.476	283.680	.000
546	157	545	.476	283.680	.000
547	154	477	.555	990.720	.000
548	154	547	.555	990.720	.000
549	154	548	.555	990.720	.000
550	154	549	.555	990.720	.000
551	154	550	.555	990.720	.000
552	154	551	.555	990.720	.000
553	154	552	.555	990.720	.000
554	154	553	.555	990.720	.000
555	154	554	.555	990.720	.000
556	154	555	.555	990.720	.000
557	154	556	.555	990.720	.000
558	154	557	.555	990.720	.000
559	154	539	.526	990.720	.000
560	157	546	.476	283.680	.000
561	156	559	.526	990.720	.000
562	156	561	.526	990.720	.000
563	156	562	.526	990.720	.000
564	2	4	21.000	.080	1.002
565	2	564	46.000	.080	1.002
566	2	565	55.000	.080	1.002
567	2	566	16.000	.080	1.002
568	12	13	10.000	.080	1.002
569	10	51	37.000	.030	.609
570	10	569	46.000	.030	.609
571	11	52	50.000	.080	1.002
572	11	571	37.000	.080	1.002
573	11	572	6.000	.080	1.002
574	41	98	3.700	1.000	1.000
575	89	0	30.000	.080	1.002
576	70	154	156.000	.080	1.002
577	5	201	77.000	.080	1.002
578	17	203	40.000	.080	1.002
579	94	235	60.000	.080	1.002
580	154	436	1.000	2.930	.000
581	180	0	55.000	.030	.609
582	180	581	77.500	.030	.609
583	164	0	21.000	.030	.609
584	168	0	1.000	.030	.609
585	179	0	43.600	.030	.609
586	182	0	6.400	.030	.609
587	181	0	24.500	.030	.609
588	165	0	80.000	.030	.609

F L U I D L U M P D A T A

FLUID LUMP	TURF NO.	FLUID LUMP UPSTREAM	LUMP LENGTH (IN)	CROSS SECTION AREA-IN2	WETTED PERIMETER (IN)
589	165	588	96.000	.030	.609
590	163	0	86.000	.030	.609
591	163	590	47.000	.030	.609
592	186	0	20.000	.030	.609
593	170	0	35.300	.030	.609
594	171	0	38.800	.030	.609
595	183	611	14.200	.030	.609
596	184	615	17.100	.030	.609
597	167	0	62.700	.030	.609
598	167	597	26.600	.030	.609
599	185	614	45.200	.030	.609
600	174	0	11.740	.030	.609
601	173	0	39.600	.030	.609
602	173	601	24.650	.030	.609
603	165	589	1.000	.030	.609
604	186	592	1.000	.030	.609
605	164	583	1.000	.030	.609
606	175	0	1.000	.030	.609
607	178	0	1.000	.030	.609
608	169	0	1.000	.030	.609
609	166	0	1.000	.030	.609
610	177	0	1.000	.030	.609
611	183	0	1.000	.030	.609
612	174	0	1.000	.030	.609
613	172	0	1.000	.030	.609
614	185	0	1.000	.030	.609
615	184	0	1.000	.030	.609
616	157	560	.476	283.680	.000
617	157	616	10.000	283.680	.000
618	157	617	10.000	283.680	.000
619	157	618	10.000	283.680	.000
620	157	619	10.000	283.680	.000
621	156	433	.526	990.720	.000
622	156	621	.526	990.720	.000
623	157	620	10.000	283.680	.000
624	157	623	.476	283.680	.000
625	157	624	.476	283.680	.000
626	157	625	10.000	283.680	.000
627	157	626	10.000	283.680	.000
628	157	627	5.000	283.680	.000
629	157	628	.476	283.680	.000
630	157	629	10.000	283.680	.000
631	156	538	.400	990.720	.000

T U B E L U M P T Y P E

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
1				11.027	.000
2				28.060	.000
3				144.000	.000
4				16.035	.000
5				7.520	.000
6				3180.000	.000
7	180TL*	3.7200	CONDI	3180.00000	.00000
8	180TL*	4.9700	CONDI	1425.00000	.00000
9				1425.000	.000
10				1425.000	.000
11				1425.000	.000
12				7.520	.000
13				30.070	.000
14				22.050	.000
15				3.660	.000
16	419TL	.0244	CONDI	72.72000	.38000
	457TL	3.5000	CONDI		
17				7.310	.000
18	458TL	.0215	CONDI	72.72000	.38000
	457TL	3.5000	CONDI		
19				4.270	.000
20	420TL	.0485	CONDI	61.56000	.16560
	457TL	3.5000	CONDI		
21				7.310	.000
22	459TL	.0485	CONDI	61.56000	.16560
	457TL	3.5000	CONDI		
23				3.660	.000
24	421TL	.0181	CONDI	193.24800	.44260
	457TL	1.6350	CONDI		
25				3.050	.000
26	438SL	6.5750	CONDI	25.05000	.01530
	438SL	1.4500	RAD		
	400SL	1.4500	RAD		
27	810SL	.0494	CONDI	55.29600	.16290
28	421SL	5.0600	CONDI	12.19000	.00770
	419SL	5.0600	CONDI		
	419SL	.3860	RAD		
	421SL	.3860	RAD		
	418SL	.7770	RAD		
29	245SL	.0307	CONDI	39.02400	.26060
30	455TL	1.6800	CONDI	93.86000	.05940
	454TL	2.5200	CONDI		
	441TL	1.2600	CONDI		
	436TL	1.6800	CONDI		
	482SL	2.5200	CONDI		
	442TL	.6650	RAD		
	455TL	1.6600	RAD		
	436TL	.6650	RAD		
	441TL	3.3300	RAD		
	454TL	1.6600	RAD		

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP HTU/DEG.F
30	485SL	1.6600	RAD	93.86000	.05940
	482SL	2.5000	RAD		
31	24ASL	.3379	CONDI	39.02400	.05490
	408SL	2.0300	CONDI		
32	432TL	1.6800	CONDI	42.66000	.07070
	438TL	1.2600	CONDI		
	436TL	1.6800	CONDI		
	436TL	.8000	RAD		
	432TL	1.6000	RAD		
	442TL	.8000	RAD		
	436TL	1.7300	RAD		
33	422TL	.2577	CONDI	1225.00000	.05300
	432TL	.3760	CONDI		
34				5.490	.000
35	439SL	2.5200	CONDI	21.33000	.01350
	421SL	2.5200	CONDI		
	419SL	2.5200	CONDI		
	439SL	.4660	RAD		
	421SL	.4660	RAD		
	419SL	.4660	RAD		
36	400SL	.4690	RAD	7.31000	.00460
	438SL	.4690	RAD		
37	184SL	.1019	CONDI	282.00000	.10200
38	438SL	1.6800	CONDI	22.55000	.01430
	438SL	1.4600	RAD		
	400SL	1.4600	RAD		
39	220SL	.0235	CONDI	132.12000	.34050
	749SL	3.4300	CONDI		
40	734SL	2.5200	CONDI	27.43000	.01740
	319SL	30.0500	CONDI		
	734SL	1.7200	RAD		
	319SL	1.7200	RAD		
41				.000	.000
42	734SL	5.0600	CONDI	6.09000	.00390
	734SL	.7800	RAD		
43	734SL	.6400	RAD	4.88000	.00310
44				.000	.000
45	317SL	.4100	CONDI	3780.00000	.37500
	352SL	16.7300	CONDI		
	221SL	15.8500	RAD		
	425SL	47.0900	RAD		
	438SL	63.3900	RAD		
	214SL	135.9000	RAD		
	400SL	20.3700	RAD		
	747SL	12.6800	RAD		
	749SL	12.6800	RAD		
46				.000	.000
47				59.328	.095
48	425SL	5.0600	CONDI	10.70000	.00690
	400SL	.7000	RAD		

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
43RSL	.7000	RAD	10.70000	.00690
274SL	.1384	CONDI	12.90200	.05760
319SL	5.0600	CONDI	50.59000	.03200
734SL	5.0600	CONDI		
43RSL	2.5200	CONDI		
734SL	1.7400	RAD		
319SL	1.7400	RAD		
400SL	1.4900	RAD		
43RSL	1.4900	RAD		
319SL	2.5200	CONDI	65.82000	.04160
671SL	1.6800	CONDI		
425TL	1.1100	RAD		
319SL	1.1100	RAD		
734SL	3.0500	RAD		
671SL	3.0500	RAD		
			10.022	.000
			3.010	.000
			42.090	.000
			40.090	.000
			144.000	.325
			34.070	.000
			6.010	.000
			144.000	.000
			34.070	.000
590SL	1.7400	RAD	30.57000	.01860
591SL	1.7400	RAD		
590SL	.4200	RAD	3.51000	.00220
99TL	1.0500	CONDI	1851.00000	.29700
10SL	.1351	CONDI		
589SL	5.7330	CONDI		
299SL	3.6500	RAD		
601SL	.1950	RAD		
680SL	.4120	RAD		
617SL	.1200	RAD	1.83000	.00120
590SL	.2400	RAD	1.83000	.00120
101TL	1.5900	CONDI	4300.00000	.12900
11SL	.1759	CONDI		
12SL	.1650	CONDI		
70SL	2.5700	CONDI		
617SL	.2400	RAD	1.83000	.00120
590SL	.4020	RAD	7.02000	.00430
591SL	.4020	RAD		
617SL	.8050	RAD	7.02000	.00430
590SL	.1200	RAD	1.83000	.00120
103TL	1.0500	CONDI	5250.00000	.35700
13SL	.1650	CONDI		
16SL	.0976	CONDI		
590SL	5.7330	CONDI		
617SL	.2400	RAD	1.83000	.00120
591SL	.8050	RAD	7.02000	.00430

T U B E P U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
74	105TL	1.0500	CONDI	6870.00000	.34100
	17SL	.1420	CONDI		
	20SL	.1413	CONDI		
	590SL	5.7330	CONDI		
75	617SL	.5600	RAD	7.02000	.00430
76	617SL	.8050	RAD	7.02000	.00430
77	617SL	.2020	RAD	17.04000	.01040
78	591SL	2.7400	RAD	46.10000	.02810
	592SL	2.7400	RAD		
79	592SL	.4080	RAD	3.51000	.00220
80	592SL	.8050	RAD	7.02000	.00430
81	592SL	.8050	RAD	7.02000	.00430
82	114TL	1.0500	CONDI	4240.00000	.34100
	37SL	.0885	CONDI		
	40SL	.0885	CONDI		
	592SL	5.7330	CONDI		
83	541SL	.8400	RAD	7.02000	.00430
84	592SL	.2400	RAD	1.83000	.00120
85	118TL	1.0500	CONDI	4280.00000	.35700
	41SL	.0872	CONDI		
	44SL	.1432	CONDI		
	592SL	5.7330	CONDI		
86	541SL	.2340	RAD	1.83000	.00120
87	592SL	.2400	RAD	1.83000	.00120
88	120TL	1.0500	CONDI	3520.00000	.34100
	45SL	.1638	CONDI		
	50SL	.2620	CONDI		
	592SL	5.7330	CONDI		
89	541SL	.2400	RAD	1.83000	.00120
90	541SL	.8050	RAD	7.02000	.00430
91	592SL	.4200	RAD	3.51000	.00220
92	122TL	1.0500	CONDI	1428.00000	.34700
	51SL	.2620	CONDI		
	593SL	5.7330	CONDI		
	299SL	2.8800	RAD		
	531SL	.3020	RAD		
	537SL	.2320	RAD		
	539SL	.2400	RAD		
	601SL	.1750	RAD		
	680SL	.3020	RAD		
93	541SL	.8050	RAD	7.02000	.00430
94	541SL	.8050	RAD	7.02000	.00430
95	541SL	1.9600	RAD	17.04000	.01040
96	163SL	1.2100	CONDI	95.21000	.05800
	541SL	4.8100	RAD		
	299SL	5.8200	RAD		
97	45L	14.9000	CONDI	114.41000	.07050
	45L	14.9000	CONDI		
	35L	4.9750	CONDI		
98	45L	18.9500	CONDI	4.11000	.02600

T U B E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
98	4SL	8.1400	RAD	4.11000	.02600
99	100TL	1.0500	CONDI	1851.00000	.29700
	90SL	.1351	CONDI		
	299SL	3.6500	RAD		
	601SL	.1950	RAD		
	680SL	.4120	RAD		
	63TL*	1.0500	CONDI		
100	10SL	.2425	CONDI	1851.00000	.29700
	577SL	5.7330	CONDI		
	299SL	3.6500	RAD		
	601SL	.1950	RAD		
	680SL	.4120	RAD		
	99TL*	1.0500	CONDI		
101	102TL	1.0500	CONDI	4300.00000	.34100
	11SL	.1759	CONDI		
	12SL	.1650	CONDI		
	692SL	6.2280	CONDI		
	66TL*	1.5900	CONDI		
102	11SL	.3175	CONDI	4300.00000	.34100
	12SL	.7149	CONDI		
	578SL	5.7330	CONDI		
	101TL*	1.0500	CONDI		
103	104TL	1.0500	CONDI	5250.00000	.35700
	13SL	.1650	CONDI		
	14SL	.1995	CONDI		
	692SL	6.2280	CONDI		
	71TL*	1.0500	CONDI		
104	13SL	.7149	CONDI	5250.00000	.35700
	14SL	.1605	CONDI		
	578SL	5.7300	CONDI		
	103TL*	1.0500	CONDI		
105	106TL	1.0500	CONDI	6870.00000	.34100
	17SL	.2128	CONDI		
	20SL	.1488	CONDI		
	74TL*	1.0500	CONDI		
106	15SL	.1570	CONDI	6870.00000	.34100
	18SL	.2520	CONDI		
	57SL	5.7300	CONDI		
	105TL*	1.0500	CONDI		
107	108TL	1.0500	CONDI	5570.00000	.37800
	21SL	.1491	CONDI		
	22SL	.0629	CONDI		
	159TL*	1.0500	CONDI		
108	19SL	.2525	CONDI	5570.00000	.37800
	22SL	.0624	CONDI		
	579SL	5.7300	CONDI		
	107TL*	1.0500	CONDI		
109				.000	.000
110	163TL	1.0500	CONDI	5160.00000	.37800
	23SL	.0621	CONDI		

T U B E L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. & CP BTU/DEG.F
110	24SL	.0621	COND1	5160.00000	.37800
	111TL*	1.0500	COND1		
111	110TL	1.0500	COND1	5160.00000	.37800
	23SL	.0621	COND1		
	24SL	.0621	COND1		
	579SL	5.7300	COND1		
112				.000	.000
113	114TL	1.0500	COND1	4300.00000	.37800
	33SL	.0621	COND1		
	36SL	.0870	COND1		
	167TL*	1.0500	COND1		
114	33SL	.0621	COND1	4300.00000	.37800
	34SL	.2525	COND1		
	101SL	.1515	COND1		
	579SL	5.7300	COND1		
	113TL*	1.0500	COND1		
115				.000	.000
116	117TL	1.0500	COND1	4240.00000	.34100
	37SL	.1426	COND1		
	40SL	.1426	COND1		
	87TL*	1.0500	COND1		
117	35SL	.2525	COND1	4240.00000	.34100
	38SL	.0990	COND1		
	107SL	.1510	COND1		
	580SL	5.7300	COND1		
	116TL*	1.0500	COND1		
118	119TL	1.0500	COND1	4280.00000	.35700
	41SL	.1420	COND1		
	42SL	.2295	COND1		
	693SL	6.2210	COND1		
	85TL*	1.0500	COND1		
119	39SL	.0990	COND1	4280.00000	.35700
	47SL	.1171	COND1		
	580SL	5.7300	COND1		
	118TL*	1.0500	COND1		
120	121TL	1.0500	COND1	3520.00000	.34100
	43SL	.2360	COND1		
	48SL	.1075	COND1		
	693SL	6.2210	COND1		
	88TL*	1.0500	COND1		
121	43SL	.1200	COND1	4300.00000	.34100
	46SL	.1492	COND1		
	580SL	5.7300	COND1		
	48SL	4.1900	COND1		
	120TL*	1.0500	COND1		
122	123TL	1.0500	COND1	1428.00000	.34100
	49SL	.1075	COND1		
	299SL	2.8800	RAD		
	531SL	.3020	RAD		
	537SL	.2320	RAD		

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
122	539SL	.2400	RAD	1428.00000	.34700
	601SL	.1950	RAD		
	680SL	.4100	RAD		
	92TL*	1.0500	CONDI		
123	47SL	.1495	CONDI	1428.00000	.34700
	49SL	4.1900	CONDI		
	581SL	5.7330	CONDI		
	299SL	2.8800	RAD		
	531SL	.3020	RAD		
	537SL	.2320	RAD		
	539SL	.2400	RAD		
	601SL	.1950	RAD		
	680SL	.4100	RAD		
	122TL*	1.0500	CONDI		
124				1390.000	.000
125				1390.000	.000
126				3120.000	.000
127				3120.000	.000
128				3940.000	.000
129				3940.000	.000
130				5133.000	.000
131				5133.000	.000
132				4150.000	.000
133				4150.000	.000
134				.000	.000
135				3896.000	.000
136				3896.000	.000
137				.000	.000
138				3200.000	.000
139				3200.000	.000
140				.000	.000
141				3150.000	.000
142				3150.000	.000
143	4SL	18.9500	CONDI	4.11000	.00260
	4SL	.6095	RAD		
144	80SL	.0450	CONDI	10068.62402	.38400
	82SL	.2820	CONDI		
	85SL	.0450	CONDI		
	4SL	45.5500	CONDI		
145	4SL	20.1500	CONDI	4.42000	.00280
	4SL	.7425	RAD		
146				4.710	.000
147				54.120	.000
148				47.100	.000
149				144.000	.000
150				19.040	.000
151				28.060	.000
152				30.070	.000
153				144.000	.000
154				20.040	.000

T U B E L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
155	59RTL*	124.5000 ²	CONDI	144.00000	3.18000
156	457TL	4.4000	RAD	76.16000	.04640
	39RTL	4.4000	RAD		
157	591SL	3.5500	CONDI	46.10000	.02810
	592SL	3.5500	CONDI		
	299SL	5.3300	RAD		
158	592SL	.2400	RAD	1.83000	.00120
159	107TL	1.0500	CONDI	5570.00000	.37800
	21SL	.1410	CONDI		
	22SL	.0629	CONDI		
	591SL	5.7300	CONDI		
160	541SL	.8260	RAD	7.02000	.00430
161	591SL	.4080	RAD	3.51000	.00220
162	541SL	.1200	RAD	1.83000	.00120
	617SL	.1200	RAD		
163	23SL	.0621	CONDI	5160.00000	.37800
	24SL	.0621	CONDI		
	591SL	5.7330	CONDI		
	110TL*	1.0500	CONDI		
	169TL*	1.2100	CONDI		
164	541SL	.1200	RAD	1.83000	.00120
	617SL	.1200	RAD		
165	541SL	.2010	RAD	3.51000	.00210
	617SL	.2010	RAD		
166	591SL	.8140	RAD	7.02000	.00430
167	113TL	1.0500	CONDI	4300.00000	.37800
	33SL	.0621	CONDI		
	34SL	.0870	CONDI		
	591SL	5.7330	CONDI		
168	617SL	.3500	RAD	3.01000	.00180
169	163TL	1.2100	CONDI	88.19000	.05370
	617SL	2.7700	RAD		
	299SL	5.5400	RAD		
	541SL	2.7700	RAD		
170	299SL	6.7500	RAD	58.13000	.03540
171	3SL	1.6330	RAD	14.52000	.00840
172	3SL	20.1500	CONDI	3.48000	.00290
	3SL	.5320	RAD		
173	74SL	.0450	CONDI	10068.62402	.38400
	76SL	.2820	CONDI		
	78SL	.0450	CONDI		
	3SL	45.5500	CONDI		
174	3SL	18.9500	CONDI	4.75000	.00310
	3SL	.5439	RAD		
175	3SL	18.9500	CONDI	4.43000	.00280
	3SL	.6699	RAD		
176	3SL	20.1500	CONDI	6.39000	.00410
	3SL	.7718	RAD		
177	3SL	7.4600	CONDI	128.74000	.07860
	1SL	4.9750	CONDI		

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
177	2SL	2.4310	COND1	128.74000	.07860
178	3SL	1.1420	RAD	10.42000	.00640
179	4SL	20.1500	COND1	4.42000	.00280
	4SL	.7425	RAD		
180	7TL	3.7200	COND1	86.71000	.05270
	ATL	4.9700	COND1		
181	457TL	1.1800	COND1	82.18000	.05000
	457TL	.8000	RAD		
	299SL	.8000	RAD		
182				.120	.000
183				.120	.000
184				.356	.001
185				.098	.000
186				.154	.000
187	590SL	.4080	RAD	3.51000	.00220
188				19.040	.000
189				.610	.000
190	617SL	.9200	RAD	8.02000	.00490
191	617SL	.5600	RAD	4.27000	.00270
192				1390.000	.000
193	590SL	.9200	RAD	8.02000	.00490
194	590SL	.9200	RAD	8.02000	.00490
195				7.520	.000
196				1.520	.000
197				.300	.000
198				.500	.000
199				1.500	.000
200				.610	.000
201				25.100	.000
202				.000	.000
203				73.160	.000
204	590SL	.2400	RAD	1.83000	.00120
205	617SL	.8050	RAD	7.02000	.00430
206	591SL	.2400	RAD	1.83000	.00120
207	617SL	.2000	RAD	1.83000	.00120
208	592SL	.2400	RAD	1.83000	.00120
209	541SL	.2400	RAD	1.83000	.00120
210	592SL	.2340	RAD	1.83000	.00120
211	541SL	.2340	RAD	1.83000	.00120
212				124.500	.369
213				144.000	.192
214	457TL	.1800	RAD	3.01000	.00180
	299SL	.1800	RAD		
215	591SL	.4200	RAD	3.51000	.00220
216	541SL	.2400	RAD	1.83000	.00120
217	617SL	.5200	RAD	3.96000	.00250
218	592SL	.2400	RAD	1.83000	.00120
219				144.000	.086
220				144.000	.200
221				144.000	.062

T U B E L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
222	8SL	2.4800	CONDI	134.42000	.08710
	9SL	2.4800	CONDI		
223				144.000	.000
224				144.000	.000
225				144.000	.000
226				144.000	.000
227	76SL	.0450	CONDI	10068.62402	.38400
	77SL	.2820	CONDI		
	79SL	.0450	CONDI		
	3SL	45.5500	CONDI		
228				144.000	.000
229				144.000	.062
230				144.000	.200
231	299SL	4.6000	RAD	58.13000	.03540
232				.156	.000
233	457TL	3.5400	CONDI	71.15000	.04330
	299SL	6.0000	RAD		
234				.000	.000
235				83.180	.000
236	419SL	5.0600	CONDI	33.52000	.02120
	421SL	5.0600	CONDI		
	439SL	5.0600	CONDI		
	421SL	2.3300	RAD		
	419SL	2.3300	RAD		
	439SL	2.3300	RAD		
237				55.296	.000
238				.156	.000
239	419SL	5.0600	CONDI	30.47000	.01930
	421SL	5.0600	CONDI		
	439SL	5.0600	CONDI		
	420SL	1.0000	RAD		
	422SL	1.0000	RAD		
	439SL	2.4000	RAD		
240	400SL	.5100	RAD	7.92000	.00500
	438SL	.5100	RAD		
241				30.150	.000
242	400SL	1.4000	RAD	10.97000	.00690
243	400SL	1.9000	CONDI	15.24000	.00960
244				12.902	.000
245	400SL	3.2000	RAD	4.88000	.00310
246	457TL	1.3100	CONDI	190.40000	.11600
	319SL	1.3100	CONDI		
	523SL	6.5700	CONDI		
	578SL	6.5700	CONDI		
	590SL	6.5700	CONDI		
	591SL	6.5700	CONDI		
	457TL	4.1000	RAD		
	319SL	3.5000	RAD		
	299SL	9.3000	RAD		
	590SL	1.8000	RAD		

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
247	591SL	.9200	RAD	8.02000	.00490
248	591SL	.5200	RAD	4.27000	.00270
249				3200.000	.000
250	541SL	.5600	RAD	4.27000	.00270
251	541SL	.9200	RAD	8.02000	.00490
252	591SL	.9200	RAD	8.02000	.00490
253	591SL	.5600	RAD	4.27000	.00270
254				3896.000	.000
255	617SL	.5600	RAD	4.27000	.00270
256	617SL	.9200	RAD	8.02000	.00490
257	591SL	.9200	RAD	8.02000	.00490
	563TL	.9200	RAD		
258	591SL	.5600	RAD	4.27000	.00270
259				4150.000	.000
260	617SL	.5600	RAD	4.27000	.00270
261	617SL	.9200	RAD	8.02000	.00490
262	617SL	.9200	RAD	8.02000	.00490
263	617SL	.5600	RAD	4.27000	.00270
264				5133.000	.000
265	590SL	.5600	RAD	4.27000	.00270
266	590SL	.9200	RAD	8.02000	.00490
267	617SL	.9200	RAD	8.02000	.00490
268	617SL	.5600	RAD	4.27000	.00270
269				3940.000	.000
270	590SL	.5600	RAD	4.27000	.00270
271	590SL	.9200	RAD	8.02000	.00490
272	617SL	.9200	RAD	8.02000	.00490
273	617SL	.5600	RAD	4.27000	.00270
274				1390.000	.000
275	590SL	.5600	RAD	4.27000	.00270
276	590SL	.9200	RAD	8.02000	.00490
277	590SL	2.8000	RAD	48.10000	.02930
	591SL	2.8000	RAD		
278	541SL	.9200	RAD	8.02000	.00490
279	541SL	.9200	RAD	8.02000	.00490
280	541SL	.5600	RAD	4.27000	.00270
281				3150.000	.000
282	592SL	.5600	RAD	4.27000	.00270
283	592SL	.9200	RAD	8.02000	.00490
284	541SL	.9200	RAD	8.02000	.00490
285	541SL	.5600	RAD	4.27000	.00270
286				3180.000	.000
287	592SL	.5600	RAD	4.27000	.00270
288	541SL	.9200	RAD	8.02000	.00490
289	541SL	.5600	RAD	4.27000	.00270
290				1425.000	.000
291	592SL	.5600	RAD	4.27000	.00270
292	592SL	.9200	RAD	8.02000	.00490
293	541SL	.9200	RAD	8.02000	.00490
294	541SL	.5600	RAD	4.27000	.00270

T U B E (L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
295				1425.000	.000
296	592SL	.5600	RAD	4.27000	.00270
297	592SE	.9200	RAD	8.02000	.00490
298	592SL	.9200	RAD	8.02000	.00490
299	592SI	2.8000	RAD	48.10000	.02930
	591SL	2.8000	RAD		
300	457TL	.7300	CONDI	115.25000	.07020
	526SL	6.5700	CONDI		
	580SL	6.5700	CONDI		
	590SL	6.5700	CONDI		
	591SL	6.5700	CONDI		
	457TL	6.8000	RAD		
	299SL	6.8000	RAD		
301	602TL	126.5000	CONDI	144.00000	1.16000
302	457TL	.7300	CONDI	110.24000	.06710
	457TL	5.5000	RAD		
	299SL	5.5000	RAD		
303				.000	.000
304				8.020	.000
305				124.500	.369
306	825SL	6.1000	CONDI	1440.00000	1.08200
307				6.060	.004
308				6.060	.052
309				97.000	.069
310	822SL	6.1000	CONDI	1440.00000	1.08200
311				6.060	.004
312				6.060	.052
313				18.180	.013
314				6.060	.004
315	834SL	4.0900	CONDI	144.00000	1.62400
	835SL	4.0900	CONDI		
316				12.120	.009
317	838SL	5.4200	CONDI	144.00000	.48400
	840SL	5.4200	CONDI		
318				18.180	.013
319				144.000	.322
320				64.640	.035
321				144.000	.542
322				18.180	.013
323				18.180	.035
324				144.000	.542
325				18.180	.013
326				12.120	.009
327	815SL	4.6990	CONDI	144.00000	.24200
	814SL	11.7500	CONDI		
	855SL	11.7500	CONDI		
328				12.120	.009
329				6.060	.004
330				72.000	.169
331				370.000	.300

T U B E L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. • CP BTU/DEG.F
332				.000	.000
333				280.800	.595
334				.000	.000
335				.000	.000
336				.000	.000
337				72.000	.169
338				370.000	.300
339				.000	.000
340				280.800	.595
341				.000	.000
342				229.000	.190
343				.000	.000
344				78.780	.056
345				144.000	.440
346				30.300	.022
347				.000	.000
348				12.120	.009
349				6.060	.272
350				18.180	.013
351				18.180	.013
352				144.000	.670
353				24.240	.017
354				78.780	.056
355	854SL	3.8200	CONDI	1440.00000	.60000
	856SL	3.8200	CONDI		
356				66.660	.047
357	830SL	5.3500	CONDI	1440.00000	.94000
	820SL	5.3500	CONDI		
358				18.180	.013
359				1123.200	2.470
360				6.060	.004
361				18.180	.013
362				12.120	.009
363				1404.000	3.610
364				1123.200	2.470
365				1404.000	3.610
366				72.000	.169
367				72.000	.169
368				.000	.000
369				229.000	.190
370				.000	.000
371				.000	.000
372				.000	.000
373	435TL	1.0360	CONDI	1015.00000	.73200
	435TL	65.2800	RAD		
	300SL	301.1000	RAD		
374				.000	.000
375				.000	.000
376				.000	.000
377				.000	.000

T U B E I U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
378				.000	.000
379				.000	.000
380				.000	.000
381	448TL	.4590	CONDI	288.00000	.07000
	394TL	9.1200	RAD		
	402TL	3.3820	RAD		
	446TL	16.1000	RAD		
	409TL	37.0600	RAD		
	403TL	5.0430	RAD		
	406TL	3.0800	RAD		
	432TL	2.2000	RAD		
	447TL	61.2800	RAD		
82	300SL	62.1900	RAD		
	383TL	.4561	CONDI	288.00000	.07000
	452TL	61.1600	RAD		
	394TL	9.1200	RAD		
	405TL	3.3820	RAD		
	409TL	37.0500	RAD		
	406TL	5.0430	RAD		
	403TL	3.0840	RAD		
	431TL	2.2050	RAD		
	451TL	16.1000	RAD		
	300SL	62.0600	RAD		
83	420SL	.8944	CONDI	.00000	.13300
	481SL	2.1530	CONDI		
	409TL	12.9800	RAD		
	203SL	6.1130	RAD		
	300SL	37.2600	RAD		
	481SL	13.6200	RAD		
	482SL	3.1780	RAD		
	382TL*	.4561	CONDI		
	451TL*	16.9500	CONDI		
	452TL*	2.1530	CONDI		
	454TL*	13.6100	CONDI		
84	456SL	.9513	CONDI	.00000	.46900
	300SL	43.4900	RAD		
	456TL*	19.4000	RAD		
85				.000	.000
86				.000	.000
87				.000	.000
88				.000	.000
89				.000	.000
90				.000	.000
91				.000	.000
92				.000	.000
93				.000	.000
94	221SL	1.7300	CONDI	3.60000	2.06700
	409TL	123.1000	RAD		
	395TL	27.3600	RAD		
	396TL	27.3600	RAD		

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
30NSL	10.9400	RAD	273.60000	2.06700
381TI*	9.1200	RAD		
382TI*	9.1200	RAD		
451TL	9.0250	CONDI	504.00000	8.64000
418SL	12.3500	CONDI		
432TL	8.8310	RAD		
30NSL	159.2000	RAD		
418SL	97.5200	RAD		
394TI*	27.3600	RAD		
409TL*	77.7500	RAD		
451TL*	26.2300	RAD		
444TL	9.0250	CONDI	504.00000	7.24000
418SL	5.6500	CONDI		
30NSL	164.4000	RAD		
418SL	97.5000	RAD		
245SL	3.0100	RAD		
394TL*	27.3600	RAD		
403TL*	3.2530	RAD		
409TL*	77.8400	RAD		
446TL*	26.4600	RAD		
420SL	7.7500	CONDI	432.00000	3.94000
418SL	.6333	CONDI		
419SL	9.0250	CONDI		
417SL	1.0530	CONDI		
398TI	57.0500	RAD		
30NSL	163.1000	RAD		
417SL	150.3000	RAD		
418SL	120.6000	RAD		
409TL*	40.0900	RAD		
444TL	1.5190	CONDI	504.00000	.30000
445TI	30.7000	RAD		
444TL	49.1400	RAD		
30NSL	178.5000	RAD		
417SL	74.3000	RAD		
154TL*	4.4000	RAD		
397TL*	57.0500	RAD		
442TL*	37.8100	RAD		
455TL	1.4250	CONDI	316.80000	.80000
455TL	29.7200	RAD		
454TL	36.7500	RAD		
442TL	28.7400	RAD		
444TL	42.3000	RAD		
30NSL	132.3000	RAD		
450TL	1.4640	CONDI	316.80000	1.96000
444TL	42.3000	RAD		
449TI	37.9000	RAD		
450TL	18.4200	RAD		
442TL	28.7900	RAD		
30NSL	142.7000	RAD		
402TL	19.4900	CONDI	734.40000	2.12000

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
401	440TL	58.5300	CONDI	734.40000	2.12000
	410SL	2.6390	CONDI		
	411SL	3.9390	CONDI		
	441TL	64.8900	RAD		
	440TL	116.5000	RAD		
	442TL	48.9000	RAD		
	454TL	21.7100	RAD		
	455TL	27.6400	RAD		
	445TL	18.4400	RAD		
	438TL	37.9600	RAD		
	300SL	223.4000	RAD		
	411SL	237.0000	RAD		
	410SL	130.5000	RAD		
	402	403TL	.9389		
411SL		1.7190	CONDI		
412SL		.8667	CONDI		
432TL		32.2000	RAD		
442TL		16.2800	RAD		
454TL		29.6800	RAD		
300SL		183.1000	RAD		
412SL		119.0000	RAD		
411SL		161.2000	RAD		
381TL*		3.3820	RAD		
401TL*		19.4900	CONDI		
403TL*		23.8000	RAD		
409TL*		22.2400	RAD		
403		412SL	3.6940	CONDI	460.80000
	413SL	5.1080	CONDI		
	402TL	23.8000	RAD		
	396TL	3.2530	RAD		
	442TL	21.0200	RAD		
	451TL	8.7610	RAD		
	454TL	20.5100	RAD		
	432TL	37.8100	RAD		
	300SL	84.7800	RAD		
	413SL	131.7000	RAD		
	412SL	208.3000	RAD		
	381TL*	5.0430	RAD		
	382TL*	3.0840	RAD		
	402TL*	.9389	CONDI		
409TL*	38.8800	RAD			
404	405TL	19.4900	CONDI	734.40000	3.70000
	443TL	58.5300	CONDI		
	405SL	2.6390	CONDI		
	404SL	3.9390	CONDI		
	450TL	29.6100	RAD		
	442TL	48.9900	RAD		
	439TL	64.8900	RAD		
	449TL	21.5700	RAD		
	405TL	22.0500	RAD		

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DFG.F			
404	437TL	37.9600	RAD	734.40000	3.70000			
	443TL	116.5000	RAD					
	300SL	217.9000	RAD					
	404SL	237.0000	RAD					
405	405SL	130.5000	RAD	489.60000	4.34000			
	406TL	.9389	CONDI					
	404SL	1.7190	CONDI					
	403SL	.8667	CONDI					
	406TL	24.8600	RAD					
	449TI	48.4100	RAD					
	431TL	33.6200	RAD					
	300SL	107.1000	RAD					
	403SL	119.0000	RAD					
	404SL	161.2000	RAD					
	382TL*	3.3820	RAD					
	404TL*	19.4900	CONDI					
	404TL*	22.0500	RAD					
	409TL*	25.4100	RAD					
442TI*	16.8400	RAD						
406	403SL	3.6940	CONDI	460.80000	4.24000			
	431TL	37.9100	RAD					
	300SL	121.5000	RAD					
	402SL	131.7000	RAD					
	403SL	208.3000	RAD					
	381TL*	3.0800	RAD					
	382TL*	5.0430	RAD					
	405TL*	.9389	CONDI					
	405TL*	24.8600	RAD					
	409TL*	32.0100	RAD					
	442TL*	21.0600	RAD					
	407						.000	.000
	408						.000	.000
	409	446TL	147.8000			CONDI	2433.60001	7.32000
451TL		147.8000	CONDI					
401SL		12.8300	CONDI					
400SL		3.5640	CONDI					
414SL		9.6890	CONDI					
418SL		135.7000	CONDI					
403TL		38.8800	RAD					
402TL		22.2400	RAD					
442TL		139.6000	RAD					
395TL		77.7500	RAD					
397TL		40.0900	RAD					
405TL		25.4100	RAD					
406TI		32.0100	RAD					
446TL		34.5500	RAD					
396TL		77.8400	RAD					
432TL		62.7300	RAD					
448TL		12.8900	RAD					
451TL		31.8700	RAD					

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	K.T. * CP BTU/DEG.F
300SL	1164.0000	RAD	2433.60001	2.32000
400SL	920.0000	RAD		
414SL	369.2000	RAD		
381TL*	37.0600	RAD		
382TL*	37.0500	RAD		
383TL*	12.9800	RAD		
394TL*	123.1000	RAD		
455TL	1.3060	CONDI	201.60000	.98000
455TL	19.6900	RAD		
454TL	24.3500	RAD		
442TL	19.0000	RAD		
300SI	87.3000	RAD		
444TL	2.7580	CONDI	201.60000	1.00000
442TL	19.0000	RAD		
454TL	24.3500	RAD		
455TL	19.6900	RAD		
444TL	14.8000	RAD		
300SL	87.3000	RAD		
444TL	1.3060	CONDI	201.60000	.98000
449TL	25.0600	RAD		
450TL	12.1800	RAD		
444TL	27.2700	RAD		
442TL	19.0400	RAD		
300SL	94.2000	RAD		
450TL	2.7580	CONDI	201.60000	1.00000
449TL	25.0600	RAD		
450TL	12.1800	RAD		
442TL	19.0400	RAD		
300SL	94.2000	RAD		
430TL	1.7170	CONDI	1238.39999	1.78000
428TL	.2250	CONDI		
730SL	1.7890	CONDI		
428TL	502.6000	RAD		
435TL	31.5200	RAD		
426TL	17.7500	RAD		
425TL	14.5000	RAD		
430TL	59.9800	RAD		
433TL	19.7600	RAD		
434TL	22.3000	RAD		
416TL	120.4000	RAD		
427TL	89.9400	RAD		
417TL	30.9700	RAD		
300SI	553.8000	RAD		
			.000	.000
429TL	73.1000	CONDI	2088.00000	.08596
427TL	12.3500	CONDI		
731SL	77.1600	CONDI		
339SI	163.4000	CONDI		
838SL	13.7000	CONDI		
849SL	13.7000	CONDI		

T U B E I U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
830SL	13.7000	CONDI	2088.00000	.08590
818SL	13.7000	CONDI		
824SL	13.7000	CONDI		
835SI	13.7000	CONDI		
854SL	13.7000	CONDI		
427TL	561.7000	RAD		
425TL	13.9700	RAD		
429TL	194.8000	RAD		
417TL	79.1100	RAD		
426TL	73.5900	RAD		
300SL	861.4000	RAD		
414TL*	120.4000	RAD		
428TL*	81.0200	RAD		
433TI*	34.4600	RAD		
434TL*	55.6800	RAD		
457TI*	96.1100	RAD		
465TL*	84.4900	RAD		
435TL	1.0360	CONDI	1008.00000	3.66000
435TI	65.2800	RAD		
300SI	301.1000	RAD		
414TL*	30.9700	RAD		
414TL*	79.1100	RAD		
429TI*	197.5000	RAD		
430TL*	24.4000	RAD		
434TI*	105.3000	RAD		
495TL*	16.8600	CONDI		
496TL*	4.8300	CONDI		
544TL*	9.1700	CONDI		
429TI	4.8730	CONDI	518.40000	1.90000
427TL	21.3700	CONDI		
435TL	7.9370	CONDI		
731SL	15.4300	CONDI		
769SL	10.2900	CONDI		
429TL	139.1000	RAD		
300SL	217.0000	RAD		
420TI*	32.6700	RAD		
434TL*	53.5600	RAD		
459TI*	32.6700	RAD		
584TL*	.1000	CONDI		
603TL*	.1000	CONDI		
604TL*	.1000	CONDI		
605TL*	.1000	CONDI		
606TL*	.1000	CONDI		
607TL*	.1000	CONDI		
608TL*	.1000	CONDI		
609TL*	.1000	CONDI		
610TL*	.1000	CONDI		
611TI*	.1000	CONDI		
612TL*	.1000	CONDI		
613TL*	.1000	CONDI		

T U B E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
418	614TL*	.1000	CONDI	518.40000	1.90000
	615TL*	.1000	CONDI		
	617TL*	2.2100	CONDI		
	618TL*	1.1000	CONDI		
	621TL*	2.8400	CONDI		
	623TL*	2.2100	CONDI		
	624TL*	1.1100	CONDI		
	625TL*	1.1100	CONDI		
	626TL*	2.2100	CONDI		
	627TL*	1.1100	CONDI		
	629TL*	2.4200	CONDI		
419	457TI	53.6000	RAD	316.80000	6.20000
	427TI	26.5000	RAD		
	300SL	245.0000	RAD		
	16TL*	.0244	CONDI		
	428TL*	52.8300	RAD		
420	465TL*	55.9000	RAD	302.40000	3.70000
	421TI	.8690	RAD		
	457TI	55.4000	RAD		
	418TL	32.4700	RAD		
	427TL	17.8900	RAD		
	300SL	270.8000	RAD		
	20TL*	.0485	CONDI		
	434TL*	65.8600	RAD		
421	465TL*	42.1300	RAD	288.00000	3.23400
	429TL	.1876	RAD		
	435TL	1.7100	RAD		
	457TL	368.1000	RAD		
	300SL	1.1680	RAD		
	24TL*	.0181	CONDI		
	420TI*	.8690	RAD		
	430TL*	.5447	RAD		
	434TL*	1.3410	RAD		
	459TL*	.8690	RAD		
422	438TL	3.2050	RAD	37.44000	.48000
	440TL	3.8250	RAD		
423	33TL*	.2577	CONDI	36.00000	2.14000
	438TL	3.5090	CONDI		
	440TL	31.0100	RAD		
	438TL	4.6000	RAD		
424	437TL	3.4890	CONDI	36.00000	2.14000
	437TL	31.0100	RAD		
	443TL	31.0100	RAD		
425	307SL	.6271	CONDI	849.60000	4.01000
	490SL	.6271	CONDI		
	310SL	1.9150	CONDI		
	312SL	1.9150	CONDI		
	314SL	1.9150	CONDI		
	316SL	1.9150	CONDI		
339SL	.8625	CONDI			

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CF BTU/DEG.F
340SL	.8625	CONDI	849.60000	4.01000
671SL	1.3760	CONDI		
749SL	2.6590	CONDI		
400SL	5.2340	CONDI		
747SL	2.6180	CONDI		
525SL	.7160	CONDI		
526SL	.7160	CONDI		
435TL	10.2000	RAD		
300SL	77.6800	RAD		
511L*	1.1100	RAD		
414TL*	14.5000	RAD		
416TL*	13.9700	RAD		
426TL*	.8845	CONDI		
427TL*	14.1200	RAD		
428TL*	9.6110	RAD		
444TL*	2.3350	RAD		
457TL*	3.8760	CONDI		
457TL*	29.7400	RAD		
425TL	.8845	CONDI	1022.40000	3.53000
304SI	298.1000	CONDI		
304SL	17.1400	RAD		
300SL	79.5000	RAD		
414TL*	17.7500	RAD		
416TL*	23.5900	RAD		
427TL*	19.7300	RAD		
428TL*	15.6200	RAD		
433TL*	5.2200	RAD		
457TL*	24.1100	RAD		
457TL	11.0300	CONDI	1468.80000	5.94900
431TL	2.9230	CONDI		
339SI	1.3940	CONDI		
767SL	6.6810	CONDI		
731SL	3.4110	CONDI		
147SL	.3155	CONDI		
431TL	2.3620	RAD		
426TL	19.7300	RAD		
425TL	14.1200	RAD		
435TL	32.0800	RAD		
434TL	24.3600	RAD		
735SL	4.3900	RAD		
708SL	5.1200	RAD		
198SL	1.1190	RAD		
194SL	4.3000	RAD		
767SL	2.7400	RAD		
731SI	6.9500	RAD		
147SL	3.4800	RAD		
300SI	689.5000	RAD		
706SI	6.6780	RAD		
711SL	9.6970	RAD		
707SL	8.9090	RAD		

T. U B L E I U M P D. A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
427	414TL*	89.9400	RAD	1468.80000	5.94900
	416TL*	12.3500	CONDI		
	416TL*	561.7000	RAD		
	418TL*	21.3700	CONDI		
	419TL*	26.5000	RAD		
	420TL*	17.8900	RAD		
	428TL*	90.6800	RAD		
	429TL*	1.4110	CONDI		
	457TL*	94.7400	RAD		
	458TL*	26.5000	RAD		
	459TL*	17.8900	RAD		
	465TL*	67.7000	RAD		
	487TL*	1.3600	CONDI		
	487TL*	1.4800	RAD		
	628TL*	1.1100	CONDI		
	631TL*	1.1100	CONDI		
	428	430TL	3.4640		
457TL		11.0300	CONDI		
340SL		1.2300	CONDI		
730SL		3.8780	CONDI		
765SL		6.6810	CONDI		
270SL		1298.0000	CONDI		
150SL		.3155	CONDI		
465TL		307.5000	RAD		
430TL		198.8000	RAD		
433TL		14.3600	RAD		
434TL		27.4300	RAD		
419TL		52.8300	RAD		
457TL		354.3000	RAD		
416TL		81.0200	RAD		
427TL		90.6800	RAD		
429TL		16.2100	RAD		
435TL		47.9600	RAD		
426TL		15.6200	RAD		
425TL		9.6110	RAD		
300SL		65.9000	RAD		
703SL		6.7380	RAD		
705SL		5.1200	RAD		
719SL		9.6940	RAD		
702SL		8.4410	RAD		
414TL*		.7250	CONDI		
414TL*		502.6000	RAD		
432TL*		2.9230	CONDI		
631TL*	2.7100	CONDI			
429	457TL	25.0800	CONDI	1238.39999	2.64800
	435TL	2.0140	CONDI		
	427TL	1.4110	CONDI		
	729SL	5.6250	CONDI		
	769SL	1.3670	CONDI		
	731SL	2.9030	CONDI		

T U B E J U M P D A T

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. ° CP BTU/DEG.F
549SL	120.4000	CONDI	1738.39999	2.64800.
549SL	40000.0000	COND2		
417TI *	197.5000	RAD		
439TL	35.7300	RAD		
769SL	.3000	RAD		
300SI	515.5000	RAD		
166SL	41.1600	RAD		
701SI	90.3700	RAD		
731SL	8.0400	RAD		
416TL *	73.1000	CONDI		
416TI *	194.8000	RAD.		
418TL *	4.8730	CONDI		
418TI *	139.1000	RAD		
421TL *	.1876	RAD		
428TI *	16.2100	RAD		
434TL *	134.8000	RAD		
437TL *	4.4860	CONDI		
457TL *	11.7200	RAD		
466TI *	.6000	RAD		
467TL *	4.8330	CONDI		
467TI *	1.6200	RAD		
468TL *	4.8330	CONDI		
468TI *	.8300	RAD		
469TL *	.6000	RAD		
485TL *	.0980	RAD		
488TL *	1.0200	CONDI		
488TI *	1.8400	RAD		
492TL *	4.8300	CONDI		
492TI *	.3000	RAD		
493TL *	4.8300	CONDI		
493TI *	.1800	RAD		
494TL *	4.8300	CONDI		
494TI *	1.2100	RAD		
495TL *	2.4100	CONDI		
495TI *	1.1700	RAD		
496TL *	1.0200	RAD		
497TL *	.3500	RAD		
498TL *	1.2100	CONDI		
540TI *	1.6100	CONDI		
540TL *	3.0800	RAD		
541TI *	1.6100	CONDI		
542TL *	4.8300	CONDI		
543TL *	4.8300	CONDI		
544TL *	2.4100	CONDI		
544TI *	1.7500	RAD		
545TL *	2.4100	CONDI		
545TI *	1.1500	RAD		
560TI *	1.6100	CONDI		
560TL *	2.0500	RAD		
616TL *	.4410	CONDI		

T J B E I U M P D A 1

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
618TL*	2.2100	CONDI	1238.39999	2.64800
621TL*	.4750	CONDI		
624TL*	1.1100	CONDI		
625TL*	1.1100	CONDI		
628TL*	.5120	CONDI		
629TL*	.7340	CONDI		
457TL	25.0800	CONDI	907.20000	2.64800
435TL	2.0140	CONDI		
763SL	5.4250	CONDI		
730SL	2.5580	CONDI		
770SL	1.7420	CONDI		
270SL	1298.0000	CONDI		
544SL	171.5000	CONDI		
421TL	.5447	RAD		
417TL	24.4000	RAD		
435TL	98.9100	RAD		
757SL	5.5660	RAD		
763SI	2.1800	RAD		
770SL	.2996	RAD		
300SI	537.6000	RAD		
167SL	47.8400	RAD		
700SL	59.6600	RAD		
730SL	10.2000	RAD		
414TL*	1.2170	CONDI		
414TL*	59.9800	RAD		
428TL*	3.6640	CONDI		
428TL*	198.8000	RAD		
438TL*	4.4860	CONDI		
471TL*	1.2100	CONDI		
471TI*	3.2000	RAD		
490TL*	1.2000	CONDI		
538TI*	2.4100	CONDI		
538TL*	1.5400	RAD		
437TL	6.9170	CONDI	403.20000	1.11200
731SL	10.1900	CONDI		
311SL	3.4030	CONDI		
403SL	3.5390	CONDI		
404SL	4.3890	CONDI		
147SL	14.2200	CONDI		
194SL	1.0000	RAD		
731SL	2.0900	RAD		
300SL	247.7000	RAD		
704SL	1.8050	RAD		
707SL	.2046	RAD		
382TL*	2.2050	RAD		
405TL*	33.6200	RAD		
406TL*	37.9100	RAD		
427TL*	2.9230	CONDI		
427TI*	2.3620	RAD		
428TL	2.9230	CONDI	388.80000	1.02100

T U B E I U M P D A T

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
150SL	14.2200	CONDI	388.80000	1.02100
157SL	1.5910	CONDI		
309SI	3.4030	CONDI		
411SL	4.3890	CONDI		
412SL	3.5390	CONDI		
300SL	180.5000	RAD		
703SL	1.8950	RAD		
702SL	3.0280	RAD		
32TL*	1.6800	CONDI		
32TL*	1.6000	RAD		
33TL*	.3760	CONDI		
381TL*	2.2000	RAD		
395TL*	8.8310	RAD		
402TL*	32.2000	RAD		
403TL*	37.8100	RAD		
409TL*	62.7300	RAD		
486TL*	2.0400	CONDI		
465TI	25.8800	RAD	432.00000	.89000
416TL	34.4600	RAD		
426TL	5.2200	RAD		
343SL	3.7800	RAD		
342SL	37.9200	RAD		
332SL	5.5700	RAD		
330SL	16.2600	RAD		
344SL	1.1300	RAD		
300SL	101.7000	RAD		
414TL*	19.7600	RAD		
428TL*	14.3600	RAD		
434TI*	2.5380	CONDI		
434TL*	114.6000	RAD		
433TI	2.5380	CONDI	1368.00000	0.00000
204SL	1.0300	CONDI		
433TL	114.6000	RAD		
420TL	65.8400	RAD		
421TL	1.3410	RAD		
416TL	55.6800	RAD		
418TL	53.5600	RAD		
429TI	134.8000	RAD		
417TL	105.3000	RAD		
435TL	239.3000	RAD		
342SL	34.8000	RAD		
343SL	82.8000	RAD		
330SL	177.4000	RAD		
344SL	18.4000	RAD		
332SI	85.4000	RAD		
300SL	472.4000	RAD		
414TI*	22.3000	RAD		
427TL*	24.3600	RAD		
428TI*	27.4300	RAD		
444TL*	3.6620	RAD		

T O B E T I O N E M A I X

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
434	454TL*	9.1970	RAD	1368.00000	1.09000
	457TL*	65.0400	RAD		
	490TL*	2.4000	RAD		
435	436TL	2.1190	CONDI	1310.39999	3.52000
	457TL	25.4200	CONDI		
	769SL	1.5190	CONDI		
	770SL	1.5190	CONDI		
	649SL	2.3610	CONDI		
	527SL	2.1530	CONDI		
	204SL	.5144	CONDI		
	332SL	.1170	CONDI		
	436TI	93.5700	RAD		
	344SL	2.2600	RAD		
	332SL	36.3000	RAD		
	366SL	43.7500	RAD		
	369SL	22.4700	RAD		
	649SL	62.6000	RAD		
	769SL	94.7000	RAD		
	770SL	94.7000	RAD		
	300SL	204.8000	RAD		
	373TL*	1.0360	CONDI		
	373TL*	65.2800	RAD		
	414TL*	31.5200	RAD		
	417TL*	1.0360	CONDI		
	417TL*	65.2800	RAD		
	418TL*	7.9370	CONDI		
	421TL*	1.7100	RAD		
	425TL*	10.2000	RAD		
	427TL*	32.0800	RAD		
	428TI*	47.9600	RAD		
	429TL*	2.0140	CONDI		
	429TI*	35.7300	RAD		
	430TL*	2.0140	CONDI		
	430TL*	98.9100	RAD		
	434TL*	39.3000	RAD		
	457TL*	84.1600	RAD		
	470TL*	1.6060	CONDI		
	470TI*	1.3300	RAD		
	485TL*	.0980	RAD		
	491TL*	1.6100	CONDI		
	491TL*	2.1000	RAD		
	492TL*	.3000	RAD		
	493TL*	.1800	RAD		
	494TI*	1.2100	RAD		
	495TL*	1.1700	RAD		
	496TI*	1.0200	RAD		
	539TL*	1.6100	CONDI		
	539TL*	1.2000	RAD		
	446SL	1.9050	CONDI	705.60000	2.33500
	408SL	2.2890	CONDI		

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. ° CP BTU/DEG.F
444SL	1.6910	CONDI	705.60000	2.33500
769SL	40.3000	RAD		
369SL	67.7500	RAD		
770SL	40.4000	RAD		
332SI	3.4700	RAD		
300SL	221.8000	RAD		
408SI	70.1000	RAD		
30TL*	1.6800	CONDI		
30TI*	.6650	RAD		
32TL*	1.6800	CONDI		
32TI*	.8000	RAD		
32TL°	1.7300	RAD		
435TL*	2.1190	CONDI		
435TI°	93.5700	RAD		
439TL*	24.3300	RAD		
441TL*	40.8500	RAD		
442TL°	187.0000	RAD		
444TL*	25.5100	RAD		
445TI°	78.5300	RAD		
450TL*	21.2700	RAD		
455TL*	21.2700	RAD		
429TL	4.4860	CONDI	475.20000	2.04100
731SL	4.1810	CONDI		
405SI	3.3190	CONDI		
444SL	1.9050	CONDI		
743SL	1.5610	CONDI		
769SL	1.3200	RAD		
300SI	233.4000	RAD		
701SL	48.8700	RAD		
731SI	4.5800	RAD		
404TI*	37.9600	RAD		
424TL°	3.4890	CONDI		
424TL°	31.0100	RAD		
431TL*	6.9170	CONDI		
439TL*	3.1190	CONDI		
439TI*	39.5400	RAD		
443TI*	67.7800	RAD		
450TL*	24.0900	RAD		
590TI°	1.4200	CONDI		
430TL	4.4860	CONDI	475.20000	2.04100
445SI	1.5910	CONDI		
158SL	1.5610	CONDI		
157SI	1.3630	CONDI		
410SL	3.1190	CONDI		
770SI	1.3200	RAD		
300SL	233.4000	RAD		
167SI	23.3200	RAD		
700SI	33.4700	RAD		
730SI	5.3900	RAD		
32TL*	1.2600	CONDI		

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
438	401TL*	37.9600	RAD	475.20000	2.04100
	422TL*	3.2050	RAD		
	423TL*	3.5090	CONDI		
	423TL*	4.6000	RAD		
	440TL*	67.7800	RAD		
	441TL*	3.3190	CONDI		
	441TL*	39.5400	RAD		
	455TI*	24.0900	RAD		
	472TL*	1.6060	CONDI		
	472TI*	.9270	RAD		
	478TL*	4.8330	CONDI		
	478TL*	.5900	RAD		
	486TL*	.3600	RAD		
	489TL*	2.4100	CONDI		
	489TL*	.6000	RAD		
	579TL*	2.3300	RAD		
	439	450TL	5.7470		
437TL		3.1190	CONDI		
440SL		.9078	CONDI		
405SL		15.2600	CONDI		
436TL		24.3300	RAD		
437TL		39.5400	RAD		
300SL		147.2000	RAD		
408SL		19.1600	RAD		
558SL		19.2200	RAD		
404TL*		64.8900	RAD		
442TL*		47.0300	RAD		
443TL*		.5167	CONDI		
443TL*		115.9000	RAD		
445TI*		24.7400	RAD		
450TL*		34.4800	RAD		
440	441TI	.5853	CONDI	1310.39999	16.82000
	410SL	.8333	CONDI		
	441TI	115.9000	RAD		
	442TL	87.3200	RAD		
	454TI	38.7700	RAD		
	455TL	49.3600	RAD		
	445TI	32.9300	RAD		
	438TL	67.7800	RAD		
	300SL	398.3000	RAD		
	410SL	434.6000	RAD		
	401TL*	58.5300	CONDI		
	401TI*	116.5000	RAD		
	422TI*	3.8250	RAD		
	423TI*	31.0100	RAD		
	441	455TI	5.7470		
438TI		3.3190	CONDI		
441SL		.9078	CONDI		
410SL		1.5920	CONDI		
442TI		47.0600	RAD		

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG * F
455TI	34.4800	RAD	590.40000	1.17100
445TI *	24.7800	RAD		
438TI	39.5400	RAD		
436TL	40.8500	RAD		
408SI	19.2000	RAD		
557SL	19.2200	RAD		
30TL *	1.2600	CONDI		
30TI *	3.3300	RAD		
401TI *	64.8900	RAD		
440TL *	.5853	CONDI		
440TI *	115.9000	RAD		
473TI *	.4400	RAD		
474TI *	.4400	RAD		
475TL *	.4400	RAD		
476TI *	.4400	RAD		
477TL *	2.1850	CONDI		
477TI *	1.7500	RAD		
440SI	.5583	CONDI	2030.40001	25.35000
441SL	.5583	CONDI		
408SL	.8111	CONDI		
455TI	49.4200	RAD		
444TI	68.3800	RAD		
445TI	193.5000	RAD		
439TL	47.0300	RAD		
398TL	37.8300	RAD		
405TL	16.8400	RAD		
406TL	21.0600	RAD		
436TL	187.0000	RAD		
300SL	476.8000	RAD		
408SL	1218.0000	RAD		
246SL	2.8100	RAD		
30TL *	.6650	RAD		
32TI *	.8000	RAD		
399TI *	28.7400	RAD		
400TI *	28.7900	RAD		
401TI *	48.9000	RAD		
402TL *	16.2800	RAD		
403TL *	21.0200	RAD		
404TI *	48.9900	RAD		
409TL *	139.6000	RAD		
410TL *	19.0000	RAD		
411TL *	19.0000	RAD		
412TL *	19.0400	RAD		
413TL *	19.0400	RAD		
440TI *	87.3200	RAD		
441TL *	47.0600	RAD		
443TI *	87.4700	RAD		
439TL	.5167	CONDI	1310.39999	14.82000
405SI	.8333	CONDI		
450TI	52.8700	RAD		

T U B E I U M P D A T A

UNIT NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
443	439TL	115.9000	RAD	1310.39999	16.82000
	437TL	67.7800	RAD		
	445TL	32.9000	RAD		
	449TL	38.5200	RAD		
	442TL	87.4700	RAD		
	300SI	391.9000	RAD		
	405SL	434.6000	RAD		
	404TL*	58.5300	CONDI		
	404TL*	116.5000	RAD		
	424TL*	31.0100	RAD		
	444	445TL	.6625		
489SL		.1493	CONDI		
426SL		1.8610	CONDI		
427SL		1.8610	CONDI		
408SL		6.5280	CONDI		
417SL		2.3360	CONDI		
436TL		25.5100	RAD		
425TL		2.3350	RAD		
434TL		3.6620	RAD		
500SL		2.1180	RAD		
300SL		216.4000	RAD		
497SL		1.9090	RAD		
487SI		1.3180	RAD		
408SL		74.1000	RAD		
398TL*		1.5190	CONDI		
398TL*		49.1400	RAD		
399TI*		42.3000	RAD		
400TL*		42.3000	RAD		
411TL*		2.7580	CONDI		
411TL*		14.8000	RAD		
412TL*		1.3060	CONDI		
412TL*		27.2700	RAD		
442TL*		68.3800	RAD		
450TL*	7.4450	CONDI			
455TL*	7.4450	CONDI			
445	439TI	24.7400	RAD	892.80000	3.53000
	436TL	78.5300	RAD		
	497SL	17.1800	RAD		
	300SI	329.8000	RAD		
	398TI*	30.7000	RAD		
	401TL*	18.4400	RAD		
	440TL*	32.9300	RAD		
	441TL*	24.7800	RAD		
	442TI*	193.5000	RAD		
	443TI*	32.9000	RAD		
	444TL*	.6625	CONDI		
446	448TL	16.9400	CONDI	547.20000	.30700
	401SL	5.1000	CONDI		
	402SL	5.7500	CONDI		
	418SL	51.7400	CONDI		

T O U R E L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
446	421SL	5.0000	CONDI	547.20000	.30700
	394TI	26.4600	RAD		
	300SI	333.3000	RAD		
	471SI	4.1000	RAD		
	381TI *	16.1000	RAD		
	394TL *	9.0250	CONDI		
	409TI *	147.8000	CONDI		
447	409TI *	34.5500	RAD	288.00000	.73100
	473SL	77.6100	RAD		
	201SL	51.4500	RAD		
	381TI *	61.2800	RAD		
448	448TL *	2.1590	CONDI	59.04000	.13300
	449TL	13.6100	CONDI		
	447TI	2.1590	CONDI		
	473SL	2.1590	CONDI		
	419SI	.8944	CONDI		
	474SL	1.3590	RAD		
	300SI	37.2400	RAD		
	472SI	.7701	RAD		
	473SI	13.5900	RAD		
	201SI	6.1100	RAD		
	381TI *	.4590	CONDI		
	409TI *	12.8900	RAD		
	444TI *	16.9400	CONDI		
	449	450TL	2.5670		
403SL		5.1360	CONDI		
404SI		5.3690	CONDI		
419SL		20.9400	CONDI		
417SL		18.2200	CONDI		
474SI		9.9560	RAD		
300SL		275.2000	RAD		
400TL *		37.9000	RAD		
404TL *		21.5700	RAD		
405TL *		48.4100	RAD		
412TL *		25.0600	RAD		
413TL *		25.0600	RAD		
443TL *		38.5200	RAD		
448TL *		13.6100	CONDI		
450	444TL	7.4450	CONDI	432.00000	.87600
	405SI	3.8170	CONDI		
	424SL	1.1750	CONDI		
	439TL	34.4800	RAD		
	434TI	21.2700	RAD		
	437TL	24.0900	RAD		
	474SI	12.8200	RAD		
	300SI	158.5000	RAD		
	424SI	13.3000	RAD		
	400TI *	1.4640	CONDI		
	400TI *	18.4200	RAD		
	404TL *	29.6100	RAD		

TUBE LUMP DATA

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. * CP BTU/DEG.F
412TL*	12.1800	RAD	432.000000	.87600
413TL*	2.7560	CONDI		
413TL*	12.1800	RAD		
439TL*	5.7470	CONDI		
443TL*	52.8700	RAD		
449TL*	2.5670	CONDI		
383TL	16.9500	CONDI	547.20000	.30700
413SL	5.7500	CONDI		
414SI	5.1000	CONDI		
418SL	51.7400	CONDI		
422SL	5.0000	CONDI		
457TI	3.6220	RAD		
395TL	26.2300	RAD		
479SL	3.4130	RAD		
300SI	328.7000	RAD		
382TI*	16.1000	RAD		
395TL*	9.0250	CONDI		
403TL*	8.7610	RAD		
409TL*	147.8000	CONDI		
409TL*	31.8700	RAD		
383TL	2.1530	CONDI	288.00000	.73100
203SL	51.4500	RAD		
481SL	77.7800	RAD		
382TI*	61.1600	RAD		
			.000	.000
383TL	13.6100	CONDI	547.20000	.67000
455TL	2.5670	CONDI		
411SI	5.3690	CONDI		
412SL	5.1360	CONDI		
420SI	20.9400	CONDI		
417SL	18.2200	CONDI		
434TL	9.1970	RAD		
483SL	9.9570	RAD		
300SI	266.3000	RAD		
30TI*	2.5200	CONDI		
30TI*	1.6600	RAD		
399TL*	36.7500	RAD		
401TL*	21.7100	RAD		
402TL*	29.6800	RAD		
403TI*	20.5100	RAD		
410TI*	24.3500	RAD		
411TL*	24.3500	RAD		
440TL*	38.7700	RAD		
444TL	7.4450	CONDI	432.00000	.87600
427SL	1.1750	CONDI		
410SL	3.8170	CONDI		
438TI	24.0900	RAD		
436TL	21.2700	RAD		
484SL	11.7100	RAD		
300SI	88.1300	RAD		

T U B E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F			
455	30TL*	1.6800	COND1	432.00000	.87600			
	30TL*	1.6600	RAD					
	399TL*	1.4250	COND1					
	399TL*	29.7200	RAD					
	401TL*	27.6400	RAD					
	410TL*	1.3060	COND1					
	410TL*	19.6900	RAD					
	411TL*	19.6900	RAD					
	440TL*	49.3600	RAD					
	441TL*	5.7470	COND1					
	441TL*	34.4800	RAD					
	442TL*	49.4200	RAD					
	454TL*	7.5670	COND1					
	456	205SL	2.2460			COND1	83.52000	.12000
		384TL	19.4000			RAD		
200SL		21.7400	RAD					
131SL		21.2000	RAD					
300SI		43.4900	RAD					
457	425TL	3.8760	COND1	1900.80000	4.07900			
	765SL	9.4590	COND1					
	729SI	5.4030	COND1					
	763SL	5.4030	COND1					
	671SL	.7727	COND1					
	649SL	.3580	COND1					
	650SI	8.4180	COND1					
	653SI	8.4180	COND1					
	767SI	9.4590	COND1					
	649SI	3.0400	COND1					
	625SL	3.1570	COND1					
	626SL	3.1570	COND1					
	414TL	96.1100	RAD					
	427TL	94.7400	RAD					
	429TL	11.7200	RAD					
	435TL	84.1600	RAD					
	426TI	24.1100	RAD					
	425TL	29.7400	RAD					
	434TL	65.0400	RAD					
	300SL	665.5000	RAD					
	550SL	111.9000	RAD					
	551SI	40.9800	RAD					
	553SL	111.9000	RAD					
	554SL	40.9700	RAD					
	692SI	43.7900	RAD					
	691SI	51.7200	RAD					
	693SL	52.1900	RAD					
	680SL	69.2600	RAD					
	625SL	33.6100	RAD					
	603SI	40.9900	RAD					
	627SL	40.9900	RAD					
	575SL	6.0800	RAD					

T U B E I U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. o CP BTU/DEG.F
457	565SI	6.0800	RAD	1900.80000	4.07900
	578SI	13.2500	RAD		
	590SI	14.6800	RAD		
	579SI	6.9800	RAD		
	591SI	5.9400	RAD		
	601SI	37.4400	RAD		
	617SI	213.3000	RAD		
	613SI	51.8300	RAD		
	615SI	86.1200	RAD		
	611SI	40.8900	RAD		
	619SI	40.8900	RAD		
	609SI	34.4400	RAD		
	621SI	34.4400	RAD		
	539SI	37.6100	RAD		
	531SI	4.9770	RAD		
	537SI	33.3000	RAD		
	605SI	33.6000	RAD		
	10SI	7.7430	RAD		
	12SI	9.1930	RAD		
	16SI	8.7630	RAD		
	20SI	9.5980	RAD		
	22SI	9.5980	RAD		
	24SI	9.5980	RAD		
	36SI	4.4300	RAD		
	40SI	4.8360	RAD		
	38SI	15.5700	RAD		
	42SI	6.4180	RAD		
	44SI	2.2850	RAD		
	46SI	2.2090	RAD		
	48SI	5.2960	RAD		
	635SI	1.0800	RAD		
	18SI	.7985	RAD		
	34SI	.7985	RAD		
	14SI	.1140	RAD		
	50SI	.8833	RAD		
	580SI	13.2000	RAD		
	592SI	14.7000	RAD		
	299SI	109.2000	RAD		
	541SI	49.6700	RAD		
	802SI	37.5300	RAD		
	805SI	33.2400	RAD		
	11SI	7.7280	RAD		
	13SI	9.1750	RAD		
	17SI	8.7460	RAD		
	21SI	9.7790	RAD		
	23SI	9.5790	RAD		
	33SI	9.5790	RAD		
	37SI	4.4210	RAD		
	41SI	4.8260	RAD		
	39SI	4.6690	RAD		

T U B E I L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN ²) TO FLUID	WT. ° CP BTU/DEG.F
457	435L	6.4050	RAD	1900.80000	4.07900
	455I	2.2800	RAD		
	475I	2.2050	RAD		
	495L	5.2850	RAD		
	195L	.8133	RAD		
	355I	.0797	RAD		
	155L	.1139	RAD		
	515L	.8815	RAD		
	16TI *	3.5000	CONDI		
	18TL *	3.5000	CONDI		
	20TI *	3.5000	CONDI		
	22TI *	3.5000	CONDI		
	24TL *	1.4350	CONDI		
	154TL *	4.4000	RAD		
	181TL *	1.1800	CONDI		
	181TI *	4.8000	RAD		
	214TI *	.1800	RAD		
	233TI *	3.5400	CONDI		
	244TI *	1.3100	CONDI		
	244TL *	4.1000	RAD		
	300TI *	.7300	CONDI		
	300TI *	6.8000	RAD		
	302TI *	.7300	CONDI		
	302TI *	5.5000	RAD		
	419TL *	53.4000	RAD		
	420TL *	55.4000	RAD		
	421TI *	368.1000	RAD		
	427TL *	11.0300	CONDI		
	428TI *	11.0300	CONDI		
	428TI *	354.3000	RAD		
	429TL *	25.0800	CONDI		
	430TL *	25.0800	CONDI		
	435TI *	25.4200	CONDI		
	451TL *	3.4220	RAD		
	458TL *	53.6000	RAD		
	459TL *	55.4000	RAD		
	465TI *	392.5000	RAD		
	466TL *	.6000	RAD		
	469TI *	2.4100	CONDI		
	469TL *	.6000	RAD		
	470TI *	1.3300	RAD		
	479TI *	2.1850	CONDI		
	479TI *	1.2900	RAD		
	480TI *	.2350	RAD		
	481TL *	.4700	RAD		
	482TI *	.2700	RAD		
	483TL *	.4700	RAD		
	484TI *	.2350	RAD		
	487TI *	1.4800	RAD		
	488TI *	1.8400	RAD		

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
539TL*	1.2000	RAD	1900.80000	4.07900
559TL*	1.4100	CONDI		
559TL*	1.4200	RAD		
562TL*	1.2000	CONDI		
562TL*	4.8000	RAD		
574TL*	3.0700	CONDI		
574TL*	9.1600	RAD		
581TL*	2.8500	CONDI		
588TL*	.4750	CONDI		
590TL*	2.8400	CONDI		
598TL*	1.4200	CONDI		
602TL*	1.4200	CONDI		
616TL*	2.2100	CONDI		
621TL*	.4750	CONDI		
622TL*	.7350	CONDI		
628TL*	2.2100	CONDI		
158 457TL	53.4000	RAD	316.80000	6.20000
427TL	26.5000	RAD		
300SL	245.0000	RAD		
18TL*	.0215	CONDI		
159 421TL	.8690	RAD	302.40000	3.70000
457TL	55.4000	RAD		
418TL	32.6700	RAD		
427TL	17.8900	RAD		
300SL	270.8000	RAD		
22TL*	.0485	CONDI		
160			.000	.000
161			.000	.000
162			.000	.000
163			252.000	.000
164			.000	.000
165 457TL	392.5000	RAD	110.24000	.10000
416TL	84.4900	RAD		
420TL	42.1300	RAD		
419TL	55.9000	RAD		
427TL	67.7000	RAD		
300SL	155.6000	RAD		
428TL	307.5000	RAD		
433TL	25.8800	RAD		
166 429TL	.6000	RAD	11.79000	.00610
457TL	.6000	RAD		
167 429TL	4.8330	CONDI	33.00000	.01710
429TL	1.4200	RAD		
580TL	1.4200	RAD		
168 429TL	4.8330	CONDI	18.85000	.00980
429TL	.8300	RAD		
580TL	.8300	RAD		
169 457TL	2.4100	CONDI	24.75000	.01280
429TL	.6000	RAD		
580TL	1.2100	RAD		

TUBE THERM DATA

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	SCALE FACTOR TO LUMP	WT. % CP BTU/DEG.F
457TL	.6000	RAD	24.75000	.01280
435TL	1.6060	CONDI	54.20000	.02810
435TI	1.3300	RAD		
580TI	2.6600	RAD		
457TI	1.3300	RAD		
430TL	1.2100	CONDI	64.90000	.03360
430TI	3.2000	RAD		
580TL	3.2000	RAD		
438TI	1.6060	CONDI	18.85000	.00980
438TL	.9270	RAD		
580TI	.9270	RAD		
441TI	.4400	RAD	8.85000	.00460
580TI	.4400	RAD		
441TI	.4400	RAD	8.85000	.00460
580TI	.4400	RAD		
441TL	.4400	RAD	8.85000	.00460
580TL	.4400	RAD		
441TI	.4400	RAD	8.85000	.00460
580TL	.4400	RAD		
441TL	2.1850	CONDI	35.40000	.01830
441TL	1.7500	RAD		
580TL	1.7500	RAD		
438TL	4.8330	CONDI	11.79000	.00610
438TL	.5900	RAD		
580TL	.5900	RAD		
457TL	2.1050	CONDI	25.90000	.01340
457TI	1.2900	RAD		
580TI	1.2900	RAD		
457TI	.2350	RAD	4.71000	.00230
580TL	.2350	RAD		
457TI	.4700	RAD	9.42000	.00460
580TI	.4700	RAD		
457TI	.2700	RAD	5.50000	.00270
580TL	.2700	RAD		
457TL	.4700	RAD	9.42000	.00460
580TL	.4700	RAD		
457TL	.2350	RAD	4.71000	.00230
580TI	.2350	RAD		
435TL	.0980	RAD	3.93000	.00190
429TL	.0980	RAD		
580TL	.1950	RAD		
432TI	2.0400	CONDI	7.07000	.00440
438TL	.3600	RAD		
580TI	.3600	RAD		
427TI	1.3600	CONDI	29.10000	.01430
427TL	1.4800	RAD		
457TI	1.4800	RAD		
429TL	1.0200	CONDI	36.10000	.01770
429TI	1.8400	RAD		
457TI	1.8400	RAD		

T U B E L U M P D A T A

IP	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
9	438TL	2.4100	CONDI	11.79000	.00610
	438TL	.4000	RAD		
	580TL	.4000	RAD		
10	430TL	1.2000	CONDI	59.00000	.03050
	434TL	2.4000	RAD		
	580TL	2.4000	RAD		
11	435TL	1.6100	CONDI	43.60000	.02760
	435TL	2.1000	RAD		
	580TL	2.1000	RAD		
12	429TL	4.8300	CONDI	5.90000	.00310
	429TL	.3000	RAD		
	435TL	.3000	RAD		
13	429TL	4.8300	CONDI	3.54000	.00180
	429TL	.1800	RAD		
	435TL	.1800	RAD		
14	429TL	4.8300	CONDI	49.50000	.02560
	429TL	1.2100	RAD		
	580TL	2.4200	RAD		
	435TL	1.2100	RAD		
15	429TL	2.4100	CONDI	47.10000	.02440
	417TL	16.8400	CONDI		
	429TL	1.1700	RAD		
	580TL	2.3300	RAD		
	435TL	1.1700	RAD		
16	417TL	4.8300	CONDI	40.10000	.02080
	429TL	1.0200	RAD		
	580TL	2.0400	RAD		
	435TL	1.0200	RAD		
17	429TL	.3500	RAD	7.07000	.00370
	580TL	.3500	RAD		
18	429TL	1.2100	CONDI	40.10000	.02080
	580TL	3.9600	RAD		
19				.000	.000
20				.000	.000
21				.000	.000
22				.000	.000
23				.000	.000
24				.000	.000
25				.000	.000
26				.000	.000
27				.000	.000
28				.000	.000
29				.000	.000
30				.000	.000
31				.000	.000
32				.000	.000
33				.000	.000
34				.000	.000
35				.000	.000
36				.000	.000

T U B E L U M P D A T A

IMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. # CP BTU/DEG.F
17				.000	.000
18				.000	.000
19				.000	.000
20				.000	.000
21				.000	.000
22				.000	.000
23				.000	.000
24				.000	.000
25				.000	.000
26				.000	.000
27				.000	.000
28				.000	.000
29				.000	.000
30				.000	.000
31				.000	.000
32				.000	.000
33				.000	.000
34				.000	.000
35				.000	.000
36				.000	.000
37				.000	.000
38	430TL	2.4100	CONDI	31.80000	.01640
	430TI	1.5400	RAD		
	580TI	1.5400	RAD		
39	435TL	1.6100	CONDI	35.40000	.01830
	457TI	1.2000	RAD		
	580TL	1.2000	RAD		
	435TL	1.2000	RAD		
40	429TI	1.6100	CONDI	63.60000	.03290
	429TI	3.0800	RAD		
	580TI	3.0800	RAD		
41	429TL	1.6100	CONDI	55.40000	.02870
	580TI	5.4200	RAD		
42	429TL	4.8300	CONDI	22.40000	.01160
	580TL	2.2300	RAD		
43	429TL	4.8300	CONDI	33.00000	.01710
	580TI	3.1700	RAD		
44	429TL	2.4100	CONDI	35.40000	.01830
	429TI	1.7500	RAD		
	580TL	1.7500	RAD		
45	429TL	2.4100	CONDI	23.60000	.01220
	429TI	1.1500	RAD		
	580TI	1.1500	RAD		
46	417TL	9.1700	CONDI	22.40000	.00120
	580TL	2.2000	RAD		
47				.000	.000
48				.000	.000
49				.000	.000
50				.000	.000
51				.000	.000

T U B E L U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. BTU/DEGREE
			.000	.000
			.000	.000
			.000	.000
			.000	.000
			.000	.000
			.000	.000
			.000	.000
457TL	1.6100	CONDI	29.58000	.0098
457TL	1.4200	RAD		
580TI	1.4200	RAD		
429TL	1.6100	CONDI	86.13800	.0442
429TL	2.0500	RAD		
580TL	6.1500	RAD		
			.000	.000
457TL	1.2000	CONDI	97.93000	.0502
457TL	4.8000	RAD		
580TI	4.8000	RAD		
257TI	.9200	RAD	94.47750	.0047
			21.750	.011
			46.120	.023
			55.120	.028
			16.035	.008
			19.022	.010
			22.585	.012
			28.040	.014
			50.110	.026
			37.050	.019
			5.012	.003
81SL	.0450	CONDI	10068.62422	.38400
83SL	.2820	CONDI		
84SL	.0450	CONDI		
45L	45.6500	CONDI		
			35.171	.000
457TL	3.0700	CONDI	156.34111	.09520
457TL	9.1600	RAD		
299SL	9.1600	RAD		
318SL	1.6400	CONDI	77.17111	.04700
318SL	4.4700	RAD		
400SL	4.4700	RAD		
299SL	4.5700	RAD	40.15711	.02440
318SL	5.0600	CONDI	60.13711	.03660
438TL	2.3300	RAD		
318SL	2.3300	RAD		
425SL	2.3300	RAD		
467TL*	1.6200	RAD	.01711	.00060
468TL*	.8300	RAD		
469TL*	1.2100	RAD		
470TL*	2.6600	RAD		
471TL*	3.2000	RAD		
472TL*	.9270	RAD		

T U B E F I U M P D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG * F
473TL *	.4400	RAD	.00000	.00000
474TL #	.4400	RAD		
475TL *	.4400	RAD		
476TL *	.4400	RAD		
477TL *	1.7500	RAD		
478TL *	.5900	RAD		
479TL *	1.2900	RAD		
480TL *	.2350	RAD		
481TL *	.4700	RAD		
482TL *	.2700	RAD		
483TL *	.4700	RAD		
484TL *	.2350	RAD		
485TL *	.1950	RAD		
486TL *	.3600	RAD		
489TL *	.6000	RAD		
490TL *	2.4000	RAD		
491TL *	2.1000	RAD		
494TL *	2.4200	RAD		
495TL *	2.3300	RAD		
496TL *	2.0400	RAD		
497TL *	.3500	RAD		
498TL *	3.9600	RAD		
538TL *	1.5400	RAD		
539TL *	1.2000	RAD		
540TL *	3.0800	RAD		
541TL *	5.4200	RAD		
542TL *	2.2300	RAD		
543TL *	3.1700	RAD		
544TL *	1.7500	RAD		
545TL *	1.1500	RAD		
546TL *	2.2000	RAD		
559TL *	1.4200	RAD		
560TL *	6.1500	RAD		
562TL *	4.8000	RAD		
487TL	2.8500	CONDI	33.52070	.02320
147SL	.9510	CONDI		
			47.234	.000
			12.799	.000
418TL	.1000	CONDI	1.05000	.10210
			26.573	.000
			3.864	.000
			16.126	.000
4571L	.4750	CONDI	48.75750	.03380
150SL	2.8400	CONDI		
			58.509	.000
457TL	2.8400	CONDI	52.41430	.03630
437TL	1.4200	CONDI		
761SL	2.8400	CONDI		
769SL	.2120	CONDI		
			26.207	.000

T U B E I U M P D A T A

P	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
2				12.189	.000
3				21.614	.000
4				23.647	.000
5				8.654	.000
6				10.422	.000
7				41.871	.000
8	155TL	126.5000	COND1	16.21180	.01120
	457TL	1.4200	COND1		
9				27.548	.000
0				7.155	.000
1				24.135	.000
2	301TL	126.5000	COND1	15.02340	.01040
	457TL	1.4200	COND1		
3	418TL	.1000	COND1	1.05000	.10210
4	418TL	.1000	COND1	1.05000	.10210
5	418TL	.1000	COND1	1.05000	.10210
6	418TL	.1000	COND1	1.05000	.10210
7	418TL	.1000	COND1	1.05000	.10210
8	418TL	.1000	COND1	1.05000	.10210
9	418TL	.1000	COND1	1.05000	.10210
0	418TL	.1000	COND1	1.05000	.10210
1	418TL	.1000	COND1	1.05000	.10210
2	418TL	.1000	COND1	1.05000	.10210
3	418TL	.1000	COND1	1.05000	.10210
4	418TL	.1000	COND1	1.05000	.10210
5	418TL	.1000	COND1	1.05000	.10210
6	429TL	.4410	COND1	60.86800	.03270
	457TL	2.2100	COND1		
7	418TL	2.2100	COND1	16.49300	.00880
8	418TL	1.1000	COND1	34.24300	.01840
	429TL	2.2100	COND1		
9				4.979	.003
0				20.781	.011
1	418TL	2.8400	COND1	75.39800	.04050
	429TL	.4750	COND1		
	457TL	.4750	COND1		
2	457TL	.7350	COND1	33.77200	.01820
3	418TL	2.2100	COND1	15.70800	.00840
4	418TL	1.1100	COND1	27.72400	.01490
	429TL	1.1100	COND1		
5	418TL	1.1100	COND1	30.47300	.01630
	429TL	1.1100	COND1		
6	418TL	2.2100	COND1	11.15300	.00600
7	418TL	1.1100	COND1	13.43000	.00810
8	427TL	1.1100	COND1	53.95600	.02900
	429TL	.5120	COND1		
	457TL	2.2100	COND1		
9	418TL	2.4200	COND1	35.49900	.01910
	429TL	.7340	COND1		
0				9.220	.005

T U B E L I N K P O I N T D A T A

CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AREA (IN2) TO FLUID	WT. * CP BTU/DEG.F
427TL	1.1100	CONDI	31.10100	.01670
428TL	2.2100	CONDI		

S T R U C T U R F I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CF BTU/DEG.F		
1	133SL*	2.8200	CONDI	.14520		
	177TL	4.9750	CONDI			
2	177TL	2.4310	CONDI	.14520		
	97TL	4.9750	CONDI			
3	171TL	1.6330	RAD	.14520		
	172TL	20.1500	CONDI			
	172TL	.5320	RAD	.14520		
	173TL	45.5500	CONDI			
	174TL	18.9500	CONDI			
	174TL	.5439	RAD			
	175TL	18.9500	CONDI			
	175TL	.6699	RAD			
	176TL	20.1500	CONDI			
	176TL	.7718	RAD			
	177TL	7.4600	CONDI			
	178TL	1.1420	RAD			
	227TL	45.5500	CONDI			
	98TL	18.9500	CONDI			
	98TL	8.1400	RAD			
	143TL	18.9500	CONDI			
	143TL	.6095	RAD			
	144TL	45.5500	CONDI			
	145TL	20.1500	CONDI			
	145TL	.7425	RAD			
	179TL	20.1500	CONDI			
	79TL	.7425	RAD			
	74TL	45.5500	CONDI			
	5	97TL	14.9000		CONDI	.14520
	6	97TL	14.9000		CONDI	.14520
	7					.145
8	227TL	2.4800	CONDI	.14520		
9	227TL	2.4800	CONDI	.14520		
10	299SL*	7.0460	RAD	2.18700		
	617SI*	7.1570	RAD			
	636SL*	.1551	CONDI			
	680SI*	1.6990	RAD			
	691SI*	1.0530	RAD			
	63TL	.1351	CONDI			
	99TL	.1351	CONDI			
	100TL	.2425	CONDI			
	457TI	7.7430	RAD			
	11	299SL*	7.0460		RAD	2.18700
	617SI*	7.1560	RAD			
	634SI*	.1902	CONDI			
	680SI*	1.6960	RAD			
	691SI*	1.0510	RAD			
	66TI	.1759	CONDI			
	101TL	.1759	CONDI			
	102TL	.3175	CONDI			
	457TI	7.7280	RAD			

S T R U C T U R E . L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
12	299SL*	16.6000	RAD	2.32700		
	617SL*	9.4680	RAD			
	637SL*	.5362	CONDI			
	680SL*	2.0460	RAD			
	691SI*	1.7910	RAD			
	692SL*	.4414	RAD			
	66TL	.1650	CONDI			
	101TL	.1650	CONDI			
	102TI	.7149	CONDI			
	457TL	9.1930	RAD			
	13	299SL*	16.5600		RAD	2.32700
617SI*		9.4680	RAD			
637SI*		.5362	CONDI			
680SL*		2.0420	RAD			
691SI*		1.7910	RAD			
71TL		.1650	CONDI			
103TL		.1650	CONDI			
104TL		.7149	CONDI			
457TI		9.1750	RAD			
14		299SL*	2.9790	RAD	1.24700	
		617SL*	2.1010	RAD		
	644SL*	.8122	CONDI			
	680SI*	.2660	RAD			
	104TL	.1605	CONDI			
	457TL	.1140	RAD			
15	299SL*	2.9730	RAD	1.24700		
	617SI*	2.1010	RAD			
	644SL*	.5435	CONDI			
	680SL*	.2655	RAD			
	106TL	.1570	CONDI			
	457TL	.1139	RAD			
16	299SL*	15.2200	RAD	1.52700		
	617SI*	8.1890	RAD			
	638SL*	.7982	CONDI			
	680SL*	1.9880	RAD			
	691SI*	1.1320	RAD			
	71TL	.0976	CONDI			
	103TL	.1995	CONDI			
	457TL	8.7630	RAD			
	17	299SI*	15.1900		RAD	1.52700
617SI*		8.1890	RAD			
638SL*		.7982	CONDI			
680SI*		1.9840	RAD			
691SI*		1.1310	RAD			
74TI		.1420	CONDI			
105TL		.2128	CONDI			
457TI		8.7460	RAD			
18		299SL*	2.0670	RAD	.69910	
	617SI*	1.4440	RAD			
	640SI*	.2394	CONDI			

S T R U C T U R E L U M P D A T A

UMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
18	680SL*	.1861	RAD	.69910
	106TL	.2520	CONDI	
19	457TI	.7985	RAD	.69910
	299SL*	2.0630	RAD	
	617SI*	1.4440	RAD	
	640SL*	.2394	CONDI	
	680SL*	.1857	RAD	
	108TL	.2525	CONDI	
20	457TL	.8133	RAD	2.36000
	299SL*	16.6400	RAD	
	617SI*	9.5490	RAD	
	639SL*	.6145	CONDI	
	680SL*	2.2690	RAD	
	691SL*	1.1710	RAD	
	74TL	.1413	CONDI	
	105TL	.1488	CONDI	
21	457TL	9.5980	RAD	2.36000
	299SL*	16.6000	RAD	
	617SL*	9.5490	RAD	
	639SI*	.6145	CONDI	
	680SL*	2.2650	RAD	
	691SL*	1.1680	RAD	
	107TL	.1491	CONDI	
22	159TL	.1410	CONDI	8.80900
	457TL	9.7790	RAD	
	299SL*	15.7400	RAD	
	617SL*	8.7920	RAD	
	641SI*	.0628	CONDI	
	680SL*	2.2470	RAD	
	107TL	.0629	CONDI	
	108TL	.0624	CONDI	
	159TI	.0629	CONDI	
23	457TL	9.5980	RAD	8.80900
	299SL*	15.7100	RAD	
	617SL*	8.7920	RAD	
	641SL*	.0628	CONDI	
	680SL*	2.2420	RAD	
	692SI*	.4406	RAD	
	110TL	.0621	CONDI	
	111TL	.0621	CONDI	
24	163TI	.0621	CONDI	8.80900
	457TI	9.5790	RAD	
	299SI*	15.7400	RAD	
	617SL*	8.7920	RAD	
	642SL*	.0628	CONDI	
	680SL*	2.2470	RAD	
	692SI*	1.3490	RAD	
	110TL	.0621	CONDI	
111TL	.0621	CONDI		
163TL	.0621	CONDI		

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP RTU/DEG.F
24	457TL	9.5780	RAD	8.80900
25				.600
26	74SL*	.1108	CONDI	26.05000
	75SI*	.1108	CONDI	
27	76SL*	1.8770	CONDI	1.99000
	77SL*	1.8770	CONDI	
28	78SI*	.1108	CONDI	26.05000
	79SL*	.1108	CONDI	
29				.600
30	80SL*	.1108	CONDI	26.05000
	81SL*	.1108	CONDI	
31	82SL*	1.8770	CONDI	1.99000
	83SL*	1.8770	CONDI	
32	84SL*	.1108	CONDI	26.05000
	85SL*	.1108	CONDI	
33	299SI*	15.7100	RAD	8.80900
	617SI*	8.7920	RAD	
	642SL*	.0628	CONDI	
	680SL*	2.2420	RAD	
	692SL*	1.3470	RAD	
	113TL	.0621	CONDI	
	114TL	.0621	CONDI	
	167TL	.0621	CONDI	
	457TI	9.5790	RAD	
34	299SL*	2.0670	RAD	.69910
	617SL*	1.4440	RAD	
	643SL*	.2394	CONDI	
	680SL*	.1861	RAD	
	114TL	.2525	CONDI	
	457TL	.7985	RAD	
35	299SL*	2.0630	RAD	.69910
	617SL*	1.4440	RAD	
	643SL*	.2394	CONDI	
	680SL*	.1857	RAD	
	117TL	.2525	CONDI	
	457TI	.0797	RAD	
36	617SL*	4.4610	RAD	1.09100
	645SI*	.0893	CONDI	
	680SI*	1.1650	RAD	
	113TL	.0870	CONDI	
	167TI	.0870	CONDI	
	457TI	4.4300	RAD	
37	299SI*	8.4080	RAD	1.09100
	617SI*	4.4610	RAD	
	645SI*	.0893	CONDI	
	680SI*	1.1620	RAD	
	82TI	.0885	CONDI	
	116TL	.1426	CONDI	
	457TI	4.4210	RAD	
38	299SL*	8.6730	RAD	1.53300

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
38	617SL*	4.8870	RAD	1.53300
	646SL*	.2088	CONDI	
	680SL*	1.1840	RAD	
	117TL	.0990	CONDI	
	457TL	15.5700	RAD	
39	299SL*	8.4550	RAD	1.53300
	617SL*	4.8870	RAD	
	646SL*	.2088	CONDI	
	680SL*	1.1820	RAD	
	119TL	.0990	CONDI	
40	457TL	4.6690	RAD	1.09100
	299SL*	8.8400	RAD	
	617SL*	4.6520	RAD	
	647SL*	.0893	CONDI	
	680SL*	1.1460	RAD	
41	82TL	.0885	CONDI	1.09100
	116TL	.1426	CONDI	
	457TL	4.8360	RAD	
	299SL*	8.8240	RAD	
	617SL*	4.6520	RAD	
42	647SL*	.0893	CONDI	2.12700
	680SL*	1.1480	RAD	
	85TL	.0872	CONDI	
	118TL	.1420	CONDI	
	457TL	4.8260	RAD	
43	299SL*	6.6450	RAD	2.12700
	617SL*	6.1640	RAD	
	648SL*	.1060	CONDI	
	680SL*	1.3180	RAD	
	118TL	.2295	CONDI	
44	119TL	.1171	CONDI	1.32000
	457TL	6.4180	RAD	
	299SL*	6.6890	RAD	
	617SL*	2.0550	RAD	
	648SL*	.1060	CONDI	
45	680SL*	1.3150	RAD	1.32000
	120TL	.2360	CONDI	
	121TL	.1200	CONDI	
	457TL	6.4050	RAD	
	455L	.4320	CONDI	
46	299SL*	6.6050	RAD	1.32000
	617SL*	2.3830	RAD	
	680SL*	.6203	RAD	
	85TL	.1637	CONDI	
	457TL	2.2850	RAD	
47	445L*	.4320	CONDI	1.32000
	299SL*	4.6360	RAD	
	617SL*	2.3880	RAD	
	680SL*	.6100	RAD	
	88TL	.1638	CONDI	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. + CP BTU/DEGREE
45	457TL	2.2800	RAD	1.32000
46	299SL*	4.4120	RAD	1.11000
	617SL*	2.4090	RAD	
	652SL*	.2042	CONDI	
	680SI*	.4539	RAD	
	121TL	.1492	CONDI	
	457TI	2.2090	RAD	
47	299SL*	4.4030	RAD	1.11000
	617SL*	2.4090	RAD	
	652SL*	.2042	CONDI	
	680SI*	.4500	RAD	
	123TL	.1495	CONDI	
	457TI	2.2050	RAD	
48	299SL*	9.6980	RAD	1.24700
	617SL*	4.6160	RAD	
	653SL*	.1424	CONDI	
	680SI*	1.0600	RAD	
	120TL	.1075	CONDI	
	121TL	4.1900	CONDI	
49	457TI	5.2960	RAD	1.24700
	299SL*	9.6290	RAD	
	617SI*	4.6160	RAD	
	653SL*	.1424	CONDI	
	680SI*	1.0590	RAD	
	122TI	.1075	CONDI	
50	123TL	4.1900	CONDI	.68000
	457TL	5.2850	RAD	
	299SL*	2.2010	RAD	
	617SL*	1.4180	RAD	
	654SL*	.7104	CONDI	
	680SI*	.2103	RAD	
51	88TL	.2620	CONDI	.68000
	457TL	.8833	RAD	
	299SI*	2.1970	RAD	
	617SI*	1.4180	RAD	
	654SI*	.7104	CONDI	
	680SL*	.2099	RAD	
52	92TL	.2620	CONDI	.000
	457TL	.8815	RAD	
53				.000
54				.000
55				.000
56				.000
57	106TL	5.7300	CONDI	.00000
58				.000
59				.000
60				.000
61				.000
62				.000

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
63				.000
64				.000
65				.000
66				.000
67				.000
68				.000
69				.000
70	66TL	2.6700	CONDI	.00000
71				.000
72				.000
73				.000
74	26SL	.1108	CONDI	1.00000
	173TL	.0450	CONDI	
75	26SL	.1108	CONDI	1.00000
	227TL	.0450	CONDI	
76	27SL	1.8770	CONDI	1.00000
	173TL	.2820	CONDI	
77	27SL	1.8770	CONDI	1.00000
	227TL	.2820	CONDI	
78	28SL	.1108	CONDI	1.00000
	173TL	.0450	CONDI	
79	28SL	.1108	CONDI	1.00000
	227TL	.0450	CONDI	
80	30SL	.1108	CONDI	1.00000
	144TL	.0450	CONDI	
81	30SL	.1108	CONDI	1.00000
	574TL	.0450	CONDI	
82	31SL	1.8770	CONDI	1.00000
	144TL	.2820	CONDI	
83	31SL	1.8770	CONDI	1.00000
	574TL	.2820	CONDI	
84	32SL	.1108	CONDI	1.00000
	574TL	.0450	CONDI	
85	32SL	.1108	CONDI	1.00000
	144TL	.0450	CONDI	
86				.000
87				.000
88				.000
89	782SI	9.7300	RAD	.76100
	500S	18.0000	RAD	
	456S	9.6500	RAD	
	457S	5.0700	RAD	
	306SL	9.2000	RAD	
	346SL	17.1500	RAD	
	516SL	23.4000	RAD	
	90SI	8.7900	RAD	
	94SI	6.4500	RAD	
	94SI	19.9000	RAD	
	91SI*	2.9500	RAD	
	92SI*	.1640	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
89	935L*	1.0070	RAD	.76100
	955L*	5.1200	RAD	
	1385L*	11.5100	RAD	
	3455L*	7.0400	RAD	
	4545L*	14.1500	RAD	
	4585L*	.0400	RAD	
	4595L*	.0060	RAD	
	4745L*	.0193	RAD	
	4765L*	.0173	RAD	
	4775L*	.0270	RAD	
	4875L*	.0050	RAD	
	6075L*	6.3200	RAD	
	6145L*	2.5400	RAD	
	6205L*	.1800	RAD	
	6245L*	.0149	RAD	
	7325L*	.5095	RAD	
	7335L*	2.8950	RAD	
	7385L*	20.0800	RAD	
	7395L*	254.8000	RAD	
	7565L*	.0863	RAD	
	7585L*	.0108	RAD	
	7645L*	93.8100	RAD	
	7745L*	.0128	RAD	
	7785L*	.1400	RAD	
	7805L*	1.5430	RAD	
	7955L*	.0045	RAD	
	7975L*	810.8000	RAD	
	8015L*	208.7000	RAD	
	8095L*	.4277	RAD	
	8115L*	1.5190	RAD	
	8125L*	10.1500	RAD	
	8135L*	12.7600	RAD	
	90	5005L	587.4000	
4775L		4.5000	RAD	
4875L		.6890	RAD	
4545L		28.9200	RAD	
4555L		290.1000	RAD	
4575L		45.2500	RAD	
5125L		.4449	RAD	
5135L		1.4500	RAD	
3465L		2.8000	RAD	
5165L		3.3250	RAD	
7825L		3.7930	RAD	
915L		10.5200	RAD	
895L*		8.7900	RAD	
925L*		.0730	RAD	
935L*		.2480	RAD	
945L*		.0520	RAD	
955L*		.2930	RAD	
965L*	.4140	RAD		

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F	
90	138SL*	1.2200	RAD		
	306SL*	.6150	RAD		
	345SL*	1.9690	RAD		
	458SL*	.0390	RAD		
	459SL*	.0100	RAD		
	474SL*	1.4400	RAD		
	476SL*	3.2100	RAD		
	484SL*	.0060	RAD		
	607SL*	.0230	RAD		
	614SL*	.1027	RAD		
	620SL*	.0076	RAD		
	732SL*	102.2000	RAD		
	733SL*	.4106	RAU		
	738SL*	.0275	RAD		
	739SL*	1.8940	RAD		
	756SL*	.0248	RAD		
	758SL*	.1334	RAD		
	764SL*	53.0500	RAD		
	774SL*	.0878	RAD		
	778SL*	.0062	RAD		
	780SL*	.0268	RAD		
	797SL*	26.0800	RAD		
	801SL*	14.2900	RAD		
	809SL*	.5094	RAD		
	811SL*	.0462	RAD		
	812SL*	.4057	RAD		
	813SL*	59.3700	RAD		
	91	774SL	12.6200	RAD	.76100
		500SL	752.3000	RAD	
		782SL	60.2400	RAD	
		484SL	5.1800	RAD	
		476SL	7.2800	RAD	
		487SL	17.8000	RAD	
		455SL	46.7500	RAD	
457SL		935.1000	RAD		
458SL		62.0400	RAD		
497SL		10.8200	RAD		
512SL		2.8800	RAD		
513SL		288.3000	RAD		
306SL		13.7900	RAD		
733SL		33.2700	RAD		
516SL		53.3500	RAD		
92SL		10.4900	RAD		
345SL		13.4900	RAD		
89SL		2.9500	RAD		
90SL*		10.5200	RAD		
93SL*		5.3000	RAD		
94SL*	.0590	RAD			
95SL*	1.9390	RAD			
96SL*	.3240	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
91	138SL*	.9.5000	RAD	.76100		
	346SI*	18.1000	RAD			
	454SL*	.4680	RAD			
	459SL*	.8030	RAD			
	463SL*	.6440	RAD			
	474SL*	.2510	RAD			
	476SL*	1.4100	RAD			
	477SL*	.5630	RAD			
	482SL*	.2390	RAD			
	485SI*	.5480	RAD			
	607SI*	.0310	RAD			
	614SL*	.5000	RAD			
	620SL*	.3570	RAD			
	626SI*	.0037	RAD			
	732SI*	23.8900	RAD			
	738SL*	.0040	RAD			
	739SL*	.0782	RAD			
	756SL*	.5750	RAD			
	758SI*	19.0900	RAD			
	764SI*	.5095	RAD			
	778SI*	.0468	RAD			
	780SL*	.0486	RAD			
	790SL*	.0148	RAD			
	793SI*	.0560	RAD			
	795SI*	.0049	RAD			
	797SL*	.6444	RAD			
	801SL*	25.2900	RAD			
	809SL*	-19.6300	RAD			
	811SL*	.4461	RAD			
	812SL*	.0728	RAD			
	813SL*	19.5000	RAD			
	92	782SL	89.6100		RAD	.38050
		774SL	79.4200		RAD	
500SL		260.4000	RAD			
346SI		4.7700	RAD			
758SL		80.0200	RAD			
485SL		3.2700	RAD			
487SL		2.1300	RAD			
458SL		249.9000	RAD			
459SL		42.8600	RAD			
512SI		3.6600	RAD			
513SL		5.5400	RAD			
733SL		1.4620	RAD			
516SL		.4449	RAD			
93SL		19.0000	RAD			
94SI		1.6500	RAD			
345SI		3.6000	RAD			
89SL	.1640	RAD				
90SI	.0730	RAD				
91SL*	10.4900	RAD				

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.*F		
92	95SL*	1.3880	RAD	.38050		
	96SI*	.1500	RAD			
	138SL*	3.3300	RAD			
	306SL*	.7550	RAD			
	454SI*	.0080	RAD			
	455SI*	.1000	RAD			
	463SI*	14.6600	RAD			
	476SI*	.0073	RAD			
	482SL*	1.5130	RAD			
	484SI*	2.8020	RAD			
	607SI*	.0181	RAD			
	614SL*	.5994	RAD			
	620SL*	1.0580	RAD			
	728SI*	19.7100	RAD			
	732SL*	.1680	RAD			
	739SL*	.0038	RAD			
	756SL*	63.0900	RAD			
	778SL*	.0607	RAD			
	780SL*	.0438	RAD			
	790SL*	.1554	RAD			
	793SL*	8.7900	RAD			
	795SL*	.0139	RAD			
	797SI*	.0310	RAD			
	801SL*	1.2690	RAD			
	809SL*	60.5100	RAD			
	811SL*	.1034	RAD			
	812SI*	.1238	RAD			
	813SL*	.5094	RAD			
	93	782SI	1061.0000		RAD	.76100
		500SI	39.8600		RAD	
		457SL	8.2100		RAD	
		458SI	8.5400		RAD	
		459SL	.3330		RAD	
306SI		14.7200	RAD			
733SL		17.3500	RAD			
346SL		27.2700	RAD			
516SL		49.7500	RAD			
614SL		10.0700	RAD			
94SI		30.8700	RAD			
345SL		16.4200	RAD			
89SL		1.0070	RAD			
90SL		.2480	RAD			
91SI		5.3000	RAD			
92SL*		19.0000	RAD			
95SI*		21.2800	RAD			
96SL*		2.3200	RAD			
138SI*		24.1900	RAD			
454SI*		.0100	RAD			
455SL*		.0770	RAD			
463SL*	.2200	RAD				

S T R U C T U R E I U M P D A T A

CLUMP NO.	CONNECTED TO CLUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
93	4765L*	.0040	RAD	.76100		
	4825L*	.0086	RAD			
	4845L*	.0126	RAD			
	4855L*	.0152	RAD			
	4875L*	.0090	RAD			
	6075L*	.3480	RAD			
	6205L*	9.8300	RAD			
	6225L*	.0031	RAD			
	6265L*	.0456	RAD			
	7325L*	.0213	RAD			
	7385L*	.0104	RAD			
	7395L*	.0351	RAD			
	7565L*	758.2000	RAD			
	7585L*	.3896	RAD			
	7645L*	.0138	RAD			
	7745L*	.3566	RAD			
	7785L*	2.2630	RAD			
	7805L*	.7463	RAD			
	7925L*	.0330	RAD			
	7935L*	5.1590	RAD			
	7955L*	5.8230	RAD			
	7975L*	.1184	RAD			
	8015L*	4.0430	RAD			
	8095L*	4.3850	RAD			
	8115L*	6.8230	RAD			
	8125L*	3.4700	RAD			
	8135L*	.5330	RAD			
	94	7785L	166.0000		RAD	.38050
		5005L	446.6000		RAD	
		7825L	142.1000		RAD	
		3065L	2.9970		RAD	
7335L		8.9300	RAD			
3465L		7.0400	RAD			
5165L		20.9200	RAD			
955L		44.9600	RAD			
965L		6.4400	RAD			
3455L		5.9300	RAD			
905L		.0520	RAD			
915L		.0590	RAD			
895L*		6.5500	RAD			
925L*		1.6500	RAD			
935L*		30.8700	RAD			
1385L*		6.7400	RAD			
4555L*		.0127	RAD			
4575L*		.5210	RAD			
4585L*		.1370	RAD			
4595L*		.0110	RAD			
4635L*		.0040	RAD			
4825L*		.0049	RAD			
6075L*		.5750	RAD			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
94	614SL *	.41.6500	RAD	.38050		
	620SL *	155.4000	RAD			
	622SL *	.1876	RAD			
	623SL *	.0724	RAD			
	624SL *	1.1900	RAD			
	738SL *	.0150	RAD			
	739SL *	.0435	RAD			
	754SL *	72.5300	RAD			
	758SL *	.0212	RAD			
	774SL *	.0203	RAD			
	780SL *	4.5550	RAD			
	792SL *	.4852	RAD			
	793SL *	.0180	RAD			
	795SL *	11.6200	RAD			
	797SL *	.1100	RAD			
	801SL *	1.9350	RAD			
	809SL *	.0598	RAD			
	811SL *	62.1900	RAD			
	812SL *	3.4370	RAD			
	813SL *	.0455	RAD			
	95	733SL	61.1400		RAD	.76100
		778SL	61.4400		RAD	
		780SL	89.9100		RAD	
500SL		1043.0000	RAD			
514SL		136.1000	RAD			
614SL		243.4000	RAD			
782SL		111.8000	RAD			
306SL		4.7700	RAD			
346SL		29.7900	RAD			
96SL		42.2600	RAD			
345SL		24.2800	RAD			
89SL		5.1200	RAD			
90SL		.2930	RAD			
91SL		1.9390	RAD			
92SL		1.3880	RAD			
93SL		21.2800	RAD			
94SL *		44.9600	RAD			
138SL *		27.8100	RAD			
454SL *		.0087	RAD			
455SL *		.0620	RAD			
457SL *		.7610	RAD			
458SL *		.1300	RAD			
459SL *		.0110	RAD			
463SL *		.0037	RAD			
487SL *		.0030	RAD			
607SL *		53.9500	RAD			
620SL *		54.4500	RAD			
622SL *	.9081	RAD				
623SL *	.9081	RAD				
624SL *	17.7100	RAD				

S T R U C T U R I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
95	732SL*	.0103	RAD	.76100		
	738SL*	.3060	RAD			
	739SL*	.3057	RAD			
	756SL*	2.0190	RAD			
	758SL*	.0214	RAD			
	764SL*	.0474	RAD			
	774SL*	.0211	RAD			
	792SL*	.1693	RAD			
	793SL*	.0130	RAD			
	795SL*	.1582	RAD			
	797SL*	1.0590	RAD			
	801SL*	29.4400	RAD			
	809SL*	.1776	RAD			
	811SL*	28.9100	RAD			
	812SL*	28.7000	RAD			
	813SL*	.0574	RAD			
	96	780SL*	19.9300		RAD	.38050
		733SL	1.4810		RAD	
		500SL	578.4000		RAD	
		344SL	4.8000		RAD	
306SL		1.2410	RAD			
516SL		11.6900	RAD			
782SL		8.8700	RAD			
614SL		40.4600	RAD			
345SL		3.1500	RAD			
90SL		.4140	RAD			
91SL		.3240	RAD			
92SL		.1500	RAD			
93SL		2.3200	RAD			
89SL*		19.9000	RAD			
94SL*		6.4400	RAD			
95SL*		42.2600	RAD			
138SL*		4.4700	RAD			
454SL*		.0345	RAD			
455SL*		.0460	RAD			
457SL*		.2510	RAD			
458SL*		.0143	RAD			
607SL*		153.8000	RAD			
620SL*		.5390	RAD			
622SL*		.0222	RAD			
623SL*		.1873	RAD			
626SL*		1.1840	RAD			
732SL*		.0100	RAD			
738SL*		6.4740	RAD			
739SL*		30.2700	RAD			
756SL*		.2505	RAD			
764SL*	.1843	RAD				
778SL*	2.9430	RAD				
795SL*	.0178	RAD				
797SL*	43.5600	RAD				

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
96	801SL*	18.1200	RAD	.32050
	809SL*	.0255	RAD	
	811SL*	3.2820	RAD	
	812SL*	61.2000	RAD	
	813SL*	.4579	RAD	
97				.000
98				.000
99				.000
100	101SL	1.2990	COND1	.85000
	102SL	1.2988	COND2	
101	100SL*	1.2990	COND1	.85000
	114TL	.1515	COND1	
102	100SL*	1.2988	COND2	.85000
	117TL	.1510	COND1	
103				.000
104				.000
105				.000
106				.000
107				.000
108				.000
109				.000
110				.000
111				.000
112				.000
113				.000
114				.000
115				.000
116				.000
117				.000
118				.000
119				.000
120				.000
121				.000
122				.000
123				.000
124				.000
125				.000
126				.000
127				.000
128				.000
129				.000
130				.000
131	205SL	1.1800	RAD	.03700
	200SL*	21.7900	RAD	
	205SL*	1.1800	RAD	
	456TL	21.2000	RAD	
132				.000
133	1SL	2.8200	COND1	320.00000
134				.000
135				.000

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
136				.0000
<137				
138	733SL	132.5000	RAD	2.96
	516SL	241.9000	RAD	
	306SL	65.3300	RAD	
	508SL	791.2000	RAD	
	782SL	252.9000	RAD	
	89SL	11.5100	RAD	
	90SL	1.2200	RAD	
	91SL	9.5000	RAD	
	92SL	3.3300	RAD	
	93SL	24.1900	RAD	
	94SL	6.7400	RAD	
	95SL	27.8100	RAD	
	96SL	4.4700	RAD	
	345SL	36.6600	RAD	
	346SL	175.9000	RAD	
	614SL	18.5500	RAD	
	458SL	1.9570	RAD	
	756SL	2.0320	RAD	
	364SL	140.5000	RAD	
	365SL	574.5000	RAD	
	594SL	.4140	RAD	
	457SL	21.9400	RAD	
	454SL *	.0380	RAD	
	455SL *	.1897	RAD	
	459SL *	.0430	RAD	
	463SL *	.0196	RAD	
	474SL *	.0034	RAD	
	474SL *	.0035	RAD	
	484SL *	.0035	RAD	
	487SL *	.0100	RAD	
	607SL *	2.9250	RAD	
	620SL *	7.7920	RAD	
	626SL *	.0506	RAD	
	732SL *	.0947	RAD	
	738SL *	.0238	RAD	
	739SL *	.2934	RAD	
	758SL *	.1022	RAD	
	764SL *	.1100	RAD	
	774SL *	.0920	RAD	
	778SL *	1.6180	RAD	
	780SL *	1.4900	RAD	
	792SL *	.0074	RAD	
	793SL *	.0128	RAD	
	795SL *	.0333	RAD	
	797SL *	1.8110	RAD	
	801SL *	130.4000	RAD	
	809SL *	1.7440	RAD	
	811SL *	4.4250	RAD	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F	
138	812SL *	2.5760	RAD	2.96000	
139	813SL *	1.2440	RAD		
	442SL *	1.4170	COND1	.00000	
	443SL *	1.4170	COND1		
	519SL *	1.1500	COND1		
	520SL *	1.1500	COND1		
140				.000	
141				.000	
142				.000	
143				.000	
144				.000	
145	746SL	.7880	COND1	.16720	
	735SL	.4661	COND1		
	146SL *	.7880	COND1		
	195SL *	16.9100	COND1		
	199SL *	16.9100	COND1		
146	145SL	.7880	COND1	.29050	
	767SL	8.6780	COND1		
	746SL	.3556	COND1		
	147SL *	1.4110	COND1		
	194SL *	25.7400	COND1		
	195SL *	25.7400	COND1		
	707SL *	5.6160	RAD		
	147	746SL	1.4110	COND1	1.07000
		146SL	1.4110	COND1	
		731SL	2.9390	RAD	
194SL *		1.9600	RAD		
198SL *		.8921	RAD		
706SL *		2.8750	RAD		
707SL *		3.7900	RAD		
708SL *		2.1210	RAD		
767SL *		14.2200	COND1		
427TL		.3155	COND1		
148	427TL	3.4800	RAD		
	431TL	14.2200	COND1		
	581TL	.9510	COND1		
	149SL	.7880	COND1	.16720	
	179SL *	16.9100	COND1		
	183SL *	16.9100	COND1		
	734SL *	.4661	COND1		
	745SL *	.7880	COND1		
	149	182SL	20.7400	COND1	.29050
		183SL	1.4830	COND1	
765SL		8.6780	COND1		
150SL		1.4110	COND1		
148SL *		.7880	COND1		
745SL *		.3556	COND1		
150	765SL	14.2200	COND1	1.07000	
	730SL	2.9390	RAD		
	149SL *	1.4110	COND1		

S T R U C T U R F L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
150	702SI *	3.7900	RAD	1.07000
	703SI *	2.8750	RAD	
	704SI *	2.1210	RAD	
	745SI *	1.4110	CONDI	
	42RTI	.3155	CONDI	
	432TL	14.2200	CONDI	
	588TL	2.8400	CONDI	
151				.000
152				.000
153				.000
154				.000
155				.000
156				.000
157	730SL	3.3250	CONDI	.08500
	742SL *	7.0750	CONDI	
	432TL	1.5910	CONDI	
	438TL	1.3630	CONDI	
158	741SL *	3.5770	CONDI	.09980
	438TL	1.5610	CONDI	
159	523SL	5.0600	CONDI	1.22100
	520SL	4.1370	CONDI	
	166SL *	13.5500	RAD	
	701SI *	8.5790	RAD	
160	521SL	8.9810	CONDI	.61400
	520SL	9.1890	CONDI	
	166SL *	10.9300	RAD	
	701SI *	11.3000	RAD	
161	521SL	3.4050	CONDI	.28100
	701SI *	10.3500	RAD	
	744SI *	3.7310	CONDI	
162	523SL	3.3480	CONDI	.28300
	701SI *	3.0310	RAD	
	744SL *	2.8340	CONDI	
163	524SL	4.3240	CONDI	.47300
	519SL *	3.9030	CONDI	
	96TL	1.2100	CONDI	
164	519SL	8.9810	CONDI	.61400
	522SL *	9.1910	CONDI	
165	167SI *	28.1200	RAD	.05660
	700SI *	36.6200	RAD	
	778SL *	9.1360	RAD	
166	743SL	4.7610	RAD	3.50000
	744SL	3.2200	RAD	
	731SI	50.0400	RAD	
	769SL	41.5000	RAD	
	775SI	44.1000	RAD	
	779SI	50.2500	RAD	
	721SI	73.1300	RAD	
	723SL	70.3500	RAD	
	725SI	31.1600	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
166	160SL	10.9300	RAD	3.500000
	159SL	13.4500	RAD	
	175SL*	.0633	CONDI	
	701SL*	46.3000	CONDI	
	701SL*	19.4200	RAD	
	743SL*	92.5900	CONDI	
	744SL*	92.5900	CONDI	
167	429TL	41.1600	RAD	3.500000
	700SL	46.3000	CONDI	
	783SL	6.2030	RAD	
	784SL	5.8380	RAD	
	785SL	5.7880	RAD	
	798SL	6.3530	RAD	
	751SL	59.0500	RAD	
	753SL	58.9300	RAD	
	759SL	25.8100	RAD	
	761SL :	30.6900	RAD	
	165SL	28.1200	RAD	
	770SI	43.5800	RAD	
	777SI	39.2600	RAD	
	755SL	29.5800	RAD	
	171SL*	.0292	CONDI	
	545SL*	128.0000	CONDI	
	584SI*	31.7200	RAD	
	700SL*	36.4200	RAD	
	773SL*	44.0600	RAD	
	783SL*	92.5900	CONDI	
	784SL*	92.5900	CONDI	
430TI	47.8400	RAD		
438TL	23.3200	RAD		
168	169SL*	.5652	CONDI	355.300000
169	168SL	.5652	CONDI	355.300000
170	170SL*	.0595	CONDI	330.900000
	169SL	.0595	CONDI	
171	171SL*	.0369	CONDI	330.900000
	700SL	.0292	CONDI	
	170SL	.0369	CONDI	
172	167SL	.0292	CONDI	301.500000
	173SL*	1.2210	CONDI	
173	172SL	1.2210	CONDI	301.500000
	174SL*	.1286	CONDI	
174	175SL	.0799	CONDI	277.900000
	173SL	.1286	CONDI	
175	701SL	.0633	CONDI	277.900000
	166SL	.0633	CONDI	
	174SL*	.0799	CONDI	
176	702SL	.1093	CONDI	33.670000
	177SL*	.1093	CONDI	
177	176SL	.1093	CONDI	33.670000
178	730SL	2.7210	CONDI	1.672000

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
178	179SL	17.7600	COND1	1.67200		
	745SL	25.7400	COND1			
	182SL	11.3400	COND1			
	730SL	4.8150	RAD			
	719SL	5.7030	RAD			
	702SL*	66.9000	COND1			
	702SL*	8.6830	RAD			
	703SL*	3.7250	RAD			
	704SL*	6.3750	COND1			
	705SL*	56.9700	COND1			
	705SL*	3.3920	RAD			
	179	148SL	16.9100		COND1	.53090
178SL*		17.7600	COND1			
702SL*		106.8000	COND1			
702SL*		.9979	RAD			
703SL*		.5581	RAD			
745SL*		1.5690	COND1			
180	703SL*	.0692	COND1	31.74000		
	181SL*	.4666	COND1			
181	180SL	.4666	COND1	31.74000		
182	183SL	14.2900	COND1	1.53900		
	730SL	4.5130	RAD			
	719SL	6.2680	RAD			
	149SL*	20.7400	COND1			
	178SL*	11.3400	COND1			
	702SL*	4.4040	RAD			
	703SL*	66.1100	COND1			
	703SL*	5.9420	RAD			
	704SL*	7.7050	COND1			
	705SL*	38.9300	COND1			
	705SL*	3.5730	RAD			
	730SL*	2.0940	COND1			
	183	148SL	16.9100		COND1	.53090
		149SL*	1.5830		COND1	
		182SL*	14.2900		COND1	
702SL*		.5924	RAD			
703SL*		127.6000	COND1			
703SL*		.9383	RAD			
184	222SL	.2933	COND1	.40000		
	37TL	.1019	COND1			
185				.000		
186				.000		
187				.000		
188				.000		
189				.000		
190	772SL	.4139	COND1	42.50000		
191	771SL	.4139	COND1	42.50000		
192	707SL	.1093	COND1	33.67000		
	193SL*	1.0930	COND1			
193	192SL	1.0930	COND1	33.67000		

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG. F
194	731SL	2.7330	CONDI	16.72000
	195SL	17.7600	CONDI	
	146SL	25.7400	CONDI	
	198SL	11.3400	CONDI	
	731SL	4.8150	RAD	
	147SL *	1.9600	RAD	
	711SL	5.7030	RAD	
	706SL *	3.7250	RAD	
	707SL *	66.9000	CONDI	
	708SL *	56.9600	CONDI	
	708SL *	3.3920	RAD	
	709SL *	6.3750	CONDI	
	427TL	4.3000	RAD	
	431TL	1.0000	RAD	
195	146SL	25.7400	CONDI	.53090
	145SL	16.9100	CONDI	
	194SL *	17.7600	CONDI	
	706SL *	.5580	RAD	
	707SL *	106.8000	CONDI	
	707SL *	.9980	RAD	
196	706SL	.0692	CONDI	31.74000
	197SL *	.4666	CONDI	
197	196SL	.4666	CONDI	31.74000
198	731SL	2.0950	CONDI	1.53900
	199SL	14.2900	CONDI	
	746SL	20.7400	CONDI	
	731SL	4.5130	RAD	
	147SL	.8921	RAD	
	767SL	1.1720	RAD	
	711SL	6.2680	RAD	
	194SL *	11.3400	CONDI	
	706SL *	66.1100	CONDI	
	706SL *	5.9420	RAD	
	707SL *	4.4040	RAD	
	708SL *	38.9300	CONDI	
	708SL *	3.5730	RAD	
	709SL *	7.7040	CONDI	
	427TL	1.1190	RAD	
	199	746SL	1.5830	
145SL		16.9100	CONDI	
198SL *		14.2900	CONDI	
706SL *		127.6000	CONDI	
706SL *		.9402	RAD	
707SL *		.5923	RAD	
200	131SL	21.7900	RAD	.17600
	414SL	15.6400	RAD	
	500SL	59.6100	RAD	
201	456TL	21.7400	RAD	.04000
	473SL *	95.9300	RAD	
	447TL	51.4500	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
201	448TL	6.1100	RAD	.04000
202				.070
203	481SL	95.7300	RAD	.04000
	383TI	6.1130	RAD	
	452TL	51.4500	RAD	
204				.700
205	131SL	1.1800	RAD	.65500
	131SI *	1.1800	RAD	
	454TL	2.2460	CONDI	
206	347SL	.5383	CONDI	1.00000
	434TI	1.0300	CONDI	
	435TL	.5144	CONDI	
207				.100
208				.000
209				.000
210				.000
211				.000
212				.000
213				.000
214	220SL *	4.3490	RAD	.15240
	221SL *	69.2100	RAD	
	222SL *	16.3100	RAD	
	224SL *	2.3560	RAD	
	400SL *	50.7400	RAD	
	425SI *	24.4600	RAD	
	438SL *	244.6000	RAD	
	464SL *	8.2500	RAD	
	465SL *	8.0560	RAD	
	466SL *	11.0800	RAD	
	747SL *	26.2700	RAD	
	749SI *	26.2700	RAD	
	45TL	135.9000	RAD	
215	439SL *	35.2900	RAD	.08940
	464SI *	4.9950	RAD	
	465SL *	5.1600	RAD	
	467SI *	6.4800	RAD	
216				.000
217				.000
218				.000
219				.000
220	747SL	6.9440	CONDI	2.68800
	438SL	4.1250	RAD	
	214SL	4.3490	RAD	
	400SL	1.4580	RAD	
	747SI	.5834	RAD	
	749SL	.5834	RAD	
	39TI	.0235	CONDI	
221	222SL	13.0700	RAD	2.25000
	425SI	16.8400	RAD	
	438SI	29.4000	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
221	214SL	69.2100	RAD	2.25000
	40NSI	15.4700	RAD	
	50NSI	4.2460	RAD	
	227SL*	2.9330	CONDI	
	224SL*	1.0420	RAD	
	352SL*	1.4290	CONDI	
	45TI*	15.8500	RAD	
	394TL	1.7300	CONDI	
	222	221SI	2.9330	
438SL		8.3920	RAD	
214SI		16.3100	RAD	
40NSI		2.3980	RAD	
184SL*		.2933	CONDI	
221SI*		13.0700	RAD	
224SL*		1.6930	RAD	
223				.000
224	221SI	1.0420	RAD	38800
	222SL	1.6930	RAD	
	425SL	1.8230	RAD	
	438SL	5.0790	RAD	
	214SI	2.3560	RAD	
	40NSI	1.9530	RAD	
	425SL*	25.0000	CONDI	
	49TL	.1389	CONDI	
225				.000
226				.000
227				.000
228				.000
229				.000
230				.000
231				.000
232				.000
233				.000
234				.000
235				.000
236				.000
237				.000
238				.000
239				.000
240				.000
241				.000
242				.000
243				.000
244				.000
245	418SL	.4056	CONDI	1.15000
	418SL	3.0050	RAD	
	29TL	.0307	CONDI	
	394TL	3.0100	RAD	
	408SL	2.8050	RAD	
246	31TL	.3379	CONDI	1.56000

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
246	442TL	2.8100	RAD	1.56000
247				.000
248				.000
249				.000
250				.000
251				.000
252				.000
253				.000
254				.000
255				.000
256				.000
257				.000
258				.000
259				.000
260				.000
261				.000
262				.000
263				.000
264				.000
265				.000
266				.000
267				.000
268				.000
269				.000
270	428TL	1298.0000	CONDI	.31380
	430TL	1298.0000	CONDI	
271				.000
272				.000
273	810SL	26.2100	CONDI	1.00000
	418SL	117.7000	CONDI	
	500SL	11.0800	RAD	
274				.000
275				.000
276				.000
277				.000
278				.000
279				.000
280				.000
281				.000
282				.000
283				.000
284				.000
285				.000
286				.000
287				.000
288				.000
289				.000
290				.000
291				.000
292				.000

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
293				.000
294				.000
295				.000
296				.000
297				.000
298				.000
299	10SL	7.0600	RAD	.00010
	11SL	7.0460	RAD	
	12SL	16.6000	RAD	
	13SL	16.5600	RAD	
	14SL	2.9790	RAD	
	15SL	2.9730	RAD	
	16SL	15.2200	RAD	
	17SL	15.1900	RAD	
	18SL	2.0670	RAD	
	19SL	2.0630	RAD	
	20SL	16.6400	RAD	
	21SL	16.6000	RAD	
	22SL	15.7400	RAD	
	23SL	15.7100	RAD	
	24SL	15.7400	RAD	
	33SL	15.7100	RAD	
	34SL	2.0670	RAD	
	35SL	2.0630	RAD	
	37SL	8.4080	RAD	
	38SL	8.6730	RAD	
	39SL	8.6550	RAD	
	40SL	8.8400	RAD	
	41SL	8.8240	RAD	
	42SL	6.6450	RAD	
	43SL	6.6890	RAD	
	44SL	6.6050	RAD	
	45SL	4.6360	RAD	
	46SL	4.4120	RAD	
	47SL	4.4030	RAD	
	48SL	9.6980	RAD	
	49SL	9.6290	RAD	
	50SL	2.2010	RAD	
	51SL	2.1970	RAD	
	692SL	36.1400	RAD	
	691SL	30.5400	RAD	
	693SL	40.8400	RAD	
	680SL	51.0800	RAD	
	625SL	51.1800	RAD	
	603SL	57.7800	RAD	
	627SL	57.9000	RAD	
	578SL	14.0400	RAD	
	590SL	18.2400	RAD	
	579SL	7.8200	RAD	
	591SL	8.1700	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP RTU/DEG.F
299	601SL	261.9000	RAD	.00010
	617SL	39.6600	RAD	
	613SL	65.2900	RAD	
	615SL	98.2800	RAD	
	611SL	54.6000	RAD	
	619SL	54.7100	RAD	
	609SL	44.1000	RAD	
	621SL	44.1800	RAD	
	539SL	49.4400	RAD	
	531SL	67.6200	RAD	
	537SL	42.2700	RAD	
	605SL	42.0800	RAD	
	635SL	2.6240	RAD	
	580SL	15.8300	RAD	
	592SL	12.7500	RAD	
	541SL*	67.4900	RAD	
	565SL*	10.8800	RAD	
	575SL*	8.5700	RAD	
	802SL*	4.9340	RAD	
	805SL*	4.2270	RAD	
	63TL	3.6500	RAD	
	92TL	2.8800	RAD	
	96TL	5.8200	RAD	
	99TL	3.6500	RAD	
	100TL	3.6500	RAD	
	122TL	2.8800	RAD	
	123TL	2.8800	RAD	
	157TL	5.3300	RAD	
	169TL	5.5400	RAD	
	170TL	6.7500	RAD	
	181TL	4.8000	RAD	
	214TL	.1800	RAD	
	231TL	4.6000	RAD	
233TL	6.0000	RAD		
246TL	9.3000	RAD		
300TL	6.8000	RAD		
302TL	5.5000	RAD		
457TL	109.2000	RAD		
576TL	9.1600	RAD		
578TL	4.5700	RAD		
300	373TL	301.1000	RAD	.00010
	381TL	62.1900	RAD	
	382TL	62.0600	RAD	
	383TL	37.2600	RAD	
	384TL	43.4900	RAD	
	394TL	10.9400	RAD	
	395TL	159.2000	RAD	
	396TL	164.4000	RAD	
	397TL	163.1000	RAD	
	398TL	178.6000	RAD	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
300	399TL	132.7000	RAD	.00010
	400TL	142.7000	RAD	
	401TL	223.4000	RAD	
	402TL	183.1000	RAD	
	403TL	84.7800	RAD	
	404TL	217.9000	RAD	
	405TL	107.1000	RAD	
	406TL	121.5000	RAD	
	409TL	1166.0000	RAD	
	410TL	87.3000	RAD	
	411TL	87.3000	RAD	
	412TL	94.2000	RAD	
	413TL	94.2000	RAD	
	414JL	553.8000	RAD	
	416TL	861.4000	RAD	
	417TL	301.1000	RAD	
	418TL	217.0000	RAD	
	419TL	245.0000	RAD	
	420TL	270.8000	RAD	
	421TL	1.1680	RAD	
	425TL	77.6800	RAD	
	426TL	79.5000	RAD	
	427TL	689.5000	RAD	
	428TL	65.9000	RAD	
	429TL	515.5000	RAD	
	430TL	537.6000	RAD	
	431TL	247.7000	RAD	
	432TL	180.5000	RAD	
	433TL	101.7000	RAD	
	434TL	472.4000	RAD	
	435TL	204.8000	RAD	
	436TL	221.8000	RAD	
	437TL	233.4000	RAD	
	438TL	233.4000	RAD	
	439TL	147.2000	RAD	
	440TL	398.3000	RAD	
	442TL	476.8000	RAD	
	443TL	391.9000	RAD	
	444TL	216.4000	RAD	
	445TL	329.8000	RAD	
	446TL	333.3000	RAD	
	448TL	37.2400	RAD	
	449TL	275.2000	RAD	
	450TL	158.5000	RAD	
	451TL	328.7000	RAD	
	454TL	266.3000	RAD	
	455TL	88.1300	RAD	
	456TL	43.4900	RAD	
	457TL	665.5000	RAD	
	458TL	245.0000	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
300	459TL	270.8000	RAD	.00010
	465TL	155.6000	RAD	
301				.000
302				.000
303				.000
304	397SL	10.1600	RAD	.89000
	398SL	10.1900	RAD	
	491SI	2.3360	RAD	
	492SI	2.3300	RAD	
	494SL	2.3410	RAD	
	495SL	2.3470	RAD	
	496SI	5.6900	RAD	
	498SL	5.6900	RAD	
	307SL	101.2000	RAD	
	490SL	99.9600	RAD	
	499SL*	71.6300	RAD	
	426TL;	298.1000	CONDI	
	426TI	17.1400	RAD	
305				.000
306	733SL	68.0300	RAD	.57400
	346SL	60.5400	RAD	
	345SI	37.7600	RAD	
	500SL	31.7800	RAD	
	516SL	119.0000	RAD	
	782SL	69.2300	RAD	
	457SL	2.5100	RAD	
	614SL	.9110	RAD	
	547SL	8.2800	RAD	
	90SL	.5150	RAD	
	92SL	.7550	RAD	
	89SI*	9.2000	RAD	
	91SL*	13.7900	RAD	
	93SI*	14.7200	RAD	
	94SI*	2.9970	RAD	
	95SI*	4.7700	RAD	
	96SL*	1.2410	RAD	
	138SL*	65.3300	RAD	
	454SL*	.0162	RAD	
	455SL*	.2220	RAD	
	458SL*	.2170	RAD	
	459SL*	.0080	RAD	
	463SL*	.0036	RAD	
	476SL*	.0093	RAD	
	484SL*	.0082	RAD	
	487SL*	.0220	RAD	
	607SL*	.1250	RAD	
	620SL*	.3260	RAD	
	626SL*	.0095	RAD	
	732SL*	.0453	RAD	
	738SL*	.0186	RAD	

S T R U C T U R E F I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CF BTU/DEG.F
306	739SL *	.2260	RAD	.57400
	756SL *	1.1750	RAD	
	758SL *	.0399	RAD	
	764SL *	.0850	RAD	
	774SL * *	.0303	RAD	
	778SL *	.1681	RAD	
	780SL *	.1232	RAD	
	793SL *	.0088	RAD	
	795SL *	.0159	RAD	
	797SL *	.7564	RAD	
	801SL *	11.9300	RAD	
	809SL *	.1722	RAD	
	811SL *	1.3690	RAD	
	812SL *	.1669	RAD	
813SL *	.1359	RAD		
307	490SL	23.1800	CONDI	1.19000
	318SL	.9223	CONDI	
	319SL	.9223	CONDI	
	490SL	11.8400	RAD	
	304SL *	101.2000	RAD	
	312SL *	.2978	CONDI	
	314SL *	.2978	CONDI	
	397SL *	.9740	RAD	
	398SL *	3.6600	RAD	
	491SL *	4.2030	CONDI	
	494SL *	8.4180	CONDI	
	495SL *	.4371	CONDI	
	496SL *	.7490	RAD	
	498SL *	.9530	RAD	
499SL *	21.5200	RAD		
425TL	.6271	CONDI		
308				.000
309	747SL	3.8190	CONDI	.13530
	734SL	12.9700	CONDI	
	413SL *	2.2780	CONDI	
	414SL *	3.3330	CONDI	
	432TL	3.4030	CONDI	
310	318SL	11.2000	CONDI	.38000
	749SL	1.1590	CONDI	
	715SL	.8092	CONDI	
	490SL	.2978	CONDI	
	425TL	1.9150	CONDI	
311	749SL	3.8190	CONDI	.13530
	401SL *	3.3330	CONDI	
	403SL *	2.2780	CONDI	
	735SL *	12.9700	CONDI	
	431TL	3.4030	CONDI	
312	318SL	11.2000	CONDI	.38000
	307SL	.2978	CONDI	
	671SL	7.6400	CONDI	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP ₁	CONNECTION VALUE	TYPE	W1. * CP BTU/DEG.F
312	715SL	.8092	COND1	.38000
	315SI	1.1590	COND1	
	425TL	1.9150	COND1	
313	314SL*	1.1590	COND1	.21030
	319SL*	4.7550	COND1	
	582SI*	16.7300	COND1	
	671SL*	11.7700	COND1	
	734SL*	17.2800	COND1	
	765SI*	7.2870	COND1	
314	671SI	7.6400	COND1	.38000
	313SI	1.1590	COND1	
	319SI	11.2000	COND1	
	715SI	.8092	COND1	
	307SL	.2978	COND1	
315	425TL	1.9150	COND1	.21030
	671SI	2.6530	COND1	
	312SL*	1.1590	COND1	
	318SI*	4.7550	COND1	
	735SI*	17.2800	COND1	
316	767SL*	7.2870	COND1	.38000
	747SL	1.1590	COND1	
	319SI	11.2000	COND1	
	715SI	.8092	COND1	
	490SI	.2978	COND1	
317	425TL	1.9150	COND1	5.80000
45TI	.4100	COND1		
318	771SL	17.7100	COND1	1.66800
	315SI	4.7550	COND1	
	339SI	.4176	COND1	
	715SL	1.2790	COND1	
	749SI	4.7550	COND1	
	735SI	10.3400	RAD	
	713SL	27.0300	RAD	
	711SL	5.2980	RAD	
	307SL*	.9223	COND1	
	310SI*	11.2000	COND1	
	312SL*	11.2000	COND1	
	490SL*	.9223	COND1	
	491SL*	.6111	COND1	
	706SL*	3.1950	RAD	
	707SL*	3.6310	RAD	
	767SI*	1.8900	RAD	
	771SI*	49.1500	RAD	
	577TL	1.6400	COND1	
	577TL	4.4700	RAD	
	579TL	5.0600	COND1	
579TI	2.3300	RAD		
319	772SL	17.7200	COND1	1.66800
	340SI	.4176	COND1	
	715SL	1.2790	COND1	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
319	313SL	4.7550	CONDI	1.66800
	747SI	4.7550	CONDI	
	734SL	10.3400	RAD	
	717SL	27.0300	RAD	
	719SL *	5.2980	RAD	
	307SL *	.9223	CONDI	
	314SL *	11.2000	CONDI	
	314SL *	11.2000	CONDI	
	490SL *	.9223	CONDI	
	494SL *	.6111	CONDI	
	702SL *	3.6240	RAD	
	703SL *	12.8100	RAD	
	772SL *	36.8600	RAD	
	40TL	30.0500	CONDI	
	40TI	1.7200	RAD	
	50TL	5.0600	CONDI	
	50TL	1.7400	RAD	
	51TL	2.5200	CONDI	
	51TL	1.1100	RAD	
	246TI	1.3100	CONDI	
246TL	3.5000	RAD		
320				.000
321				.000
322				.000
323				.000
324				.000
325				.000
326				.000
327				.000
328				.000
329				.000
330	332SL	22.9500	RAD	3.84700
	344SL	2.4070	RAD	
	342SL *	7.4310	CONDI	
	343SL *	1.6230	CONDI	
	343SL *	15.7300	RAD	
	433TL	16.2600	RAD	
	434TI	177.4000	RAD	
	649SI *	62.0400	RAD	
	769SL	1.2330	CONDI	
	770SL	1.2330	CONDI	
331	366SI	46.9200	RAD	.00000
	649SI	41.3600	RAD	
	769SI	104.4000	RAD	
	770SI	104.5000	RAD	
	369SL	24.8700	RAD	
	330SI *	22.9500	RAD	
	343SL *	20.3700	RAD	
	344SL *	68.6400	RAD	
	433TL	5.5700	RAD	
	332			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
332	434TL	85.4000	RAD	1.85000		
	435TL	.1170	CONDI			
	435TL	36.3000	RAD			
	436TL	3.4700	RAD			
333				.000		
334				.000		
335				.000		
336				.000		
337				.000		
338				.000		
339	735SL	.6223	CONDI	.66110		
	318SL*	.4176	CONDI			
	771SL*	7.5030	CONDI			
	416TL	163.4000	CONDI			
	425TL	.8625	CONDI			
	427TL	1.3940	CONDI			
	340	734SL	.6223		CONDI	.66110
		319SL*	.4176		CONDI	
		772SL*	12.1900		CONDI	
		425TL	.8625		CONDI	
428TL	1.2300	CONDI				
341				.000		
342	330SL	7.4310	CONDI	2.15400		
	348SL	11.1700	CONDI			
	343SL	.4694	CONDI			
	362SI*	55.6900	RAD			
	433TL	37.9200	RAD			
	434TL	34.8000	RAD			
	343	330SL	1.6230		CONDI	.98200
344SL		.7000	CONDI			
330SL		15.7300	RAD			
344SL		1.5130	RAD			
332SL		20.3700	RAD			
366SL		.4946	RAD			
342SL*		.4694	CONDI			
347SL*		1.0310	CONDI			
348SL*		.1317	CONDI			
433TL		3.7800	RAD			
434TL		82.8000	RAD			
344		349SL	.0764	CONDI	.61000	
		332SL	68.6400	RAD		
		364SL	2.2500	RAD		
		330SI*	2.4070	RAD		
	343SL*	.7000	CONDI			
	343SL*	1.5130	RAD			
	347SI*	.7889	CONDI			
	433TL	1.1300	RAD			
	434TL	18.4000	RAD			
	435TI	2.2600	RAD			
	345	350SI	.0486	CONDI		.70000

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP BTU/DEG.F
345	344SL	11.1500	RAD	.70000
	516SL	187.9000	RAD	
	782SI	77.6200	RAD	
	500SL	45.2500	RAD	
	733SL	84.8200	RAD	
	614SI	2.7900	RAD	
	457SL	1.9200	RAD	
	89SL	7.0400	RAD	
	90SL	1.9690	RAD	
	91SL*	13.4900	RAD	
	92SL*	3.6000	RAD	
	93SL*	16.4200	RAD	
	94SL*	5.9300	RAD	
	95SL*	24.2800	RAD	
	96SL*	3.1500	RAD	
	138SL*	36.6600	RAD	
	306SL*	37.7600	RAD	
	454SI*	.0166	RAD	
	455SL*	.2350	RAD	
	458SL*	.2780	RAD	
	459SL*	.0210	RAD	
	463SL*	.0077	RAD	
	476SL*	.0049	RAD	
	484SL*	.0045	RAD	
	487SL*	.0200	RAD	
	607SL*	.2900	RAD	
	620SL*	.5780	RAD	
	626SL*	.0429	RAD	
	732SL*	.0590	RAD	
	738SL*	.0080	RAD	
	739SL*	.1759	RAD	
	756SL*	1.3410	RAD	
	758SL*	.0671	RAD	
	764SL*	.0650	RAD	
	774SL*	.0581	RAD	
	778SL*	.3986	RAD	
	780SL*	.4136	RAD	
	793SI*	.0097	RAD	
	795SL*	.0208	RAD	
	797SL*	.5925	RAD	
801SL*	6.3040	RAD		
809SL*	.1624	RAD		
811SL*	2.1050	RAD		
812SL*	.3055	RAD		
813SL*	.0981	RAD		
346	351SL	.0205	CONDI	2.33500
	516SI	111.5000	RAD	
	733SL	112.1000	RAD	
	782SI	160.3000	RAD	
	500SL	177.6000	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP RTU/DEG.F
346	614SL	11.3000	RAD	2.33500
	457SL	10.0100	RAD	
	91SI	18.1000	RAD	
	89SL*	17.1500	RAD	
	90SL*	2.8000	RAD	
	92SL*	4.7700	RAD	
	93SL*	27.2700	RAD	
	94SL*	7.0400	RAD	
	95SL*	29.7900	RAD	
	96SI*	4.8000	RAD	
	138SL*	175.9000	RAD	
	306SI*	60.5400	RAD	
	345SL*	11.1500	RAD	
	454SL*	.0536	RAD	
	455SL*	.5120	RAD	
	458SL*	.5570	RAD	
	459SL*	.0620	RAD	
	463SL*	.0176	RAD	
	476SL*	.0111	RAD	
	477SL*	.0030	RAD	
	484SL*	.0102	RAD	
	485SL*	.0065	RAD	
	487SL*	.0270	RAD	
	607SL*	1.2230	RAD	
	620SL*	3.2370	RAD	
	626SL*	.0515	RAD	
	732SL*	.0995	RAD	
	738SL*	.0345	RAD	
	739SL*	.4286	RAD	
	756SL*	2.3380	RAD	
	758SL*	.1073	RAD	
	764SL*	.1696	RAD	
	774SI*	.1199	RAD	
	778SL*	1.0070	RAD	
780SI*	.9980	RAD		
793SL*	.0223	RAD		
795SL*	.0359	RAD		
797SL*	2.7030	RAD		
801SI*	64.0500	RAD		
809SL*	2.9710	RAD		
811SI*	6.7700	RAD		
812SI*	2.1050	RAD		
813SL*	1.6560	RAD		
347	343SI	1.0310	COND1	2.54300
	344SL	.7889	COND1	
	206SL*	.5383	COND1	
348	343SI	.1317	COND1	7.45200
	349SI	19.0000	COND1	
	342SL*	11.1700	COND1	
	362SL*	.1061	COND1	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
349	350SL	19.5800	CONDI	6.45500
	363SI	.1017	CONDI	
	344SL*	.0764	CONDI	
	348SL*	19.0000	CONDI	
350	364SL	.0572	CONDI	6.78000
	351SI	19.8300	CONDI	
	345SL*	.0486	CONDI	
	349SI*	19.5800	CONDI	
351	365SI	.0230	CONDI	12.15000
	346SI*	.0205	CONDI	
	350SL*	19.8300	CONDI	
352	425SI	8.3420	CONDI	1.25800
	221SL	1.4290	CONDI	
	45TI	16.7300	CONDI	
353				.000
354				.000
355				.000
356				.000
357				.000
358				.000
359				.000
360				.000
361				.000
362	348SL	.1061	CONDI	.00000
	500SL	2.8200	RAD	
	342SI	55.6900	RAD	
	363SL	16.3100	RAD	
	542SI	.9830	RAD	
	364SL	1.8500	RAD	
	365SI	1.4500	RAD	
	363SL*	9.6500	RAD	
	500SL	43.1600	RAD	
	542SI	25.8800	RAD	
363	364SL	74.3300	RAD	.00000
	365SL	38.9600	RAD	
	362SI	9.6500	RAD	
	349SI*	.1017	CONDI	
364	362SI*	16.3100	RAD	.00000
	500SL	131.6000	RAD	
	365SL	202.5000	RAD	
	138SL*	140.5000	RAD	
	350SL*	.0572	CONDI	
	362SI*	1.8500	RAD	
	363SL*	74.3300	RAD	
	365SL*	164.5000	RAD	
365	594SL*	4.5970	RAD	.00000
	500SL	560.4000	RAD	
	364SI	164.5000	RAD	
	138SI*	574.5000	RAD	
	351SL*	.0230	CONDI	

S T R U C T U R E I U M P D A T A

COMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F.
365	362SL*	1.4500	RAD	.00000
	363SI*	38.9600	RAD	
	364SI*	202.5000	RAD	
	594SL*	3.7800	RAD	
366	649SL	33.3300	RAD	.07150
	332SL*	46.9200	RAD	
	343SL*	2.4946	RAD	
	344SL*	2.2500	RAD	
	544SL*	22.0700	RAD	
	769SL*	15.3400	RAD	
	770SL*	15.3500	RAD	
	435TI	43.7500	RAD	
367	700SL	14.5900	RAD	.06180
	543SL*	4.7200	RAD	
	770SL*	4.7660	RAD	
368	701SI	22.5600	RAD	.06180
	560SL*	13.4100	RAD	
	769SL*	4.7660	RAD	
369	332SI*	24.8700	RAD	.06060
	547SI*	8.2800	RAD	
	435TI	22.4700	RAD	
	436TI	67.7500	RAD	
370	680SI	17.9200	RAD	.06150
	615SI	17.2000	RAD	
	546SI*	22.0700	RAD	
371				.000
372				.000
373				.000
374				.000
375				.000
376				.000
377				.000
378				.000
379				.000
380				.000
381				.000
382				.000
383				.000
384				.000
385				.000
386				.000
387				.000
388				.000
389				.000
390				.000
391				.000
392				.000
393				.000
394				.000
395				.000

S T R U C T U R F L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
396				.000
397	498SL	.1355	CONDI	.53000
	307SL	.9740	RAD	
	490SL	3.6600	RAD	
	304SI *	10.1600	RAD	
	499SL *	1.5400	RAD	
398	496SI	.1355	CONDI	.53000
	307SL	3.6600	RAD	
	490SL	.9710	RAD	
	304SI *	10.1900	RAD	
	499SL *	1.5400	RAD	
399				.000
400	749SL	15.0000	CONDI	2.09100
	418SL	8.3330	CONDI	
	421SL	7.9720	CONDI	
	422SL	7.9720	CONDI	
	747SL	22.3300	CONDI	
	438SL ;	1.0300	CONDI	
	401SL	1.6450	CONDI	
	414SL	1.6450	CONDI	
	439SL	3.2110	CONDI	
	438SL	84.1400	RAD	
	214SL	50.7400	RAD	
	468SL	1.4160	RAD	
	220SL *	1.4580	RAD	
	221SL *	15.4700	RAD	
	222SL *	2.3980	RAD	
	224SL *	1.9530	RAD	
	425SL *	1.1570	CONDI	
	425SI *	8.1740	RAD	
	747SL *	7.9620	RAD	
	749SL *	7.9620	RAD	
	26TL	1.4500	RAD	
	36TI	.4690	RAD	
	38TI	1.4600	RAD	
	45TL	20.3700	RAD	
	48TL	.7000	RAD	
	50TL	1.4900	RAD	
	240TL	.5100	RAD	
	242TL	1.4000	RAD	
	243TL	1.9000	CONDI	
	245TL	3.2000	RAD	
	409TI	3.5640	CONDI	
	409TL	920.0000	RAD	
	425TL	5.2340	CONDI	
	577TL	4.4700	RAD	
401	749SL	14.1000	CONDI	1.25100
	311SL	3.3330	CONDI	
	402SL	1.0810	CONDI	
	400SI *	1.6450	CONDI	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
401	438SL*	1.3590	CONDI	1.25100
	439SI*	4.2400	CONDI	
	450SL*	8.5160	RAD	
	409TL	12.8300	CONDI	
402	446TL	5.1000	CONDI	1.50300
	403SL	1.8140	CONDI	
	401SI*	1.0810	CONDI	
	450SL*	5.6770	RAD	
	406TL	131.7000	RAD	
403	446TL	5.7500	CONDI	1.48500
	311SI	2.2780	CONDI	
	404SL	1.2390	CONDI	
	402SL*	1.8140	CONDI	
	452SL*	3.5630	RAD	
	405TL	.8667	CONDI	
	405TL	119.0000	RAD	
	406TL	3.6940	CONDI	
	406TL	208.3000	RAD	
	431TL	3.5390	CONDI	
404	449TL	5.1360	CONDI	1.06100
	405SL	4.5830	CONDI	
	403SL*	1.2390	CONDI	
	453SL*	8.0390	RAD	
	685SL*	3.9460	CONDI	
	685SL*	33.9600	RAD	
	686SL*	25.5200	RAD	
	404TL	3.9390	CONDI	
	404TL	237.0000	RAD	
	405TL	1.7190	CONDI	
	405TL	161.2000	RAD	
405	431TL	4.3890	CONDI	1.02000
	449TL	5.3690	CONDI	
	404SI*	4.5830	CONDI	
	454SL*	11.4500	RAD	
	502SL*	89.6900	RAD	
	685SL*	3.9460	CONDI	
	685SL*	33.9600	RAD	
	686SL*	25.5200	RAD	
	404TL	2.6390	CONDI	
	404TL	130.5000	RAD	
	437TL	3.3190	CONDI	
	439TL	15.2600	CONDI	
406	443TL	.8333	CONDI	.000
	443TL	434.6000	RAD	
	450TL	3.8170	CONDI	
	407			
408	440SL	1.7580	CONDI	2.04600
	441SL	1.7580	CONDI	
	246SL*	2.8050	RAD	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG.F
408	557SL*	9.5900	RAD	2.04600
	558SL*	9.5900	RAD	
	31TL	2.0300	CONDI	
	436TL	2.2890	CONDI	
	436TL	70.1000	RAD	
	439TL	19.1600	RAD	
	441TL	19.2000	RAD	
	442TL	.8111	CONDI	
	442TL	1218.0000	RAD	
	444TL	6.5280	CONDI	
	444TL	74.1000	RAD	
409				.000
410	411SL	4.5830	CONDI	1.02000
	490SL	3.9460	CONDI	
	501SL	89.6900	RAD	
	459SI*	9.7030	RAD	
	690SL*	33.9600	RAD	
	694SL*	25.5200	RAD	
	401TL	2.6390	CONDI	
	401TL	130.5000	RAD	
	438TL	3.1190	CONDI	
	440TL	.8333	CONDI	
	440TL	434.6000	RAD	
	441TL	1.5920	CONDI	
	455TL	3.8170	CONDI	
411	412SL	1.2390	CONDI	1.06100
	410SL*	4.5830	CONDI	
	460SL*	8.0390	RAD	
	690SL*	3.9460	CONDI	
	690SL*	33.9600	RAD	
	694SI*	25.5200	RAD	
	401TL	3.9390	CONDI	
	401TL	237.0000	RAD	
	402TL	1.7190	CONDI	
	402TL	161.2000	RAD	
	432TL	4.3890	CONDI	
	454TL	5.3690	CONDI	
	412	413SI	1.8140	
411SL*		1.2390	CONDI	
441SI*		3.5630	RAD	
402TL		.8667	CONDI	
402TL		119.0000	RAD	
403TL		3.6940	CONDI	
403TL		208.3000	RAD	
432TL		3.5390	CONDI	
454TL		5.1360	CONDI	
413		414SL	1.0810	CONDI
	309SL	2.2780	CONDI	
	412SL*	1.8140	CONDI	
	462SI*	5.6770	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
413	403TL	5.1080	CONDI	1.50300
	403TI	131.7000	RAD	
414	451TL	5.7500	CONDI	1.25100
	309SI	3.3330	CONDI	
	200SL*	15.6400	RAD	
	400SL*	1.6450	CONDI	
	413SI*	1.0810	CONDI	
	438SL*	1.3590	CONDI	
	462SL*	1775.0000	CONDI	
	462SL*	8.5160	RAD	
	409TI	9.6890	CONDI	
	409TL	369.2000	RAD	
	451TL	5.1000	CONDI	
415				.000
416				.000
417	426SL	11.3900	CONDI	.95100
	427SI	11.3900	CONDI	
	419SL	11.4000	RAD	
	420SL	11.4000	RAD	
	418SL*	1.9840	CONDI	
	419SL*	11.3900	CONDI	
	420SL*	11.3900	CONDI	
	468SL*	10.8100	RAD	
	469SL*	7.1510	RAD	
	489SL*	1.5610	CONDI	
	397TL	1.0530	CONDI	
	397TL	150.3000	RAD	
	398TL	74.3000	RAD	
	444TL	2.3360	CONDI	
	449TL	18.2200	CONDI	
	454TL	18.2200	CONDI	
	418	417SL	1.9840	
810SL		.9578	CONDI	
420SL		20.8000	RAD	
245SI*		.4056	CONDI	
245SI*		3.0050	RAD	
273SL*		117.7000	CONDI	
400SL*		8.3330	CONDI	
419SL*		1.5890	CONDI	
420SL*		1.5890	CONDI	
421SI*		5.5560	CONDI	
422SI*		5.5560	CONDI	
468SL*		14.5000	RAD	
28TL		.7770	RAD	
395TL		12.3500	CONDI	
395TL		97.5200	RAD	
396TL		5.6500	CONDI	
396TL		97.5000	RAD	
397TL		.6333	CONDI	
397TL		120.6000	RAD	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP BTU/DEG.F
418	409TL	135.7000	COND1	1.87100
	444TL	51.7400	COND1	
419	451TL	51.7400	COND1	.56900
	418SI	1.5890	COND1	
	4175L	11.3900	COND1	
	426SL	10.9400	COND1	
	420SL	4.2430	RAD	
	4175L*	11.4000	RAD	
	421SI*	6.9440	COND1	
	474SL*	10.0600	RAD	
	28TI	5.0600	COND1	
	28TL	.3860	RAD	
	35TL	2.5200	COND1	
	35TL	.4660	RAD	
	236TL	5.0600	COND1	
	236TL	2.3300	RAD	
	239TL	5.0600	COND1	
	397TL	9.0250	COND1	
	448TL	.8944	COND1	
449TL	20.9400	COND1		
420	418SL	1.5890	COND1	.56900
	4175L	11.3900	COND1	
	427SL	10.9400	COND1	
	4175L*	11.4000	RAD	
	418SL*	20.8000	RAD	
	419SL*	4.2430	RAD	
	422SL*	6.9440	COND1	
	482SL*	10.0800	RAD	
	239TI	1.0000	RAD	
	383TL	.8944	COND1	
	397TL	7.7500	COND1	
	454TL	20.9400	COND1	
	421	419SI	6.9440	
418SL		5.5560	COND1	
400SL*		7.9720	COND1	
439SL*		7.7360	COND1	
470SL*		1.3090	RAD	
28TL		5.0600	COND1	
28TL		.3860	RAD	
35TL		2.5200	COND1	
35TI		.4660	RAD	
236TI		5.0600	COND1	
236TL	2.3300	RAD		
239TI	5.0600	COND1		
444TL	5.0000	COND1		
422	418SL	5.5560	COND1	.12000
	420SL	6.9440	COND1	
	400SL*	7.9720	COND1	
	439SI*	7.7360	COND1	
	478SI*	1.3090	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
422	239TL	1.0000	RAD	.12000
	451TI	5.0000	CONDI	
423				.000
424				.000
425	438SL	3.3470	CONDI	.42000
	400SI	1.1570	CONDI	
	224SI	25.0000	CONDI	
	438SL	16.3500	RAD	
	214SL	24.4600	RAD	
	400SL	8.1740	RAD	
	221SL*	16.8400	RAD	
	224SL*	1.8230	RAD	
	352SL*	8.3420	CONDI	
	45TI	47.0900	RAD	
	48TL	5.0600	CONDI	
	579TI	2.3300	RAD	
426	417SL*	11.3900	CONDI	.55900
	419SL*	10.9400	CONDI	
	442SL*	6.8080	CONDI	
	477SL*	3.5450	RAD	
	489SL*	.9885	CONDI	
	512SL*	5.2980	RAD	
	444TL	1.8610	CONDI	
	450TL	1.1750	CONDI	
	450TL	13.3000	RAD	
427	417SL*	11.3900	CONDI	.55900
	420SL*	10.9400	CONDI	
	443SL*	6.8080	CONDI	
	485SL*	3.5450	RAD	
	489SL*	.9885	CONDI	
	513SL*	5.2980	RAD	
	444TL	1.8610	CONDI	
	455TL	1.1750	CONDI	
428				.000
429				.000
430				.000
431				.000
432				.000
433				.000
434				.000
435	451SL*	.0037	RAD	.01600
	459SI*	.1350	RAD	
	460SI*	.0071	RAD	
	464SI*	.0156	RAD	
	478SI*	.0970	RAD	
	479SI*	.0540	RAD	
	481SI*	.0460	RAD	
	483SI*	.0370	RAD	
	501SI*	1.0610	RAD	
	787SI*	.0217	RAD	

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LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WI. ° CP BTU/DEG.F
435	789SL*	.0515	RAD	.01600
	796SI*	.0042	RAD	
436				.000
437				.000
438	414SL*	1.3590	CONDI	2.56300
	401SL	1.3590	CONDI	
	439SL	1.7380	CONDI	
	747SL	4.7680	CONDI	
	749SL	5.1360	CONDI	
	214SL	244.6000	RAD	
	220SL*	4.1250	RAD	
	221SL*	29.4000	RAD	
	222SL*	8.3920	RAD	
	224SL*	5.0790	RAD	
	400SL*	1.0300	CONDI	
	400SI*	84.1400	RAD	
	425SL*	3.3470	CONDI	
	425SI*	16.3500	RAD	
	747SL*	17.3400	RAD	
	749SL*	17.3400	RAD	
	26TL	6.5750	CONDI	
	26TI	1.4500	RAD	
	36TL	.4690	RAD	
	38TL	1.6800	CONDI	
	38TI	1.4600	RAD	
	45TL	63.3900	RAD	
	48TL	.7000	RAD	
	50TL	2.5200	CONDI	
	50TI	1.4900	RAD	
	240TI	.5100	RAD	
439	401SL	4.2400	CONDI	2.93800
	422SI	7.7360	CONDI	
	421SI	7.7360	CONDI	
	467SL	885.2000	CONDI	
	215SL	35.2900	RAD	
	400SL*	3.2110	CONDI	
	438SI*	1.7380	CONDI	
	35TL	2.5200	CONDI	
	35TI	.4660	RAD	
	236TI	5.0600	CONDI	
	236TL	2.3300	RAD	
	239TL	5.0600	CONDI	
	239TI	2.4000	RAD	
440	444SL	2.5720	CONDI	1.41000
	442SL	1.5520	CONDI	
	408SI*	1.7580	CONDI	
	439TI	.9078	CONDI	
	442TL	.5583	CONDI	
441	445SI	2.5720	CONDI	1.41000
	443SI	1.5520	CONDI	

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LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP BTU/DEG.F
441	408SL*	1.7580	CONDI	1.41000
	441TL	.9078	CONDI	
	442TL	.5583	CONDI	
442	426SL^	6.8080	CONDI	.64600
	139SL	1.4170	CONDI	
	440SI*	1.5520	CONDI	
443	489SI*	3.1210	CONDI	.64600
	427SL	6.8080	CONDI	
	139SL	1.4170	CONDI	
	441SI*	1.5520	CONDI	
444	489SI*	3.1210	CONDI	.14800
	740SL*	7.3000	CONDI	
	769SL	4.6040	CONDI	
	440SL*	2.5720	CONDI	
445	436TL	1.5910	CONDI	.14800
	437TL	1.9050	CONDI	
	770SL	4.6040	CONDI	
	441SL*	2.5720	CONDI	
446	436TL	1.9050	CONDI	.10000
	438TL	1.5910	CONDI	
	465SI*	.0171	RAD	
	470SL*	.0845	RAD	
	471SL*	.0490	RAD	
	475SI*	.0330	RAD	
	737SL*	.0381	RAD	
447	786SL*	.0140	RAD	.01600
	453SL*	.0380	RAD	
	502SI*	1.1210	RAD	
	737SI*	.8062	RAD	
448	750SL*	.1496	RAD	.01600
	786SL*	.1406	RAD	
	787SL*	.0156	RAD	
	450SI*	.1150	RAD	
	452SI*	.0590	RAD	
	453SL*	74.6300	RAD	
	462SI*	.0044	RAD	
	465SL*	.3930	RAD	
	466SI*	.0700	RAD	
	467SI*	.0095	RAD	
	470SL*	.3120	RAD	
	471SL*	.7190	RAD	
	473SI*	1.4870	RAD	
475SI*	1.5900	RAD		
502SL*	1.7110	RAD		
714SL*	.1043	RAD		
736SL*	.0462	RAD		
737SI*	.6384	RAD		
750SL*	3.7760	RAD		
786SL*	.9141	RAD		
787SL*	2.9700	RAD		

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LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
449	453SL *	.0055	RAD	.01600		
	502SI *	4.1400	RAD			
	737SL *	.0818	RAD			
450	401SI	8.5160	RAD	.14400		
	402SL	5.6770	RAD			
	445SL	90.8100	RAD			
	750SL	212.5000	RAD			
	500SI	820.1000	RAD			
	786SI	5.9900	RAD			
	448SI	.1150	RAD			
	452SL *	.7400	RAD			
	453SL *	.1150	RAD			
	456SL *	.0060	RAD			
	461SL *	.0058	RAD			
	462SL *	.0520	RAD			
	464SI *	.0050	RAD			
	466SI *	1.3200	RAD			
	467SL *	.1780	RAD			
	470SL *	.0092	RAD			
	475SI *	.0518	RAD			
	483SL *	.0052	RAD			
	604SL *	.0210	RAD			
	714SL *	1.8960	RAD			
	736SL *	.5245	RAD			
	737SL *	.0182	RAD			
	748SL *	.0073	RAD			
	787SI *	55.7400	RAD			
	788SI *	.0106	RAD			
	451	500SL	125.0000		RAD	.10000
		435SL	.0037		RAD	
459SL		.1885	RAD			
460SL *		.0660	RAD			
501SL *		1.1210	RAD			
748SL *		.1499	RAD			
787SL *		.1786	RAD			
789SI *		.8706	RAD			
796SL *		.0397	RAD			
452		403SL	3.5630	RAD	.06300	
	750SI	37.7600	RAD			
	500SL	139.0000	RAD			
	786SI	1.6900	RAD			
	448SI	.0590	RAD			
	450SI	.7400	RAD			
	453SL *	.1910	RAD			
	462SI *	.0046	RAD			
	465SL *	.2860	RAD			
	466SI *	.1260	RAD			
	467SI *	.0171	RAD			
	475SI *	.0045	RAD			
	604SI *	.0040	RAD			

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LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
452	714SL*	.1885	RAD	.06300		
	736SL*	.0863	RAD			
	737SL*	.0320	RAD			
	787SL*	5.3350	RAD			
453	404SL	8.0390	RAD	.07600		
	750SI	10.8600	RAD			
	500SI	456.0000	RAD			
	786SL	1.4250	RAD			
	447SL	.0380	RAD			
	448SL	74.6300	RAD			
	449SL	.0055	RAD			
	450SI	.1150	RAD			
	452SL	.1910	RAD			
	465SL*	.0880	RAD			
	466SL*	.0380	RAD			
	467SL*	.0052	RAD			
	470SL*	.0430	RAD			
	471SL*	.0980	RAD			
	473SL*	.2030	RAD			
	475SL*	.2190	RAD			
	714SL*	.0776	RAD			
	736SL*	.0557	RAD			
	737SL*	2.2120	RAD			
	787SL*	1.6270	RAD			
	454	405SL	11.6500		RAD	.11500
		500SI	617.4000		RAD	
		89SL	14.1500		RAD	
91SL		.4680	RAD			
92SL		.0080	RAD			
93SL		.0100	RAD			
95SL		.0087	RAD			
96SI		.0345	RAD			
138SI		.0380	RAD			
304SL		.0162	RAD			
345SL		.0166	RAD			
346SL		.0536	RAD			
90SI*		28.9200	RAD			
455SL*		2.4990	RAD			
457SL*		.2930	RAD			
458SL*		.0040	RAD			
474SL*		.1013	RAD			
476SI*		.0761	RAD			
477SI*		.1380	RAD			
516SL*		.0490	RAD			
607SI*		.0084	RAD			
614SL*		.0041	RAD			
732SL*		29.2800	RAD			
733SL*	.0086	RAD				
738SL*	.0269	RAD				
739SL*	.3596	RAD				

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LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
454	764SL*	12.8300	RAD	.11500
	782SL*	.0486	RAD	
	797SL*	1.1840	RAD	
	801SL*	.3368	RAD	
	809SL*	.0207	RAD	
	812SL*	.0406	RAD	
455	813SL*	69.8500	RAD	.11300
	500SI	347.4000	RAD	
	457SL	9.4200	RAD	
	558SI	19.0500	RAD	
	92SL	.1000	RAD	
	93SL	.0770	RAD	
	94SL	.0127	RAD	
	95SI	.0620	RAD	
	96SL	.0460	RAD	
	138SL	.1897	RAD	
	306SI	.7220	RAD	
	344SL	.7350	RAD	
	346SI	.5120	RAD	
	454SL	2.4990	RAD	
	89SL*	9.6500	RAD	
	90SL*	290.1000	RAD	
	91SI*	46.7500	RAD	
	458SL*	.4980	RAD	
	459SI*	.0070	RAD	
	463SL*	.0053	RAD	
	474SI*	.1410	RAD	
	476SL*	.2280	RAD	
	477SI*	.2360	RAD	
	484SL*	.0410	RAD	
	485SI*	.0044	RAD	
	487SL*	.1220	RAD	
	516SI*	.8450	RAD	
	607SL*	.0080	RAD	
	614SL*	.0244	RAD	
	620SL*	.0046	RAD	
	732SL*	113.9000	RAD	
	733SL*	.4346	RAD	
	738SL*	.0188	RAD	
	739SI*	.3087	RAD	
	756SI*	.0078	RAD	
	758SL*	.1570	RAD	
764SL*	4.4660	RAD		
774SI*	.1043	RAD		
780SL*	.0447	RAD		
782SI*	.8571	RAD		
797SI*	1.7600	RAD		
801SL*	1.1490	RAD		
809SI*	.1963	RAD		
811SL*	.0123	RAD		

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LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG.F
455	812SL*	.0486	RAD	.11300
	813SL*	61.8600	RAD	
456	450SL	.0060	RAD	.10000
	500SI	49.4500	RAD	
	460SI*	79.1200	RAD	
	461SL*	.0630	RAD	
	462SL*	.1040	RAD	
	464SL*	.3300	RAD	
	466SL*	.0750	RAD	
	467SL*	.0100	RAD	
	478SI*	.3300	RAD	
	479SL*	.7640	RAD	
	481SL*	1.5800	RAD	
	483SL*	1.6870	RAD	
	501SL*	1.7110	RAD	
	714SL*	.1109	RAD	
	748SL*	4.0160	RAD	
	787SL*	4.1360	RAD	
	788SI*	.0498	RAD	
	789SI*	.6824	RAD	
	796SL*	.0307	RAD	
	384TL	.9513	CONDI	
457	500SL	164.8000	RAD	.22800
	733SL	5.1500	RAD	
	516SL	8.6900	RAD	
	782SL	12.8600	RAD	
	458SL	8.2700	RAD	
	557SL	9.5100	RAD	
	558SI	9.5100	RAD	
	94SL	.5210	RAD	
	95SL	.7610	RAD	
	96SL	.2510	RAD	
	454SI	.2930	RAD	
	89SI*	5.0700	RAD	
	90SI*	45.2500	RAD	
	91SI*	935.1000	RAD	
	93SL*	8.2100	RAD	
	138SL*	21.9400	RAD	
	304SL*	2.5100	RAD	
	345SL*	1.9200	RAD	
	346SI*	10.0100	RAD	
	455SL*	9.6200	RAD	
	459SI*	.4170	RAD	
	463SL*	.1700	RAD	
	474SI*	.0400	RAD	
	476SI*	.6440	RAD	
	477SL*	.0860	RAD	
	482SL*	.0380	RAD	
	484SL*	.5660	RAD	
	485SL*	.0836	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
457	487SL *	1.5300	RAD	.27800
	607SL *	.0348	RAD	
	614SL *	.2780	RAD	
	620SL *	.1364	RAD	
	732SL *	7.1320	RAD	
	738SL *	.0094	RAD	
	739SL *	.1331	RAD	
	756SL *	1.0310	RAD	
	758SL *	4.2260	RAD	
	764SL *	.4436	RAD	
	774SL *	2.4550	RAD	
	778SL *	.0375	RAD	
	780SL *	.0289	RAD	
	793SL *	.0659	RAD	
	795SL *	.0058	RAD	
	797SL *	.5982	RAD	
	801SL *	7.6600	RAD	
	809SL *	6.1980	RAD	
	811SL *	.3198	RAD	
	812SL *	.0560	RAD	
813SL *	6.1840	RAD		
458	774SL	40.7600	RAD	.11300
	758SL	89.0100	RAD	
	500SL	163.9000	RAD	
	782SL	6.0200	RAD	
	557SL	19.0500	RAD	
	89SL	.0400	RAD	
	90SL	.0390	RAD	
	94SL	.1370	RAD	
	95SL	.1300	RAD	
	96SL	.0143	RAD	
	306SL	.2170	RAD	
	345SL	.2780	RAD	
	346SL	.5570	RAD	
	454SL	.0040	RAD	
	455SL	.4980	RAD	
	91SL *	62.0400	RAD	
	92SL *	249.9000	RAD	
	93SL *	8.5400	RAD	
	138SL *	1.9570	RAD	
	457SL *	8.2700	RAD	
459SL *	3.7800	RAD		
463SL *	.9650	RAD		
474SL *	.0400	RAD		
477SL *	.0040	RAD		
482SL *	.1090	RAD		
484SL *	.1610	RAD		
485SL *	.2014	RAD		
487SL *	.1050	RAD		
516SL *	.8600	RAD		

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG.F		
458	607SL •	.0032	RAD	•11300		
	614SL •	.0498	RAD			
	620SL •	.1822	RAD			
	728SL •	126.3000	RAD			
	732SL •	.1705	RAD			
	733SL •	.4945	RAD			
	756SL •	3.0600	RAD			
	778SL •	.0069	RAD			
	780SL •	.0040	RAD			
	790SL •	.1367	RAD			
	793SL •	.4242	RAD			
	795SL •	.0053	RAD			
	797SL •	.0080	RAD			
	801SL •	.3111	RAD			
	809SL •	57.4800	RAD			
	811SL •	.0177	RAD			
	812SL •	.0133	RAD			
	813SL •	.1690	RAD			
	459	410SL	9.7030		RAD	•11500
		758SL	8.6900		RAD	
774SL		115.4000	RAD			
500SL		374.6000	RAD			
89SL		.0060	RAD			
90SL		.0100	RAD			
91SL		.8030	RAD			
94SL		.0110	RAD			
95SL		.0110	RAD			
138SL		.0430	RAD			
306SL		.0080	RAD			
345SL		.0210	RAD			
346SL		.0620	RAD			
435SL		.1350	RAD			
455SL		.0070	RAD			
457SL		.4170	RAD			
458SL		3.7800	RAD			
92SL •		42.8600	RAD			
93SL •		.3330	RAD			
451SL •		.1885	RAD			
460SL •	.1240	RAD				
463SL •	11.9000	RAD				
478SL •	.0060	RAD				
479SL •	.0085	RAD				
481SL •	.0150	RAD				
482SL •	.2120	RAD				
483SL •	.0040	RAD				
484SL •	.3690	RAD				
485SL •	.2040	RAD				
487SL •	.0034	RAD				
516SL •	.0400	RAD				
614SL •	.0041	RAD				

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
459	620SL*	21.1000	RAD	.11500
	732SL*	.0042	RAD	
	733SL*	.0284	RAD	
	748SL*	.0099	RAD	
	756SL*	.3896	RAD	
	782SL*	.5634	RAD	
	787SL*	.0444	RAD	
	789SI*	.0923	RAD	
	790SL*	2.7190	RAD	
	793SI*	.1708	RAD	
	801SI*	.0221	RAD	
	809SI*	59.9100	RAD	
	813SL*	.0207	RAD	
	460	411SL	8.0390	
748SL		22.6300	RAD	
500SL		482.4000	RAD	
784SL		.0060	RAD	
435SL		.0071	RAD	
451SL		.0660	RAD	
454SL		79.1200	RAD	
459SL		.1240	RAD	
461SL*		.1920	RAD	
462SI*		.0896	RAD	
464SL*		.0620	RAD	
464SL*		.0366	RAD	
467SL*		.0050	RAD	
478SL*		.0320	RAD	
479SL*		.0737	RAD	
481SL*		.1540	RAD	
483SL*		.1650	RAD	
608SL*		.0034	RAD	
714SI*		.0791	RAD	
787SL*		2.9610	RAD	
788SL*		.0545	RAD	
789SL*		2.4700	RAD	
796SL*		.8462	RAD	
461	412SL	3.5630	RAD	.06300
	748SI	37.7600	RAD	
	500SI	193.0000	RAD	
	784SL	7.9710	RAD	
	450SL	.0058	RAD	
	454SL	.0630	RAD	
	460SI	.1920	RAD	
	462SI*	.5900	RAD	
	464SL*	.2330	RAD	
	464SL*	.1265	RAD	
	467SL*	.0171	RAD	
	483SL*	.0045	RAD	
	608SI*	.0040	RAD	
	714SI*	.1888	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
461	787SL*	7.0430	RAD	.06300		
	788SL*	.0860	RAD			
	789SL*	.0426	RAD			
	791SL*	.0045	RAD			
	796SL*	.1400	RAD			
462	414SL	1775.0000	CONDI	.14400		
	413SL	5.6770	RAD			
	414SL	8.5160	RAD			
	748SL	113.6000	RAD			
	500SL	545.5000	RAD			
	464SL	35.0600	RAD			
	786SL	.0720	RAD			
	448SL	.0044	RAD			
	450SL	.0520	RAD			
	452SL	.0046	RAD			
	456SL	.1040	RAD			
	460SL	.0896	RAD			
	461SL	.5900	RAD			
	465SL*	.0048	RAD			
	466SL*	1.0430	RAD			
	467SL*	.1410	RAD			
	475SL*	.0040	RAD			
	478SL*	.0070	RAD			
	483SL*	.0480	RAD			
	608SL*	.0188	RAD			
	714SL*	1.3460	RAD			
	736SL*	.0084	RAD			
	750SL*	.0048	RAD			
	787SL*	48.8500	RAD			
	788SL*	.4151	RAD			
	789SL*	.0147	RAD			
	791SL*	.0230	RAD			
	796SL*	.0440	RAD			
	463	91SL	.6440		RAD	.10000
		92SL	14.6600		RAD	
		93SL	.2200		RAD	
		94SL	.0040		RAD	
		95SL	.0037		RAD	
138SL		.0196	RAD			
306SL		.0036	RAD			
345SL		.0077	RAD			
346SL		.0176	RAD			
455SL		.0053	RAD			
457SL		.1700	RAD			
458SL		.9650	RAD			
459SL		11.9000	RAD			
500SL		67.4300	RAD			
482SL*		.1620	RAD			
484SL*		.3150	RAD			
485SL*		.1196	RAD			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F	
463	501SL*	2.0400	RAD	.10000	
	516SL*	.0130	RAD		
	620SL*	21.9700	RAD		
	733SL*	.0113	RAD		
	756SL*	.1412	RAD		
	758SL*	3.3570	RAD		
	774SL*	21.5200	RAD		
	782SL*	.2077	RAD		
	790SL*	2.8540	RAD		
	793SL*	.0671	RAD		
	801SL*	.0064	RAD		
	809SL*	9.1450	RAD		
	813SL*	.0044	RAD		
	748SL	48.8500	RAD		.70420
	500SI	332.0000	RAD		
	214SL	8.2500	RAD		
	215SL	4.9950	RAD		
	435SL	.0156	RAD		
	450SL	.0050	RAD		
	456SL	.3300	RAD		
	460SL	.0620	RAD		
	461SL	.2330	RAD		
	462SI*	35.0600	RAD		
	466SL*	.1830	RAD		
	467SL*	.0250	RAD		
	478SI*	.0033	RAD		
	479SI*	.0560	RAD		
	481SI*	.0040	RAD		
	483SL*	.3330	RAD		
	714SL*	.2206	RAD		
	786SI*	.0116	RAD		
	787SL*	7.8820	RAD		
	788SL*	.0506	RAD		
789SI*	.0042	RAD			
791SI*	.0031	RAD			
796SI*	.0288	RAD			
465	750SL	60.2400	RAD	.70420	
	500SI	389.6000	RAD		
	214SI	8.0560	RAD		
	215SL	5.1600	RAD		
	446SI	.0171	RAD		
	448SL	.3930	RAD		
	452SI	.2860	RAD		
	453SI	.0880	RAD		
	462SL	.0048	RAD		
	450SI*	90.8100	RAD		
	466SI*	.2150	RAD		
	467SI*	.0292	RAD		
	470SL*	.0042	RAD		
	471SI*	.0710	RAD		

S T R U C T U R E I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. ° CP BTU/DEG.F
465	473SL*	.0050	RAD	.70420
	475SL*	.4200	RAD	
	714SL*	.2583	RAD	
	736SL*	.0584	RAD	
	786SL*	.1025	RAD	
466	787SL*	9.1410	RAD	.51870
	500SL	530.5000	RAD	
	214SL	11.0800	RAD	
	786SL	.2520	RAD	
	448SL	.0700	RAD	
	450SL	1.3200	RAD	
	452SL	.1260	RAD	
	453SL	.0380	RAD	
	456SL	.0750	RAD	
	460SL	.0366	RAD	
	461SL	.1265	RAD	
	462SL	1.0430	RAD	
	464SL	.1830	RAD	
	465SL	.2150	RAD	
	467SL*	.5030	RAD	
	470SL*	.0070	RAD	
	475SL*	.0690	RAD	
	478SL*	.0070	RAD	
	483SL*	.0690	RAD	
	502SL*	1.0610	RAD	
	600SL*	.0030	RAD	
	714SL*	4.4060	RAD	
	736SL*	.4945	RAD	
	737SL*	.0112	RAD	
	748SL*	.2041	RAD	
	750SL*	.1579	RAD	
	787SL*	157.3000	RAD	
788SL*	.4942	RAD		
789SL*	.0117	RAD		
791SL*	.0295	RAD		
796SL*	.0465	RAD		
467	500SL	385.9000	RAD	.33530
	215SL	6.4800	RAD	
	786SL	.0340	RAD	
	448SL	.0095	RAD	
	450SL	.1780	RAD	
	452SL	.0171	RAD	
	453SL	.0052	RAD	
	456SL	.0100	RAD	
	460SL	.0050	RAD	
	461SL	.0171	RAD	
	462SL	.1410	RAD	
	464SL	.0250	RAD	
	465SL	.0292	RAD	
	466SL	.5030	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
467	439SL*	885.2000	CONDI	.33630
	475SL*	.0093	RAD	
	483SL*	.0093	RAD	
	714SL*	.5964	RAD	
	736SL*	.0662	RAD	
	748SL*	.0276	RAD	
	750SL*	.0214	RAD	
	787SL*	21.3100	RAD	
	788SL*	.0663	RAD	
	791SL*	.0040	RAD	
	796SL*	.0063	RAD	
468	418SL	14.5000	RAD	.20300
	500SL	962.0000	RAD	
	417SL	10.8100	RAD	
	400SL*	1.4160	RAD	
469	487SL	.8720	RAD	.26970
	513SL*	31.7700	RAD	
	512SL	31.7700	RAD	
	497SL	46.5300	RAD	
	500SL	340.8000	RAD	
	417SL	7.1510	RAD	
	473SL*	.0034	RAD	
	481SL*	.0033	RAD	
470	421SL	1.3090	RAD	.10900
	475SL	3.7370	RAD	
	471SL	4.5300	RAD	
	500SL	77.4500	RAD	
	446SL	.0845	RAD	
	448SL	.3120	RAD	
	450SL	.0092	RAD	
	453SL	.0430	RAD	
	465SL	.0042	RAD	
	466SL	.0070	RAD	
	473SL*	.3270	RAD	
	714SL*	.0088	RAD	
	750SL*	.1564	RAD	
	786SL*	.0178	RAD	
787SL*	.2961	RAD		
471	475SL	4.5330	RAD	.04300
	500SL	165.7000	RAD	
	446SL	.0490	RAD	
	448SL	.7190	RAD	
	453SL	.0980	RAD	
	465SL	.0710	RAD	
	470SL*	4.5300	RAD	
	473SL*	.0730	RAD	
	750SL*	.0039	RAD	
	787SL*	.0102	RAD	
	446TL	4.1000	RAD	
472	475SL	19.1000	RAD	.05000

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
472	474SL	11.7100	RAD	.05000
	500SI	28.6600	RAD	
	473SI	6.8090	RAD	
473	448TI	.7701	RAD	.58800
	475SL	37.6900	RAD	
	474SL	23.9200	RAD	
	500SL	123.9000	RAD	
	201SL	95.9300	RAD	
	448SL	1.4870	RAD	
	453SL	.2030	RAD	
	465SI	.0050	RAD	
	469SL	.0034	RAD	
	470SL	.3270	RAD	
	471SI	.0730	RAD	
	472SL*	6.8090	RAD	
	497SL*	.1046	RAD	
	750SL*	.0077	RAD	
	786SL*	.0050	RAD	
	787SL*	.0366	RAD	
	447TI	77.6100	RAD	
	448TL	2.1590	CONDI	
	448TI	13.5900	RAD	
	474	419SL	10.0600	
475SI		74.5400	RAD	
476SL		83.9200	RAD	
500SL		507.5000	RAD	
89SI		.0193	RAD	
90SL		1.4400	RAD	
91SI		.2510	RAD	
138SI		.0034	RAD	
454SL		.1013	RAD	
455SI		.1410	RAD	
457SI		.0400	RAD	
472SL*		11.7100	RAD	
473SI*		23.9200	RAD	
476SL*		36.8600	RAD	
477SL*		1.6400	RAD	
732SL*		.0722	RAD	
764SL*		.0680	RAD	
797SI*		.0067	RAD	
801SI*		.0047	RAD	
813SL*		6.6580	RAD	
448TL	1.3590	RAD		
475	500SL	542.3000	RAD	.10100
	446SL	.0330	RAD	
	448SI	1.5900	RAD	
	450SL	.0518	RAD	
	452SI	.0045	RAD	
	453SL	.2190	RAD	
	462SI	.0040	RAD	

S T R U C T U R F I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
475	465SL	.4200	RAD	.10100		
	466SI	.0690	RAD			
	467SL	.0093	RAD			
	470SL*	3.7370	RAD			
	471SI*	4.5330	RAD			
	472SI*	19.1000	RAD			
	473SL*	37.6900	RAD			
	474SI*	74.5400	RAD			
	497SI*	.0070	RAD			
	714SI*	.0866	RAD			
	736SL*	.0189	RAD			
	750SI*	.0260	RAD			
	786SL*	.2143	RAD			
	787SL*	2.9070	RAD			
	449TI	9.9560	RAD			
	476	477SL	35.8800		RAD	.17000
		500SL	566.4000		RAD	
		89SI	.0173		RAD	
		90SL	3.2100		RAD	
		91SL	1.4100		RAD	
92SL		.0073	RAD			
93SL		.0040	RAD			
138SL		.0035	RAD			
306SL		.0093	RAD			
345SL		.0049	RAD			
346SL		.0111	RAD			
454SL		.0761	RAD			
455SL		.2280	RAD			
457SI		.6440	RAD			
458SL		.0400	RAD			
474SL		34.8600	RAD			
91SL*		7.2800	RAD			
474SI*		83.9200	RAD			
484SL*		.0034	RAD			
487SI*		.0095	RAD			
516SL*		.0330	RAD			
733SL*		.0218	RAD			
758SL*		.0125	RAD			
764SI*		.0610	RAD			
774SL*		.0083	RAD			
782SI*		.0420	RAD			
797SI*		.0129	RAD			
801SI*		.0230	RAD			
809SL*		.0140	RAD			
813SI*		4.4310	RAD			
477	450TL	12.8200	RAD	.02900		
	426SI	3.5450	RAD			
	500SL	149.9000	RAD			
	89SL	.0270	RAD			
	91SL	.5630	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
477	346SL	.0030	RAD	.02900		
	454SL	.1380	RAD			
	455SL	.2360	RAD			
	457SL	.0860	RAD			
	458SL	.0040	RAD			
	474SL ²	1.6400	RAD			
	90SL*	4.5000	RAD			
	476SL*	35.8800	RAD			
	732SL*	.1130	RAD			
	764SL*	.0970	RAD			
	797SL*	.0132	RAD			
	801SL*	.0083	RAD			
	809SL*	.0036	RAD			
	812SL*	.0034	RAD			
	813SL*	8.7690	RAD			
	478	422SL	1.3090		RAD	.10900
		483SL	3.9520		RAD	
479SL		4.5300	RAD			
500SL		77.4400	RAD			
435SL		.0970	RAD			
456SL		.3300	RAD			
459SL		.0060	RAD			
460SL		.0320	RAD			
462SL		.0070	RAD			
464SL		.0033	RAD			
466SL		.0070	RAD			
481SL*		.3270	RAD			
714SL*		.0087	RAD			
748SL*		.1564	RAD			
787SL*		.3117	RAD			
479		482SL	3.3940	RAD	.04300	
		483SL	4.8060	RAD		
	500SL	160.6000	RAD			
	435SL	.0540	RAD			
	456SL	.7640	RAD			
	459SL	.0085	RAD			
	460SL	.0737	RAD			
	464SL	.0560	RAD			
	478SL*	4.5300	RAD			
	481SL*	.0730	RAD			
	748SL*	.0052	RAD			
	787SL*	.0097	RAD			
	451TL	3.4130	RAD			
	480	483SL	21.8200	RAD		.05000
		482SL	12.3300	RAD		
		500SL	30.2000	RAD		
		481SL*	6.7950	RAD		
481	480SL	6.7950	RAD	.58800		
	483SL	37.6900	RAD			
	482SL	23.9200	RAD			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
481	500SI	123.9000	RAD	.58800		
	435SI	.0460	RAD			
	456SI	1.5800	RAD			
	459SL	.0150	RAD			
	460SL	.1540	RAD			
	464SL	.0040	RAD			
	469SL	.0033	RAD			
	478SI	.3270	RAD			
	479SI	.0730	RAD			
	203SL *	95.7300	RAD			
	497SL *	.1046	RAD			
	517SL *	.0030	RAD			
	748SL *	.0033	RAD			
	787SL *	.0405	RAD			
	789SI *	.0063	RAD			
	383TL	2.1530	CONDI			
	383TL	13.6200	RAD			
	452TL	77.7800	RAD			
	482	420SL	10.0800		RAD	.06900
		484SI	32.9400		RAD	
500SL		509.5000	RAD			
91SL		.2390	RAD			
92SL		1.5130	RAD			
93SI		.0086	RAD			
94SI		.0049	RAD			
457SL		.0380	RAD			
458SI		.1090	RAD			
459SI		.2120	RAD			
463SI		.1620	RAD			
479SI *		3.3940	RAD			
480SI *		12.3300	RAD			
481SI *		23.9200	RAD			
485SI *		1.7300	RAD			
620SI *		4.0760	RAD			
756SL *		.0137	RAD			
758SI *		.0489	RAD			
774SI *		.1184	RAD			
778SI *		.0074	RAD			
782SI *		.0207	RAD			
790SI *		.0129	RAD			
793SI *		.0093	RAD			
809SI *		4.6510	RAD			
30TL		2.5200	CONDI			
30TI		2.5000	RAD			
383TL		3.1780	RAD			
483		500SL	518.5000	RAD	.10100	
	415SI	.0370	RAD			
	450SI	.0052	RAD			
	456SI	1.6870	RAD			
	459SI	.0040	RAD			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
483	460SL	.1650	RAD	.10100		
	461SL	.0045	RAD			
	462SL	.0480	RAD			
	464SL	.3330	RAD			
	466SL	.0690	RAD			
	467SL	.0093	RAD			
	478SL *	3.9520	RAD			
	479SL *	4.8060	RAD			
	480SL *	21.8200	RAD			
	481SL *	37.6900	RAD			
	497SL *	.0070	RAD			
	714SL *	.0863	RAD			
	748SL *	.0330	RAD			
	787SL *	3.1170	RAD			
	788SL *	.0189	RAD			
	454TL	9.9570	RAD			
	484	485SL	59.3400		RAD	.08500
		500SL	503.5000		RAD	
		90SL	.0060		RAD	
		92SL	2.8020		RAD	
93SL		.0126	RAD			
138SL		.0035	RAD			
306SL		.0082	RAD			
345SL		.0045	RAD			
346SL		.0102	RAD			
455SL		.0410	RAD			
457SL		.5660	RAD			
458SL		.1610	RAD			
459SL		.3690	RAD			
463SL		.3150	RAD			
476SL		.0034	RAD			
91SL *		5.1800	RAD			
482SL *		32.9600	RAD			
487SL *		.0083	RAD			
516SL *		.0290	RAD			
620SL *		8.1220	RAD			
732SL *		.0134	RAD			
733SL *		.0206	RAD			
754SL *		.0248	RAD			
758SL *		.0644	RAD			
774SL *		.1295	RAD			
782SL *		.0695	RAD			
790SL *		.0055	RAD			
793SL *		.0070	RAD			
801SL *		.0154	RAD			
809SL *		2.2440	RAD			
813SL *		.0119	RAD			
455TL		11.7100	RAD			
427SL	3.5450	RAD				
500SL	149.3000	RAD	.02900			

S T R U C T U R F I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. e CP BTU/DEG.F		
485	915L	.5480	RAD	.07900		
	935L	.0152	RAD			
	3465L	.0065	RAD			
	4555L	.0044	RAD			
	4575L	.0836	RAD			
	4585L	.2014	RAD			
	4595L	.2040	RAD			
	4635L	.1196	RAD			
	4825L	1.7300	RAD			
	925L *	3.2700	RAD			
	4845L *	59.3400	RAD			
	6205L *	2.6520	RAD			
	7335L *	.0041	RAD			
	7565L *	.0291	RAD			
	7585L *	.0821	RAD			
	7745L *	.1687	RAD			
	7825L *	.0432	RAD			
	7905L *	.0036	RAD			
	7935L *	.0155	RAD			
	8015L *	.0036	RAD			
	8095L *	7.2370	RAD			
	8135L *	.0031	RAD			
	307L	1.6600	RAD			
	486					.000
	487	5135L	.6590		RAD	.07400
		5005L	50.3500		RAD	
		4975L	.7730		RAD	
	5125L	.6620	RAD			
	895L	.0050	RAD			
	935L	.0090	RAD			
	955L	.0030	RAD			
	1385L	.0100	RAD			
	3065L	.0220	RAD			
	3455L	.0200	RAD			
	3465L	.0270	RAD			
	4555L	.1220	RAD			
	4575L	1.5300	RAD			
	4585L	.1050	RAD			
	4595L	.0034	RAD			
	4765L	.0095	RAD			
	4845L	.0083	RAD			
	905L *	.6890	RAD			
	915L *	17.8000	RAD			
	925L *	2.1300	RAD			
	4695L *	.8720	RAD			
	5165L *	.0850	RAD			
	7325L *	.0396	RAD			
	7335L *	.0530	RAD			
	7585L *	.0327	RAD			
	7745L *	.0233	RAD			

S T R U C T U R E I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG. • F		
487	782SL *	.0980	RAD	.02400		
	801SI *	.0406	RAD			
	809SL *	.1377	RAD			
	813SL *	.1375	RAD			
	444TI	1.3180	RAD			
488				.000		
489	417SL	1.5610	CONDI	1.96000		
	427SL	.9885	CONDI			
	442SL	3.1210	CONDI			
	426SL	.9885	CONDI			
	443SL	3.1210	CONDI			
	444TL	.1493	CONDI			
490	318SL	.9223	CONDI	1.19000		
	319SL	.9223	CONDI			
	304SL *	99.9600	RAD			
	307SL *	23.1800	CONDI			
	307SL *	11.8400	RAD			
	310SL *	.2978	CONDI			
	316SL *	.2978	CONDI			
	397SL *	3.6600	RAD			
	398SL *	.9710	RAD			
	491SL *	4.2030	CONDI			
	492SL *	.4371	CONDI			
	494SL *	4.2030	CONDI			
	496SL *	.9530	RAD			
	498SL *	.7490	RAD			
	499SL *	21.5200	RAD			
	425TL	.6271	CONDI			
	491	492SL	.6884		CONDI	1.75000
		495SL	.6884		CONDI	
		496SI	55.6600		CONDI	
		318SL	.6111		CONDI	
490SL		4.2030	CONDI			
307SL		4.2030	CONDI			
499SI		11.9900	RAD			
304SL *		2.3360	RAD			
496SL *		1.1300	RAD			
498SL *		1.1300	RAD			
492		715SL	.3077	CONDI	1.75000	
	490SL	.4371	CONDI			
	498SI	16.4400	CONDI			
	499SL	11.9900	RAD			
	304SI *	2.3300	RAD			
	491SL *	.6884	CONDI			
	494SL *	.6884	CONDI			
	496SI *	1.4030	RAD			
	498SL *	.6560	RAD			
	493					.000
494	492SL	.6884	CONDI	1.75000		
	495SL	.6884	CONDI			

S T R U C T U R E I U M P D A T A

IUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG.F		
494	307SI	8.4180	CONDI	1.75000		
	319SI	.6111	CONDI			
	490SL	4.2030	CONDI			
	496SL	32.6800	CONDI			
	304SI •	2.3410	RAD			
	496SL •	1.1300	RAD			
	498SL •	1.1300	RAD			
	499SL •	11.9900	RAD			
495	715SL	.3077	CONDI	1.75000		
	307SI	.4371	CONDI			
	496SL	20.5800	CONDI			
	304SI •	2.3470	RAD			
	491SL •	.6884	CONDI			
	494SL •	.6884	CONDI			
	496SL •	.6560	RAD			
	498SL •	1.6030	RAD			
	499SL •	11.9900	RAD			
	496	498SL	.8418		CONDI	.53000
		499SI	275.1000		RAD	
498SL		98.3000	RAD			
495SI		.6560	RAD			
307SI		.7490	RAD			
490SL		.9530	RAD			
491SI		1.1300	RAD			
492SL		1.6030	RAD			
494SL		1.1300	RAD			
304SI •		5.6900	RAD			
398SL •		.1355	CONDI			
491SI •		55.5600	CONDI			
494SI •		32.6800	CONDI			
495SL •		20.5800	CONDI			
497		513SL	59.0400	RAD	1.00600	
	512SL	107.3000	RAD			
	500SI	793.0000	RAD			
	473SL	.1046	RAD			
	475SL	.0070	RAD			
	481SL	.1046	RAD			
	483SL	.0070	RAD			
	91SL •	10.8200	RAD			
	469SL •	66.5300	RAD			
	487SL •	.7730	RAD			
	444TI	1.9090	RAD			
	445TL	17.1800	RAD			
	498	499SI	275.1000	RAD		1.06000
		492SI	.6560	RAD		
307SI		.9530	RAD			
90SL		.7490	RAD			
91SI		1.1300	RAD			
94SL		1.1300	RAD			
95SI		1.6030	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
498	3045L*	5.6900	RAD	1.06000		
	3975L*	.1355	CONDI			
	4925L*	16.4400	CONDI			
	4965L*	.8418	CONDI			
499	4945L*	98.3000	RAD	1.00000		
	3045L	71.6300	RAD			
	3075L	21.5200	RAD			
	3975L	1.5400	RAD			
	3985L	1.5400	RAD			
	4905L	21.5200	RAD			
	4945L	11.9900	RAD			
	4955L	11.9900	RAD			
	4915L*	11.9900	RAD			
	4925L*	11.9900	RAD			
	4965L*	275.1000	RAD			
	4985L*	275.1000	RAD			
	500	895L*	618.0000		RAD	.00000
		905L*	587.4000		RAD	
915L*		752.3000	RAD			
925L*		260.4000	RAD			
935L*		39.8600	RAD			
945L*		446.4000	RAD			
955L*		1043.0000	RAD			
965L*		578.4000	RAD			
1385L*		791.2000	RAD			
2005L*		59.6100	RAD			
2215L*		4.2460	RAD			
2735L*		11.0800	RAD			
3065L*		31.7800	RAD			
3455L*		45.2500	RAD			
3465L*		177.4000	RAD			
3625L*		2.8200	RAD			
3635L*		43.1600	RAD			
3645L*		131.6000	RAD			
3655L*		560.4000	RAD			
4505L*		820.1000	RAD			
4515L*		125.0000	RAD			
4525L*		139.0000	RAD			
4535L*		456.0000	RAD			
4545L*		617.4000	RAD			
4555L*		347.6000	RAD			
4565L*		49.4500	RAD			
4575L*		164.8000	RAD			
4585L*		163.9000	RAD			
4595L*		374.6000	RAD			
4605L*		482.4000	RAD			
4615L*		193.0000	RAD			
4625L*		545.5000	RAD			
4635L*		67.4300	RAD			
4645L*		332.0000	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WI. * CP BTU/DEG.F
500	465SL *	389.6000	RAD	.00000
	466SL *	530.5000	RAD	
	467SL *	385.9000	RAD	
	468SL *	962.0000	RAD	
	469SL *	340.8000	RAD	
	470SL *	77.4500	RAD	
	471SL *	165.7000	RAD	
	472SL *	28.4600	RAD	
	473SL *	123.9000	RAD	
	474SL *	507.5000	RAD	
	475SL *	542.3000	RAD	
	476SL *	566.4000	RAD	
	477SL *	149.9000	RAD	
	478SL *	77.4400	RAD	
	479SL *	160.6000	RAD	
	480SL *	30.2000	RAD	
	481SL *	123.9000	RAD	
	482SL *	509.5000	RAD	
	483SL *	518.5000	RAD	
	484SL *	503.5000	RAD	
	485SL *	149.3000	RAD	
	487SL *	50.3500	RAD	
	497SL *	793.0000	RAD	
	512SL *	168.4000	RAD	
	513SL *	168.4000	RAD	
	516SL *	106.4000	RAD	
	582SL *	2.8270	RAD	
	600SL *	977.0000	RAD	
	604SL *	1172.0000	RAD	
	606SL *	506.5000	RAD	
	607SL *	530.5000	RAD	
	608SL *	1316.0000	RAD	
	612SL *	512.5000	RAD	
	614SL *	185.5000	RAD	
	620SL *	443.6000	RAD	
	622SL *	551.4000	RAD	
	623SL *	551.5000	RAD	
	626SL *	3057.0000	RAD	
	681SL *	28.5200	RAD	
	682SL *	88.2800	RAD	
	683SL *	28.5200	RAD	
	684SL *	88.2800	RAD	
	688SL *	28.5200	RAD	
	689SL *	88.2800	RAD	
	696SL *	28.5200	RAD	
	697SL *	88.2800	RAD	
	714SL *	1449.0000	RAD	
	728SL *	119.3000	RAD	
	732SL *	184.9000	RAD	
	733SL *	42.8600	RAD	

S T R U C T U R E L U M P D A T A

PUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
500	736SL *	1061.0000	RAD	.00000
	737SL *	2017.0000	RAD	
	738SL *	830.2000	RAD	
	739SL *	578.4000	RAD	
	748SL *	489.1000	RAD	
	750SL *	554.4000	RAD	
	754SL *	328.2000	RAD	
	754SL *	139.4000	RAD	
	758SL *	134.6000	RAD	
	764SL *	848.2000	RAD	
	766SL *	569.4000	RAD	
	768SL *	578.4000	RAD	
	774SL *	617.4000	RAD	
	778SL *	806.3000	RAD	
	780SL *	554.4000	RAD	
	782SL *	186.7000	RAD	
	786SL *	5526.0000	RAD	
	787SL *	5642.0000	RAD	
	788SL *	1059.0000	RAD	
	789SL *	1932.0000	RAD	
	790SL *	707.9000	RAD	
	791SL *	326.4000	RAD	
	792SL *	636.0000	RAD	
	793SL *	648.2000	RAD	
	794SL *	236.4000	RAD	
	795SL *	707.0000	RAD	
	796SL *	253.2000	RAD	
	797SL *	53.1400	RAD	
	799SL *	1206.0000	RAD	
	801SL *	72.8900	RAD	
	809SL *	341.4000	RAD	
	811SL *	358.4000	RAD	
	812SL *	367.1000	RAD	
	813SL *	360.5000	RAD	
444T1	2.1180	RAD		
501	435SL	1.0610	RAD	.05000
	451SL	1.1210	RAD	
	456SL	1.7110	RAD	
	463SL	2.0400	RAD	
	410SL *	89.6900	RAD	
502	694SL *	85.1600	RAD	.05000
	405SI	89.6900	RAD	
503	686SL	85.1600	RAD	.000
	466SL	1.0610	RAD	
	447SL	1.1210	RAD	
	448SL	1.7110	RAD	
	449SI	4.1400	RAD	
504				.000
505				.000

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
506				.000
507				.000
508				.000
509				.000
510				.000
511				.000
512	513SL	27.4200	RAD	.04000
	500SL	168.4000	RAD	
	426SL	5.2980	RAD	
	481SL	.0030	RAD	
	90SL *	.4449	RAD	
	91SL *	2.8800	RAD	
	92SL *	3.6600	RAD	
	469SL *	31.7700	RAD	
	487SL *	.6620	RAD	
	497SL *	107.3000	RAD	
513	427SL	5.2980	RAD	.04000
	500SL	168.4000	RAD	
	90SL *	1.4500	RAD	
	91SL *	288.3000	RAD	
	92SL *	5.5400	RAD	
	469SL *	31.7700	RAD	
	487SL *	.6590	RAD	
	497SL *	59.0400	RAD	
	512SL *	27.4200	RAD	
514	706SL *	1.1190	RAD	.03980
	707SL *	9.2710	RAD	
	711SL *	10.0500	RAD	
	713SL *	17.1400	RAD	
	735SL *	5.1780	RAD	
	768SL *	11.3800	RAD	
515	717SL	17.1200	RAD	.03980
	707SL *	5.2140	RAD	
	703SL *	7.7740	RAD	
	719SL *	10.0500	RAD	
	766SL *	11.3800	RAD	
516	500SL	106.4000	RAD	.82800
	733SL	122.3000	RAD	
	782SL	112.4000	RAD	
	614SL	6.4100	RAD	
	546SL	22.0500	RAD	
	454SL	.0490	RAD	
	455SL	.8450	RAD	
	458SL	.8600	RAD	
	459SL	.0400	RAD	
	463SL	.0130	RAD	
	476SL	.0330	RAD	
	484SL	.0290	RAD	
	487SL	.0850	RAD	
	89SL *	23.4000	RAD	

S T R U C T U R E L U M P D A T A .

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP HTU/DEG.F
516	90SL*	3.3250	RAD	.82800
	91SL*	53.3500	RAD	
	92SL*	.4449	RAD	
	93SL*	49.7500	RAD	
	94SL*	20.9700	RAD	
	95SL*	136.1000	RAD	
	96SL*	11.6900	RAD	
	138SL*	241.9000	RAD	
	306SL*	119.0000	RAD	
	345SL*	187.9000	RAD	
	346SL*	111.5000	RAD	
	457SL*	8.6900	RAD	
	607SL*	1.4030	RAD	
	620SL*	2.3600	RAD	
	627SL*	.0124	RAD	
	623SL*	.0122	RAD	
	626SL*	.2494	RAD	
	738SL*	.0500	RAD	
	739SL*	.6114	RAD	
	756SL*	4.1060	RAD	
	758SL*	.1810	RAD	
	764SL*	.2330	RAD	
	774SL*	.1424	RAD	
	778SL*	1.5640	RAD	
	780SL*	1.7560	RAD	
	793SL*	.0334	RAD	
	795SL*	.0680	RAD	
	797SL*	2.0380	RAD	
	801SL*	22.3800	RAD	
	809SL*	.4675	RAD	
	811SL*	3.0860	RAD	
	812SL*	1.7770	RAD	
	813SL*	.3690	RAD	
517				.000
518				.000
519	163SL	3.9030	COND1	.13260
	139SL	1.1500	COND1	
	164SL*	8.9810	COND1	
520	139SI	1.1500	COND1	.13260
	159SI*	4.1370	COND1	
	160SI*	9.1890	COND1	
521	649SI	3.9000	COND1	.24450
	729SL	2.9860	COND1	
	769SL	6.6600	COND1	
	160SL*	8.9810	COND1	
	161SI*	3.4050	COND1	
522	649SI	3.9020	COND1	.24450
	763SL	2.9860	COND1	
	770SL	6.6600	COND1	
	164SL	9.1910	COND1	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
522	798SL *	5.7190	COND1	.24450
523	767SI	3.2940	COND1	.36800
	779SI	2.3670	COND1	
	731SI	3.3250	COND1	
	159SL *	5.0600	COND1	
	162SI *	3.3480	COND1	
	634SL *	59.7900	COND1	
	246TL	6.5700	COND1	
524	730SL	3.3250	COND1	.36800
	763SI	2.3670	COND1	
	765SL	3.2440	COND1	
	163SL *	4.3240	COND1	
	629SL *	59.7900	COND1	
	785SI *	4.1210	COND1	
525	630SL *	486.1000	COND1	.09980
	631SI *	482.9000	COND1	
	671SI *	3.6000	COND1	
	425TL	.7160	COND1	
	457TI	3.1570	COND1	
526	632SI *	482.9000	COND1	.09700
	633SI *	486.1000	COND1	
	671SI *	3.6000	COND1	
	300TL	6.5700	COND1	
	425TL	.7160	COND1	
	457TL	3.1570	COND1	
527	649SL	.2861	COND1	.12000
	556SI *	5.5110	COND1	
	680SL *	1.6440	COND1	
	435TL	2.1530	COND1	
528				.000
529				.000
530				.000
531	537SI	11.5500	RAD	.09700
	551SL	100.6000	RAD	
	299SL *	67.6200	RAD	
	539SI *	13.5100	RAD	
	575SI *	2.7200	RAD	
	608SI *	14.5400	RAD	
	612SL *	10.3400	RAD	
	617SL *	22.4000	RAD	
	620SL *	1.9600	RAD	
	622SI *	3.2370	RAD	
	680SI *	10.3100	RAD	
	92TI	.3020	RAD	
	122TL	.3020	RAD	
	123TL	.3020	RAD	
	457TI	4.9770	RAD	
532				.000
533				.000
534				.000

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.*F
535				.000
536				.000
537	299SL*	42.2700	RAD	.05100
	531SL*	11.5500	RAD	
	539SL*	8.9690	RAD	
	575SL*	2.0800	RAD	
	617SL*	20.1700	RAD	
	622SL*	6.4740	RAD	
	680SL*	6.5320	RAD	
	92TL	.2320	RAD	
	122TI	.2320	RAD	
	123TL	.2320	RAD	
	457TL	33.3000	RAD	
538				.000
539	531SL	13.5100	RAD	.05800
	537SI	8.9690	RAD	
	299SI*	49.4400	RAD	
	575SI*	2.1300	RAD	
	617SI*	23.4000	RAD	
	620SI*	1.9600	RAD	
	680SI*	7.4650	RAD	
	92TL	.2400	RAD	
	122TL	.2400	RAD	
	123TL	.2400	RAD	
	457TI	37.6100	RAD	
540				.000
541	805SL	11.5500	RAD	.09200
	575SL	2.7360	RAD	
	680SL	10.3100	RAD	
	617SL	22.4000	RAD	
	802SL	13.1500	RAD	
	299SI	67.4900	RAD	
	554SL	100.8000	RAD	
	604SL*	14.5400	RAD	
	606SL*	10.3400	RAD	
	607SI*	1.9600	RAD	
	623SL*	3.2370	RAD	
	83TL	.8400	RAD	
	84TL	.2340	RAD	
	89TL	.2400	RAD	
	90TI	.8050	RAD	
	93TL	.8050	RAD	
	94TL	.8050	RAD	
	95TL	1.9600	RAD	
	96TL	4.8100	RAD	
	140TL	.8260	RAD	
	142TI	.1200	RAD	
	144TI	.1200	RAD	
	145TL	.2010	RAD	
	149TI	2.7700	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG.F
541	209TL	.2400	RAD	.09200
	211TL	.2340	RAD	
	214TL	.2400	RAD	
	250TL	.5600	RAD	
	251TI	.9200	RAD	
	278TI	.9200	RAD	
	279TI	.9200	RAD	
	280TI	.5600	RAD	
	284TI	.9200	RAD	
	285TL	.5600	RAD	
	288TI	.9200	RAD	
	289TI	.5600	RAD	
	293TI	.9200	RAD	
	294TL	.5600	RAD	
457TI	49.6700	RAD		
542	362SL*	.9830	RAD	.00000
	363SL*	25.8800	RAD	
	594SI*	2.1780	RAD	
543	546SI	.0220	CONDI	.00000
	367SL	4.7200	RAD	
	781SI	13.2900	RAD	
	544SI*	39.6800	CONDI	
544	782SL*	17.3700	RAD	2.22000
	543SI	39.6800	CONDI	
	781SL	25.6700	RAD	
	545SI*	5.5560	CONDI	
	782SL*	25.6700	RAD	
545	430TL	171.5000	CONDI	1.73000
	544SL	5.5560	CONDI	
	167SL	128.0000	CONDI	
	756SI	19.2700	RAD	
	756SL*	19.2700	RAD	
546	547SL	3.2220	CONDI	.00000
	614SL	6.9440	CONDI	
	366SL	22.0700	RAD	
	370SI	22.0700	RAD	
	516SL*	22.0500	RAD	
	543SI*	.0220	CONDI	
	560SL*	1.9700	CONDI	
	547SI	7.3490	CONDI	
547	557SL	7.3490	CONDI	.84000
	369SI	8.2800	RAD	
	306SI*	8.2800	RAD	
	546SL*	3.2220	CONDI	
	548SI	7.3490	CONDI	
548	701SL	128.0000	CONDI	2.00000
	725SI	17.0300	RAD	
	549SL*	9.1980	CONDI	
	797SI*	16.5400	RAD	
	801SI*	11.2100	RAD	
549	560SI	.7880	CONDI	1.32000

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
549	54RSI	9.1980	CONDI	1.32000		
	725SL	11.3600	RAD			
	797SI *	6.7130	RAD			
	801SI *	4.6150	RAD			
	429TL	120.4000	CONDI			
550	429TI	40000.0000	CONDI	.50700		
	577SI	8.4180	CONDI			
	589SL	8.4180	CONDI			
	561SI	2.7780	CONDI			
	693SI	27.9900	RAD			
	551SL *	84.8100	RAD			
	457TL	8.4180	CONDI			
	457TI	111.9000	RAD			
	551	550SI	84.8100		RAD	.37800
		693SI	10.2400		RAD	
552SL		68.7800	RAD			
531SI *		100.4000	RAD			
550SL *		2.7780	CONDI			
552SL *		.0694	CONDI			
457TL		40.9800	RAD			
552		551SL	.0694	CONDI	1.97000	
		681SL	.2089	CONDI		
		551SL *	68.7800	RAD		
553	581SI	8.4180	CONDI	.50700		
	593SL	8.4180	CONDI			
	554SL	2.7780	CONDI			
	692SL	27.9900	RAD			
	554SI *	84.8100	RAD			
	457TL	8.4180	CONDI			
	457TI	111.9000	RAD			
	554	553SI	84.8100		RAD	.37800
		692SL	10.2400		RAD	
		555SI	68.7800		RAD	
541SL *		100.4000	RAD			
553SL *		2.7780	CONDI			
555SL *		.0694	CONDI			
457TL		40.9700	RAD			
555		554SL	.0694	CONDI	1.97000	
		683SL	.2089	CONDI		
		554SI *	68.7800	RAD		
556	590SI	15.3500	CONDI	.51700		
	591SI	12.7400	CONDI			
	592SI	15.3500	CONDI			
	680SL	3.2530	CONDI			
	649SL	14.3900	CONDI			
	527SL	5.5110	CONDI			
557	408SL	9.5900	RAD	.52500		
	457SI *	9.5100	RAD			
	458SL *	19.0500	RAD			
	547SI *	7.3490	CONDI			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	#1. * CP BTU/DEG.F
557	441TL	19.2200	RAD	.52500
558	408SI	9.5900	RAD	.52500
	455SL*	19.0500	RAD	
	457SI*	9.5100	RAD	
	547SI* ⁿ	7.3490	CONDI	
	439TL	19.2200	RAD	
559				.000
560	546SL	1.9700	CONDI	.39900
	368SI	13.4100	RAD	
	549SL*	.7880	CONDI	
	733SI*	13.4100	RAD	
561				.000
562				.000
563				.000
564				.000
565	299SL	10.8800	RAD	.58500
	601SI*	1.7350	RAD	
	680SL*	1.2230	RAD	
	457TL	6.0800	RAD	
566				.000
567				.000
568				.000
569				.000
570				.000
571				.000
572				.000
573				.000
574				.000
575	299SL	8.5700	RAD	.64900
	531SL	2.7200	RAD	
	537SL	2.0800	RAD	
	539SL	2.1300	RAD	
	541SL*	2.7360	RAD	
	601SL*	1.7350	RAD	
	680SL*	1.2230	RAD	
	802SL*	2.1470	RAD	
	805SL*	2.0930	RAD	
	457TL	6.0800	RAD	
576	579SL*	.3311	CONDI	.50000
	631SL*	60.2800	CONDI	
	632SI*	60.2800	CONDI	
	732SI*	.1927	RAD	
577	578SI	4.3420	CONDI	.04000
	550SL*	8.4180	CONDI	
	629SI*	59.7900	CONDI	
	630SL*	60.4500	CONDI	
	100TI	5.7330	CONDI	
578	579SI	8.0670	CONDI	.17500
	601SL	4.8020	RAD	
	617SL	3.8320	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. ° CP BTU/DEG. F
578	299SL*	14.0400	RAD	.17500
	577SL*	4.3420	CONDI	
	680SL*	2.2640	RAD	
	102TL	5.7330	CONDI	
	104TL	5.7300	CONDI	
	244TL	6.5700	CONDI	
579	457TL	13.2500	RAD	.09100
	580SL	7.9310	CONDI	
	576SL	.3311	CONDI	
	601SL	2.6550	RAD	
	299SL*	7.8200	RAD	
	578SL*	8.0670	CONDI	
	680SL*	1.1860	RAD	
	108TL	5.7300	CONDI	
	111TL	5.7300	CONDI	
	114TL	5.7300	CONDI	
	457TL	6.9800	RAD	
580	581SL	4.3420	CONDI	.17500
	299SL*	15.8300	RAD	
	579SL*	7.9310	CONDI	
	617SL*	3.2430	RAD	
	680SL*	2.2640	RAD	
	117TL	5.7300	CONDI	
	119TL	5.7300	CONDI	
	121TL	5.7300	CONDI	
	300TL	6.5700	CONDI	
	457TL	13.2000	RAD	
	581	553SL*	8.4180	
580SL*		4.3420	CONDI	
633SL*		60.6500	CONDI	
634SL*		59.7900	CONDI	
123TL		5.7330	CONDI	
582	313SL	16.7300	CONDI	3.78000
	671SL	2.0580	CONDI	
	671SL	.0417	RAD	
	787SL	3.4500	RAD	
	500SL	2.8270	RAD	
583				.000
584	167SL	31.7200	RAD	.08200
	700SL	26.5000	RAD	
	753SL	17.9400	RAD	
	759SL	8.6160	RAD	
	761SL	11.2300	RAD	
	773SL	22.5900	RAD	
	777SL	20.9300	RAD	
	793SL*	7.7320	RAD	
	794SL*	4.4060	RAD	
	795SL*	8.1820	RAD	
	585			
586				.000

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DLG.F
587				.000
588				.000
589	590SL	3.0940	CONDI	.04000
	550SL	8.4180	CONDI	
	63TL	5.7330	CONDI	
590	591SL	8.4720	CONDI	.17500
	601SL	3.5700	RAD	
	617SL	6.8310	RAD	
	299SI *	18.2400	RAD	
	556SL *	15.3500	CONDI	
	589SI *	3.0940	CONDI	
	680SI *	5.6120	CONDI	
	680SL *	5.0510	RAD	
	61TL	1.7400	RAD	
	62TL	.4200	RAD	
	65TL	.2400	RAD	
	68TL	.4020	RAD	
	70TL	.1200	RAD	
	71TL	5.7330	CONDI	
	74TL	5.7330	CONDI	
	187TL	.4080	RAD	
	193TL	.9200	RAD	
	194TI	.9200	RAD	
	204TL	.2400	RAD	
	246TL	6.5700	CONDI	
	246TI	1.8000	RAD	
	265TL	.5600	RAD	
	266TL	.9200	RAD	
	270TL	.5600	RAD	
	271TL	.9200	RAD	
	275TL	.5600	RAD	
	276TI	.9200	RAD	
	277TL	2.8000	RAD	
	300TL	6.5700	CONDI	
	457TL	14.6800	RAD	
591	592SI	8.4720	CONDI	.09100
	601SL	1.4500	RAD	
	299SL *	8.1700	RAD	
	556SL *	12.7400	CONDI	
	590SI *	8.4720	CONDI	
	680SI *	5.6120	CONDI	
	680SL *	2.2180	RAD	
	61TL	1.7400	RAD	
	68TL	.4020	RAD	
	73TL	.8050	RAD	
	78TL	2.7400	RAD	
	157TL	3.5500	CONDI	
	159TI	5.7300	CONDI	
	161TI	.4080	RAD	
	163TI	5.7330	CONDI	

S T R U C T U R E I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F	
591	166TL	.8140	RAD	.09100	
	167TL	5.7330	CONDI		
	206TI	.2400	RAD		
	215TL	.4200	RAD		
	246TL	6.5700	CONDI		
	247TL	.9200	RAD		
	248TI	.5200	RAD		
	252TI	.9200	RAD		
	253TL	.5600	RAD		
	257TI	.9200	RAD		
	258TI	.5600	RAD		
	277TI	2.8000	RAD		
	299TL	2.8000	RAD		
	300TI	6.5700	CONDI		
457TL	5.9400	RAD			
592	593SI	3.0940	CONDI	.17500	
	299SL*	12.7500	RAD		
	556SI*	15.3500	CONDI		
	591SL*	8.4720	CONDI		
	617SI*	3.3250	RAD		
	680SL*	5.6120	CONDI		
	680SI*	3.7310	RAD		
	78TL	2.7400	RAD		
	79TI	.4080	RAD		
	80TL	.8050	RAD		
	81TL	.8050	RAD		
	82TL	5.7330	CONDI		
	84TL	.2400	RAD		
	85TL	5.7330	CONDI		
	87TI	.2400	RAD		
	88TL	5.7330	CONDI		
	91TL	.4200	RAD		
	157TL	3.5500	CONDI		
	158TL	.2400	RAD		
	208TI	.2400	RAD		
	210TI	.2340	RAD		
	218TI	.2400	RAD		
	282TL	.5600	RAD		
	283TL	.9200	RAD		
	287TL	.5600	RAD		
	291TL	.5600	RAD		
	292TL	.9200	RAD		
	296TL	.5600	RAD		
	297TI	.9200	RAD		
	298TL	.9200	RAD		
	299TI	2.8000	RAD		
	457TL	14.7000	RAD		
	553SL*	8.4180	CONDI		.04000
	592SI*	3.0940	CONDI		
92TL	5.7330	CONDI			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
594	364SL	4.4970	RAD	.00000		
	365SI	3.7800	RAD			
	542SL	2.1780	RAD			
	138SI *	.4140	RAD			
595				.000		
596				.000		
597				.000		
598				.000		
599				.000		
600	601SL	17.7700	RAD	.19570		
	500SI	977.0000	RAD			
	787SI	.5930	RAD			
	799SL	60.2400	RAD			
	766SL	9.1700	RAD			
	768SL	9.2000	RAD			
	464SL	.0030	RAD			
	604SI *	1.6300	RAD			
	606SL *	.0120	RAD			
	608SI *	1.8730	RAD			
	612SL *	.0132	RAD			
	714SI *	3.7460	RAD			
	736SI *	.4196	RAD			
	737SL *	.0098	RAD			
	786SI *	125.0000	RAD			
	788SI *	.4190	RAD			
	789SI *	.0135	RAD			
	791SI *	.0239	RAD			
	796SI *	.0378	RAD			
	601	617SL	74.6900		RAD	.20200
		609SL	8.2080		RAD	
		621SL	8.2080		RAD	
		565SI	1.7350		RAD	
		575SI	1.7350		RAD	
		299SL *	261.9000		RAD	
		578SI *	4.8020		RAD	
		579SL *	2.6550		RAD	
590SI *		3.5700	RAD			
591SI *		1.4500	RAD			
600SI *		17.7700	RAD			
603SL *		12.3100	RAD			
627SL *		12.3100	RAD			
680SI *		28.6900	RAD			
63TI		.1950	RAD			
92TI		.1750	RAD			
99TI		.1950	RAD			
100TL	.1950	RAD				
122TI	.1950	RAD				
123TI	.1950	RAD				
457TI	37.4400	RAD				
602				.000		

S T R U C T U R E F I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
603	601SL	12.3100	RAD	.05280
	299SI *	57.7800	RAD	
	608SI *	4.1060	RAD	
	457TL	40.9900	RAD	
604	450SL	.0210	RAD	.14380
	452SL	.0040	RAD	
	500SI	1172.0000	RAD	
	541SL	14.5400	RAD	
	600SI	1.6300	RAD	
	606SL *	.7040	RAD	
	608SL *	.2950	RAD	
	625SL *	4.1060	RAD	
	627SL *	4.2260	RAD	
	714SL *	2.1100	RAD	
	736SI *	.7163	RAD	
	737SL *	1.0910	RAD	
	766SI *	.0146	RAD	
	768SE *	114.2000	RAD	
	786SI *	73.1300	RAD	
	787SI *	.1187	RAD	
	788SI *	.0443	RAD	
	796SI *	.0034	RAD	
	799SL *	2.1120	RAD	
	605	299SL *	42.0800	
608SL *		4.2260	RAD	
617SL *		8.6160	RAD	
680SL *		6.2160	RAD	
606	457TL	33.6000	RAD	.10000
	500SL	506.5000	RAD	
	541SL	10.3400	RAD	
	600SI	.0120	RAD	
	604SL	.7040	RAD	
	714SL *	.0444	RAD	
	736SL *	.0366	RAD	
	737SL *	13.0700	RAD	
	768SL *	47.9500	RAD	
	786SL *	1.7620	RAD	
607	89SI	6.3200	RAD	.12250
	90SL	.0230	RAD	
	91SI	.0310	RAD	
	92SL	.0181	RAD	
	93SI	.3480	RAD	
	94SL	.5750	RAD	
	95SI	53.9500	RAD	
	96SL	153.8000	RAD	
	138SI	2.9250	RAD	
	306SI	.1250	RAD	
	345SI	.2900	RAD	
	346SI	1.2230	RAD	
454SL	.0084	RAD		

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	W1. ° CP RTU/DEG.F		
607	455SL	.0080	RAD	.12250		
	457SL	.0348	RAD			
	458SL	.0032	RAD			
	500SL	530.5000	RAD			
	514SL	1.4030	RAD			
	541SI	1.9600	RAD			
	614SL*	2.6500	RAD			
	619SL*	8.9910	RAD			
	620SL*	.3360	RAD			
	621SI*	8.9910	RAD			
	622SI*	.0057	RAD			
	623SI*	.0120	RAD			
	626SI*	.1370	RAD			
	733SI*	.5934	RAD			
	738SI*	6.6530	RAD			
	739SL*	.8122	RAD			
	756SI*	.0321	RAD			
	764SL*	.0520	RAD			
	778SL*	.4525	RAD			
	780SL*	247.8000	RAD			
	797SL*	1.3820	RAD			
	801SL*	.8305	RAD			
	802SL*	1.9660	RAD			
	809SL*	.0041	RAD			
	811SI*	.4072	RAD			
	812SI*	78.4600	RAD			
	813SI*	.0469	RAD			
	608	460SI	.0034		RAD	.14380
		461SI	.0040		RAD	
		462SI	.0188		RAD	
		500SI	1316.0000		RAD	
		531SI	14.5400		RAD	
600SI		1.8730	RAD			
603SL		4.1060	RAD			
604SL		.2950	RAD			
605SI		4.2260	RAD			
612SL*		.7970	RAD			
714SI*		2.4380	RAD			
736SL*		.0551	RAD			
766SL*		129.2000	RAD			
768SI*		.0196	RAD			
786SI*		71.3300	RAD			
787SI*		13.0100	RAD			
788SI*		.8212	RAD			
789SL*		1.2280	RAD			
791SI*		.0431	RAD			
796SI*		.0833	RAD			
799SI*	2.4650	RAD				
609	299SI*	44.1000	RAD	.04590		
	601SI*	8.2080	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP BTU/DEG.F		
609	620SI *	8.9910	RAD	.04590		
	680SL *	7.8640	RAD			
	457TI	34.4400	RAD			
610				.000		
611	299SI *	54.6000	RAD	.05810		
	615SL *	11.6900	RAD			
	620SI *	8.9910	RAD			
	680SI *	13.0100	RAD			
	457TI	40.8900	RAD			
612	500SL	512.5000	RAU	.10000		
	531SL	10.3400	RAD			
	600SL	.0137	RAD			
	608SI	.7970	RAD			
	714SL *	.0527	RAD			
	764SI *	47.9500	RAD			
	786SL *	.6533	RAD			
	787SL *	1.4390	RAD			
	788SL *	.0420	RAD			
	789SL *	14.5900	RAU			
	791SL *	.0036	RAD			
	794SI *	1.4200	RAD			
	613	615SL	17.2000		RAD	.07950
		299SI *	65.2900		RAD	
614SI *		12.3500	RAD			
617SL *		37.4500	RAD			
680SL *		17.9200	RAD			
614	457TI	51.8300	RAD	2.08000		
	613SL	12.3500	RAD			
	615SL	26.2900	RAD			
	500SL	185.5000	RAD			
	733SL	5.7080	RAD			
	782SL	8.9600	RAD			
	89SI	2.5400	RAD			
	90SL	.1022	RAD			
	91SI	.5000	RAD			
	97SL	.5994	RAD			
	94SI	41.6600	RAD			
	454SI	.0041	RAD			
	455SL	.0244	RAD			
	457SI	.2780	RAD			
	458SL	.0498	RAD			
	459SL	.0041	RAD			
	607SL	2.6500	RAD			
	93SI *	10.0700	RAD			
	95SI *	243.4000	RAD			
	96SL *	40.4600	RAD			
	138SL *	18.5500	RAD			
	304SI *	.9110	RAD			
	345SI *	2.7900	RAD			
	346SL *	11.3000	RAD			

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F.
614	51ASL*	6.4100	RAD	2.00000
	54ASL*	6.9440	CONDI	
	620SI*	2.5380	RAD	
	622SL*	.0239	RAD	
	623SI*	.0238	RAD	
	626SI*	.4530	RAD	
	732SI*	.0032	RAD	
	738SL*	.0608	RAD	
	739SI*	.8122	RAD	
	756SI*	1.1870	RAD	
	758SL*	.0083	RAD	
	764SL*	.0230	RAD	
	774SI*	.0079	RAD	
	778SI*	6.2640	RAD	
	780SL*	14.6000	RAD	
	792SI*	.0108	RAD	
	793SI*	.0060	RAD	
	795SL*	.0817	RAD	
	797SI*	.4498	RAD	
	801SL*	2.6130	RAD	
	809SL*	.0322	RAD	
	811SI*	5.2060	RAD	
	812SL*	5.2240	RAD	
813SL*	.0233	RAD		
615	611SI	11.6900	RAD	.12300
	619SI	11.6900	RAD	
	299SL*	98.2800	RAD	
	370SL*	17.2000	RAD	
	613SI*	17.2000	RAD	
	614SI*	26.2900	RAD	
	680SL*	34.0200	RAD	
	457TL	86.1200	RAD	
616				.000
617	10SL	7.1570	RAD	.31700
	11SI	7.1560	RAD	
	12SL	9.4680	RAD	
	13SI	9.4680	RAD	
	14SL	2.1010	RAD	
	15SL	2.1010	RAD	
	16SL	8.1890	RAD	
	17SL	8.1890	RAD	
	18SL	1.4440	RAD	
	19SI	1.4440	RAD	
	20SI	9.5490	RAD	
	21SI	9.5490	RAD	
	22SL	8.7920	RAD	
	23SI	8.7920	RAD	
	24SI	8.7920	RAD	
	23SI	8.7920	RAD	
	34SI	1.4440	RAD	

S T R U C T U R E · I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP BTU/DEG.F
617	35SL	1.4440	RAD	.31700
	36SL	4.4610	RAD	
	37SL	4.4610	RAD	
	38SL	4.8870	RAD	
	39SL	4.8870	RAD	
	40SL	4.6520	RAD	
	41SL	4.6520	RAD	
	42SL	6.1640	RAD	
	43SL	2.0550	RAD	
	44SL	2.3830	RAD	
	45SL	2.3880	RAD	
	46SL	2.4090	RAD	
	47SL	2.4090	RAD	
	49SL	4.6160	RAD	
	50SL	1.4180	RAD	
	51SL	1.4180	RAD	
	613SL	37.4500	RAD	
	539SI	23.4000	RAD	
	531SL	22.4000	RAD	
	537SI	20.1700	RAD	
	605SL	8.6160	RAD	
	635SL	16.6700	RAD	
	580SI	3.2430	RAD	
	592SL	3.3250	RAD	
	48SI	4.6160	RAD	
	299SL*	39.6600	RAD	
	541SL*	22.4000	RAD	
	578SI*	3.8320	RAD	
	590SL*	6.8310	RAD	
	601SL*	74.6900	RAD	
	626SL*	57.8400	RAD	
	680SL*	50.9200	RAD	
	802SI*	23.4000	RAD	
	805SL*	20.1700	RAD	
	64TL	.1200	RAD	
	67TL	.2400	RAD	
	69TL	.8050	RAD	
	72TL	.2400	RAD	
	75TL	.5600	RAD	
	76TL	.8050	RAD	
	77TL	.2020	RAD	
	162TL	.1200	RAD	
	164TL	.1200	RAD	
	165TI	.2010	RAD	
	168TL	.3500	RAD	
	169TI	2.7700	RAD	
	190TI	.9200	RAD	
	191TL	.5600	RAD	
	205TI	.8050	RAD	
	207TI	.2000	RAD	

S T R U C T U R F I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
617	217TL	.4200	RAD	.31700
	254TL	.5600	RAD	
	256TL	.9200	RAD	
	260TL	.5600	RAD	
	261TL	.9200	RAD	
	262TL	.9200	RAD	
	263TL	.5600	RAD	
	267TL	.9200	RAD	
	268TL	.5600	RAD	
	272TL	.9200	RAD	
	273TL	.5600	RAD	
	457TL	213.3000	RAD	
	618			
619	607SI	8.9910	RAD	.05810
	299SI *	54.7100	RAD	
	615SI *	11.6900	RAD	
	600SL *	13.0100	RAD	
	457TL	40.8900	RAD	
620	89SL	.1800	RAD	.12250
	90SL	.0076	RAD	
	91SL	.3570	RAD	
	92SL	1.0580	RAD	
	93SL	9.8300	RAD	
	94SL	155.5000	RAD	
	95SL	54.5500	RAD	
	96SL	.5390	RAD	
	138SL	7.7920	RAD	
	306SL	.3260	RAD	
	345SL	.5780	RAD	
	346SL	3.2370	RAD	
	455SL	.0046	RAD	
	457SI	.1364	RAD	
	458SL	.1822	RAD	
	459SL	21.1000	RAD	
	463SI	21.9700	RAD	
	482SI	4.0760	RAD	
	484SL	8.1220	RAD	
	485SL	2.6520	RAD	
	500SL	443.6000	RAD	
	516SL	2.3600	RAD	
	531SI	1.9600	RAD	
	539SI	1.9600	RAD	
	607SI	.3360	RAD	
	609SL	8.9910	RAD	
	611SL	8.9910	RAD	
	614SI	2.5380	RAD	
	622SI *	.0126	RAD	
	623SI *	.0058	RAD	
626SI *	.1355	RAD		
733SI *	1.2020	RAD		

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP HTU/DEG.F
620	739SL *	.0057	RAD	.12250
	754SL *	2.2780	RAD	
	758SL *	.7343	RAD	
	774SL *	4.1060	RAD	
	778SL *	256.4000	RAD	
	780SL *	.4560	RAD	
	782SL *	5.9340	RAD	
	790SL *	.4975	RAD	
	792SL *	5.3580	RAD	
	793SL *	.0052	RAD	
	795SL *	.5559	RAD	
	797SL *	.0249	RAD	
	801SL *	.7193	RAD	
	809SL *	.7540	RAD	
	811SL *	62.9900	RAD	
	812SL *	.3953	RAD	
	813SL *	.0077	RAD	
621	607SL *	8.9910	RAD	.04690
	299SL *	44.1800	RAD	
	601SL *	8.2080	RAD	
	680SL *	7.8820	RAD	
	457TL	34.4400	RAD	
622	93SL	.0031	RAD	.89470
	94SL	.1876	RAD	
	95SL	.9081	RAD	
	96SL	.0222	RAD	
	500SL	551.4000	RAD	
	514SL	.0124	RAD	
	531SL	3.2370	RAD	
	537SL	6.4740	RAD	
	607SL	.0057	RAD	
	614SL	.0239	RAD	
	620SL	.0126	RAD	
	733SL *	.0062	RAD	
	778SL *	.0163	RAD	
	780SL *	.0100	RAD	
	782SL *	.0128	RAD	
	801SL *	.0030	RAD	
	811SL *	.2765	RAD	
812SL *	.0354	RAD		
623	94SL	.0224	RAD	.10000
	95SL	.9081	RAD	
	96SL	.1873	RAD	
	500SL	551.5000	RAD	
	514SL	.0122	RAD	
	541SL	3.2370	RAD	
	607SL	.0120	RAD	
	614SL	.0238	RAD	
	620SL	.0058	RAD	
	733SL *	.0058	RAD	

S T R U C T U R E I D U M P D A T A

I D U M P N O .	C O N N E C T E D T O I D U M P	C O N N E C T I O N V A L U E	T Y P E	W T . * C P B T U / D E G . F
623	778SL*	.0071	RAD	.10000
	780SL*	.0187	RAU	
	782SL*	.0100	RAD	
	801SL*	.0033	RAD	
	805SL*	6.4860	RAU	
	811SL*→	.0354	RAU	
	812SL*	.2748	RAD	
624				.000
625	604SL	4.1060	RAD	.04340
	299SL	51.1800	RAU	
	457TL	33.6100	RAD	
626	89SL	.0149	RAD	.36320
	91SL	.0037	RAD	
	93SL	.0456	RAD	
	94SL	1.1900	RAD	
	95SL	17.7100	RAD	
	96SL	1.1840	RAD	
	138SL	.0506	RAD	
	306SL	.0095	RAD	
	345SL	.0429	RAD	
	346SL	.0515	RAD	
	500SL	1057.0000	RAD	
	516SL	.2494	RAD	
	607SL	.1370	RAD	
	614SL	.4530	RAD	
	617SL	57.8400	RAD	
	620SL	.1355	RAD	
	733SL*	.1136	RAD	
	739SL*	.0053	RAD	
	756SL*	.0153	RAD	
	778SL*	.1615	RAD	
	780SL*	.2146	RAD	
	782SL*	.2269	RAD	
	795SL*	.0041	RAD	
	797SL*	.0088	RAD	
	801SL*	.0578	RAD	
	811SL*	1.1090	RAD	
812SL*	1.1080	RAD		
627	601SL	12.3100	RAD	.05280
	604SL	4.2260	RAD	
	299SL*	57.9000	RAD	
	457TL	40.9900	RAD	
628				.000
629	524SL	59.7900	COND1	.14110
	577SL	59.7900	COND1	
630	525SL	486.1000	COND1	.15370
	577SL	60.4500	COND1	
631	525SL	482.9000	COND1	.14930
	576SL	60.2800	COND1	
632	526SL	482.9000	COND1	.14930

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
632	574SL	60.2800	CONDI	.14930
633	524SL	486.1000	CONDI	.15370
	581SI	60.4500	CONDI	
634	523SL	59.7900	CONDI	.14110
	581SL *	59.7900	CONDI	
635	299SL *	2.6240	RAD	3.40000
	617SL *	16.6700	RAD	
	680SL *	.2421	RAD	
	457TL	1.0800	RAD	
636	10SL	.1551	CONDI	2.18700
	11SL	.1902	CONDI	
637	12SL	.5362	CONDI	2.32700
	13SL	.5362	CONDI	
638	16SL	.7982	CONDI	1.52700
	17SI	.7982	CONDI	
639	20SL	.6145	CONDI	2.36000
	21SL	.6145	CONDI	
640	18SL	.2394	CONDI	1.70000
	19SL	.2394	CONDI	
641	22SL	.0628	CONDI	22.40000
	23SL	.0628	CONDI	
642	24SL	.0628	CONDI	22.40000
	33SL	.0628	CONDI	
643	34SL	.2394	CONDI	1.70000
	35SI	.2394	CONDI	
644	14SL	.8122	CONDI	1.24700
	15SL	.5435	CONDI	
645	36SL	.0893	CONDI	1.09100
	37SL	.0893	CONDI	
646	38SI	.2088	CONDI	1.53300
	39SL	.2088	CONDI	
647	40SL	.0893	CONDI	1.62000
	41SI	.0893	CONDI	
648	42SL	.1060	CONDI	2.12700
	43SL	.1060	CONDI	
649	331SL	62.0400	RAD	.26150
	332SL *	41.3600	RAD	
	366SL *	33.3300	RAD	
	521SI *	3.9000	CONDI	
	522SI *	.3.9020	CONDI	
	527SI *	.2861	CONDI	
	556SI *	14.3900	CONDI	
	769SI *	18.7700	RAD	
	770SI *	18.7700	RAD	
	435TL	2.3610	CONDI	
650				.000
651				2.700
652	46SL	.2042	CONDI	1.11000
	47SL	.2042	CONDI	
653	48SL	.1424	CONDI	1.24700

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP HTU/DEG.F
653	49SI	.1424	COND1	1.24700
654	50SL	.7104	COND1	.68000
	51SI	.7104	COND1	
655				3.400
656				.000
657				.000
658				.000
659				.000
660				.000
661				.000
662				.000
663				.000
664				.000
665				.000
666				.000
667				.000
668				.000
669				.000
670				.000
671	767SL	.8819	COND1	.81730
	313SI	11.7700	COND1	
	525SI	3.4000	COND1	
	526SL	3.4000	COND1	
	312SL*	7.6400	COND1	
	314SL*	7.6400	COND1	
	315SL*	2.6530	COND1	
	582SL*	2.0580	COND1	
	582SL*	.0417	RAD	
	715SL*	35.4200	COND1	
	799SI*	5.9810	RAD	
	51TL	1.4800	COND1	
672				.000
673				.000
674				.000
675				.000
676				.000
677				.000
678				.000
679				.000
680	527SL	1.6440	COND1	12.64000
	590SL	5.6120	COND1	
	591SL	5.6120	COND1	
	592SI	5.6120	COND1	
	14SL	.2660	RAD	
	15SL	.2655	RAD	
	16SI	1.9880	RAD	
	17SI	1.9840	RAD	
	18SL	.1861	RAD	
	19SI	.1857	RAD	
	20SI	2.2690	RAD	

S T R U C T U R E I U M P D A T A

JUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. ° CP BTU/DEG.F
680	21SL	2.2650	RAD	12.64000
	22SL	2.2470	RAD	
	23SL	2.2420	RAD	
	24SL	2.2470	RAD	
	33SI	2.2420	RAD	
	34SI	.1861	RAD	
	35SI ^o	.1857	RAD	
	36SL	1.1650	RAD	
	37SL	1.1620	RAD	
	38SL	1.1840	RAD	
	39SL	1.1820	RAD	
	40SI	1.1460	RAD	
	41SI	1.1480	RAD	
	42SI	1.3180	RAD	
	43SI	1.3150	RAD	
	44SL	.6203	RAD	
	45SL	.6100	RAD	
	46SL	.4539	RAD	
	47SL	.4500	RAD	
	48SL	1.0600	RAD	
	49SL	1.0590	RAD	
	50SL	.2103	RAD	
	51SI	.2099	RAD	
	10SL	1.6990	RAD	
	11SL	1.6960	RAD	
	12SL	2.0460	RAD	
	13SL	2.0420	RAD	
	575SL	1.2230	RAD	
	565SL	1.2230	RAD	
	578SI	2.2640	RAD	
	590SL	5.0510	RAD	
	579SI	1.1860	RAD	
	591SL	2.2180	RAD	
	601SL	28.6900	RAD	
	617SL	50.9200	RAD	
	613SL	17.9200	RAD	
	615SL	34.0200	RAD	
	611SI	13.0100	RAD	
	619SL	13.0100	RAD	
	609SL	7.8640	RAD	
	621SI	7.8820	RAD	
	539SI	7.4650	RAD	
	531SL	10.3100	RAD	
	537SL	6.5320	RAD	
	605SL	6.2160	RAD	
	635SL	.2421	RAD	
	580SL	2.2640	RAD	
592SL	3.7310	RAD		
299SL ^o	51.0800	RAD		
370SL ^o	17.9200	RAD		

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
680	541SL*	10.3100	RAD	12.64000
	556SL*	3.2530	CONDI	
	691SL*	4.3270	CONDI	
	691SL*	12.7100	RAD	
	692SL*	15.8700	CONDI	
	692SL*	12.2800	RAD	
	693SL*	15.8700	CONDI	
	693SL*	12.7200	RAD	
	802SL*	7.4650	RAD	
	805SL*	6.5320	RAD	
	63TL	.4120	RAD	
681	500SL	28.5200	RAD	.23400
	552SL*	.2089	CONDI	
	682SL*	10.9400	CONDI	
	682SL*	35.4100	RAD	
682	681SL	10.9400	CONDI	.33700
	681SL	35.4100	RAD	
	500SL	88.2800	RAD	
683	500SL	28.5200	RAD	.23400
	555SL*	.2089	CONDI	
	684SL*	10.9400	CONDI	
	684SL*	35.4100	RAD	
684	683SL	10.9400	CONDI	.33700
	683SL	35.4100	RAD	
	500SL	88.2800	RAD	
	685	684SL	2.7780	
404SL	3.9460	CONDI		
405SL	3.9460	CONDI		
405SL	33.9600	RAD		
404SL	33.9600	RAD		
686	684SL*	67.2100	RAD	
686	405SL	25.5200	RAD	.37800
	404SL	25.5200	RAD	
	685SL	67.2100	RAD	
	502SL*	85.1600	RAD	
	685SL*	2.7780	CONDI	
	687SL*	.0694	CONDI	
	687SL*	68.7800	RAD	
	687	684SL	.0694	
688SL	.2089	CONDI		
686SL	68.7800	RAD		
688	500SL	28.5200	RAD	.23400
	687SL*	.2089	CONDI	
	689SL*	10.9400	CONDI	
	689SL*	35.4100	RAD	
689	688SL	10.9400	CONDI	.33700
	688SL	35.4100	RAD	
	500SL	88.2800	RAD	
690	694SL	2.7780	CONDI	.52500
	411SL	3.9460	CONDI	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
690	410SL	33.9600	RAD	.52400		
	411SL	33.9600	RAD			
	410SI *	3.9460	CONDI			
	694SL *	67.2100	RAD			
691	680SL	4.3270	CONDI	1.35000		
	11SI *	1.0510	RAD			
	12SI	1.7910	RAD			
	13SL	1.7910	RAD			
	14SL	1.1320	RAD			
	17SL	1.1310	RAD			
	20SL	1.1710	RAD			
	21SL	1.1680	RAD			
	10SI.	1.0530	RAD			
	680SL	12.7100	RAD			
	693SL	21.3400	RAD			
	299SL *	30.5400	RAD			
	692SI *	5.2320	RAD			
	457TII	51.7200	RAD			
692	680SL	15.8700	CONDI	7.49000		
	691SL	5.2320	RAD			
	693SL	5.2320	RAD			
	680SL	12.7800	RAD			
	12SL	.4415	RAD			
	23SL	.4406	RAD			
	24SI	1.3490	RAD			
	33SI	1.3470	RAD			
	299SI *	36.1400	RAD			
	553SL *	27.9900	RAD			
	554SI *	10.2400	RAD			
	101TL	6.2280	CONDI			
	693	680SL	15.8700		CONDI	7.49000
		680SL	12.7200		RAD	
299SI *		40.8400	RAD			
550SI *		27.9900	RAD			
551SI *		10.2400	RAD			
691SI *		21.3400	RAD			
692SI *		5.2320	RAD			
118TL		6.2210	CONDI			
694	410SL	25.5200	RAD	.37800		
	411SL	25.5200	RAD			
	690SI	67.2100	RAD			
	501SI	85.1600	RAD			
	690SL *	2.7780	CONDI			
	695SI *	.0694	CONDI			
	695SI *	68.7800	RAD			
695	694SL	.0694	CONDI	1.97000		
	694SL	68.7800	RAD			
696	696SI *	.2089	CONDI	.23400		
	695SI	.2089	CONDI			
	500SL	28.5200	RAD			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEGREE
696	697SL*	10.9400	LUNDI	.23400
	697SI*	35.4100	RAD	
697	696SI	10.9400	CONDI	.33700
	696SI	35.4100	RAD	
	500SI	88.2800	RAD	
698				.000
699				.000
700	763SI	11.8700	RAD	3.50000
	781SI	47.2500	RAD	
	783SI	5.0770	RAD	
	784SI	7.0390	RAD	
	785SI	6.3370	RAD	
	798SI	7.8760	RAD	
	741SI	4.2620	RAD	
	742SI	6.1710	RAD	
	167SI	36.4200	RAD	
	165SI	36.6200	RAD	
	730SI	57.4100	RAD	
	751SI	48.9500	RAD	
	753SI	33.3700	RAD	
	757SI	14.4700	RAD	
	759SI	11.9200	RAD	
	761SI	15.8500	RAD	
	770SI	30.3800	RAD	
	773SI	35.9200	RAD	
	775SI	32.7500	RAD	
	167SI*	46.3000	CONDI	
	171SI*	.0292	CONDI	
	367SI*	14.5900	RAD	
	584SI*	26.5000	RAD	
	755SI*	24.6600	RAD	
	783SI*	92.5900	CONDI	
	784SI*	92.5900	CONDI	
	430SI	59.6600	RAD	
701	166SI	46.3000	CONDI	3.50000
	166SI	19.4200	RAD	
	743SI	3.9150	RAD	
	744SI	2.9540	RAD	
	161SI	10.3500	RAD	
	162SI	3.0310	RAD	
	160SI	11.3600	RAD	
	159SI	8.5790	RAD	
	721SI	30.5300	RAD	
	723SI	40.2600	RAD	
	725SI	50.0100	RAD	
	729SI	28.2600	RAD	
	731SI	77.2100	RAD	
	769SI	46.9900	RAD	
	775SI	29.9400	RAD	
	779SI	37.2200	RAD	

S T R U C T U R E I U N I F D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
701	174SL*	.0633	CONDI	3.50000		
	368SI*	27.5600	RAD			
	548SL*	128.0000	CONDI			
	743SI*	92.5900	CONDI			
	744SI*	92.5900	CONDI			
	429TL	90.3700	RAD			
702	179SL	106.8000	CONDI	1.69800		
	178SI	66.9000	CONDI			
	726SL	8.5170	RAD			
	717SI	15.4000	RAD			
	704SI	1.4980	RAD			
	772SI	22.1500	RAD			
	705SL	9.0360	RAD			
	703SL	30.4200	RAD			
	719SL	29.0300	RAD			
	515SL	5.2140	RAD			
	747SI	.7056	RAD			
	730SL	7.2850	RAD			
	745SL	5.6160	RAD			
	150SI	3.7900	RAD			
	734SI	4.4050	RAD			
	319SL	3.6240	RAD			
	765SL	2.4720	RAD			
	178SL	8.6830	RAD			
	182SL	4.4040	RAD			
	179SL	.9979	RAD			
	183SL	.5924	RAD			
	176SL*	.1093	CONDI			
	428TL	8.4410	RAD			
	703	183SL	127.6000		CONDI	1.45800
		182SL	66.1100		CONDI	
		747SL	.5969		RAD	
		730SI	5.5050		RAD	
745SL		5.1770	RAD			
150SI		2.8750	RAD			
734SI		3.9160	RAD			
319SL		12.8100	RAD			
765SL		2.4660	RAD			
178SI		3.7250	RAD			
182SL		5.9420	RAD			
179SL		.5581	RAD			
183SI		.9383	RAD			
704SL		1.3240	RAD			
772SI		21.6100	RAD			
705SL		7.2780	RAD			
726SI		4.1300	RAD			
717SI		16.8800	RAD			
719SL		24.0700	RAD			
515SI		7.7740	RAD			
180SL*	.0692	CONDI				

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WINDING CP BTU/DEG.F
703	7025L *	30.4200	RAD	1.95800
	428TL	6.7380	KAD	
704	1785L	6.3750	CONDI	1.94200
	1825L	7.7050	CONDI	
	7195L	3.0690	RAD	
	7025L *	1.4980	RAD	
	7035L *	1.3240	RAD	
705	1825L	38.9300	CONDI	1.12000
	1785L	56.9700	CONDI	
	7305L	5.7880	RAD	
	1505L	2.1210	RAD	
	1785L	3.3920	RAD	
	1825L	3.5730	RAD	
	7175L	5.8890	RAD	
	7195L	13.5900	RAD	
	7025L *	9.0360	RAD	
	7035L *	7.2780	RAD	
	428TL	5.1200	RAD	
706	1995L	127.6000	CONDI	1.45800
	1985L	66.1100	CONDI	
	5145L	1.1190	RAD	
	7135L	16.8800	RAD	
	7115L	24.0700	RAD	
	7275L	7.7740	RAD	
	7475L	7.2270	RAD	
	1945L	3.7250	RAD	
	1985L	5.9420	RAD	
	1955L	.5580	RAD	
	1995L	.9402	RAD	
	7095L	1.3240	RAD	
	7715L	21.5600	RAD	
	7085L	7.2780	RAD	
	7495L	.6607	RAD	
	7315L	5.5050	RAD	
	7465L	5.1770	RAD	
	1475L	2.8750	RAD	
	7355L	3.9160	RAD	
	3185L	3.1950	RAD	
	1965L *	.0692	CONDI	
	7075L *	30.2600	RAD	
	427TL	6.6780	RAD	
707	1955L	106.8000	CONDI	1.69800
	1945L	66.9000	CONDI	
	5145L	9.2710	RAD	
	7135L	17.4600	RAD	
	7115L	28.5300	RAD	
	7275L	5.1240	RAD	
	1985L	4.4040	RAD	
	1955L	.9980	RAD	
	1995L	.5923	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. ° CP BTU/DEG.F		
707	709SL	1.4980	RAD	1.69800		
	771SI	27.5800	RAD			
	708SL	9.0350	RAD			
	704SL	30.2600	RAD			
	749SL*	.4296	RAD			
	731SI	7.2850	RAD			
	146SL	5.6160	RAD			
	147SI	3.7900	RAD			
	735SI	4.4050	RAD			
	318SI	3.6310	RAD			
	767SL	3.6580	RAD			
	192SL*	.1093	CONDI			
	427TI	8.9090	RAD			
	708	194SL	56.9600		CONDI	1.12000
198SL		38.9300	CONDI			
731SL		5.7880	RAD			
147SI		2.1210	RAD			
194SL		3.3920	RAD			
198SL		3.5730	RAD			
713SL		5.8920	RAD			
711SI		13.5900	RAD			
706SL*		7.2780	RAD			
707SI*		9.0350	RAD			
427TL		5.1200	RAD			
709		194SL	6.3750	CONDI	1.94200	
		198SI	7.7040	CONDI		
		711SI	3.0690	RAD		
	706SI*	1.3240	RAD			
	707SI*	1.4980	RAD			
710				.000		
711	727SL	8.0130	RAD	.13520		
	514SI	10.0500	RAD			
	713SL	23.5500	RAD			
	194SI*	5.7030	RAD			
	198SI*	6.2680	RAD			
	318SI*	5.2980	RAD			
	706SL*	24.0700	RAD			
	707SI*	28.5300	RAD			
	708SL*	13.5900	RAD			
	709SL*	3.0690	RAD			
	731SL*	9.4900	RAD			
	735SL*	6.1820	RAD			
	737SI*	14.6900	RAD			
	738SL*	1.4810	RAD			
	739SL*	2.5410	RAD			
	746SL*	4.5350	RAD			
	764SL*	5.0350	RAD			
	427TL	9.6970	RAD			
712				.000		
713	514SI	17.1400	RAD	.07920		

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	W1. & CP BTU/DEG.F		
713	318SL*	27.0300	RAD	.07920		
	704SL*	16.8800	RAD			
	707SI*	17.4600	RAD			
	708SI*	5.8920	RAD			
	711SI*	23.5500	RAD			
	727SI*	17.1200	RAU			
	735SI*	34.1700	RAD			
	736SL*	23.8000	RAD			
	737SI*	23.4700	RAD			
	746SL*	5.6060	RAU			
	767SI*	51.5500	RAD			
	771SI*	140.1000	RAD			
	714	716SI	6.3780		CONDI	.46700
		715SI	926.1000		CONDI	
500SI		1449.0000	RAD			
787SI		263.4000	RAD			
786SI		274.8000	RAD			
715SL		49.2100	RAD			
448SI		.1043	RAD			
450SL		1.6960	RAD			
452SI		.1885	RAD			
453SL		.0776	RAD			
456SI		.1109	RAD			
460SI		.0791	RAD			
461SI		.1888	RAD			
462SI		1.3460	RAD			
464SI		.2206	RAD			
465SI		.2583	RAD			
466SI		4.4060	RAD			
467SI		.5964	RAD			
470SL		.0088	RAD			
475SL		.0866	RAD			
478SL		.0087	RAD			
483SL		.0863	RAD			
600SL		3.7460	RAD			
604SI		2.1100	RAD			
606SI		.0444	RAD			
608SL		2.4380	RAD			
612SL		.0527	RAU			
736SI*		3.6560	RAU			
737SI*		.1678	RAD			
748SI*		.2550	RAD			
750SI*		.1960	RAD			
766SL*		.1651	RAD			
768SL*		.1861	RAD			
788SI*		3.6560	RAD			
789SI*	.1993	RAD				
791SI*	.1879	RAU				
796SL*	.3314	RAD				
799SI*	.1142	RAD				

S T R U C T U R E I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
715	747SL	2.4400	CONDI	.96000		
	749SL	2.4400	CONDI			
	671SI	35.4200	CONDI			
	772SI	13.3600	CONDI			
	771SL	13.3600	CONDI			
	310SL*	.8092	CONDI			
	312SI*	.8092	CONDI			
	314SL*	.8092	CONDI			
	316SI*	.8092	CONDI			
	318SL*	1.2790	CONDI			
	319SL*	1.2790	CONDI			
	492SI*	.3077	CONDI			
	495SL*	.3077	CONDI			
	714SL*	926.1000	CONDI			
	714SL*	49.2100	RAD			
	716	714SL*	6.3780		CONDI	.00000
	717	726SI	5.7150		RAD	.07920
	319SI*	27.0300	RAD			
	515SL*	17.1200	RAD			
	702SI*	15.4000	RAD			
	703SL*	16.8800	RAD			
	705SL*	5.8890	RAD			
	719SL*	7.8490	RAD			
	734SI*	34.1700	RAD			
	745SL*	5.5000	RAD			
	765SL*	5.8300	RAD			
	772SL*	140.1000	RAD			
	788SL*	23.8900	RAD			
	789SI*	14.6600	RAD			
718				.000		
719	726SI	8.0130	RAD	.13520		
	515SI	10.0500	RAD			
	717SI	7.8490	RAD			
	178SL*	5.7030	RAD			
	182SL*	6.2680	RAD			
	319SL*	5.2980	RAD			
	702SI*	29.0300	RAD			
	703SI*	24.0700	RAD			
	704SL*	3.0690	RAD			
	705SI*	13.5900	RAD			
	730SI*	9.5100	RAD			
	734SL*	6.1820	RAD			
	745SL*	4.5350	RAD			
	789SL*	23.4100	RAD			
	428TI	9.6940	RAD			
720				.000		
721	775SL	31.3700	RAD	.14360		
	779SI	28.5400	RAD			
	723SI	32.8600	RAD			
	166SI*	73.1300	RAD			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BLU/DEG.F		
721	701SL *	30.4300	RAD	.14360		
	738SL *	5.8740	RAD			
	739SL *	5.1850	RAD			
	744SL *	4.6500	RAD			
722				.000		
723	775SL	30.5000	RAD	.15740		
	775SL	30.9600	RAD			
	779SL	46.2700	RAD			
	166SL *	70.3500	RAD			
	701SL *	40.2600	RAD			
	721SL *	32.8600	RAD			
	738SL *	10.0700	RAD			
	739SL *	9.1700	RAD			
	744SL *	2.9520	RAD			
	724					.000
725	775SL	19.7400	RAD	.11470		
	779SL	26.5500	RAD			
	166SL *	31.1600	RAD			
	548SL *	17.0300	RAD			
	549SL *	11.3600	RAD			
	701SL *	50.0100	RAD			
	723SL *	30.5000	RAD			
	702SL *	8.5170	RAD			
	703SL *	4.1300	RAD			
	717SL *	5.7150	RAD			
726	719SL *	8.0130	RAD	.05320		
	734SL *	5.1780	RAD			
	748SL *	12.3900	RAD			
	713SL	17.1200	RAD			
	706SL *	7.7740	RAD			
	707SL *	5.1240	RAD			
	711SL *	8.0130	RAD			
	750SL *	12.3900	RAD			
	727	500SL	119.3000		RAD	.37580
		774SL	155.0000		RAD	
758SL		56.8700	RAD			
92SL		19.7100	RAD			
458SL		126.3000	RAD			
740SL *		653.4000	CONDI			
740SL *		16.3700	RAD			
809SL *		119.3000	RAD			
728		521SL *	2.9860	CONDI	.54400	
		523SL *	2.3670	CONDI		
	701SL *	28.2600	RAD			
	731SL *	20.0400	RAD			
	769SL *	1.1950	RAD			
	429TI	5.4250	CONDI			
729	182SL	2.0940	CONDI	3.35500		
	719SL	9.5100	RAD			
	763SL	2.4890	RAD			

S T R U C T U R E (L U M P D A T A)

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	W1. * CP BTU/DEG.F		
730	150SL*	2.9390	RAD	3.35400		
	157SL*	3.3250	CONDI			
	178SL*	2.7210	CONDI			
	178SI*	4.8150	RAD			
	182SL**	4.5130	RAD			
	524SI*	3.3250	CONDI			
	700SL*	57.4100	RAD			
	702SL*	7.2850	RAD			
	703SI*	5.5050	RAD			
	706SL*	5.7880	RAD			
	414TL	1.7890	CONDI			
	731	769SI	5.3730		RAD	3.35400
		711SL	9.4900		RAD	
		729SI	20.0400		RAD	
147SI*		2.9390	RAD			
164SL*		50.0400	RAD			
194SI*		2.7330	CONDI			
194SI*		4.8150	RAD			
198SI*		2.0950	CONDI			
198SI*		4.5130	RAD			
523SL*		3.3250	CONDI			
701SI*		77.2100	RAD			
706SI*		5.5050	RAD			
707SI*		7.2850	RAD			
708SL*		5.7880	RAD			
767SL*		2.3870	RAD			
416TL		77.1600	CONDI			
732		89SL	.5095	RAD	.10000	
		90SL	102.7000	RAD		
	91SI	23.8900	RAD			
	92SI	.1680	RAD			
	93SL	.0213	RAD			
	95SL	.0103	RAD			
	96SL	.0100	RAD			
	138SL	.0947	RAD			
	306SI	.0453	RAD			
	345SI	.0590	RAD			
	346SI	.0995	RAD			
	454SL	29.2800	RAD			
	455SL	113.9000	RAD			
	457SL	7.1320	RAD			
	458SL	.1705	RAD			
	459SL	.0042	RAD			
	474SL	.0722	RAD			
	477SL	.1130	RAD			
	484SI	.0134	RAD			
	487SL	.0394	RAD			
	500SL	184.9000	RAD			
	576SL	.1927	RAD			
	614SI	.0032	RAD			

S T R U C T U R E I U M P D A T A

PUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP BU/DEG.F		
732	733SL *	.0953	RAD	.10000		
	739SL *	.0384	RAD			
	756SL *	.0034	RAD			
	758SL *	.0530	RAD			
	764SL *	1.1810	RAD			
	774SL *	.0369	RAD			
	775SL ² *	7.8520	RAD			
	782SL *	.2215	RAD			
	797SL *	.3991	RAD			
	801SL *	.2841	RAD			
	809SL *	.1558	RAD			
	812SL *	.0177	RAD			
	813SL *	38.2700	RAD			
	733	500SL	42.8600		RAD	.58400
		782SL	64.1400		RAD	
560SL		13.4100	RAD			
89SL		2.8950	RAD			
90SL		.4106	RAD			
454SL		.0086	RAD			
455SL		.4346	RAD			
458SL		.4945	RAD			
459SL		.0284	RAD			
463SL		.0113	RAD			
476SL		.0218	RAD			
484SL		.0206	RAD			
485SL		.0041	RAD			
487SL		.0530	RAD			
607SL		.5934	RAD			
620SL		1.2020	RAD			
622SL		.0062	RAD			
623SL		.0058	RAD			
626SL		.1136	RAD			
732SL		.0953	RAD			
91SL *		33.2700	RAD			
92SL *		1.4620	RAD			
93SL *		17.3500	RAD			
94SL *		8.9300	RAD			
95SL *		61.1400	RAD			
96SL *		1.4810	RAD			
138SL *		132.5000	RAD			
306SL *		68.0300	RAD			
345SL *		84.8200	RAD			
346SL *		112.1000	RAD			
457SL *		5.1500	RAD			
516SL *		122.3000	RAD			
614SL *	5.7080	RAD				
718SL *	.0052	RAD				
739SL *	.0758	RAD				
756SL *	1.4690	RAD				
758SL *	.1145	RAD				

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
733	764SL*	.0300	RAD	.58400		
	774SI*	.0920	RAD			
	778SI*	.8631	RAD			
	780SL*	.8092	RAD			
	793SI*	.0141	RAD			
	795SI*	.0367	RAD			
	797SL*	.3666	RAD			
	801SI*	13.4000	RAD			
	809SI*	.3872	RAD			
	811SI*	6.5770	RAD			
	817SI*	.4613	RAD			
	813SL*	.1852	RAD			
	734	313SL	17.2800		CONDI	2.21500
		148SI	.4661		CONDI	
765SL		16.3300	CONDI			
726SI		5.1780	RAD			
717SL		34.1700	RAD			
719SL		6.1820	RAD			
309SI*		12.9700	CONDI			
319SL*		10.3400	RAD			
340SL*		.6223	CONDI			
707SI*		4.4050	RAD			
703SL*		3.9160	RAD			
747SL*		23.9600	CONDI			
772SL*		45.3700	RAD			
40TL		2.5200	CONDI			
735	311SL	12.9700	CONDI	2.21500		
	749SL	23.9600	CONDI			
	315SL	17.2800	CONDI			
	772SI	.9139	RAD			
	749SI	1.9370	RAD			
	514SL	5.1780	RAD			
	713SL	34.1700	RAD			
	711SI	6.1820	RAD			
	148SL*	.4661	CONDI			
	318SI*	10.3400	RAD			
	339SI*	.6223	CONDI			
	706SL*	3.9160	RAD			
	707SI*	4.4050	RAD			
	767SL*	16.3300	CONDI			
767SI*	2.2910	RAD				
771SL*	45.4600	RAD				
736	427TL	4.3900	RAD	.15040		
	448SL	.0462	RAD			
	450SI	.5245	RAD			
	452SI	.0863	RAD			
	453SI	.0557	RAD			
	462SI	.0084	RAD			
	465SL	.0584	RAD			
	466SI	.4945	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
736	467SL	.0662	RAD	.15090		
	474SL	.0189	RAD			
	500SL	1061.0000	RAD			
	600SL	.4196	RAD			
	604SL	.7163	RAD			
	606SL	.0366	RAD			
	608SL	.0551	RAD			
	713SL	23.8000	RAD			
	714SL	3.6560	RAD			
	737SL *	.1951	RAD			
	750SL *	.0381	RAD			
	768SL *	.0381	RAD			
	786SL *	127.4000	RAD			
	787SL *	21.0100	RAD			
	799SL *	.0101	RAD			
	737	446SL	.0381		RAD	.23980
	447SL	.8062	RAD			
448SL	.6384	RAD				
449SL	.0818	RAD				
450SL	.0182	RAD				
452SL	.0320	RAD				
453SL	2.2120	RAD				
466SL	.0112	RAD				
500SL	2017.0000	RAD				
600SL	.0098	RAD				
604SL	1.0910	RAD				
606SL	13.0700	RAD				
711SL	14.6900	RAD				
713SL	23.4700	RAD				
714SL	.1678	RAD				
736SL	.1951	RAD				
750SL *	.0193	RAD				
768SL *	.7942	RAD				
786SL *	6.6530	RAD				
787SL *	.5065	RAD	.01950			
738	89SL	20.0800		RAD		
90SL	.0275	RAD				
91SL	.0040	RAD				
93SL	.0104	RAD				
94SL	.0159	RAD				
95SL	.3060	RAD				
96SL	6.4740	RAD				
138SL	.0238	RAD				
306SL	.0186	RAD				
345SL	.0080	RAD				
346SL	.0345	RAD				
454SL	.0269	RAD				
455SL	.0188	RAD				
457SL	.0094	RAD				
500SL	830.2000	RAD				

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP BTU/DEG.F		
738	514SL	.0500	RAD	.01950		
	607SL	6.6530	RAD			
	614SL	.0608	RAD			
	711SL	1.4810	RAD			
	721SI	5.8740	RAD			
	723SL	10.0700	RAD			
	733SL	.0052	RAD			
	739SI *	.5095	RAD			
	764SI *	.1750	RAD			
	778SI *	.0087	RAU			
	780SL *	1.2680	RAU			
	787SL *	.0486	RAU			
	797SI *	1.5710	RAU			
	801SI *	.4079	RAD			
	811SI *	.0108	RAD			
	812SI *	15.8000	RAD			
	813SL *	.0409	RAU			
	739	89SI	254.8000		RAD	.10450
		90SI	1.8940		RAD	
		91SI	.0782		RAD	
92SI		.0038	RAD			
93SL		.0351	RAD			
94SL		.0435	RAD			
95SL		.3057	RAD			
96SI		30.2700	RAD			
138SI		.2934	RAD			
306SI		.2260	RAD			
345SI		.1759	RAD			
346SI		.4286	RAD			
454SI		.3596	RAD			
455SI		.3087	RAD			
457SI		.1331	RAD			
500SI		578.4000	RAD			
514SL		.6114	RAD			
607SL		.8122	RAD			
614SI		.8122	RAU			
620SI		.0057	RAD			
626SI		.0053	RAD			
711SL		2.5410	RAD			
721SI		5.1850	RAD			
723SI		9.1700	RAD			
732SI		.0384	RAD			
733SI		.0758	RAD			
738SI		.5095	RAD			
764SI *		2.2720	RAD			
778SI *		.0151	RAU			
780SL *		.8930	RAU			
787SL *		.2745	RAU			
797SI *		19.6500	RAD			
801SI *		5.0890	RAD			

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEGREE		
739	809SL*	.0085	RAD	.10450		
	811SL*	.0509	RAD			
	812SL*	7.1400	RAD			
740	813SL*	1.1680	RAD	.08200		
	728SI	653.6000	CONDI			
	443SL*	7.3000	CONDI			
	728SI	16.3700	RAD			
	783SL*	5.7110	CONDI			
741	158SI	3.5770	CONDI	.31800		
	742SL	21.0500	CONDI			
	700SL*	4.2620	RAD			
742	783SL*	2.9340	CONDI	.14800		
	167SL	7.0750	CONDI			
	700SI*	6.1710	RAD			
	741SL*	21.0500	CONDI			
	783SL*	4.0300	CONDI			
743	166SL	92.5900	CONDI	3.65600		
	701SI	92.5900	CONDI			
	166SI*	4.7610	RAD			
	701SI*	3.9150	RAD			
	437TL	1.5610	CONDI			
744	166SL	92.5900	CONDI	.21940		
	161SL	3.7310	CONDI			
	701SL	92.5900	CONDI			
	162SI	2.8340	CONDI			
	166SL*	3.2200	RAD			
	701SL*	2.9540	RAD			
745	179SL	1.5690	CONDI	.29050		
	149SI	.3554	CONDI			
	150SL	1.4110	CONDI			
	148SI	.7880	CONDI			
	717SI	5.5000	RAD			
	719SL	4.5350	RAD			
	178SI*	25.7400	CONDI			
	702SL*	5.6160	RAD			
	703SL*	5.1770	RAD			
	747SL*	10.4100	CONDI			
	746	749SL	10.4100		CONDI	.29050
713SL		5.5060	RAD			
711SI		4.5350	RAD			
145SI*		.7880	CONDI			
146SI*		.3554	CONDI			
147SL*		1.4110	CONDI			
198SL*		20.7400	CONDI			
199SL*		1.5830	CONDI			
706SI*		5.1770	RAD			
747		745SL	10.4100	CONDI	1.17900	
		734SI	23.9600	CONDI		
	748SI	1.4830	RAD			
	438SI	17.3400	RAD			

S T R U C T U R E I U M P D A T A

UNIT NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
747	214SL	26.2700	RAD	1.17900		
	400SI	7.9620	RAD			
	220SI *	6.9440	CONDI			
	220SI *	.5834	RAD			
	309SI *	3.8190	CONDI			
	314SI *	1.1590	CONDI			
	319SI *	4.7550	CONDI			
	400SI *	27.3300	CONDI			
	438SI *	4.7680	CONDI			
	702SI *	.7056	RAD			
	703SI *	.5969	RAD			
	715SI *	2.4400	CONDI			
	749SL *	9.2120	CONDI			
	.45TI	12.6800	RAD			
	748	726SI	12.3900		RAD	.53990
		500SI	489.1000		RAD	
		786SL	.0115		RAD	
450SI		.0073	RAD			
451SL		.1499	RAD			
456SI		4.0160	RAD			
459SI		.0099	RAD			
464SL		.2041	RAD			
467SL		.0276	RAD			
478SL		.1564	RAD			
479SI		.0052	RAD			
481SL		.0033	RAD			
483SI		.0330	RAD			
714SL		.2550	RAD			
460SI *		27.6300	RAD			
461SI *		37.7600	RAD			
462SI *		113.6000	RAD			
464SL *		48.8500	RAD			
747SL *		1.4830	RAD			
787SI *		9.1710	RAD			
788SL *		.0563	RAD			
789SL *		.0204	RAD			
791SI *		.0033	RAD			
796SI *	.0178	RAD				
749	747SL	9.2120	CONDI	1.13200		
	750SI	1.4830	RAD			
	438SL	17.3400	RAD			
	214SL	26.2700	RAD			
	400SL	7.9620	RAD			
	220SI *	.5834	RAD			
	310SL *	1.1590	CONDI			
	311SI *	3.8190	CONDI			
	318SL *	4.7550	CONDI			
	400SI *	15.0000	CONDI			
	401SL *	14.1000	CONDI			
	438SL *	5.1360	CONDI			

S T R U C T U R E I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
749	706SL *	.6607	RAD	1.13200
	707SL *	.4296	RAD	
	715SL *	2.4400	CONDI	
	735SL *	23.9600	CONDI	
	735SL *	1.9370	RAD	
	746SL *	10.4100	CONDI	
750	39TL	3.4300	CONDI	.37470
	777SL	12.3900	RAD	
	500SL	554.4000	RAD	
	786SL	.2338	RAD	
	447SL	.1496	RAD	
	448SL	3.7760	RAD	
	462SL	.0048	RAD	
	466SL	.1579	RAD	
	467SL	.0214	RAD	
	470SL	.1564	RAD	
	471SL	.0039	RAD	
	473SL	.0077	RAD	
	475SL	.0260	RAD	
	714SL	.1960	RAD	
	736SL	.0381	RAD	
	737SL	.0193	RAD	
	450SL *	212.5000	RAD	
	452SL *	37.7600	RAD	
	453SL *	10.8600	RAD	
	465SL *	60.2400	RAD	
749SL *	1.4830	RAD		
787SL *	6.8030	RAD		
751	753SL	32.0400	RAD	.15730
	759SL	15.7200	RAD	
	761SL	20.9800	RAD	
	773SL	39.8600	RAD	
	777SL	40.7400	RAD	
	167SL *	59.0500	RAD	
	700SL *	48.9500	RAD	
	790SL *	12.4400	RAD	
	791SL *	6.2640	RAD	
	792SL *	12.7100	RAD	
	796SL *	5.1550	RAD	
752				.000
753	759SL	15.5700	RAD	.10260
	761SL	18.8900	RAD	
	167SL *	58.9300	RAD	
	584SL *	17.9400	RAD	
	700SL *	33.3700	RAD	
	751SL *	32.0400	RAD	
	754SL *	6.4330	RAD	
	755SL *	16.6300	RAD	
754	753SL	6.4330	RAD	.47400
	500SL	328.2000	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
755	7535L	16.6300	RAD	.15880
	759SL	8.0350	RAD	
	761SI	10.4300	RAD	
	773SI	21.0100	RAD	
	777SI	19.4500	RAD	
	700SL	24.6600	RAD	
	167SI *	29.5800	RAD	
	545SL *	19.2700	RAD	
756	500SL	139.4000	RAD	.15880
	92SI	63.0900	RAD	
	93SL	758.2000	RAD	
	94SI	72.5300	RAD	
	91SL	.5750	RAD	
	95SL	2.0190	RAD	
	346SI	2.3380	RAD	
	306SL	1.1750	RAD	
	733SL	1.4690	RAD	
	514SI	4.1060	RAD	
	782SI	83.9200	RAD	
	614SL	1.1870	RAD	
	457SI	1.0310	RAD	
	458SI	3.0600	RAD	
	345SL	1.3410	RAD	
	545SL	19.2700	RAD	
	89SL	.0863	RAD	
	90SL	.0248	RAD	
	96SL	.2505	RAD	
	455SL	.0078	RAD	
	459SL	.3896	RAD	
	463SL	.1412	RAD	
	482SL	.0137	RAD	
	484SL	.0248	RAD	
	485SI	.0291	RAD	
	607SL	.0321	RAD	
	620SL	2.2780	RAD	
	626SI	.0153	RAD	
	732SI	.0034	RAD	
	138SI *	2.0320	RAD	
	758SI *	.7073	RAD	
	774SI *	.7043	RAD	
	778SI *	1.7860	RAD	
	780SI *	.1031	RAD	
	793SI *	.4726	RAD	
	795SI *	.5634	RAD	
797SI *	.0107	RAD		
801SL *	.3503	RAD		
809SI *	1.0710	RAD		
811SI *	1.3650	RAD		
812SI *	.3072	RAD		
813SI *	.0500	RAD		

S T R U C T U R E J U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
757	763SL	1.2440	RAD	.04510
	770SL	6.1140	RAD	
	781SL	15.8500	RAD	
	700SI *	19.4700	RAD	
	758SI *	5.5930	RAD	
758	430TI	5.5660	RAD	.28320
	757SL	5.5930	RAD	
	500SI	134.4000	RAD	
	89SI	.0108	RAD	
	90SL	.1334	RAD	
	91SL	19.0900	RAD	
	93SL	.3896	RAD	
	94SL	.0212	RAD	
	95SL	.0216	RAD	
	138SI	.1022	RAD	
	306SL	.0399	RAD	
	344SL	.0671	RAD	
	346SL	.1073	RAD	
	455SL	.1570	RAD	
	457SL	4.2260	RAD	
	463SL	3.3570	RAD	
	476SI	.0125	RAD	
	482SL	.0489	RAD	
	484SI	.0644	RAD	
	485SL	.0821	RAD	
	487SL	.0327	RAD	
	514SL	.1810	RAD	
	614SI	.0083	RAD	
	620SL	.7343	RAD	
	732SI	.0530	RAD	
	733SL	.1145	RAD	
	756SL	.7073	RAD	
	92SI *	80.0200	RAD	
	458SL *	89.0100	RAD	
	459SL *	8.6900	RAD	
	728SL *	56.8700	RAD	
	774SI *	2.3770	RAD	
	782SL *	1.1660	RAD	
790SI *	.0420	RAD		
793SI *	.1528	RAD		
801SI *	.0748	RAD		
809SI *	28.7000	RAD		
811SL *	.0031	RAD		
813SL *	.0872	RAD		
759	773SI	15.5400	RAD	.04890
	147SI *	25.8100	RAD	
	584SI *	8.6160	RAD	
	700SI *	11.9200	RAD	
	751SI *	14.7200	RAD	
	753SI *	15.5700	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
759	755SI *	8.0350	RAD	.04890
	793SI *	5.5290	RAD	
760				.000
← 761	777SL	18.4500	RAD	.06380
	167SI *	30.6900	RAD	
	584SI *	11.7300	RAD	
	700SI *	15.8500	RAD	
	751SI *	20.9800	RAD	
	753SI *	18.8900	RAD	
	755SI *	10.4300	RAD	
	795SI *	5.6040	RAD	
	590TL	2.8400	CONDI	
	762			
763	770SL	1.7060	RAD	.54400
	781SL	3.8690	RAD	
	522SL *	2.9860	CONDI	
	524SL *	2.3670	CONDI	
	700SI *	11.8700	RAD	
	730SL *	2.4890	RAD	
	757SI *	1.6440	RAD	
	430TL	5.6250	CONDI	
764	89SL	93.8100	RAD	.11740
	90SL	53.0500	RAD	
	91SL	.5095	RAD	
	93SI	.0138	RAD	
	95SL	.0474	RAD	
	96SL	.1843	RAD	
	138SL	.1100	RAD	
	306SL	.0850	RAD	
	345SL	.0650	RAD	
	346SL	.1696	RAD	
	454SI	12.8300	RAD	
	455SI	4.4660	RAD	
	457SL	.4436	RAD	
	474SI	.0680	RAD	
	476SI	.0610	RAD	
	477SI	.0970	RAD	
	500SI	848.2000	RAD	
	516SL	.7330	RAD	
	607SL	.0520	RAD	
	614SL	.0230	RAD	
	711SI	5.0350	RAD	
	721SL	4.6500	RAD	
	723SL	2.9520	RAD	
	732SL	1.1810	RAD	
	733SL	.0300	RAD	
	738SL	.1750	RAD	
	739SL	2.2720	RAD	
	775SI *	7.2200	RAD	
	780SL *	.0141	RAD	

S T R U C T U R F L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP RTU/DEG.F		
764	782SL*	.1214	RAD	.11740		
	797SI*	7.3610	RAD			
	801SL*	1.9520	RAD			
	809SI*	.0150	RAD			
	811SL*	.0137	RAD			
	812SI*	.1085	RAD			
	813SI*	41.7500	RAD			
765	313SL	7.2870	CONDI	1.84900		
	766SI	1.4830	RAD			
	717SI	5.8300	RAD			
	149SI*	8.6780	CONDI			
	150SI*	14.2200	CONDI			
	524SI*	3.2440	CONDI			
	702SL*	2.4720	RAD			
	703SI*	2.4660	RAD			
	734SL*	16.3300	CONDI			
	428TL	6.6810	CONDI			
	766	515SL	11.3800		RAD	.36510
		500SI	569.4000		RAD	
787SL		.2835	RAD			
604SI		.0146	RAD			
608SL		129.2000	RAD			
612SI		47.9500	RAD			
714SL		.1651	RAD			
600SI*		9.1700	RAD			
765SI*		1.4830	RAD			
768SL*		.0129	RAD			
786SL*		5.3050	RAD			
788SI*		.0324	RAD			
789SL*		.8562	RAD			
796SL*		.0977	RAD			
799SI*		.1058	RAD			
767		315SL	7.2870	CONDI	1.84900	
		735SI	16.3300	CONDI		
	147SL	14.2200	CONDI			
	768SI	1.4830	RAD			
	731SL	2.3870	RAD			
	735SI	2.2910	RAD			
	318SL	1.8900	RAD			
	713SI	51.5500	RAD			
	144SI*	8.6780	CONDI			
	198SL*	1.1720	RAD			
	523SL*	3.2440	CONDI			
	671SL*	.8819	CONDI			
	706SI*	2.2270	RAD			
	707SI*	3.6580	RAD			
427TL	6.6810	CONDI				
768	514SI	11.3800	RAD	.36510		
	500SI	578.4000	RAD			
	787SI	3.3570	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BLU/DEG.F		
768	604SL	114.2000	RAD	.36510		
	606SL	47.9500	RAD			
	608SL	.0196	RAD			
	714SL	.1861	RAD			
	736SL	.0381	RAD			
	737SL	.7942	RAD			
	766SL	.0129	RAD			
	600SL*	9.2000	RAD			
	767SL*	1.4830	RAD			
	786SL*	6.3240	RAD			
	799SL*	.1275	RAD			
	769	729SL	1.1950		RAD	1.70000
		770SL	16.7300		RAD	
366SL		15.3400	RAD			
649SL		18.7700	RAD			
368SL		4.7660	RAD			
166SL*		41.5000	RAD			
337SL*		1.2330	CONDI			
332SL*		104.4000	RAD			
444SL*		4.6040	CONDI			
521SL*		6.6600	CONDI			
701SL*		46.9900	RAD			
731SL*		5.3730	RAD			
418TL		10.2900	CONDI			
770	649SL	18.7700	RAD	1.70000		
	366SL	15.3500	RAD			
	367SL	4.7660	RAD			
	167SL*	43.5800	RAD			
	332SL*	1.2330	CONDI			
	337SL*	104.5000	RAD			
	445SL*	4.6040	CONDI			
	522SL*	6.6600	CONDI			
	700SL*	30.3800	RAD			
	757SL*	6.1140	RAD			
	763SL*	1.7060	RAD			
	769SL*	16.7300	RAD			
	430TL	1.7420	CONDI			
771	339SL	7.5030	CONDI	.75000		
	735SL	45.4600	RAD			
	318SL	49.1500	RAD			
	713SL	140.1000	RAD			
	191SL*	.4139	CONDI			
	318SL*	17.7100	CONDI			
	706SL*	21.5600	RAD			
	707SL*	22.5800	RAD			
	715SL*	13.3600	CONDI			
	772	340SL	12.1900		CONDI	.75000
734SL		45.3700	RAD			
319SL		36.8600	RAD			
717SL		140.1000	RAD			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
772	190SI *	.4139	CONDI	.75000
	319SI *	17.7200	CONDI	
	702SI *	22.1500	RAD	
	703SI *	21.4100	RAD	
	715SI *	13.3600	CONDI	
773	735SL *	.9139	RAD	.12240
	167SI	44.0600	RAD	
	584SI *	22.5900	RAD	
	700SI *	35.9200	RAD	
	751SI *	39.8600	RAD	
	755SI *	21.0100	RAD	
	759SI *	15.5400	RAD	
	774SI *	15.3000	RAD	
774	773SI	15.3000	RAD	.91230
	500SL	617.4000	RAD	
	89SL	.0128	RAD	
	90SL	.0878	RAD	
	93SL	.3566	RAD	
	94SI	.0203	RAD	
	95SL	.0211	RAD	
	138SL	.0920	RAD	
	306SL	.0303	RAD	
	345SL	.0581	RAD	
	346SL	.1199	RAD	
	455SI	.1043	RAD	
	457SI	2.4550	RAD	
	463SI	21.5200	RAD	
	476SL	.0083	RAD	
	482SL	.1184	RAD	
	484SL	.1295	RAD	
	485SL	.1687	RAD	
	487SL	.0233	RAD	
	516SI	.1424	RAD	
	614SL	.0079	RAD	
	620SL	4.1060	RAD	
	732SI	.0369	RAD	
	733SI	.0920	RAD	
	756SL	.7043	RAD	
	758SL	2.3770	RAD	
	91SI *	12.6200	RAD	
	92SI *	79.4200	RAD	
	458SL *	40.7600	RAD	
	459SL *	115.4000	RAD	
	728SI *	155.0000	RAD	
	782SI *	1.1000	RAD	
	790SI *	.1360	RAD	
	793SI *	.2499	RAD	
	801SI *	.0656	RAD	
	809SI *	76.9900	RAD	
	811SL *	.0038	RAD	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
774	813SI *	.0966	RAD	.91230
775	732SI	7.8520	RAD	.10780
	764SI	7.2200	RAD	
	166SI *	44.1000	RAD	
	701SI *	29.9400	RAD	
	721SI *	31.3700	RAD	
	723SI *	30.9600	RAD	
	725SI *	19.7400	RAD	
776				.000
777	167SI *	39.2600	RAD	.11910
	584SI *	20.9300	RAD	
	700SI *	32.7500	RAD	
	751SI *	40.7400	RAD	
	755SI *	19.4500	RAD	
	761SI *	18.4500	RAD	
	778SI *	21.7500	RAD	
778	165SI	9.1360	RAD	.65800
	777SI	21.7500	RAD	
	500SI	806.3000	RAD	
	89SI	.1400	RAD	
	90SI	.0062	RAD	
	91SI	.0468	RAD	
	92SI	.0602	RAD	
	93SI	2.2630	RAD	
	96SI	2.9430	RAD	
	138SI	1.6180	RAD	
	306SI	.1681	RAD	
	345SI	.3986	RAD	
	346SI	1.0070	RAD	
	457SI	.0375	RAD	
	458SI	.0069	RAD	
	482SI	.0074	RAD	
	516SI	1.5640	RAD	
	607SI	.4525	RAD	
	614SI	6.2640	RAD	
	620SI	256.8000	RAD	
	622SI	.0163	RAD	
	623SI	.0071	RAD	
	626SI	.1615	RAD	
	733SI	.8631	RAD	
	738SI	.0087	RAD	
	739SI	.0151	RAD	
	756SI	1.7860	RAD	
	94SI *	166.0000	RAD	
	95SI *	61.4400	RAD	
	780SI *	1.0190	RAD	
	782SI *	4.3460	RAD	
	792SI *	1.0760	RAD	
	795SI *	.5544	RAD	
	797SI *	.0319	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
778	80151 *	.3957	RAD	.65800		
	80951 *	.0074	RAD			
	81151 *	114.8000	RAD			
	81251 *	2.9190	RAD			
	81351 *	.0038	RAD			
779	16651 *	50.2500	RAD	.15080		
	70151 *	37.2200	RAD			
	72151 *	28.5400	RAD			
	72351 *	46.2700	RAD			
	72551 *	26.5500	RAD			
	78051 *	18.8100	RAD			
	77951 *	18.8100	RAD			
780	50051	554.4000	RAD	.10520		
	8951	1.5430	RAD			
	9051	.0268	RAD			
	9151	.0486	RAD			
	9251	.0438	RAD			
	9351	.7463	RAD			
	9451	4.5550	RAD			
	13851	1.4900	RAD			
	30651	.1232	RAD			
	34551	.4134	RAD			
	34651	.9980	RAD			
	45551	.0447	RAD			
	45751	.0289	RAD			
	45851	.0040	RAD			
	51651	1.7560	RAD			
	60751	247.8000	RAD			
	61451	14.6000	RAD			
	62051	.6560	RAD			
	62251	.0100	RAD			
	62351	.0187	RAD			
	62651	.2146	RAD			
	73351	.8092	RAD			
	73851	1.2680	RAD			
	73951	.8930	RAD			
	75651	.1031	RAD			
	76451	.0141	RAD			
	77851	1.0190	RAD			
	9551 *	89.9100	RAD			
	9651 *	19.9300	RAD			
	78251 *	-1.7800	RAD			
	79551 *	.0156	RAD			
	79751 *	1.2800	RAD			
	80151 *	.8841	RAD			
	80951 *	.0040	RAD			
	81151 *	4.1840	RAD			
	81251 *	97.4300	RAD			
	81351 *	.0500	RAD			
	781	54351 *	13.2900		RAD	.15020

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP H ₂ O/DEG.F
781	544SL*	25.6700	RAD	.15020
	700SL*	47.2500	RAD	
	757SL*	15.4500	RAD	
	763SL*	3.8690	RAD	
782	500SL	186.7000	RAD	.72900
	543SL	17.3700	RAD	
	544SL	25.6700	RAD	
	454SL	.0486	RAD	
	455SL	.8571	RAD	
	459SL	.5634	RAD	
	463SL	.2077	RAD	
	474SL	.0420	RAD	
	482SL	.0207	RAD	
	484SL	.0695	RAD	
	485SL	.0432	RAD	
	487SL	.0980	RAD	
	620SL	5.9340	RAD	
	622SL	.0128	RAD	
	623SL	.0100	RAD	
	626SL	.2269	RAD	
	732SL	.2215	RAD	
	738SL	.0486	RAD	
	739SL	.2745	RAD	
	758SL	1.1660	RAD	
	764SL	.1214	RAD	
	774SL	1.1000	RAD	
	778SL	4.3460	RAD	
	780SL	1.7800	RAD	
	89SL*	9.7300	RAD	
	90SL*	3.7930	RAD	
	91SL*	60.2400	RAD	
	92SL*	89.6100	RAD	
	93SL*	1061.0000	RAD	
	94SL*	142.1000	RAD	
	95SL*	111.8000	RAD	
	96SL*	8.8700	RAD	
	138SL*	252.9000	RAD	
	306SL*	69.2300	RAD	
	345SL*	77.6200	RAD	
	346SL*	160.3000	RAD	
457SL*	12.8600	RAD		
458SL*	6.0200	RAD		
514SL*	112.4000	RAD		
614SL*	8.9600	RAD		
733SL*	64.1400	RAD		
756SL*	83.9200	RAD		
792SL*	.0127	RAD		
793SL*	.6602	RAD		
795SL*	.8523	RAD		
797SL*	.9788	RAD		

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP G/U/DEG.*F
782	801SL *	27.9000	RAD	.77900
	809SL *	1.6620	RAD	
	811SL *	3.7690	RAD	
	812SL *	9.2620	RAD	
	813SL *	1.4200	RAD	
783	167SL *	92.5900	CONDI	3.65600
	700SL	92.5900	CONDI	
	741SL	2.9340	CONDI	
	742SL	4.0300	CONDI	
	740SL	5.7110	CONDI	
	167SL *	6.2030	RAD	
	700SL *	5.0770	RAD	
	784	167SL	92.5900	
700SL	92.5900	CONDI		
785SL	4.7110	CONDI		
798SL	6.9120	CONDI		
167SL *	5.8380	RAD		
785	700SL *	7.0390	RAD	.34700
	524SL	4.1210	CONDI	
	167SL *	5.7880	RAD	
786	700SL *	6.3370	RAD	.00000
	784SL *	4.7110	CONDI	
	500SL	5526.0000	RAD	
	446SL	.0140	RAD	
	447SL	.1406	RAD	
	448SL	.9141	RAD	
	464SL	.0116	RAD	
	465SL	.1025	RAD	
	470SL	.0178	RAD	
	473SL	.0050	RAD	
	475SL	.2143	RAD	
	600SL	125.0000	RAD	
	604SL	73.1300	RAD	
	606SL	1.7620	RAD	
	608SL	71.3300	RAD	
	612SL	.6533	RAD	
	736SL	127.4000	RAD	
	737SL	6.6530	RAD	
	766SL	5.3050	RAD	
	768SL	6.3240	RAD	
	450SL *	5.9900	RAD	
	452SL *	1.6900	RAD	
	453SL *	1.4250	RAD	
	460SL *	.0060	RAD	
	461SL *	7.9710	RAD	
	462SL *	.0720	RAD	
	466SL *	.2520	RAD	
	467SL *	.0340	RAD	
	714SL *	274.8000	RAD	
	748SL *	.0115	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
786	750SL *	.2338	RAD	.00000
	787SI *	15.6700	RAD	
	788SL *	21.9000	RAD	
	789SI *	.7534	RAD	
	791SI *	1.2470	RAD	
	796SL *	1.9440	RAD	
	799SL *	3.8210	RAD	
787	799SI	.0090	RAD	.00000
	500SI	5642.0000	RAD	
	435SL	.0217	RAD	
	447SL	.0156	RAD	
	448SL	2.9700	RAD	
	450SL	55.7400	RAD	
	451SI	.1786	RAD	
	452SI	5.3350	RAD	
	453SI	1.6270	RAD	
	454SI	4.1360	RAD	
	459SI	.0444	RAD	
	460SI	2.9610	RAD	
	461SI	7.0430	RAD	
	462SI	48.8500	RAD	
	464SL	7.8820	RAD	
	465SL	9.1410	RAD	
	466SI	157.3000	RAD	
	467SI	21.3100	RAD	
	470SI	.2961	RAD	
	471SI	.0102	RAD	
	473SL	.0366	RAD	
	475SL	2.9070	RAD	
	478SL	.3117	RAD	
	479SL	.0097	RAD	
	481SL	.0405	RAD	
	483SL	3.1170	RAD	
	604SL	.1187	RAD	
	608SL	13.0100	RAD	
	612SL	1.4390	RAD	
	736SI	21.0100	RAD	
	737SI	.5065	RAD	
	748SL	9.1710	RAD	
	750SI	6.8030	RAD	
	786SL	15.6700	RAD	
	582SI *	3.4500	RAD	
600SL *	.5930	RAD		
714SL *	263.4000	RAD		
764SI *	.2835	RAD		
768SI *	3.3570	RAD		
788SL *	126.5000	RAD		
789SI *	7.5630	RAD		
791SL *	6.2930	RAD		
796SI *	11.4800	RAD		

S T R U C T U R E L I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
788	450SL	.0106	RAD	.15040		
	456SL	.0498	RAD			
	460SL	.0545	RAD			
	461SL	.0860	RAD			
	462SL	.4151	RAD			
	464SL	.0506	RAD			
	466SL	.4942	RAD			
	467SL	.0663	RAD			
	483SL	.0189	RAD			
	500SL	1059.0000	RAD			
	600SL	.4190	RAD			
	604SL	.0443	RAD			
	608SL	.8217	RAD			
	612SL	.0420	RAD			
	714SL	3.6560	RAD			
	717SL	23.8900	RAD			
	748SL	.0563	RAD			
	766SL	.0324	RAD			
	786SL	21.9000	RAD			
	787SL	126.5000	RAD			
	789SL *	.1977	RAD			
	791SL *	.1759	RAD			
	796SL *	.3270	RAD			
	799SL *	.0100	RAD			
	789	435SL	.0515		RAD	.23980
		451SL	.8706		RAD	
		456SL	.6824		RAD	
459SL		.0923	RAD			
460SL		2.4700	RAD			
461SL		.0426	RAD			
462SL		.0147	RAD			
464SL		.0042	RAD			
466SL		.0117	RAD			
481SL		.0063	RAD			
500SL		1937.0000	RAD			
600SL		.0135	RAD			
608SL		1.7280	RAD			
612SL		14.5900	RAD			
714SL		.1993	RAD			
717SL		14.6600	RAD			
719SL		23.4100	RAD			
748SL		.0204	RAD			
766SL		.8562	RAD			
786SL		.7534	RAD			
787SL		7.5630	RAD			
788SL	.1977	RAD				
791SL *	1.5010	RAD				
796SL *	75.1600	RAD				
790	91SL	.0148	RAD	.10000		
	92SL	.1554	RAD			

S T R U C T U R F I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	ΔT, ΔCP BTU/DEG.F		
790	458SL	.1367	RAD	.10000		
	459SL	2.7190	RAD			
	463SI	2.8540	RAD			
	462SI	.0129	RAD			
	484SI	.0055	RAD			
	485SL	.0036	RAD			
	500SI	707.9000	RAD			
	620SL	.4975	RAD			
	751SL	12.4400	RAD			
	758SL	.0420	RAD			
	774SL	.3360	RAD			
	809SI	2.6540	RAD			
	791	461SI	.0045		RAD	.10000
		462SL	.0230		RAD	
		464SL	.0031		RAD	
		466SI	.0295		RAD	
		467SI	.0040		RAD	
500SI		326.4000	RAD			
600SI		.0239	RAD			
608SL		.0431	RAD			
612SI		.0036	RAD			
714SL		.1879	RAD			
748SL		.0033	RAD			
751SI		6.2640	RAD			
786SI		1.2470	RAD			
787SI		6.2930	RAD			
788SL		.1759	RAD			
789SI		1.5010	RAD			
796SL*		.0245	RAD			
792	93SL	.0330	RAD	.10000		
	94SI	.4852	RAD			
	95SI	.1693	RAD			
	138SI	.0074	RAD			
	500SL	636.0000	RAD			
	614SI	.0108	RAD			
	620SL	5.3580	RAD			
	751SI	12.7100	RAD			
	778SI	1.0760	RAD			
	782SI	.0127	RAD			
	795SI*	.0062	RAD			
	811SI*	3.4390	RAD			
	793	91SL	.0560		RAD	.10000
92SI		8.7900	RAD			
93SL		5.1590	RAD			
94SI		.0180	RAD			
95SI		.0130	RAD			
138SL		.0128	RAD			
306SL		.0088	RAD			
345SI		.0097	RAD			
346SI		.0223	RAD			

S T R U C T U R E J U M P D A T A

LOOP NO.	CONNECTION	CONNECTION VALUE	TYPE	WT. & CP		
793	45751	.0659	RAD	.10000		
	45851	.4242	RAD			
	45951	.1708	RAD			
	46351	.0671	RAD			
	48251	.0093	RAD			
	48451	.0070	RAD			
	48551	.0155	RAD			
	50051	648.2000	RAD			
	51651	.0334	RAD			
	58451	7.7320	RAD			
	61451	.0060	RAD			
	62051	.0052	RAD			
	73351	.0141	RAD			
	75651	.4726	RAD			
	75851	.1528	RAD			
	75951	5.5290	RAD			
	77451	.2499	RAD			
	78251	.4602	RAD			
	79551*	.0031	RAD			
	80151*	.0053	RAD			
	80951*	9.6860	RAD			
	81151*	.0039	RAD			
	794	50051	236.4000		RAD	.10000
		58451	4.4060		RAD	
	795	8951	.0045		RAD	.10000
		9151	.0049		RAD	
		9251	.0139		RAD	
9351		5.8230	RAD			
9451		11.6200	RAD			
9551		.1582	RAD			
9651		.0178	RAD			
13851		.0333	RAD			
30651		.0159	RAD			
34551		.0208	RAD			
34651		.0359	RAD			
45751		.0058	RAD			
45851		.0053	RAD			
50051		707.0000	RAD			
51651		.0680	RAD			
58451		8.1820	RAD			
61451		.0817	RAD			
62051		.5559	RAD			
62651		.0041	RAD			
73351		.0367	RAD			
75651		.5634	RAD			
76151		5.6040	RAD			
77851		.5544	RAD			
78051		.0154	RAD			
78251		.8523	RAD			
79251		.0062	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG.F		
795	793SL	.0031	RAD	.10000		
	801SL *	.0118	RAD			
	809SL *	.0035	RAD			
	811SL *	11.3300	RAD			
796	812SL *	.0138	RAD	.10000		
	435SL	.0042	RAD			
	451SL	.0397	RAD			
	456SL	.0307	RAD			
	460SL	.8462	RAD			
	461SL	.1400	RAD			
	462SL	.0440	RAD			
	464SL	.0288	RAD			
	466SL	.0465	RAD			
	467SL	.0063	RAD			
	500SL	253.2000	RAD			
	600SL	.0378	RAD			
	604SL	.0034	RAD			
	608SL	.0833	RAD			
	612SL	1.4200	RAD			
	714SL	.3314	RAD			
	748SL	.0178	RAD			
	751SL	5.1550	RAD			
	766SL	.0977	RAD			
	786SL	1.9440	RAD			
	787SL	11.4800	RAD			
	788SL	.3270	RAD			
	789SL	75.1600	RAD			
	791SL	.0245	RAD			
	797	89SL	810.8000		RAD	.00000
		90SL	26.0800		RAD	
		91SL	.6444		RAD	
92SL		.0310	RAD			
93SL		.1184	RAD			
94SL		.1100	RAD			
95SL		1.0590	RAD			
96SL		43.5600	RAD			
138SL		1.8110	RAD			
306SL		.7564	RAD			
345SL		.5925	RAD			
346SL		2.7030	RAD			
454SL		1.1840	RAD			
455SL		1.7600	RAD			
457SL		.5982	RAD			
458SL		.0080	RAD			
474SL		.0067	RAD			
476SL		.0129	RAD			
477SL		.0132	RAD			
500SL		53.1400	RAD			
516SL	2.0380	RAD				
548SL	16.5400	RAD				

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	#T. o CP HYU/DEG.F
797	549SL	6.7130	RAD	.00000
	607SL	1.3820	RAD	
	614SI	.4498	RAD	
	620SI	.6249	RAD	
	626SI	.0088	RAD	
	732SL *	.3991	RAD	
	733SL	.3666	RAD	
	738SI	1.5710	RAD	
	739SI	19.6500	RAD	
	756SL	.0107	RAD	
	764SI	7.3610	RAD	
	778SI	.0319	RAD	
	780SI	1.2800	RAD	
	782SI	.9788	RAD	
	801SL *	16.2000	RAD	
	809SI *	.0411	RAD	
	811SI *	.1433	RAD	
	812SI *	1.2430	RAD	
	813SL *	1.2910	RAD	
	798	522SL	5.7190	
147SI *		6.3530	RAD	
700SL *		7.8760	RAD	
784SL *		6.9120	CONDI	
799	500SL	1206.0000	RAD	.04310
	671SI	5.9810	RAD	
	604SI	2.1120	RAD	
	608SI	2.4650	RAD	
	714SL	.1142	RAD	
	736SL	.0101	RAD	
	766SL	.1058	RAD	
	768SI	.1275	RAD	
	786SI	3.8210	RAD	
	788SL	.0100	RAD	
	600SL *	60.2400	RAD	
	787SI *	.0090	RAD	
	800			
801				.10000
801	89SL	208.7000	RAD	
	90SL	14.2900	RAD	
	91SL	25.2900	RAD	
	92SL	1.2690	RAD	
	93SI	4.0430	RAD	
	94SI	1.9350	RAD	
	95SL	29.4400	RAD	
	96SI	18.1200	RAD	
	138SL	130.4000	RAD	
	306SI	11.9300	RAD	
	346SI	6.3040	RAD	
	346SI	64.0500	RAD	
	454SL	.3368	RAD	
	455SI	1.1490	RAD	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP HTU/DEG.F		
801	457SL	7.6600	RAD	.10000		
	458SL	.3111	RAD			
	459SI	.0221	RAD			
	463SI	.0064	RAD			
	474SI	.0047	RAD			
	476SL	.0230	RAD			
	477SI	.0083	RAD			
	484SI	.0154	RAD			
	485SI	.0036	RAD			
	487SI	.0406	RAD			
	500SI	72.8900	RAD			
	516SL	22.3800	RAD			
	548SL	11.2100	RAD			
	549SI	4.6150	RAD			
	607SL	.8305	RAD			
	614SI	2.6130	RAD			
	620SI	.7193	RAD			
	622SL	.0030	RAD			
	623SI	.0033	RAD			
	626SL	.0578	RAD			
	732SI	.2841	RAD			
	733SL	13.4000	RAD			
	738SL	.4079	RAD			
	739SI	5.0890	RAD			
	756SI	.3503	RAD			
	758SI	.0748	RAD			
	764SL	1.9520	RAD			
	774SL	.0656	RAD			
	778SI	.3952	RAD			
	780SL	.8841	RAD			
	782SI	27.9000	RAD			
	793SL	.0053	RAD			
	795SL	.0118	RAD			
	797SI	16.2000	RAD			
	809SI *	1.0700	RAD			
	811SL *	3.3600	RAD			
	812SI *	.5745	RAD			
	813SL *	.4948	RAD			
	802	805SL	8.9690		RAD	.05800
		680SI	7.4650		RAD	
575SL		2.1470	RAD			
617SL		23.4000	RAD			
299SL		4.9340	RAD			
607SI		1.9660	RAD			
541SL *		13.1500	RAD			
457TL	37.5300	RAD				
803				.000		
804				.000		
805	680SL	6.6320	RAD	.05100		
	575SL	2.0930	RAD			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
804	6175L ¹	20.1700	RAD	.05100
	2995L	4.2270	RAD	
	6235L	6.4860	RAD	
	5415E ⁴	11.5500	RAD	
	8025L ⁶	8.9690	RAD	
	4577L ²	33.2400	RAD	
806				.000
807				.000
808				.000
809	895L	.4277	RAD	.34950
	905L	.5094	RAD	
	915L	19.4300	RAD	
	925L	60.5100	RAD	
	935L	4.3850	RAD	
	945L	.0598	RAD	
	955L	.1774	RAD	
	965L	.0255	RAD	
	1385L	1.7440	RAD	
	3065L	.1722	RAD	
	3465L	.1624	RAD	
	3465L	2.9710	RAD	
	4545L	.0207	RAD	
	4555L	.1963	RAD	
	4575L	6.1980	RAD	
	4585L	57.4800	RAD	
	4595L	59.9100	RAD	
	4635L	9.1450	RAD	
	4745L	.0140	RAD	
	4775L	.0036	RAD	
	4825L	4.6510	RAD	
	4845L	2.2440	RAD	
	4855L	7.2370	RAD	
	4875L	.1377	RAD	
	5005L	341.4000	RAD	
	5165L	.4675	RAD	
	6075L	.0041	RAD	
	6145L	.0322	RAD	
	6205L	.7540	RAD	
	7285L	119.3000	RAD	
	7325L	.1558	RAD	
	7335L	.3872	RAD	
	7395L	.0085	RAD	
	7565L	1.0710	RAD	
7585L	28.7000	RAD		
7645L	.0150	RAD		
7745L	76.9900	RAD		
7785L	.0074	RAD		
7805L	.0040	RAD		
7825L	1.6620	RAD		
7905L	2.6540	RAD		

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
809	793SL	9.6860	RAD	.34950
	795SI	.0035	RAD	
	797SI	.0411	RAD	
	801SI	1.0700	RAD	
	811SI *	.1259	RAD	
	812SI * ?	.0063	RAD	
	813SI *	1.2230	RAD	
810	273SL *	26.2100	CONDI	3.95200
	418SL *	.9578	CONDI	
	27TL	.0494	CONDI	
811	89SL	1.5190	RAD	.23300
	90SL	.0462	RAD	
	91SI	.4461	RAD	
	92SI	.1034	RAD	
	93SL	6.8230	RAD	
	94SL	62.1900	RAD	
	95SL	28.9100	RAD	
	96SI	3.2820	RAD	
	138SL	4.4250	RAD	
	306SL	1.3690	RAD	
	345SL	2.1050	RAD	
	346SL	6.7700	RAD	
	455SI	.0123	RAD	
	457SI	.3198	RAD	
	458SL	.0177	RAD	
	500SI	358.4000	RAD	
	516SI	3.0860	RAD	
	607SI	.4072	RAD	
	614SL	5.2060	RAD	
	620SL	62.9900	RAD	
	622SI	.2765	RAD	
	623SL	.0354	RAD	
	626SI	1.1090	RAD	
	733SL	6.5770	RAD	
	738SL	.0108	RAD	
	739SI	.0509	RAD	
	756SL	1.3650	RAD	
	758SL	.0031	RAD	
	764SI	.0137	RAD	
	774SI	.0038	RAD	
	778SL	114.8000	RAD	
	780SI	4.1840	RAD	
	782SI	3.7690	RAD	
	792SI	3.4390	RAD	
	793SL	.0039	RAD	
	795SI	11.3300	RAD	
	797SL	.1433	RAD	
	801SI	3.3600	RAD	
	809SL	.1259	RAD	
	812SL	3.0540	RAD	

S T R U C T U R E L U M P D A T A .

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
811 812	813SI *	.0088	RAD	.23300
	895L	10.1500	RAD	
	905I	.4057	RAD	
	915I	.0728	RAD	
	925I	.1238	RAD	
	935I	3.4700	RAD	
	945I	3.4370	RAD	
	955I	28.7000	RAD	
	965L	61.7000	RAD	
	138SI	2.4760	RAD	
	3065I	.1669	RAD	
	3455L	.3055	RAD	
	3465L	2.1050	RAD	
	4545L	.0406	RAD	
	4555I	.0486	RAD	
	4575I	.0560	RAD	
	4585I	.0133	RAD	
	4775I	.0034	RAD	
	5005L	367.1000	RAD	
	5165L	1.7770	RAD	
	6075I	78.4600	RAD	
	6145I	5.2240	RAD	
	6205L	.3953	RAD	
	6225I	.0354	RAD	
	6235L	.2748	RAD	
	6265L	1.1080	RAD	
	7325L	.0177	RAD	
	7335L	.4613	RAD	
	7385L	15.8000	RAD	
	7395I	2.1400	RAD	
	7565I	.3072	RAD	
	7645I	.1085	RAD	
	7785L	2.9190	RAD	
7805I	97.4300	RAD		
7825L	9.2620	RAD		
7955L	.0138	RAD		
7975I	1.2430	RAD		
8015I	.5745	RAD		
8095L	.0063	RAD		
8115I	3.0540	RAD		
8135I	1.7900	RAD		
813	895I	12.7600	RAD	.23300
	905I	59.3700	RAD	
	915I	19.5000	RAD	
	925L	.5094	RAD	
	935L	.5330	RAD	
	945I	.0455	RAD	
	955I	.0574	RAD	
	965I	.4579	RAD	
	1385L	1.2440	RAD	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
813	306SL	.1359	RAD	.23300
	345SL	.0981	RAD	
	346SL	1.6560	RAD	
	454SL	69.8500	RAD	
	455SL	61.8600	RAD	
	457SL	6.1840	RAD	
	458SL	.1690	RAD	
	459SL	.0207	RAD	
	463SL	.0044	RAD	
	474SL	6.6580	RAD	
	476SL	4.4310	RAD	
	477SL	8.7690	RAD	
	484SL	.0119	RAD	
	485SL	.0031	RAD	
	487SL	.1375	RAD	
	500SL	360.5000	RAD	
	516SL	.3690	RAD	
	607SL	.0469	RAD	
	614SL	.0233	RAD	
	620SL	.0077	RAD	
	737SL	38.2700	RAD	
	733SL	.1857	RAD	
	738SL	.0409	RAD	
	739SL	1.1680	RAD	
	756SL	.0500	RAD	
	758SL	.0872	RAD	
	764SL	41.7500	RAD	
	774SL	.0966	RAD	
	778SL	.0038	RAD	
	780SL	.0500	RAD	
	782SL	1.4200	RAD	
	797SL	1.2910	RAD	
	801SL	.4948	RAD	
809SL	1.2230	RAD		
811SL	.0088	RAD		
812SL	1.7900	RAD		
814	853SL	23.3000	COND1	.20000
	853SL	17.5996	COND2	
	856SL	23.3000	COND1	
	856SL	20.0000	COND2	
	848SL	23.3000	COND1	
	848SL	20.8994	COND2	
	847SL	23.3000	COND1	
	847SL	26.1992	COND2	
	845SL	23.3000	COND1	
	845SL	10.1191	COND2	
	815SL *	14.1500	COND1	
	815SL *	23.1992	COND2	
	816SL *	17.0000	COND1	
	816SL *	23.1992	COND2	

S T R U C T U R E L I N E D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. • CP BTU/DEG.F		
814	817SL *	17.6000	COND1	.20000		
	817SL *	23.1992	COND2			
	845SL *	10.1200	COND1			
	845SI *	23.2998	COND2			
	327TL	11.7500	COND1			
815	814SI *	14.1500	COND1	.20000		
	814SL	23.1992	COND2			
	855SI	14.1500	COND1			
	855SI	23.1992	COND2			
	816SL *	17.0000	COND1			
	816SL *	14.1494	COND2			
	817SL *	17.6000	COND1			
	817SL *	14.1494	COND2			
	818SI *	17.0000	COND1			
	818SL *	14.1494	COND2			
	327TL	4.6990	COND1			
	816	814SL	17.0000		COND1	.11590
		814SL	23.1992		COND2	
815SL		17.0000	COND1			
815SL		14.1494	COND2			
817SL		17.0000	COND1			
817SL		22.3994	COND2			
819SI *		16.6500	COND1			
819SI *		17.0000	COND2			
820SL *		19.1000	COND1			
820SL *		17.0000	COND2			
821SI *		22.8000	COND1			
821SL *		17.0000	COND2			
822SL *		17.6000	COND1			
822SI *		17.0000	COND2			
817		814SI	17.6000	COND1	.15210	
		814SI	23.1992	COND2		
		815SI	17.6000	COND1		
	815SI	14.1494	COND2			
	816SI *	17.0000	COND1			
	816SI *	22.3994	COND2			
	818SI *	17.0000	COND1			
	818SL *	22.3994	COND2			
	819SI *	16.6500	COND1			
	819SI *	22.3994	COND2			
	823SI *	21.7000	COND1			
	823SI *	22.3994	COND2			
	824SI *	17.6000	COND1			
	824SI *	22.4395	COND2			
	828SI *	22.8000	COND1			
	828SL *	22.3994	COND2			
	830SL *	19.1000	COND1			
818	817SL	17.0000	COND1	.11590		
	817SL	22.3994	COND2			
	815SI	17.0000	COND1			

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
818	815SL	14.1494	COND2	.11590		
	855SI	17.0000	COND1			
	855SL	23.2998	COND2			
	819SI *	16.6500	COND1			
	819SL *	17.0000	COND2			
	823SI *	21.7000	COND1			
	823SL *	17.0000	COND2			
	824SL *	17.6000	COND1			
	824SI *	17.0000	COND2			
	828SI *	22.8000	COND1			
	828SL *	17.0391	COND2			
	830SI *	22.4000	COND1			
	830SL *	19.0996	COND2			
	41ATL	13.7000	COND1			
	819	820SL	16.6500		COND1	2.00000
		820SL	19.0996		COND2	
816SL		16.6500	COND1			
816SI		17.0000	COND2			
817SI		16.6500	COND1			
817SL		22.3994	COND2			
818SL		16.6500	COND1			
818SI		17.0000	COND2			
830SL		16.6500	COND1			
830SL		19.0996	COND2			
821SI *		22.8000	COND1			
821SL *		16.6494	COND2			
822SI *		17.6000	COND1			
822SL *		16.6494	COND2			
823SI *		21.7000	COND1			
823SL *		16.6494	COND2			
824SI *		17.6000	COND1			
824SL *		16.6494	COND2			
828SI *		22.8000	COND1			
828SL *	16.6494	COND2				
820	843SI	19.1000	COND1	2.00000		
	843SL	21.2998	COND2			
	831SL	19.1000	COND1			
	831SI	14.8994	COND2			
	816SL	19.1000	COND1			
	816SL	17.0000	COND2			
	837SL	19.1000	COND1			
	837SL	23.0996	COND2			
	819SI *	16.6500	COND1			
	819SI *	19.0996	COND2			
	821SL *	22.8000	COND1			
	821SI *	19.0996	COND2			
	822SL *	17.6000	COND1			
	822SI *	19.0996	COND2			
	832SI *	16.7000	COND1			
	832SI *	19.0996	COND2			

S T R U C T U R E F I L I P P I N O D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. % CP BTU/DEG.F		
820	854SL*	20.0000	CUND1	2.00000		
	856SL*	14.5996	CUND2			
	357TI	5.3500	CUND1			
821	820SL	22.8000	CUND1	2.00000		
	820SL	19.0996	CUND2			
	822SL *	22.8000	CUND1			
	822SI	17.5996	CUND2			
	833SI	22.8000	CUND1			
	833SL	11.3096	CUND2			
	827SI	22.8000	CUND1			
	827SI	13.5498	CUND2			
	819SI	22.8000	CUND1			
	819SI	16.6494	CUND2			
	816SI	22.8000	CUND1			
	816SI	17.0000	CUND2			
	832SI *	16.7000	CUND1			
	832SL *	22.7998	CUND2			
	834SI *	21.1000	CUND1			
	834SI *	22.7998	CUND2			
	822	827SL	17.6000		CUND1	.20000
827SL		13.5498	CUND2			
825SI		17.6000	CUND1			
825SI		13.5498	CUND2			
823SL		17.6000	CUND1			
823SL		21.6992	CUND2			
820SI		17.6000	CUND1			
820SL		19.0996	CUND2			
819SI		17.6000	CUND1			
819SI		16.6494	CUND2			
816SI		17.6000	CUND1			
816SI		17.0000	CUND2			
821SI *		22.8000	CUND1			
821SI *		17.5996	CUND2			
310TI		6.1000	CUND1			
823		825SI	21.7000	CUND1	.20000	
		825SI	13.5498	CUND2		
	819SI	21.7000	CUND1			
	819SI	16.6494	CUND2			
	827SL	21.7000	CUND1			
	827SL	13.5498	CUND2			
	830SI	21.7000	CUND1			
	830SI	19.0996	CUND2			
	817SI	21.7000	CUND1			
	817SI	22.3994	CUND2			
	818SI	21.7000	CUND1			
	818SI	17.0000	CUND2			
	822SI *	17.6000	CUND1			
	822SI *	21.6992	CUND2			
	824SI *	17.6000	CUND1			
	824SI *	21.6992	CUND2			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
823	828SL *	22.8000	COND1	.20000
	828SL *	21.6992	COND2	
824	825SL	17.6000	COND1	.82000
	825SL	13.5498	COND2	
	826SI	17.6000	COND1	
	826SL	13.5498	COND2	
	823SL	17.6000	COND1	
	823SL	21.6992	COND2	
	819SL	17.6000	COND1	
	819SI	16.6494	COND2	
	818SI	17.6000	COND1	
	818SL	17.0000	COND2	
	830SI	17.6000	COND1	
	830SL	19.0996	COND2	
	817SI	17.6000	COND1	
	817SL	22.4395	COND2	
	828SL *	22.8000	COND1	
	828SL *	17.5996	COND2	
	825	416TL	13.7000	
826SL		13.5500	COND1	
826SI		13.5498	COND2	
827SL		13.5500	COND1	
827SL		13.5498	COND2	
822SI *		17.6000	COND1	
822SL *		13.5498	COND2	
823SL *		21.7000	COND1	
823SL *		13.5498	COND2	
824SL *		17.6000	COND1	
824SL *		13.5498	COND2	
304TL		6.1000	COND1	
826		833SL	13.5500	COND1
	833SL	11.3193	COND2	
	824SL *	17.6000	COND1	
	824SL *	13.5498	COND2	
	825SI *	13.5500	COND1	
	825SI *	13.5498	COND2	
	828SL *	22.8000	COND1	
	828SI *	13.5498	COND2	
	829SL *	16.7000	COND1	
	829SL *	22.0498	COND2	
	835SL *	22.1000	COND1	
	835SL *	13.5498	COND2	
	827	832SL	13.5500	COND1
832SI		16.6992	COND2	
833SI		13.5500	COND1	
833SL		11.3193	COND2	
834SI		13.5500	COND1	
834SL		21.0996	COND2	
821SI *		22.8000	COND1	
821SI *		13.5498	COND2	

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. A CP BTU/DLG.F
827	822SL*	17.4000	CUND1	.09750
	822SI*	11.6498	CUND2	
	823SI*	21.7000	CUND1	
	823SI*	13.6498	CUND2	
	825SL*	13.6500	CUND1	
828	825SI*	13.6498	CUND2	.82000
	826SI	22.8000	CUND1	
	826SI	13.6498	CUND2	
	833SL	22.8000	CUND1	
	833SL	13.0996	CUND2	
	823SI	22.8000	CUND1	
	823SI	21.6992	CUND2	
	824SI	22.8000	CUND1	
	824SI	17.6996	CUND2	
	819SI	22.8000	CUND1	
	819SI	16.6494	CUND2	
	817SI	22.8000	CUND1	
	817SI	22.3994	CUND2	
	818SI	22.8000	CUND1	
	818SI	17.0391	CUND2	
	829SI*	16.7000	CUND1	
	829SL*	11.3096	CUND2	
	830SL*	17.0000	CUND1	
	830SL*	19.0996	CUND2	
	835SI*	22.1000	CUND1	
835SI*	22.7998	CUND2		
829	857SI	16.7000	CUND1	.82000
	857SL	19.0996	CUND2	
	836SL	16.7000	CUND1	
	836SI	14.8994	CUND2	
	835SL	16.7000	CUND1	
	835SI	21.2998	CUND2	
	833SL	16.7000	CUND1	
	833SL	23.0996	CUND2	
	826SI	16.7000	CUND1	
	826SL	22.0498	CUND2	
	828SL	16.7000	CUND1	
	828SI	11.3096	CUND2	
	830SI	16.7000	CUND1	
	830SI	13.7393	CUND2	
	831SI*	14.9000	CUND1	
831SI*	16.6992	CUND2		
830	817SL	19.1000	CUND1	.13000
	818SL	22.4000	CUND1	
	818SI	19.0996	CUND2	
	828SI	17.0000	CUND1	
	828SI	19.0996	CUND2	
	836SL	22.8000	CUND1	
	836SI	19.0996	CUND2	
	857SI	23.1000	CUND1	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * LF BTU/DEG.F
830	857SL	19.0996	COND2	.13000
	819SL*	16.6500	COND1	
	819SL*	19.0996	COND2	
	823SL*	21.7000	COND1	
	823SL*	19.0996	COND2	
	824SL*	17.6000	COND1	
	824SL*	19.0996	COND2	
	829SL*	16.7000	COND1	
	829SL*	13.7393	COND2	
	831SL*	14.9000	COND1	
	831SL*	19.0996	COND2	
	854SL*	20.0000	COND1	
	854SL*	14.5996	COND2	
	357TL.	5.3500	COND1	
	831	843SL	14.9000	
843SL		21.2998	COND2	
857SL		14.9000	COND1	
857SL		21.2998	COND2	
829SL*		14.9000	COND1	
829SL		16.6992	COND2	
830SL		14.9000	COND1	
830SL		19.0996	COND2	
820SL*		19.1000	COND1	
820SL*		14.8994	COND2	
832SL*		16.7000	COND1	
832SL*		14.9395	COND2	
836SL*		23.1000	COND1	
836SL*		14.8994	COND2	
837SL*		23.1000	COND1	
832	837SL*	14.8994	COND2	.11390
	843SL	16.7000	COND1	
	843SL	21.2998	COND2	
	837SL	16.7000	COND1	
	837SL	22.0498	COND2	
	834SL	16.7000	COND1	
	834SL	21.0996	COND2	
	833SL	16.7000	COND1	
	833SL	11.3096	COND2	
	821SL	16.7000	COND1	
	821SL	22.7998	COND2	
	820SL	16.7000	COND1	
	820SL	19.0996	COND2	
	831SL	16.7000	COND1	
	831SL	14.9395	COND2	
833	827SL*	13.5500	COND1	.07710
	827SL*	16.6992	COND2	
	834SL	11.3100	COND1	
	834SL	21.0996	COND2	
	835SL	11.3100	COND1	
	835SL	22.0996	COND2	

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
833	821SL *	22.8000	COND1	.07710		
	821SI *	11.3096	COND2			
	826SI *	13.5500	COND1			
	826SI *	11.3193	COND2			
	827SI *	13.5500	COND1			
	827SI *	11.3193	COND2			
	828SL *	22.8000	COND1			
	828SI *	13.0996	COND2			
	829SL *	16.7000	COND1			
	829SL *	23.0996	COND2			
	832SL *	16.7000	COND1			
	832SI *	11.3096	COND2			
	835SI *	22.1000	COND1			
	835SI *	11.3096	COND2			
	834	840SI	21.1000		COND1	.14380
		840SL	15.1494		COND2	
		821SI	21.1000		COND1	
821SI		22.7998	COND2			
827SI *		13.5500	COND1			
827SL *		21.0996	COND2			
832SI *		16.7000	COND1			
832SL *		21.0996	COND2			
833SI *		11.3100	COND1			
833SL *		21.0996	COND2			
837SI *		23.1000	COND1			
837SL *		21.0996	COND2			
840SI *		15.1500	COND1			
840SI *		21.0996	COND2			
841SI *		9.5400	COND1			
841SI *		21.0996	COND2			
835		315TL	4.0900	COND1	.15020	
	838SL	22.1000	COND1			
	838SI	14.4492	COND2			
	839SL	22.1000	COND1			
	839SI	19.5996	COND2			
	833SL	22.1000	COND1			
	833SI	11.3096	COND2			
	826SL	22.1000	COND1			
	826SL	13.5498	COND2			
	828SL	22.1000	COND1			
	828SL	22.7998	COND2			
	829SL *	16.7000	COND1			
	829SL *	21.2998	COND2			
	833SL *	11.3100	COND1			
	833SL *	22.0996	COND2			
	836SI *	23.1000	COND1			
	836SI *	22.0498	COND2			
841SI *	9.5400	COND1				
841SL *	22.0498	COND2				
315TL	4.0900	COND1				

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. OF BTU/DEG.F		
836	857SL	23.1000	COND1	.15720		
	857SL	21.2998	COND2			
	835SI	23.1000	COND1			
	835SI	22.0498	COND2			
	838SL	23.1000	COND1			
	838SI	14.4893	COND2			
	831SI	23.1000	COND1			
	831SL	14.8994	COND2			
	839SL	23.1000	COND1			
	839SL	19.0996	COND2			
	829SL*	16.7000	COND1			
	829SL*	14.8994	COND2			
	830SL*	22.8000	COND1			
	830SI*	19.0996	COND2			
	841SI*	9.5400	COND1			
	841SL*	23.0996	COND2			
	837	834SL	23.1000		COND1	.15720
		834SL	21.0996		COND2	
		843SI	23.1000		COND1	
		843SL	21.2998		COND2	
840SL		23.1000	COND1			
840SL		15.1494	COND2			
831SL		23.1000	COND1			
831SL		14.8994	COND2			
820SI*		19.1000	COND1			
820SL*		23.0996	COND2			
832SL*		16.7000	COND1			
832SL*		22.0498	COND2			
841SL*		9.5400	COND1			
841SL*		23.0996	COND2			
838		849SI	14.4500	COND1	.09851	
		849SI	20.5498	COND2		
	857SL	14.4500	COND1			
	857SI	21.2998	COND2			
	841SL	14.4500	COND1			
	841SI	9.5391	COND2			
	835SL*	22.1000	COND1			
	835SI*	14.4492	COND2			
	836SL*	23.1000	COND1			
	836SL*	14.4893	COND2			
	839SL*	19.0500	COND1			
	839SL*	15.0996	COND2			
	842SL*	16.6500	COND1			
	842SL*	15.1494	COND2			
	851SL*	26.2000	COND1			
	851SI*	14.4492	COND2			
839	317TL	5.4200	COND1	.1300		
	840SL	19.0500	COND1			
	840SL	15.0996	COND2			
	841SI	19.0500	COND1			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. & CP 8IU/DEG.F		
839	841SL	9.5391	COND2	.13000		
	838SL	19.0500	COND1			
	838SI	15.0996	COND2			
	835SI*	22.1000	COND1			
	835SI*	19.5996	COND2			
	836SI*	23.1000	COND1			
	836SI*	19.0996	COND2			
	842SI*	16.6500	COND1			
	842SL*	19.0498	COND2			
	843SL*	21.3000	COND1			
	843SL*	19.5996	COND2			
	844SL*	21.2000	COND1			
	844SL*	19.5996	COND2			
	840	844SL	15.1500		COND1	.09750
		844SI	21.1992		COND2	
847SL		15.1500	COND1			
847SI		26.1992	COND2			
850SL		15.1500	COND1			
850SI		26.1992	COND2			
843SL		15.1500	COND1			
843SL		21.7998	COND2			
841SL		15.1500	COND1			
841SL		9.5391	COND2			
834SL		15.1500	COND1			
834SL		21.0996	COND2			
834SL*		21.1000	COND1			
834SL*		15.1494	COND2			
837SI*		23.1000	COND1			
837SL*		15.1494	COND2			
839SL*		19.0500	COND1			
839SI*		15.0996	COND2			
842SL*		16.6500	COND1			
842SI*		15.1494	COND2			
847SL*		26.2000	COND1			
847SL*		15.1494	COND2			
841		317TI	5.4200	COND1	.07110	
	837SL	9.5400	COND1			
	837SL	23.0996	COND2			
	836SL	9.5400	COND1			
	836SL	23.0996	COND2			
	834SI	9.5400	COND1			
	834SL	21.0996	COND2			
	835SL	9.5400	COND1			
	835SL	22.0498	COND2			
	838SI*	14.4500	COND1			
	838SL*	9.5391	COND2			
	839SI*	19.0500	COND1			
	839SI*	9.5391	COND2			
	840SI*	15.1500	COND1			
	840SL*	9.5391	COND2			

S T R U C T U R E F I L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
842	838SL	16.6500	COND1	0.09450		
	838SL	15.1494	COND2			
	840SL	16.6500	COND1			
	840SL	15.1494	COND2			
	839SL	16.6500	COND1			
	839SL	19.0498	COND2			
	843SL	16.6500	COND1			
	843SL	21.2998	COND2			
	857SL	16.6500	COND1			
	857SL	21.2998	COND2			
	844SL*	21.2000	COND1			
	844SL*	14.1494	COND2			
	849SL*	20.5500	COND1			
	849SL*	14.1494	COND2			
	850SL*	26.2000	COND1			
	850SL*	14.0000	COND2			
	851SL*	26.2000	COND1			
	851SL*	14.1494	COND2			
	843	844SL	21.3000		COND1	1.00000
		844SL	21.1992		COND2	
		850SL	21.3000		COND1	
		850SL	26.1992		COND2	
		839SL	21.3000		COND1	
839SL		19.5996	COND2			
820SL*		19.1000	COND1			
820SL*		21.2998	COND2			
831SL*		14.9000	COND1			
831SL*		21.2998	COND2			
832SL*		16.7000	COND1			
832SL*		21.2998	COND2			
837SL*		23.1000	COND1			
837SL*		21.2998	COND2			
840SL*		15.1500	COND1			
840SL*		21.2998	COND2			
842SL*		16.6500	COND1			
842SL*		21.2998	COND2			
847SL*		26.2000	COND1			
847SL*		21.2998	COND2			
844		842SL	21.2000	COND1	1.00000	
		842SL	14.1494	COND2		
		839SL	21.2000	COND1		
	839SL	19.5996	COND2			
	840SL*	15.1500	COND1			
	840SL*	21.1992	COND2			
	843SL*	21.3000	COND1			
	843SL*	21.1992	COND2			
	845SL*	10.1200	COND1			
	845SL*	21.1992	COND2			
	846SL*	18.4900	COND1			
	846SL*	19.9795	COND2			

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
844	847SL*	26.7000	COND1	1.00000		
	847SL*	21.1992	COND2			
	850SL*	26.2000	COND1			
845	850SL*	21.1494	COND2	1.00000		
	814SI	10.1200	COND1			
	814SI	23.7998	COND2			
	847SL	10.1200	COND1			
	847SI	26.1992	COND2			
	848SL	10.1200	COND1			
	848SL	20.8994	COND2			
	853SL	10.1200	COND1			
	853SL	17.5996	COND2			
	844SL	10.1200	COND1			
	844SL	21.1992	COND2			
	814SI*	23.3000	COND1			
	814SL*	10.1191	COND2			
	846SL*	18.4900	COND1			
	846SL*	10.1191	COND2			
	856SL*	20.0000	COND1			
	856SL*	10.1191	COND2			
846	844SL	18.4900	COND1	1.00000		
	844SL	19.9795	COND2			
	50SL	18.4900	COND1			
	50SI	26.1992	COND2			
	49SL	18.4900	COND1			
	49SL	20.5498	COND2			
	45SL	18.4900	COND1			
	45SL	10.1191	COND2			
	52SL	18.4900	COND1			
	52SL	10.1191	COND2			
	48SI	18.4900	COND1			
	848SL	20.8994	COND2			
	847	844SL	26.7000		COND1	1.00000
		844SL	21.1992		COND2	
840SL		26.2000	COND1			
840SI		15.1494	COND2			
843SI		26.7000	COND1			
843SL		21.7998	COND2			
853SI		26.2000	COND1			
853SL		17.5996	COND2			
848SL		26.2000	COND1			
848SL		20.8994	COND2			
814SI*		23.3000	COND1			
814SL*		26.1992	COND2			
840SL*		15.1500	COND1			
840SL*		26.1992	COND2			
845SL*	10.1200	COND1				
845SL*	26.1992	COND2				
848SL*	20.9000	COND1				
848SL*	26.1992	COND2				

S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F		
847	850SL *	26.2000	COND1	1.00000		
	850SL *	26.1992	COND2			
	854SL *	20.0000	COND1			
	854SL *	26.1992	COND2			
848	853SL	20.9000	COND1	1.00000		
	853SL	17.5996	COND2			
	849SL	20.9000	COND1			
	849SL	21.1992	COND2			
	847SL	20.9000	COND1			
	847SL	26.1992	COND2			
	814SI *	23.3000	COND1			
	814SI *	20.8994	COND2			
	845SL *	10.1200	COND1			
	845SI *	20.8994	COND2			
	846SI *	18.4900	COND1			
	846SL *	20.8994	COND2			
	847SI *	26.2000	COND1			
	847SL *	20.8994	COND2			
	852SL *	10.1200	COND1			
	852SI *	20.8994	COND2			
	856SL *	20.0000	COND1			
	856SI *	20.8994	COND2			
	849	842SL	20.5500		COND1	1.00000
		842SL	14.1494		COND2	
857SL		20.5500	COND1			
857SL		21.2998	COND2			
838SL *		14.4500	COND1			
838SL *		20.5498	COND2			
846SL *		18.4900	COND1			
846SI *		20.5498	COND2			
848SL *		20.9000	COND1			
848SL *		21.1992	COND2			
850SI *		26.2000	COND1			
850SL *		21.1494	COND2			
851SI *		26.2000	COND1			
851SL *		21.1992	COND2			
852SL *		10.1200	COND1			
852SI *		21.1992	COND2			
416TL		13.7000	COND1			
850		849SL	26.2000	COND1	1.00000	
		849SI	21.1494	COND2		
		844SL	26.2000	COND1		
	844SL	21.1494	COND2			
	842SL	26.2000	COND1			
	842SL	14.0000	COND2			
	847SI	26.2000	COND1			
	847SL	26.1992	COND2			
	840SL *	15.1500	COND1			
	840SL *	26.1992	COND2			
	843SL *	21.3000	COND1			

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S T R U C T U R E I U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP BTU/DEG.F
850	843SL *	26.1992	COND2	1.00000
	846SL *	18.4900	COND1	
	846SL *	26.1992	COND2	
851	849SL	26.2000	COND1	1.00000
	849SL	21.1992	COND2	
	857SL	26.2000	COND1	
	857SL	21.2998	COND2	
	842SL	26.2000	COND1	
	842SL	14.1494	COND2	
	838SL	26.2000	COND1	
	838SL	14.4492	COND2	
	853SL	26.2000	COND1	
	853SL	17.5996	COND2	
	852SL *	10.1200	COND1	
	852SL *	26.1992	COND2	
	854SL *	20.0000	COND1	
	854SL *	26.1992	COND2	
	855SL *	23.3000	COND1	
855SL *	26.1992	COND2		
852	855SL	10.1200	COND1	1.00000
	855SL	23.2998	COND2	
	851SL	10.1200	COND1	
	851SL	26.1992	COND2	
	853SL	10.1200	COND1	
	853SL	17.5996	COND2	
	848SL	10.1200	COND1	
	848SL	20.8994	COND2	
	849SL	10.1200	COND1	
	849SL	21.1992	COND2	
	846SL *	18.4900	COND1	
	846SL *	10.1191	COND2	
	854SL *	20.0000	COND1	
	854SL *	10.1191	COND2	
	855SL *	23.3000	COND1	
855SL *	10.1191	COND2		
853	814SL *	23.3000	COND1	1.00000
	814SL *	17.5996	COND2	
	845SL *	10.1200	COND1	
	845SL *	17.5996	COND2	
	847SL *	26.2000	COND1	
	847SL *	17.5996	COND2	
	848SL *	20.9000	COND1	
	848SL *	17.5996	COND2	
	851SL *	26.2000	COND1	
	851SL *	17.5996	COND2	
	852SL *	10.1200	COND1	
	852SL *	17.5996	COND2	
	854SL *	20.0000	COND1	
	854SL *	17.5996	COND2	
	855SL *	23.3000	COND1	

. S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	WT. * CP RTU/DEG.F
853	856SL*	17.5996	COND2	1.00000
	856SI*	20.0000	COND1	
	856SL*	17.5996	COND2	
854	830SL	20.0000	COND1	.13600
	830SL	14.5996	COND2	
	853SL	20.0000	COND1	
	853SL	17.5996	COND2	
	857SL	20.0000	COND1	
	852SL	10.1191	COND2	
	851SI	20.0000	COND1	
	851SL	26.1992	COND2	
	855SI*	23.3000	COND1	
	855SI*	20.0000	COND2	
	355TL	3.8200	COND1	
855	854SL	23.3000	COND1	.15900
	854SL	20.0000	COND2	
	853SL	23.3000	COND1	
	853SI	17.5996	COND2	
	852SL	23.3000	COND1	
	852SI	10.1191	COND2	
	851SI	23.3000	COND1	
	851SL	26.1992	COND2	
	815SL*	14.1500	COND1	
	815SL*	23.1992	COND2	
	818SL*	17.0000	COND1	
	818SL*	23.2998	COND2	
	852SL*	10.1200	COND1	
	852SL*	23.2998	COND2	
	327TL	11.7500	COND1	
	856	820SL	20.0000	
820SL		14.5996	COND2	
848SI		20.0000	COND1	
848SI		20.8994	COND2	
847SL		20.0000	COND1	
847SL		26.1992	COND2	
845SL		20.0000	COND1	
845SL		10.1191	COND2	
853SI		20.0000	COND1	
853SL		17.5996	COND2	
814SL*		23.3000	COND1	
814SL*	20.0000	COND2		
857	355TL	3.8200	COND1	.14520
	829SL*	16.7000	COND1	
	829SL*	19.0996	COND2	
	830SL*	23.1000	COND1	
	830SI*	19.0996	COND2	
	831SL*	14.9000	COND1	
	831SI*	21.2998	COND2	
	836SL*	23.1000	COND1	
836SI*	21.2998	COND2		

S T R U C T U R E L U M P D A T A

LUMP NO.	CONNECTED TO LUMP	CONNECTION VALUE	TYPE	AT. % CP BIU/OEG.F
857	838SL*	14.4500	COND1	.14520
	838SL*	21.2998	COND2	
	842SL*	14.6500	COND1	
	842SL*	21.2998	COND2	
	849SL*	20.5500	COND1	
	849SI*	21.2998	COND2	
	851SI*	26.2000	COND1	
	851SL*	21.2998	COND2	
858				.700
859				1.400
860				1.800
861				.700
862				1.400
863				1.800
864				.350
865				.700
866				.900
867				.350
868				.700
869				.900
870				.350
871				.700
872				.900
873				.350
874				.700
875				.900

APPENDIX C

LM-6 THERMAL MODEL NODE
LOCATION/DESCRIPTION

<u>TABLE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
C-1	FLOW SYSTEM; COMPONENT LOCATIONS	C-2
C-2	STRUCTURE MODEL NODE DESCRIPTIONS	C-15

TABLE C-1

FLOW SYSTEM COMPONENT LOCATIONS

Tube Lump No.	Enclosed Fluid Lump No.	System No. *	Tube No.	Location/Description
1	1	1	1	Downstream of Glycol Pump (Item No. 212)
2	2	1	2	Upstream of Suit Loop H/X (Item No. 106)
3	3	1	2	Cold Side of Suit Loop H/X (Item No. 106)
4	4	1	2	Downstream of Suit Loop H/X (Item No. 106)
6	6	2	115	Cold rail for AEA/VHF
7	7	2	115	Cold rail for AEA/VHF
8	8	2	117	Cold rail for SP/S-BX/S-BP
9	9	2	117	Cold rail for SP/S-BX/S-BP
10	10	2	118	Cold rail for SP/S-BX/S-BP
11	11	2	118	Cold rail for SP/S-BX-S-SP
13	13	1	12	Downstream of suit Loop H/X
14	14	1	3	Downstream of Junction of Tubes 1, 2, and 3
15	15	1	4	Upstream of First LGC
16	16	1	4	Cold Plate for First LGC
17	17	1	4	Between First and Second LGC
18	18	1	4	Cold Plate for Second LGC
19	19	1	4	Between Second LGC and CDU
20	20	1	4	Cold Plate for First CDU
21	21	1	4	Between First and Second CDU
22	22	1	4	Cold Plate for Second CDU
23	23	1	4	Between Second CDU and PSA
24	24	1	4	Cold Plate for PSA
25	25	1	4	Upstream of Junction of Tubes 4 and 9
26	26	1	7	Downstream of Junction of Tubes 5, 6, and 7
27	27	1	9	Cold Plate for TLE
28	28	1	9	Between TLE and GASTA
29	29	1	9	Cold Plate for GASTA
30	30	1	9	Between GASTA and LCA
31	31	1	9	Cold Plate for LCA
32	32	1	9	Between LCA and DSE
33	33	1	9	Cold Plate for DSE
34	34	1	9	Upstream of Junction of Tubes 4 and 9

- * System 1 is the primary glycol loop.
 System 2 is the secondary glycol loop.
 System 3 is the suit loop.
 System 4 is the cabin loop
 System 5 is water management system.

<u>Tube Lump No.</u>	<u>Enclosed Fluid Lump No.</u>	<u>System No. *</u>	<u>Tube No.</u>	<u>Location/Description</u>
35	35	1	9	Upstream of TLE
36	36	1	8	Upstream of ASA
37	37	1	8	Cold Plate for ASA
38	38	1	8	Between ASA and PTA
39	39	1	8	Cold Plate for PTA
40	40	1	8	First Lump Downstream of PTA
41	41	1	8	Second Lump Downstream of PTA
42	42	1	8	Third Lump Downstream of PTA
43	43	1	8	Upstream of Junction of Tubes 6 and 8
44	44	1	6	Upstream of IMU
45	45	1	6	Cold Plate for IMU
46	46	1	6	Downstream of IMU
47	47	1	85	Glycol Filter
48	48	1	6	Upstream of RGA
49	49	1	6	Cold Plate for RGA
50	50	1	6	Upstream of Junction of Tubes 6, 8
51	51	1	10	Downstream of Junction of Tubes 6, 8, and 10
52	52	1	11	Downstream of Junction of Tubes 10 and 12
53	53	1	13	Upstream of Junction of Tubes 11 and 13
54	54	1	14	Downstream of Junction of Tubes 11, 13, and 14
58	58	1	17	Upstream of LCG H/X (Item No. 191)
59	59	1	17	LCG H/X (Item No. 191)
60	60	1	17	Downstream of LCG H/X (Item No. 191)
61	61	1	18	Upstream of Junction of Tubes 18, 29, and 30
62	62	1	29	Downstream of Junction of Tubes 18, 29, and 30
63	63	1	29	Cold rail for RRE
64	64	1	29	Downstream of RRE
65	65	1	31	Upstream of SCEA
66	66	1	31	Cold rail for First SCEA
67	67	1	31	Downstream of First SCEA
68	68	1	32	Downstream of Junction of Tubes 30, 31, and 32
69	69	1	35	Downstream of Junction of Tubes 29, 31, and 35
70	70	1	33	Upstream of PCM
71	71	1	33	Cold rail for PCM
72	72	1	33	Downstream of PCM
73	73	1	34	Downstream of Junction of Tubes 32, 33, and 34
74	74	1	34	Cold rail for Second SCEA
75	75	1	34	Upstream of Junction of Tubes 34, 36, and 37
76	76	1	36	Downstream of Junction of Tubes 33, 35, and 36
77	77	1	37	Downstream of Junction of Tubes 34, 36, and 37
78	78	1	19	Downstream of Junction of Tubes 17, 18, and 19
79	79	1	21	Downstream of Junction of Tubes 19, 20, and 21
80	80	1	23	Downstream of Junction of Tubes 21, 22, and 23
81	81	1	25	Downstream of Junction of Tubes 23, 24, and 25
82	82	1	25	Cold Rail for INV No. 2

Tube Lump No.	Enclosed Fluid Lump No.	System No. *	Tube No.	Location/Description
83	83	1	25	Upstream of Junction of Tubes 25, 27, and 28
84	84	1	24	Upstream of ATCA/INV
85	85	1	24	Cold rail for ATC/INV
86	86	1	24	Downstream of ATCA/INV
87	87	1	22	Upstream of AEA/VHF
88	88	1	22	Cold rail for AEA/VHF
89	89	1	22	Downstream of AEA/VHF
90	90	1	26	Downstream of Junction of Tubes 20, 22, and 26
91	91	1	20	Downstream of Junction of Tubes 19, 20, and 21
92	92	1	20	Cold rail for S-BP/S-BX/SP
93	93	1	20	Upstream of Junction of Tubes 20, 22, and 26
94	94	1	27	Downstream of Junction of Tubes 24, 26, and 27
95	95	1	28	Downstream of Junction of Tubes 25, 27, and 28
96	96	1	38	Downstream of Junction of Tubes 28, 37, and 38
97	97	1	40	Downstream of Junction of Tubes 39, 40, 41 (D/S Loop)
98	98	1	41	Upstream QUAD I D/S BATT
99	99	1	29	Cold rail for RRE
100	100	1	29	Cold rail for RRE
101	101	1	31	Cold rail for SCEA
102	102	1	31	Cold rail for SCEA
103	103	1	33	Cold rail for PCM/CWEA
104	104	1	33	Cold rail for PCM/CWEA
105	105	1	34	Cold rail for SCEA/ECA
106	106	1	34	Cold rail for SCEA/ECA
107	107	1	74	Cold rail for BATT
108	108	1	74	Cold rail for BATT
109	109	1	74	Downstream of BATT
110	110	1	76	Cold rail of BATT
111	111	1	76	Cold rail of BATT
112	112	1	76	Downstream of BATT
113	113	1	75	Cold rail of BATT
114	114	1	75	Cold rail of BATT
115	115	1	75	Downstream of BATT
116	116	1	25	Cold rail of INV/DUA/ECA
117	117	1	25	Cold rail for INV/DUA/ECA
118	118	1	24	Cold rail for INV/ATCA
119	119	1	24	Cold rail for INV/ATCA
120	120	1	22	Cold rail for VHF/AEA
121	121	1	22	Cold rail for VHF/AEA
122	122	1	20	Cold rail for SP/S-BX/S-BP
123	123	1	20	Cold rail for SP/S-BX/S-BP
124	124	2	92	Cold rail for RRE
125	125	2	92	Cold rail for RRE
126	126	2	108	Cold rail for SCEA
127	127	2	108	Cold rail for SCEA
128	128	2	109	Cold rail for PCM/CWEA
129	129	2	109	Cold rail for PCM/CWEA
130	130	2	110	Cold rail for SCEA/ECA

<u>Tube Lump No.</u>	<u>Enclosed Fluid Lump No.</u>	<u>System No. x</u>	<u>Tube No.</u>	<u>Location/Description</u>
131	131	2	110	Cold rail for SCEA /ECA
132	132	2	100	Cold rail for BATT
133	133	2	100	Cold rail for BATT
134	134	2	100	Downstream of BATT
135	135	2	101	Cold rail for BATT
136	136	2	101	Cold rail for BATT
137	137	2	101	Downstream of BATT
138	138	2	102	Cold rail of BATT
139	139	2	102	Cold rail of BATT
140	140	2	102	Downstream of BATT
141	141	2	114	Cold rail for INV/ECA
142	142	2	114	Cold rail for INV/ECA
143	143	1	39	Upstream of QUAD I D/S BATT
144	144	1	39	Cold rail QUAD I D/S BATT
145	145	1	39	Downstream of QUAD I D/S BATT
148	148	1	68	Upstream of Suit Loop Heater (Item No. 111)
149	149	1	68	Cold Side of Suit Loop Heater (Item No. 111)
150	150	1	68	Downstream of Suit Loop Heater (Item No. 111)
151	151	1	69	Downstream of Flow Control Valve for Suit Loop Heater
152	152	1	70	Downstream of Suit Loop Heater (Item No. 111)
153	153	1	70	Downstream of Suit Loop Heater (Item No. 111)
154	154	1	70	Downstream of suit loop heater
155	155	1	70	Primary Sublimator.
156	156	1	70	Downstream of Primary Sublimator
157	157	1	71	Upstream of Junction of Tubes 71, 73, and 74
158	158	1	74	Upstream of First ASC BATT
159	159	1	74	Cold Rail for First ASC BATT
160	160	1	74	Upstream of Junction of Tubes 74, 76, and 77
161	161	1	73	Upstream of Junction of Tubes 73, 75, and 76
162	162	1	76	Upstream of Second ASC BATT
163	163	1	76	Cold Rail for Second ASC BATT
164	164	1	76	Downstream of Second ASC BATT
165	165	1	77	Upstream of Junction of Tubes 75, 77 and 78
166	166	1	75	Downstream of Junction of Tubes 73, 75, and 76
167	167	1	75	Cold Rail for Third ASC BATT
168	168	1	75	Upstream of Junction of Tubes 75, 77, and 78
169	169	1	78	Upstream of Junction of Tubes 78, 84, and 85
170	170	1	72	Downstream of Junction of Tubes 70, 71, and 72
171	171	1	79	Downstream of Junction of Tubes 72, 79, and 83
172	172	1	80	Downstream of QUAD IV D/S BATT
173	173	1	80	Cold Rail for QUAD IV D/S BATT
174	174	1	80	Upstream of QUAD IV D/S BATT

<u>Tube Lump No.</u>	<u>Enclosed Fluid Lump No.</u>	<u>System No. *</u>	<u>Tube No.</u>	<u>Location/Description</u>
175	175	1	81	Upstream of QUAD IV D/S BATT
176	176	1	81	Downstream of QUAD IV D/S BATT
177	177	1	83	Upstream of Junction of Tubes 39, 41, and 83 (D/S Loop)
178	178	1	82	Downstream of Junction of Tubes 80, 81, and 82 (D/S Loop)
179	179	1	41	Downstream of QUAD I D/S BATT
180	180	1	84	Downstream of Junction of Tubes 40, 82, and 84
181	181	1	85	Downstream of Junction of Tubes 78, 84, and 85
182	182	1	6	Downstream of RGA
183	183	1	8	Fourth Lump Downstream of PTA
184	184	1	9	Downstream of DSE
185	185	1	4	Downstream of PSA
186	186	1	12	Upstream of Junction of Tubes 10, 11, and 12
187	187	1	30	Upstream of Junction of Tubes 30, 31, and 32
188	188	1	16	Upstream of LCG H/X (Item No. 191)
190	190	2	92	Downstream of Junction of Tubes 91, 92, and 108
191	191	2	92	Upstream of RRE
192	192	2	92	Cold Rail for RRE
193	193	2	92	Downstream of RRE
194	194	2	92	Upstream of Junction of Tubes 92, 93, and 108
201	201	1	5	Downstream of Junction of Tubes 3, 4, and 5
202	202	1	17	Second Lump Downstream of LCG H/X (Item No. 192)
203	203	1	17	Third Lump Downstream of LCG H/X (Item No. 192)
204	204	1	29	Upstream of RRE
205	205	1	29	Upstream of Junction of Tubes 29, 31, and 35
206	206	1	34	Upstream of SCEA
207	207	1	34	Downstream of SCEA
208	208	1	20	Upstream of S-BP/S-BX/SP
209	209	1	20	Downstream of S-BP/S-BX/SP
210	210	1	25	Upstream of ACTA/INV
211	211	1	25	Downstream of ACTA/INV
212	212	1	85	Glycol Pump
213	213	1	70	Downstream of Primary Sublimator
214	214	1	70	Downstream of Primary Sublimator
215	215	1	74	Downstream of Junction of Tubes 71, 73, and 74
216	216	1	74	Downstream of First ASC BATT
217	217	1	75	Downstream of Third ASC BATT
218	218	1	75	Upstream of Third ASC BATT
219	219	1	72	Upstream of First Interstage Disconnect
220	200	1	72	First Interstage Disconnect
221	221	1	72	Downstream of First Interstage Disconnect
222	222	1	72	Upstream of Junction of Tubes 72, 79, and 83
227	227	1	81	Cold Rail for QUAD IV D/S BATT
229	229	1	84	Upstream of Second Interstage Disconnect

<u>Tube Lump No.</u>	<u>Enclosed Fluid Tube No.</u>	<u>System No. #</u>	<u>Tube No.</u>	<u>Location/Description</u>
230	230	1	84	Second Interstage Disconnect
231	231	1	84	Downstream of Second Interstage Disconnect
232	232	1	70	Upstream of Junction of Tubes 78, 84, 85
233	233	1	85	Upstream of Glycol Filter
234	234	1	8	Fourth Lump Downstream of PTA
235	235	2	94	Downstream of Glycol Pump (Item 290)
236	236	2	95	Upstream of TLE
237	237	2	95	Cold Plate for TLE
238	238	2	95	Downstream of TLE
239	239	2	95	Upstream of Junction of Tubes 95, 97, and 98
240	240	2	97	Upstream of ASA
241	241	2	97	Cold Plate for ASA
242	242	2	97	Downstream of ASA
243	243	2	96	Upstream of RGA
244	244	2	96	Cold Plate for RGA
245	245	2	96	Downstream of RGA
246	246	2	98	Upstream of Junction of Tubes 98, 99, and 102
247	247	2	102	Downstream of Junction of Tubes 98, 99, and 102
248	248	2	102	Upstream of Second ECA/BATT
249	249	2	102	Cold Rail for Second ECA/BATT
250	250	2	102	Downstream of ECA/BATT
251	251	2	104	Upstream of Junction of Tubes 102, 104, and 106
252	252	2	99	Upstream of Junction of Tubes 99, 100, and 101
253	253	2	101	Upstream of First A/S BATT
254	254	2	101	Cold Rail for ECA/BATT
255	255	2	101	Downstream of ECA/BATT
256	256	2	103	Downstream of Junction of Tubes 101, 103, and 104
257	257	2	100	Downstream of Junction of Tubes 99, 100, and 101
258	258	2	100	Upstream of Second SCEA
259	259	2	100	Cold Rail for Second SCEA
260	260	2	100	Downstream of Second SCEA
261	261	2	105	Downstream of Junction of Tubes 100, 103, and 105
262	262	2	110	Downstream of Junction of Tubes 105, 107, and 110
263	263	2	110	Upstream of PCM/CWEA
264	264	2	110	Cold Rail for PCM/CWEA
265	265	2	110	Downstream of PCM/CWEA
266	266	2	110	Upstream of Junction of Tubes 109, 110, and 111
267	267	2	107	Upstream of Junction of Tubes 107, 108, and 109
268	268	2	109	Upstream of First SCEA
269	269	2	109	Cold Rail for First SCEA
270	270	2	109	Downstream of First SCEA
271	271	2	111	Downstream of Junction of Tubes 109, 110, and 111
272	272	2	91	Downstream of Junction of Tubes 91, 107, and 109
273	273	2	108	Upstream of PQGS/RRE
274	274	2	108	Cold Rail for PQGS/RRE

<u>Tube Lump No.</u>	<u>Enclosed Fluid Lump No.</u>	<u>System No. *</u>	<u>Tube No.</u>	<u>Location/Description</u>
275	275	2	108	Downstream of PQCS/RRE
276	276	2	93	Upstream of Junction of Tubes 93, 111, and 112
277	277	2	112	Upstream of Junction of Tubes 112, 121, and 122
278	278	2	106	Upstream of Junction of Tubes 106, 113, and 114
279	279	2	114	Downstream of Junction of Tubes 106, 113, and 114
280	280	2	114	Upstream of ACTA/INV
281	281	2	114	Cold Rail for ACTA/INV
282	282	2	114	Downstream of ACTA/INV
283	283	2	114	Upstream of Junction of Tubes 114, 115, and 119
284	284	2	113	Upstream of Junction of Tubes 113, 115, and 116
285	285	2	115	Upstream of ATCA/INV
286	286	2	115	Cold Rail for ATCA/INV
287	287	2	115	Downstream of ATCA/INV
288	288	2	116	Downstream of Junction of Tubes 113, 115, and 116
289	289	2	117	Upstream of AEA/VHF
290	290	2	117	Cold Rail for AEA/VHF
291	291	2	117	Downstream of AEA/VHF
292	292	2	119	Upstream of Junction of Tubes 117, 119, and 120
293	293	2	118	Downstream of Junction of Tubes 116, 117, and 118
294	294	2	118	Upstream of S-BP/S-BX/SP
295	295	2	118	Cold Rail for S-BP/S-BX/SP
296	296	2	118	Downstream of S-BP/S-BX/SP
297	297	2	118	Upstream of Junction of Tubes 118, 120, and 121
298	298	2	120	Downstream of Junction of Tubes 117, 119, and 120
299	299	2	121	Downstream of Junction of Tubes 118, 120, and 121
300	300	2	122	Upstream of Water Boiler (Item No. 224)
301	301	2	122	Cold Plate for Water Boiler (Item No. 224)
302	302	2	122	Between Water Boiler (Item No. 224) and filter (Item No. 222)
303	303	2	122	Filter (Item No. 222)
304	304	2	122	Between Filter (Item No. 222) and Glycol Pump (Item No. 290)
305	305	2	122	Glycol Pump (Item No. 290)
306	306	3	123	Left Suit Fan (Item No. 118)
307	307	3	123	Between Left Suit Fan (Item No. 118) and Left Check Valve (Item No. 119)
308	308	3	125	Left Check Valve (Item No. 119)
309	309	3	125	Downstream of Left Check Valve (Item No. 119)
310	310	3	124	Right Suit Fan (Item No. 118)
311	311	3	124	Between Right Suit Fan (Item No. 118) and Right Check Valve (Item No. 119)
312	312	3	126	Right Check Valve (Item No. 118)
313	313	3	126	Downstream of Right Check Valve
314	314	3	127	Upstream of Water Boiler (Item No. 107)
315	315	3	128	Water Boiler (Item No. 107)
316	316	3	128	Between Water Boiler (Item No. 107) and O ₂ -Glycol H/X (Item No. 106)

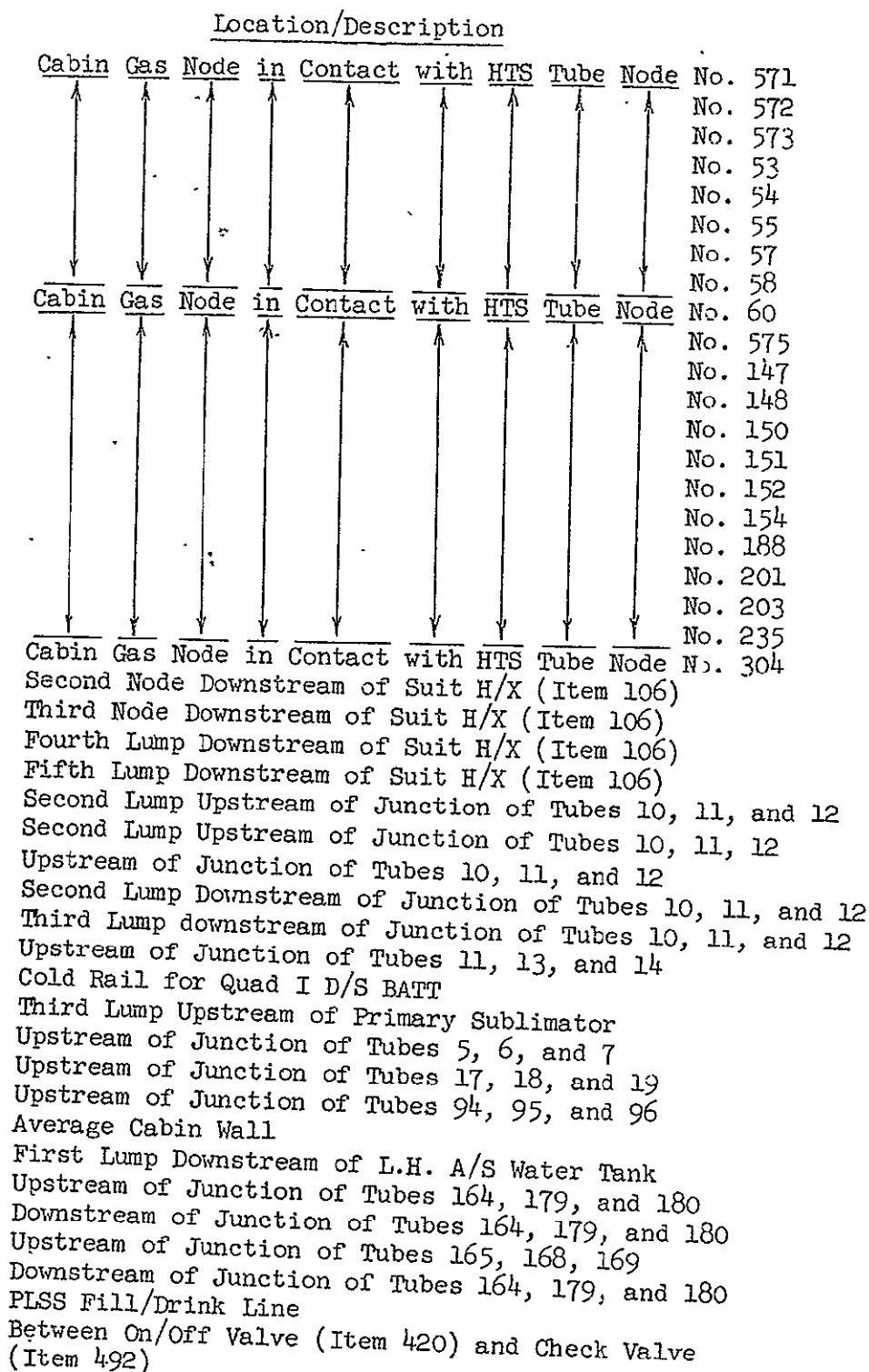
<u>Tube Lump No.</u>	<u>Enclosed Fluid Lump No.</u>	<u>System No. *</u>	<u>Tube No.</u>	<u>Location/Description</u>
317	317	3	129	O ₂ - Glycol H/X (Item No. 106)
318	318	3	129	Between O ₂ -Glycol H/X (Item No. 106) and Manual Diverter Valve (Item No. 115)
319	319	3	129	Manual Diverter Valve (Item No. 115)
320	320	3	131	Between Right Water Separator (Item No. 109) and Manual Diverter Valve (Item No. 115)
321	321	3	131	Right Water Separator (Item No. 109)
322	322	3	133	Downstream of Right Water Separator (Item No. 109)
323	323	3	130	Between Left Water Separator (Item No. 109) and Manual Diverter Valve (Item No. 115)
324	324	3	130	Left Water Separator (Item No. 109)
325	325	3	132	Downstream of Left Water Separator (Item No. 109)
326	326	3	134	Upstream of Glycol - O ₂ Heater (Item No. 111)
327	327	3	135	Glycol - O ₂ Heater (Item No. 111)
328	328	3	135	Downstream of Glycol - O ₂ Heater (Item No. 111)
329	329	3	136	Downstream of Junction of Tubes 135, 136, and 138
330	330	3	136	Downstream of Right Flow Reversing and Shutoff Valve (Item No. 128)
331	331	3	136	Between Right Flow Reversing and Shutoff Valve and First Disconnect for Right Astronaut
332	332	3	136	First Right Astronaut Disconnect
333	333	3	136	First Node in Right Astronaut
334	334	3	136	Second Right Astronaut Disconnect
335	335	3	136	Upstream of Junction of Tubes 136, 138, and 140
336	336	3	138	Downstream of Junction of Tubes 135, 136, and 138
337	337	3	138	Flow Reversing and Shutoff Valve (Item No. 128) for Left Astronaut
338	338	3	138	Between Flow Reversing and Shutoff Valve and First Disconnect for Left Astronaut
339	339	3	138	First Disconnect for Left Astronaut
340	340	3	138	First Node in Left Astronaut
341	341	3	138	Second Disconnect for Left Astronaut
342	342	3	138	Between Second Disconnect for Left Astronaut and Flow Reversing and Shutoff Valve
343	343	3	138	Upstream of Junction of Tubes 136, 138, and 140
344	344	3	140	Upstream of Cabin Loop Diverter Valve (Item No. 112)
345	345	3	141	Cabin Loop Diverter Valve (Item No. 112)
346	346	3	144	Downstream of Cabin Loop Diverter Valve (Item No. 112)
347	347	3	141	Downstream of Cabin Loop Diverter Valve (Item No. 112)
348	348	3	142	Upstream of Cabin Loop Check Valve (Item No. 113)
349	349	3	143	Cabin Loop Check Valve (Item No. 113)
350	350	3	143	Downstream of Cabin Loop Check Valve (Item No. 113)
351	351	3	145	Upstream of First Manual Diverter Valve (Item No. 114) for LiOH Canisters
352	352	3	145	First Manual Diverter Valve (Item No. 114) for LiOH Canisters

Tube Inventory No.	Enclosed Fluid Lump No.	System No.	Tube No.	Location/Description
353	353	3	146	Upstream of Primary LiOH Canister (Item No. 110)
354	354	3	148	Upstream of Secondary LiOH Canister (Item No. 127)
355	355	3	149	Secondary LiOH Canister (Item No. 127)
356	356	3	149	Downstream of Secondary LiOH Canister (Item No. 127)
357	357	3	147	Primary LiOH Canister (Item No. 110)
358	358	3	147	Downstream of LiOH Canister (Item No. 110)
359	359	3	136	Second Node in Right Astronaut
360	360	3	150	Downstream of Second Manual Diverter Valve (Item No. 114) for LiOH Canisters
361	361	3	151	Upstream of Left Suit Fan (Item No. 118)
362	362	3	152	Upstream of Right Suit Fan (Item No. 118)
363	363	3	136	Third Node in Right Astronaut
364	364	3	138	Second Node in Left Astronaut
365	365	3	138	Third Node in Left Astronaut
366	366	3	136	Right Flow Reversing and Shutoff Valve (Item No. 128)
367	367	3	138	Left Flow Reversing and Shutoff Valve (Item No. 128)
368	368	3	137	Downstream of Right Astronaut (In Tube to Cabin)
369	369	3	136	Between Second Disconnect for Right Astronaut and Flow Reversing & Shutoff Valve
370	370	3	139	Downstream of Left Astronaut (In Tube to Cabin)
371	371	4	162	Cabin Fan
372	372	4	162	Downstream of Cabin Fan
373	373	4	153	Downstream of Junction of Tubes 153, 141 or 137, 139
374	374	4	153	Second Node in Tube
375	375	4	154	First Node in Tube
376	376	4	155	First Node in Tube
377	377	4	156	First Node in Tube
378	378	4	157	First Node in Tube
379	379	4	156	Second Node Downstream in Tube
380	380	4	156	Thirteenth Node Upstream of Forward Hatch
381	381	4	157	+Y FWD Window Shade
382	382	4	155	-Y FWD Window Shade
383	383	4	155	-Y FG Retainer
384	384	4	154	Docking Window Shade
385	385	4	156	Eleventh Node Upstream of Forward Hatch
386	386	4	156	Tenth Node Upstream of Forward Hatch
387	387	4	156	Ninth Node Upstream of Forward Hatch
388	388	4	156	Eighth Node Upstream of Forward Hatch
389	389	4	156	Seventh Node Upstream of Forward Hatch
390	390	4	159	Downstream of Junction of Tubes 159, 155, 156, 157, 158, and 159
391	391	4	160	Upstream of Junction of Tubes 160, 161
392	392	4	161	Upstream of Junction of Tubes 161 and 162
393	393	4	162	Upstream of Cabin Fan
394	394	4	150	AOT
395	395	4	150	Panel I

<u>Tube Lump No.</u>	<u>Enclosed Fluid Lump No.</u>	<u>System No. *</u>	<u>Tube No.</u>	<u>Location/Description</u>
396	396	4	156	Panel II
397	397	4	156	Panel III
398	398	4	156	Panel IV
399	399	4	155	Panel V
400	400	4	157	Panel VI
401	401	4	154	Panel VIII
402	402	4	154	Panel X
403	403	4	154	Panel XI
404	404	4	158	Panel XII
405	405	4	158	Panel XIV
406	406	4	158	Panel XVI
407	407	4	156	Between Panel III and Panel I
408	408	4	156	Sixth Node Upstream of Forward Hatch
409	409	4	156	Ceiling Fluid Light
410	410	4	155	TCA (1)
411	411	4	156	ACA (1)
412	412	4	156	TCA (2) ;
413	413	4	157	ACA (2)
414	4.4	4	155	PLSS Simulator
415	415	4	155	Fifth Node Upstream of Forward Hatch
416	416	4	157	Air Revitalizer
417	417	4	153	Third Node Downstream in Tube
418	418	4	157	Water Module Simulator
419	419	4	156	LGC
420	420	4	156	CDU
421	421	4	156	PSA
422	422	4	154	DSE
423	423	4	154	Right EOS
424	424	4	158	Left EOS
425	425	4	156	Upstream of Hatch Upper Docking Tunnel
426	426	4	156	Hatch Upper Docking Tunnel
427	427	4	157	Upstream of Air Revitalizer
428	428	4	155	Upstream of PLSS
429	429	4	157	Downstream of water module simulator
430	430	4	155	-Y Internal Mid Section Cabin Lower Wall
431	431	4	158	Upstream of Left EOS
432	432	4	154	Upstream of DSE
433	433	4	156	Downstream of PSA
434	434	4	153	Fourth Node Downstream in Tube
435	435	4	153	Fifth Node Downstream in Tube
436	436	4	154	Last Node Downstream in Tube
437	437	4	158	Downstream of Left EOS
438	438	4	154	Downstream of Right EOS
439	439	4	158	Second Node Downstream
440	440	4	154	Left Garment Box

Tube Lump No.	Enclosed Fluid Lump No.	System No. *	Tube No.	Location/Description
441	441	4	154	Second Node Downstream in Tube
442	442	4	156	Upstream of Forward Hatch
443	443	4	158	Fifth Node Upstream of Left EOS
444	444	4	156	Downstream of Forward Hatch
445	445	4	156	Forward Hatch
446	446	4	157	Downstream of +Y FG Retainer
447	447	4	157	+Y Forward Window
448	448	4	157	+Y FG Retainer
449	449	4	157	Upstream +Y Forward Window
450	450	4	157	Upstream of ACA (2)
451	451	4	155	Upstream of PLSS Simulator
452	452	4	155	-Y Forward Window
453	453	4	156	Fourth Node Upstream of Forward Hatch
454	454	4	155	Upstream of -Y Forward Window
455	455	4	155	Upstream of TCA (1)
456	456	4	154	Docking Window
457	457	4	156	Aft Bulkhead
458	458	4	156	LGC
459	459	4	156	CDU
460	460	4	158	First Node in Tube
461	461	4	157	Second Node Downstream of Water Module Simulator
462	462	4	157	Third Node Downstream of Water Module Simulator
463	463	4	156	Second Node Upstream of Forward Hatch
464	464	4	157	Fourth Node Downstream of Water Module Simulator
465	465	4	156	Third Node Upstream of Forward Hatch
466	466	4	157	Cabin Gas Node in Contact with HTS Tube Node No. 1
467	467	4	157	Cabin Gas Node in Contact with HTS Tube Node No. 2
468	468	4	157	Cabin Gas Node in Contact with HTS Tube Node No. 4
469	469	4	156	Cabin Gas Node in Contact with HTS Tube Node No. 564
470	470	4	153	Cabin Gas Node in Contact with HTS Tube Node No. 565
471	471	4	155	Cabin Gas Node in Contact with HTS Tube Node No. 566
472	472	4	154	Cabin Gas Node in Contact with HTS Tube Node No. 567
477	477	4	154	Cabin Gas Node in Contact with HTS Tube Node No. 13
478	478	4	154	↑ No. 568
479	479	4	156	↑ No. 14
480	480	4	156	↑ No. 15
481	481	4	156	↑ No. 17
482	482	4	156	↑ No. 19
483	483	4	156	↑ No. 21
484	484	4	156	↑ Cabin Gas Node in Contact with HTS Tube Node No. 23
485	485	4	157	↑ Cabin Gas Node in Contact with HTS Tube Node No. 25
486	486	4	154	↑ No. 34
487	487	4	157	↑ No. 569
488	488	4	157	↑ No. 570
489	489	4	154	↑ Cabin Gas Node in Contact with HTS Tube Node No. 52

Tube Lump No.	Enclosed Fluid Lump No.	System No. *	Tube No.
490	490	4	155
491	491	4	153
492	492	4	157
493	493	4	157
494	494	4	157
495	495	4	157
496	496	4	157
497	497	4	157
498	498	4	157
539	539	4	156
540	540	4	157
541	541	4	157
542	542	4	157
543	543	4	157
544	544	4	157
545	545	4	157
546	546	4	157
559	559	4	156
560	560	4	157
562	562	4	156
563	563	4	156
564	564	1	2
565	565	1	2
566	566	1	2
567	567	1	2
568	568	1	12
569	569	1	10
570	570	1	10
571	571	1	11
572	572	1	11
573	573	1	11
574	574	1	41
576	576	1	70
577	577	1	5
578	578	1	17
579	579	2	94
580	580	4	154
581	581	5	180
582	582	5	180
583	583	5	164
584	584	5	168
585	585	5	179
586	586	5	182
587	587	5	181



Tube Lump No.	Enclosed Fluid Lump No.	System No. *	Tube No.	Location/Description
588	588	5	165	Downstream of R.H. A/S Water Tank
589	589	5	165	Second Lump Downstream of R.H. A/S Water Tank
590	590	5	163	Downstream of D/S Water Tank
591	591	5	163	Upstream of Junction of Tubes 163, 181, 186
592	592	5	186	Downstream of Junction of Tubes 163, 181, and 186
593	593	5	170	Downstream of Water Separator No. 2
594	594	5	171	Downstream of Water Separator No. 1
595	595	5	183	Upstream of Junction of Tubes 167, 183, and 184
596	596	5	184	Upstream of Junction of Tubes 167, 183, 184
597	597	5	167	Downstream of Junction of Tubes 167, 183, and 184
598	598	5	167	Upstream of Primary Sublimator (Item No. 209)
599	599	5	185	Downstream of On/Off Valve (Item No. 406)
600	600	5	174	Downstream of Suit Sublimator (Item No. 107)
601	601	5	173	Upstream of Junction of Tubes Nos. 174, 185 and 173
602	602	5	173	Downstream of Secondary Sublimator (Item No. 224)
603	603	5	165	Upstream of Junction of Tubes Nos. 165, 168, and 169
604	604	5	186	Upstream of Water Tank Select Valve (Item No. 414)
605	605	5	164	Upstream of Junction of Tube Nos. 164, 168, and 178
606	606	5	175	Downstream of Junction of Tube Nos. 170, 171, and 175
607	607	5	178	Upstream of Water Tank Select Valve (Item No. 414)
608	608	5	169	Upstream of Junction of Tube Nos. 169, 172, and 176
609	609	5	166	Upstream of Junction of Tube Nos. 166, 177, and 183
610	610	5	177	Upstream of Junction of Tube Nos. 166, 177, and 183
611	611	5	183	Downstream of Junction of Tube Nos. 166, 177, and 183
612	612	5	176	Upstream of Junction of Tube Nos. 169, 172, and 176
613	613	5	172	Upstream of Junction of Tube Nos. 172, 184, and 185
614	614	5	185	Downstream of Junction of Tube Nos. 172, 184, and 185
615	615	5	184	Downstream of Junction of Tube Nos. 172, 184, and 185
616	616	5	157	<u>Cabin Gas Node in Contact with WMS Tube Node No. 582</u>
617	617	5	157	↑ No. 583
618	618	5	157	↑ No. 585
619	619	5	157	↑ No. 586
620	620	5	157	↑ No. 587
621	621	5	156	↑ No. 589
622	622	5	156	↑ No. 591
623	623	5	157	↑ No. 592
624	624	5	157	↑ No. 593
625	625	5	157	↑ No. 594
626	626	5	157	↑ No. 595
627	627	5	157	↑ No. 596
628	628	5	157	↑ No. 597
629	629	5	157	↑ No. 599
630	630	5	157	↑ No. 600
631	631	5	155	↑ <u>Cabin Gas Node in Contact with WMS Tube Node No. 601</u>

STRUCTURAL MODEL NODE DESCRIPTIONS

<u>Node No.</u>	<u>Description</u>
1	D/S Boundary (D/S node 66)
2	D/S Boundary (D/S node 57)
3	D/S Boundary (D/S node 64)
4	D/S Boundary (D/S node 58)
5	D/S Boundary (D/S node 43)
6	D/S Boundary (D/S node 44)
7	D/S Boundary (D/S node 41)
8	D/S Boundary (D/S node 63)
9	D/S Boundary (D/S node 65)
10	RRE Flange - AEB
11	RRE Flange - AEB
12	SCEA No. 1 Flange - AEB
13	SCEA No. 1 Flange - AEB
14	CWEA Flange - AEB
15	CWEA Flange - AEB
16	PCMTEA Flange - AEB
17	PCMTEA Flange - AEB
18	A/S ECA No. 4 Flange - AEB
19	A/S ECA No. 4 Flange - AEB
20	SCEA No. 2 Flange - AEB
21	SCEA No. 2 Flange - AEB
22	A/S Batt No. 6 Flange - AEB
23	A/S Batt No. 6 Flange - AEB
24	A/S Batt No. 5 Flange - AEB
25	Pyro Batt, Elect Equip, D/S Electronics Quad IV
26	Batt, Elect Equip, D/S Electronics Quad IV
27	ECA, Elect Equip, D/S Electronics Quad IV
28	Batt, Elect Equip, D/S Electronics Quad IV
29	Pyro Batt, Elect Equip, D/S Electronics Quad I
30	Batt, Elect Equip, D/S Electronics, Quad I
31	ECA, Elect Equip, D/S Electronics, Quad I
32	Batt, Elect Equip, D/S Electronics, Quad I
33	A/S Batt No. 6 Flange - AEB
34	A/S ECA No. 3 Flange - AEB
35	A/S ECA No. 3 Flange - AEB
36	INV No. 1 Flange - AEB
37	INV No. 1 Flange - AEB
38	ATCA Flange - AEB
39	ATCA Flange - AEB
40	INV No. 2 Flange - AEB
41	INV No. 2 Flange - AEB
42	AEA Flange - AEB
43	AEA Flange - AEB
44	VHF XCVR - Right Side - AEB
45	VHF XCVR - Left Side - AEB
46	S-Band Power Amp Flange - AEB
47	S-Band Power Amp Flange - AEB

<u>Node No.</u>	<u>Description</u>
48	S-Band Trans Flange - AEB
49	S-Band Trans Flange - AEB
50	Signal Proc Flange - AEB
51	Signal Proc Flange - AEB
74	D/S Batt Flange Quad IV
75	D/S Batt Flange Quad IV
76	D/S ECA Flange Quad IV
77	D/S ECA Flange Quad IV
78	D/S Batt Flange Quad IV
79	D/S Batt Flange Quad IV
80	D/S Batt Flange Quad I
81	D/S Batt Flange Quad I
82	D/S ECA Flange Quad I
83	D/S ECA Flange Quad I
84	D/S Batt Flange Quad I
85	D/S Batt Flange Quad I
89	D/S Thermal Shield
90	D/S Thermal Shield
91	D/S Thermal Shield
92	D/S Thermal Shield
93	D/S Thermal Shield
94	D/S Thermal Shield
95	D/S Thermal Shield
96	D/S Thermal Shield
100	DUA - AEB
101	DUA Flange - AEB
102	DUA Flange - AEB
131	Docking Window Retainer
133	D/S Water Tank
138	D/S Thermal Shield
139	D/S Structure and Interface Supports
145	Struct. Beam, +X, +Y Side
146	Struct. Beam, +X, +Y Side
147	Struct. Beam, +X, +Y Side
148	Struct. Beam, +X, -Y Side
149	Struct. Beam, +X, -Y Side
150	Struct. Beam, +X, -Y Side
157	Struct. Beam On +Z27 Bulkhead -Y Side
158	Struct. Beam On +Z27 Bulkhead -Y, -X Side
159	Strut-Z27 Bulkhead to Main Oxid. Tank Attachment Point
160	Suspension BAR, Main. Oxid. Tank-Z27 Bulkhead +Y, -X Side
161	Strut-Z27 Bulkhead to Main Oxid. Tank Attachment Point
162	Strut-Z27 Bulkhead to Main Oxid. Tank Attachment Point
163	Strut-Z27 Bulkhead to Main Fuel Tank Attachment Point
164	Suspension Bar, Main Fuel Tank, -Z27 Bulkhead, -Y, -X Side
165	Surface Radiating to Main Fuel Tank
166	Main OX. Tank Surface, +Y Side
167	Main Fuel Tank Surface, -Y Side
168	Fuel In Main Fuel Tank, Inner Node -Y Side
169	Fuel In Main Fuel Tank, Second Node -Y Side

Node No.Description

170 Fuel In Main Fuel Tank, Third Node -Y Side
171 Fuel In Main Fuel Tank, Outer Node -Y Side
172 Oxidizer in Main Ox. Tank, Inner Node +Y Side
173 Oxidizer in Main Ox. Tank, Second Node +Y Side
174 Oxidizer in Main Ox. Tank, Third Node +Y Side
175 Oxidizer in Main Ox. Tank, Outer Node +Y Side
176 Oxygen In RCS Ox. Tank, Outer Node -Y Side
177 Oxygen In RCS Ox. Tank, Inner Node -Y Side
179 Structural Mount for RCS Ox. Tank -Y Side
180 Fuel In RCS Fuel Tank, Outer Node -Y Side
181 Fuel In RCS Fuel Tank, Inner Node -Y Side
182 Structural Mount for RCS Fuel Tank -Y Side
183 Structural Mount for RCS Fuel Tank -Y Side
184 ASA, In Front of +Z27 Bulkhd, +X Top
190 H2O In -Y Side H2O Tank -Y,+X Side
191 H2O In +Y Side H2O Tank +Y,+X Side
192 Oxygen In RCS Ox. Tank, Outer Node +Y Side
193 Oxygen In RCS Ox. Tank, Inner Node +Y Side
194 Structural Mount for RCS Ox. Tank +Y Side
195 Structural Mount for RCS Ox. Tank +Y Side
196 Fuel In RCS Fuel Tank, Outer Node +Y Side
197 Fuel In RCS Fuel Tank, Inner Node +Y Side
198 Structural Mount for RCS Fuel Tank +Y Side
199 Structural Mount for RCS Fuel Tank +Y Side
200 Docking Window, Outer, +X, -Y Side
201 FG Retainer, Forward Window, +Y Side
203 FG Retainer, Forward Window, -Y Side

205 Docking Window Inner Structure
206 A/S Engine Cover Interface
214 Inner Mylar, Cover for AOT, ASA, IMU +X Top
215 Inner Mylar, Struct. Around R/R Ant. +X, +Z Area
220 PTA, On +Z27 Bulkhead, Top
221 AOT, Front of +Z27 Bulkhd, Top
222 ASA Block, In Front of +Z27 Bulkhd, +X Top
224 RGA, Front of +Z27 Bulkhd, Top
245 Gasta, In Front of Fwd Right Instrument Panel
246 LCA, Under Cabin Floor
270 Equipment Box and Shelves, Left Cabin Wall
273 Tracking Light Assy.
299 Effective Aft Bay Environment
300 Effective Cabin Environment
304 Docking Tunnel Outer Hatch, Cabin Ceiling
306 Engine Well Thermal Shield, Cabin Floor
307 Docking Tunnel, Cabin Ceiling
309 Struct. Beam On +Z27 Bulkhd. Top, -Y Side
310 Beam, Docking Tunnel to +Z27 Blkhd, Top
311 Struct. Beam on +Z27 Bulkhd. Top, +Y Side
312 Beam, Docking Tunnel to -Z27 Blkhd, Top
313 Struct. Beam On -Z27 Bulkhd. Top, -Y Side
314 Beam, Docking Tunnel to -Z27 Blkhd, Top

<u>Node No.</u>	<u>Description</u>
315	Struct. Beam On -Z27 Bulkhd. Top, +Y Side
316	Docking Tunnel Structure
317	IMU Stable Element, Front of +Z27 Bulkhd, Top
318	Beam, +Z27 Blkhd to Dock Tunnel to -Z27 Blkhd, Top, +Y Side
319	Beam, +Z27 Blkhd to Dock Tunnel to -Z27 Blkhd. Top, -Y Side
330	Ascent Engine Valve
332	Struct. Beams (Box) Under Cabin Floor, Around A/S Engine
339	Structural Member From +Z27 to -Z27 Bulkhd., Top Right Side
340	Structural Member From +Z27 to -Z27 Bulkhd., Top Left Side
342	Ascent Engine Injector
343	Ascent Engine Thrust Chamber
344	Ascent Engine Nozzle -Upper
345	Ascent Engine Nozzle -Center
346	Ascent Engine Nozzle -Lower
347	Ascent Engine Support
348	Ascent Engine Thrust Chamber
349	Ascent Engine Nozzle -Center
350	Ascent Engine Nozzle -Center
351	Ascent Engine Nozzle -Center
352	MIT NAU BASE Near IMU, AOT-Top. In front of +Z27 Bulkhd
362	Ascent Engine Thrust Chamber
363	Ascent Engine Nozzle -Inner
364	Ascent Engine Nozzle -Inner
365	Ascent Engine Nozzle -Inner
366	Inner Mylar on Engine Well Thermal Shield, Cabin Floor
367	Inner Mylar on Engine Well Thermal Shield, Cabin Floor
368	Inner Mylar on Engine Well Thermal Shield, Cabin Floor
369	Inner Mylar on Engine Well Thermal Shield, Cabin Floor
370	Inner Mylar on Engine Well Thermal Shield, Cabin Floor
397	Docking Tunnel Drogue, Inner Surface Next to 498
398	Docking Tunnel Drogue, Inner Surface Next to 496
400	Top Surface in Front of +Z27 Bulkhd.
401	Wall of Fwd Cabin +X, +Y Side
402	Wall of Fwd Cabin +X, +Y Side
403	Wall of Fwd Cabin +X, +Y Side
404	Wall of Fwd Cabin, +Y Side
405	Wall of Fwd Cabin, +Y Side
408	Sub-Floor, Fwd Cabin
410	Wall of Fwd Cabin, -Y Side
411	Wall of Fwd Cabin, -Y Side
412	Wall of Fwd Cabin, +X, -Y Side
413	Wall of Fwd Cabin, +X, -Y Side
414	Wall of Fwd Cabin, Near Ceiling
417	Panel Above Fwd Hatch
418	Panel Above Fwd Hatch

Node No.Description

419 Struct. Beam on Panels Above Fwd Hatch
420 Struct. Beam on Panels Above Fwd Hatch
421 Struct. Beam on Panels Above Fwd Hatch
422 Struct. Beam On Panels Above Fwd Hatch
425 Structure or Equip Top of Fwd Cabin by IMU, AOT, RGA
426 Struct. Beam Around Fwd Hatch
427 Struct. Beam Around Fwd Hatch
438 Struct. Member Above Fwd Cabin Bulkhead Near R/R Ant.
439 Struct. Member Above Fwd Cabin Bulkhead Near R/R Ant.
440 Struct. Beam Between Fwd Cabin Floor and Sub-Floor
441 Struct. Beam Between Fwd Cabin Floor and Sub-Floor
442 Struct. Member, Fwd Bottom A/S - D/S Interface
443 Struct. Member, Fwd Bottom A/S - D/S Interface
444 Struct. Member, Lower +227 Bulkhead
445 Struct. Member, Lower +227 Bulkhead
446 Cover, +Y RCS
449 Cover, +Y RCS
450 Outer Skin, Fwd Cabin, +X Top
451 Cover, -Y RCS.
452 Outer Skin, Fwd Cabin, +X, +Y Side
453 Outer Skin, Fwd Cabin, +X, +Y Side
454 Outer Skin, Fwd Cabin, +Y Side
455 Outer Skin, Fwd Cabin, -X, +Y Side
456 Cover, -Y RCS
457 Outer Skin, Fwd Cabin, -X, Bottom
458 Outer Skin, Fwd Cabin, -X, -Y Side
459 Outer Skin, Fwd Cabin, -Y Side
460 Outer Skin, Fwd Cabin, +X, -Y Side
461 Outer Skin, Fwd Cabin, +X, -Y Side
462 Outer Skin, Fwd Cabin, +X, -Y Side
463 Cover, -Y RCS
464 Outer Skin, Over Equip on Top of Fwd Cabin
465 Outer Skin, Over Equip on Top of Fwd Cabin
466 Outer Skin, Over Equip on Top of Fwd Cabin
467 Outer Skin, Structure, In R/R Ant. Area
468 Outer Skin, Above Fwd Hatch
469 Outer Skin, Above Fwd Hatch
470 Outer Skin, +Y Side Near LMP Window
471 Outer Skin, Panel Above Lmp Sta. Window
472 Outer Skin, Panel Above Lmp Sta. Window
473 Outer Skin, Panel Above Lmp Sta. Window
474 Outer Skin, Panel Beside Lmp Sta. Window
475 Outer Skin, Panel Below Lmp Sta. Window
476 Outer Skin, Panel Below Lmp Sta. Window
477 Outer Skin, Panel Beside Fwd Hatch (+Y Side)
478 Outer Skin, Panel Beside Cdr Sta. Window
479 Outer Skin, Panel Above Cdr Sta. Window
480 Outer Skin, Panel Above Cdr Sta. Window
481 Outer Skin, Panel Above Cdr Sta. Window
482 Outer Skin, Panel Beside Cdr Sta. Window
483 Outer Skin, Panel Below Cdr Sta. Window
484 Outer Skin, Panel Below Cdr Sta. Window
485 Outer Skin, Panel Beside Fwd Hatch (-Y Side)
487 Outer Skin, Panel Below Fwd Hatch
489 Structural Beam Under Fwd Hatch

<u>Node No.</u>	<u>Description</u>
490	Docking Tunnel, Top of Cabin
491	Docking Tunnel, Outside of Hatches
492	Docking Tunnel, Outside of Hatches
494	Docking Tunnel, Outside of Hatches
495	Docking Tunnel, Outside of Hatches
496	Docking Tunnel Drogue
497	Outside Skin, Around Fwd Hatch
498	Docking Tunnel Drogue
499	Space and CSM Node for Docking Tunnel
500	Space Node
501	-Y RCS Mylar Wrap
502	+Y RCS Mylar Wrap
512	Outer Skin, Panel Beside FWD Hatch (+Y Side)
513	Outer Skin, Panel Beside FWD Hatch (-Y Side)
514	Inner Mylar, -Z27 Bulkhead, +X, +Y Side
515	Inner Mylar, -Z27 Bulkhead, +X, -Y Side
516	Engine Well Thermal Shield
519	Structural Member, A/S - D/S Interface (-Z27 Bulkhd)
520	Structural Member, A/S - D/S Interface (-Z27 Bulkhd)
521	Structural Member, -Z27 Bulkhead Bottom
522	Structural Member, -Z27 Bulkhead Bottom
523	Structural Member, -Z27 Bulkhead +Y Side
524	Structural Member, -Z27 Bulkhead -Y Side
525	Structural Member, Connects -Z27 Bulkhd to Aft Bay Equip
526	Structural Member, Connects -Z27 Bulkhd to Aft Bay Equip
527	Struct. Panel Connecting HE and GOX Tanks to -Z27 Bulkhd
531	Inner Mylar on Aft Equip Bay Cover
537	Inner Mylar on Aft Equip Bay Cover
539	Inner Mylar on Aft Equip Bay Cover
541	Inner Mylar on Aft Equip Bay Cover
542	Engine Diaphragm, +X Side
543	Subfloor, -Y Side, at Eng Well Th Shield, Aps Fuel TK Compt
544	Subfloor, -Y Side, in Aps Fuel Tank Compt.
545	Subfloor, -Y Side, in Aps Fuel Tank Compt.
546	Subfloor, Center, at Engine Well Thermal Shield
547	Subfloor, Center, at Engine Well Thermal Shield
548	Subfloor, +Y Side, in Aps Ox. Tank Compt.
549	Subfloor, +Y Side, in Aps Ox. Tank Compt.
550	Struts on RCS Quad -Y, -Z Side (On Aft Equip Bay)
551	Can, RCS Quad, -Y, -Z Side (On Aft Equip Bay)
552	Valve and Injector, RCS Quad, -Y, -Z Side (Aft Eq. Bay)(4)
553	Struts on RCS Quad, +Y, -Z Side (On Aft Equip Bay)
554	Can, RCS Quad, +Y, -Z Side (On Aft Equip Bay)

Node No.Description

555 Valve and Injector, RCS Quad, +Y, -Z Side (Aft Eq. Bay)(4)
556 Structural Support Aft Equip Bay
557 Subfloor, Fwd Cabin Area
558 Subfloor, Fwd Cabin Area
560 Subfloor, +Y Side, at Eng Well Th Shield, Aps Ox. Tk Com
565 Structure, Aft Equip Bay
575 Structure, Aft Equip Bay
576 Struct. Beam, Connects -Z27 Bulkhd to Aft Bay Equip Rack
577 Struct. Beam, Connects -Z27 Bulkhd to Aft Bay Equip Rack
578 Struct. Frame, Aft Bay Equip Rack, Coldplates
579 Struct. Frame, Aft Bay Equip Rack, Coldplates
580 Struct. Frame, Aft Bay Equip Rack, Coldplates
581 Struct. Beam, Connects -Z27 Bulkhd to Aft Bay Equip Rack
582 H2O Boiler, -Z27 Bulkhead Top
584 Inner Mylar, Aps Fuel Tank Compt.
589 Struct. Beam, Equip Rack-RCS Struts, Aft Equip Bay, -Y Side
590 Struct. Frame, Aft Bay Equip Rack, Coldplates
591 Struct. Frame, Aft Bay Equip Rack, Coldplates
592 Struct. Frame, Aft Bay Equip Rack, Coldplates
593 Struct. Beam, Equip Rack-RCS Struts, Aft Equip Bay, +Y Side
594 Engine Diaphragm, -X Side
600 Outer Skin, Aft Equip Bay, Top
601 Inner Mylar, Aft Equip Bay, Top
603 Inner Mylar, Aft Equip Bay, -Y Side
604 Outer Skin, Aft Equip Bay, +Y Side
605 Inner Mylar, Aft Equip Bay, -Y Side
606 Cover, +Y Aft RCS
607 Outer Skin, Aft Equipment Bay, +Y Side
608 Outer Skin, Aft Equipment Bay, -Y Side
609 Inner Mylar, Aft Equip Bay, -Y Side (Exact Loc. Unknown)
611 Inner Mylar, Aft Equip Bay, -Y, -X Side
612 Cover, -Y RCS
613 Inner Mylar, Aft Equip Bay, -Y, -X Side
614 Outer Skin, Aft Equip Bay, Bottom
615 Inner Mylar, Aft Equip Bay
617 Inner Mylar, Aft Equip Bay
619 Inner Mylar, Aft Equip Bay
620 Outer Skin, Aft Equipment Bay, -Y Side
621 Inner Mylar Aft Equip Bay Section
622 Cover, -Y RCS
623 Cover, +Y RCS
625 Inner Mylar Aft Equip Bay Section
626 Outer Skin, Aft Equipment Bay, -Z
627 Inner Mylar Aft Equip Bay Section
629 Struct. Bar, Connects Aft Bay Eq. Rack to -Z27 Bulkhd (-Y)
630 Struct. Bar, Connects Aft Bay Eq. Rack to -Z27 Bulkhd (-Y)
631 Struct. Bar, Connects Aft Bay Eq. Rack to -Z27 Bulkhd (-Y)
632 Struct. Bar, Connects Aft Bay Eq. Rack to -Z27 Bulkhd (+Y)
633 Struct. Bar, Connects Aft Bay Eq. Rack to -Z27 Bulkhd (+Y)
634 Struct. Bar, Connects Aft Bay Eq. Rack to -Z27 Bulkhd (+Y)
635 PQGS, Elect Equip, Aft Equip Bay
636 RRE, Elect Equip, Aft Equip Bay
637 SCEA, Elect Equip, Aft Equip Bay
638 PCM Elect Equip, Aft Equip Bay
639 SCEA, Elect Equip, Aft Equip Bay

Node No.Description

640 ECA, Elect Equip, Aft Equip Bay
641 Batt, Elect Equip, Aft Equip Bay
642 Batt, Elect Equip, Aft Equip Bay
643 ECA, Elect Equip, Aft Equip Bay
644 CWE, Elect Equip, Aft Equip Bay
645 INVL, Elect Equip, Aft Equip Bay
646 ATCA, Elect Equip, Aft Equip Bay
647 INV2, Elect Equip, Aft Equip Bay
648 AEA, Elect Equip, Aft Equip Bay
649 -Z27 Bulkhead, Bottom Section
652 S-PB, Elect Equip, Aft Equip Bay
653 S-BX, Elect Equip, Aft Equip Bay
654 SP, Elect Equip, Aft Equip Bay
655 TLE, Elect Equip, Upstream Elect
671 -Z27 Bulkhead, Top Section
680 Struct. Panel Or Shelf for HE and GOX tanks, Aft Eq. Bay
681 NO Chamber, RCS Engine Quad, -Y, -Z Side (4)
682 Skirt, RCS Engine Quad, -Y,-Z Side (4)
683 MO Chamber, RCS Engine Quad, +Y, -Z Side (4)
684 Skirt, RCS Engine Quad, +Y, -Z Side (4)
685 Struts, RCS Engine Quad, +Y, +Z Side
686 Can, RCS Engine Quad, +Y, +Z Side
687 Valve + Inj, RCS Engine Quad, +Y, +Z Side
688 MO Chamber, RCS Engine Quad, +Y, +Z Side
689 Skirt, RCS Engine Quad, +Y, +Z Side
690 Struts, RCS Engine Quad, -Y, +Z Side
691 GOX Tank, Aft Equip Bay, Middle
692 HE Tank, Aft Equip Bay, -Y Side
693 HE Tank, Aft Equip Bay, +Y Side
694 Can, RCS Engine Quad, +Y, +Z Side
695 Valve + Inj, RCS Engine Quad, +Y, +Z Side
696 MO Chamber, RCS Engine Quad, +Y, +Z Side
697 Skirt RCS Engine Quad, +Y, +Z Side
700 Main Fuel Tank, -Y Side Aps Fuel Tank Compt.
701 Main Ox. Tank, +Y Side Aps OX. Tank Compt.
702 RCS Ox. Tank, -Y, +X Side
703 RCS Fuel Tank, -Y, +X Side
704 Valves, RCS Ox.-RCS Fuel, -Y, +X Side
705 HE Tank, RCS, -Y, +X Side
706 RCS Fuel Tank, +Y, +X Side
707 RCS Ox. Tank, +Y, +X Side
708 HE Tank, RCS, +Y, +X Side
709 Valves, RCS Ox.-RCS Fuel, +Y, +X Wide
710 Outer Skin, Aps Ox. Tank Compt, +Y Side
711 Inner Mylar, Aps Ox. Tank Compt, +Y Side
712 Outer Skin, Aps Ox. Tank Compt, +Y Side
713 Inner Mylar, Aps Ox. Tank Compt, +Y Side
714 Outer Skin, Aps Ox. Tank Compt, +Y Side, Top
715 Panel, Docking Tunnel to -Z27 Bulkhead, Top
716 Outer Skin, Aps Main Fuel Tank Compt, -Y Side
717 Inner Mylar, Aps Main Fuel Tank Compt, -Y Side

Node No.Description

719	Inner Mylar, -Y Midsection
721	Inner Mylar, APS Ox. Tank Compt; +Y Side
723	Inner Mylar, APS Ox. Tank Compt, +Y Side
725	Inner Mylar, APS Ox. Tank Compt, +Y Side, Bottom
726	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
727	Inner Mylar, APS Ox. Tank Compt, +Y Side
728	Truss, APS Main Fuel Tank Support to Fwd Cabin (-Y Side)
729	-Z27 Bulkhead, -X, +Y Section
730	Structural Beam, Outside Cabin Wall, in APS Fuel Tk Comp
731	Structural Beam, Outside Cabin Wall, in APS Ox. Tank Comp
732	Outer Skin, +Y FWD Tank Bay
733	Engine Well Thermal Shield, Cabin Floor Area
734	Structural Beam, Outside Cabin Ceiling, -Y Side
735	Structural Beam, Outside Cabin Ceiling, +Y Side
736	Outer Skin, +Y Midsection
737	Outer Skin, +Y Midsection
738	Outer Skin, +Y Tank Bay
739	Outer Skin, +Y Tank Bay
740	Truss, APS Main Fuel Tank Support to Fwd Cabin (-Y Side)
741	Truss, APS Main Fuel Tank Support to +Z27 Bulkhd, -Y Side)
742	Truss, APS Main Fuel Tank Support to +Z27 Bulkhd, -Y Side)
743	Attachment Point, Main Ox. Tank to +Z27 Bulkhead
744	Attachment Point, Main Ox. Tank to -Z27 Bulkhead
745	Struct. Beam, +X, -Y Side
746	Struct. Beam, +X,+Y Side
747	Struct. Beam, +Z27 Bulkhead, Top
748	Outer Skin, APS Fuel Tank Compt, -Y Side
749	Struct. Beam, +Z27 Bulkhead, Top
750	Outer Skin, APS Ox Tank Compt, +Y Side
751	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
753	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
754	Outer Skin, APS Main Fuel Tank Compt, -Y Side
755	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
756	Outer Skin, APS Main Fuel Tank Compt, -Y Side
757	Outer Skin, APS Main Fuel Tank Compt, Exact Loc. Unknown
758	Outer Skin, APS Main Fuel Tank Compt, -Y Side
759	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
761	Inner Mylar APS Main Fuel Tank Compt, -Y Side
763	Struct. Beam, -Z27 Bulkhead, -Y Side
764	Outer Skin, +Y Tank Bay
765	Struct. Beam, -Z27 Bulkhead, -Y,+X Side
766	Outer Beam at -Z27 Bulkhead, -Y,+X Side
767	Struct. Beam, -Z27 Bulkhead, +Y,+X Side
768	Outer Beam at -Z27 Bulkhead, +Y,+X Side
769	Struct. Beam, Below Cabin Floor, +Y Side
770	Struct. Beam, Below Cabin Floor, -Y Side
771	H2O Tank, Top of APS Ox Tank Compt, +Y Side
772	H2O Tank, Top of APS Main Fuel Tank Compt, -Y Side
773	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
774	Outer Skin, APS Main Fuel Tank Compt, -Y Side

<u>Node No.</u>	<u>Description</u>
775	Inner Mylar, APS Ox Tank Compt, +Y Side
776	Outer Skin, APS Ox Tank Compt, +Y Side
777	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
778	Outer Skin, APS Main Fuel Tank Compt, -Y Side
779	Inner Mylar, APS Ox Tank Compt, +Y Side
780	Outer Skin, APS Ox Tank Compt, +Y Side
781	Inner Mylar, APS Main Fuel Tank Compt, -Y Side
782	Outer Skin, APS Main Fuel Tank Compt, -Y Side
783	Attachment Point, Main Fuel Tank to +Z27 Bulkhead
784	Attachment Point, Main Fuel Tank to -Z27 Bulkhead
785	Strut, -Z27 Bulkhd to Main Fuel Tank Attachment Pt.
786	Command Module Simulator
787	Command Module Simulator
788	Outer Skin, -Y Midsection
789	Outer Skin, -Y Midsection
790	Outer Skin, -Y Tank Bay
791	Outer Skin, -Y Tank Bay
792	Outer Skin, -Y Tank Bay
793	Outer Skin, -Y Tank Bay
794	Outer Skin, -Y Tank Bay
795	Outer Skin, -Y Tank Bay
796	Outer Skin, -Y Tank Bay
797	Outer Skin, Lower Midbody
798	Strut, -Z27 Bulkhd to Main Fuel Tank Attachment Pt.
799	Outer Beam at -Z27 Bulkhead, Top
801	+Y Tank Thermal Shield
802	Inner Mylar, Aft Equip Bay Cover, +Y Side
805	Inner Mylar, Aft Equip Bay Cover, Back
809	RCS Plume Deflector - Quad I
810	Tracking Light Electronics, +Z
811	RCS Plume Deflector - Quad II
812	RCS Plume Deflector - Quad III
813	RCS Plume Deflector - Quad IV
814	ARS Frame
815	ARS Frame
816	ARS Frame
817	ARS Frame
818	ARS Frame
819	ARS Frame
820	ARS Frame
821	ARS Frame
822	ARS Frame
823	ARS Frame
824	ARS Frame
825	ARS Frame
826	ARS Frame
827	ARS Frame
828	ARS Frame
829	ARS Frame
830	ARS Frame
831	ARS Frame
832	ARS Frame
833	ARS Frame

<u>Node No.</u>	<u>Description</u>
834	ARS Frame
835	ARS Frame
836	ARS Frame
837	ARS Frame
838	ARS Frame
839	ARS Frame
840	ARS Frame
841	ARS Frame
842	ARS Frame
843	ARS Frame
844	ARS Frame
845	ARS Frame
846	ARS Frame
847	ARS Frame
848	ARS Frame
849	ARS Frame
850	ARS Frame
851	ARS Frame
852	ARS Frame
853	ARS Frame
854	ARS Frame
855	ARS Frame
856	ARS Frame
857	ARS Frame
858	Crewman No. 1 Suit, Helmet
859	Crewman No. 1 Suit, Trunk
860	Crewman No. 1 Suit, Extremity
861	Crewman No. 2 Suit, Helmet
862	Crewman No. 2 Suit, Trunk
863	Crewman No. 2 Suit, Extremity
864	Crewman No. 1 Interior Suit, Helmet
865	Crewman No. 1 Interior Suit, Trunk
866	Crewman No. 1 Interior Suit, Extremity
867	Crewman No. 1 Exterior Suit, Helmet
868	Crewman No. 1 Exterior Suit, Trunk
869	Crewman No. 1 Exterior Suit, Extremity
870	Crewman No. 2 Interior Suit, Helmet
871	Crewman No. 2 Interior Suit, Trunk
872	Crewman No. 2 Interior Suit, Extremity
873	Crewman No. 2 Exterior Suit, Helmet
874	Crewman No. 2 Exterior Suit, Trunk
875	Crewman No. 2 Exterior Suit, Extremity