

# TABLE OF CONTENTS

## PTO Section

Features & Benefits of Our PTO's	4-5
Suggested PTO Percentages	6
New PTO & Pump Installation Requirements	7
Replacement PTO Requirements	8
Replacement Pump Requirements	8
Replacement Pump Measurements	9
Typical 02 Series PTO Identification	10
Typical 06 Series PTO Identification	11
Typical 08 Series PTO Identification	12
Typical 10 Series PTO Identification	13
Wa06/08, Parts Breakdown	14-15
"Build Your Own PTO Kit" Program	16-17
Wa10 Series Parts Breakdown	18-19
Control Tower Combo Kits	20
Control Tower (Consoles), Replacement PTO & Dump Pump Control Valve Installation Kits	20
Shifter Conversion Kits, Seal Kits, Popular PTO Stud Kits	20
PTO Gaskets & Shims	21
Replacement Cab Control Valves For PTO's & Dump Pumps	21
Air Protection Valve Kit	21
Push/Pull Cables	22
Replacement Indicator Light Parts, Indicator Light Kit	23
PTO Driveline Parts, PTO Shaft Assemblies	23-24
U-Joints For PTO's	23
PTO Yokes, Slip Yokes For PTO's	24

## Hydraulic Section

Hydraulic Dump Pump G101, G102	26
Wak20b Series Universal Replacement Gear Pumps	27
Wal51b Series Universal Replacement Gear Pumps	28
Muncie® -Type To World American® Pump Crossover	29
Low Speed High Torque Motors	30
Dump Pump Seal Kits, Combo Dump / Walking Floor Pump	31
Dry Valve Pump, Dry Valve Pump Valve	31
Replacement Dump Pump Air Shift Cylinder, Dump Pump Support Brackets	32
Replacement Reservoir Filler Cap	32
Hydraulic Oil Reservoirs, Reservoir Strap Kits, Hose Kits	33
Filter Assemblies, Replacement Filter Parts	34
Quick Connect Coupler, Nipples, Ball Valve, Elbows	35
Sectional Valve Kits	36-38
Inlets	36
Reliefs	36
Outlets	36
Work Sections (Lo-Boy)	36
Work Sections (Hi-Boy)	37
Handle Kits	37
Stud Kits	37
Spools	37
Port Relief Valve	38
Spool Actuation Kits	38
Plugs	38
Seal Kits	38
Hydraulic Cylinder Kits	39-41
Major Packing Kits	39
Seal Kits	39
Packing And Wiper Kits	40
Minor Repair Kits (Custom Hoist Style Only)	40
Replacement Hydraulic Cylinders	41

# TABLE OF CONTENTS

## Hydraulic Section (Continued)

Wa101/102 Dump Pump Parts Breakdown .....	42-43
P20 Repair And Rebuild Kits .....	44
P30 Repair And Rebuild Kits .....	44
P50 & P51 Repair And Rebuild Kits .....	45
Wal20 Series (P20), Parts Breakdown .....	46-47
Wak51 Series (P50 & 51), Parts Breakdown .....	48-49

## Technical Section

Chelsea® -Type To World American® Interchange .....	51
Muncie® -Type To World American® Interchange.....	52
Power Transmission Options® -Type (P.t.o.) To World American® Interchange.....	53
Pto Single Control Air & Electrical Installation Guide .....	54
Pto & Pump Dual Control Air & Installation Guide .....	54
Hot Shift Pto Electric & Hydraulic Installation Guide.....	55
2-Line Hydraulic Hose Installation Schematic.....	56
3-Line Hydraulic Hose Installation Schematic.....	56
Walking Floor Hydraulic Schematic.....	57
Combination Walking Floor/Dump Trailer Hydraulic Schematic .....	57
Dump Pump Air Shift Cylinder Installation .....	58-59
Start-U Procedures .....	60
Troubleshooting Guide.....	61
Interchange .....	63-75
Warranty Claim Form.....	76



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# POWER TAKE OFF SECTION

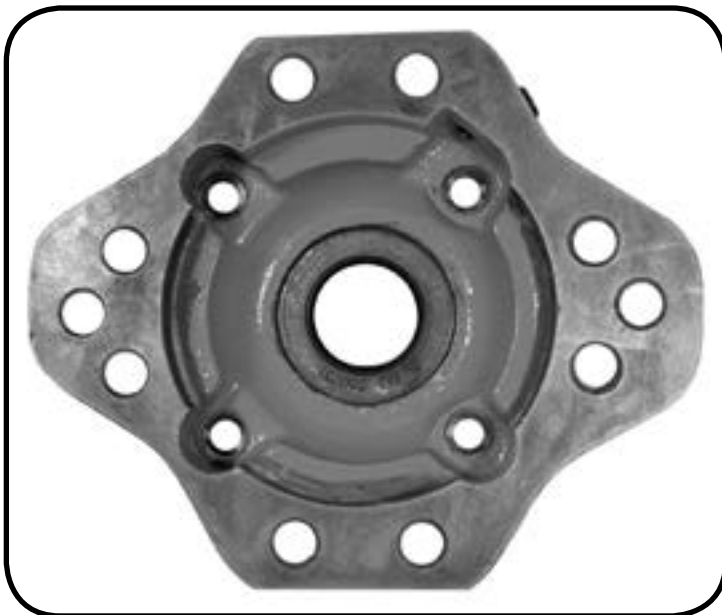
THREAD DIAMETER	GRADE 2	GRADE 5	GRADE 8
1/4"	7 ft-lbs.	10.5 ft-lbs.	15 ft-lbs.
5/16"	11 ft-lbs.	15 ft-lbs.	22 ft-lbs.
3/8"	17 ft-lbs.	24 ft-lbs.	37 ft-lbs.
1/2"	27 ft-lbs.	40 ft-lbs.	60 ft-lbs.
5/8"	43 ft-lbs.	64 ft-lbs.	92 ft-lbs.
3/4"	66 ft-lbs.	96 ft-lbs.	132 ft-lbs.
7/8"	100 ft-lbs.	150 ft-lbs.	220 ft-lbs.
1"	150 ft-lbs.	220 ft-lbs.	330 ft-lbs.
1 1/8"	220 ft-lbs.	330 ft-lbs.	470 ft-lbs.
1 1/4"	330 ft-lbs.	500 ft-lbs.	710 ft-lbs.



# FEATURES & BENEFITS OF WORLD AMERICAN PTO'S

**ALL PARTS ARE 100% INTERCHANGEABLE WITH CHELSEA®**

OUR PTO HOUSING IS MADE OF CAST IRON WITH AN INCREASED MOUNTING FLANGE RADIUS FOR HEAVY DUTY APPLICATIONS.



WORLD AMERICAN USES A CAST IRON ROTATABLE FLANGE WITH TAPPED HOLES MAKES INSTALLING THE PUMP EASIER. THE PLUG AND GASKET ARE INCLUDED TO INCREASE THE LIFE OF THE SPLINES.

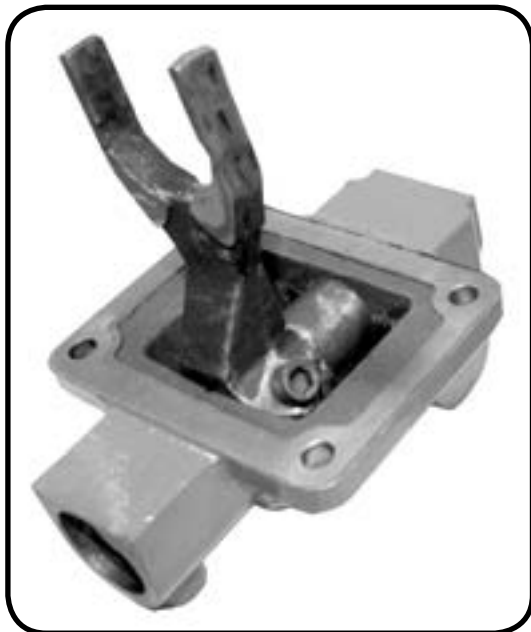


WORLD AMERICAN PTO MOUNTING KIT INCLUDE 2 STUDS TO MAKE INSTALLATION OF THE PTO EASIER.

# FEATURES & BENEFITS OF WORLD AMERICAN PTO'S



**\*WORLD AMERICAN'S IMPROVED HOUSING TO FLANGE CASTING PRODUCES A STRONGER HOUSING.  
\*DEEPER GUSSETS WERE ADDED TO ALLOW FOR EASIER INSTALLATION.**



**\*WORLD AMERICAN USES A CAST IRON SHIFT COVER HOUSING AND STEEL SHIFTING FORK NEARLY ELIMINATE LEAKS AND ENGAGEMENT ISSUES THAT PLAGUE OTHER BRANDS IN THE MARKET.**

# SUGGESTED PTO PERCENTAGES

TYPE OF APPLICATION	PTO%	ENGINE RPM
AERIAL LADDER & PLATFORM	80-130	800-1500
AERIAL BUCKET MAN LIFTS	80-130	800-1200
AERIAL CRANES DIGGER DERRICKS	80-130	800-1200
AUTO CARRIERS	125-210	IDLE
AUTO TOW TRUCKS	90-120	IDLE - 1200
AUTO TOW TRUCKS HEAVY DUTY	90-130	1000 - 1500
<b>AIR COMPRESSORS</b>		
85 FT PER MIN CAPACITY	100	1200 - 2000
125 FT PER MIN CAPACITY	100	1200 - 2000
180 FT PER MIN CAPACITY	100	1200 - 2000
BLOWER PNEUMATIC	150 - 250	1500 - 3500
<b>DUMP BODIES</b>		
SMALL SINGLE AXLE	50 - 80	1000 - 2000
MEDIUM SINGLE - TANDEM	80 - 100	1000 - 2000
LARGE TRI-AXLE	60 - 130	1000 - 2000
DUMP TRAILERS	80 - 130	1000 - 2000
DUMP TRAILERS W/ MOVING FLOOR	80 - 130	1000 - 1800
<b>HYDRAULIC PUMPS</b>		
1 - 15 GPM	80 - 130	IDLE - 3000
16 - 35 GPM	80 - 130	IDLE - 3000
36 + GPM	80 - 130	IDLE - 3000
LIVE FLOOR	80 - 110	1000 - 1800
PRODUCT PUMPS	50 - 70	IDLE - 2000
REFUSE	80 - 130	1000 - 1800
SNOW PLOWS	60 - 90	1000 - 3000
SPREADERS - MECHANICAL	45 - 60	1200 - 2500
SPREADERS - HYDRAULIC	75 - 90	1200 - 2500
TAILGATES	60 - 75	IDLE
WINCHES	80 - 110	IDLE - 1800

*ALWAYS CHECK WITH THE MANUFACTURER FOR CORRECT SPECIFICATIONS.*

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# NEW WET LINE KIT INSTALLATION REQUIREMENTS

## PTO QUESTIONS:

Transmission Make and Model: \_\_\_\_\_

PTO Mounting Location: LH/BOTTOM \_\_\_\_\_ RH \_\_\_\_\_ REAR C/S \_\_\_\_\_

Percentage of Engine Speed Desired: \_\_\_\_\_ % OR, (Desired Engine Operating RPM \_\_\_\_\_) (SEE PG. 4 FOR SUGGESTION)

Shifter Type: Cable Shift \_\_\_\_\_ Air Shift \_\_\_\_\_

Cab Control Required: Yes \_\_\_\_\_ No \_\_\_\_\_

## CAB CONTROLLER:

Type Required: Single (PTO Only) \_\_\_\_\_ Dual W/ Kick Out (PTO / Pump) \_\_\_\_\_ Dual W/O Kick Out (PTO / Pump) \_\_\_\_\_

Control Tower Height Required: 8" \_\_\_\_\_ 10" \_\_\_\_\_ 12" \_\_\_\_\_

## PUMP QUESTIONS:

Duty Application: Dump \_\_\_\_\_ Walking Floor \_\_\_\_\_ Other \_\_\_\_\_

How is the pump mounted: Direct \_\_\_\_\_ Remote \_\_\_\_\_

Shift Type: Air \_\_\_\_\_ Manual \_\_\_\_\_

Flow Requirements: \_\_\_\_\_ GPM

Pressure Required: \_\_\_\_\_ PSI

Location of ports: Side \_\_\_\_\_ Rear \_\_\_\_\_ Both \_\_\_\_\_

Port Sizes Required: Left Side \_\_\_\_\_ Right Side \_\_\_\_\_ Rear Top \_\_\_\_\_ Rear Bottom \_\_\_\_\_

## TANK QUESTIONS:

Tank Size: 50 Gallons \_\_\_\_\_ 70 Gallons \_\_\_\_\_

Mounting: Side (Saddle) \_\_\_\_\_ Upright \_\_\_\_\_

Construction: Steel \_\_\_\_\_ Aluminum \_\_\_\_\_ Plastic \_\_\_\_\_ (50 GAL. UPRIGHT ONLY)

Do you require a shut off valve for the tank? yes \_\_\_\_\_ no \_\_\_\_\_

## HOSE KIT:

Do you require: Yes \_\_\_\_\_ No \_\_\_\_\_

\*Number of Lines in system: 2 \_\_\_\_\_ 3 \_\_\_\_\_

What Length Pressure Hose: \_\_\_\_\_' What Length Suction: \_\_\_\_\_'

If 3 line system, do you require the filter? yes \_\_\_\_\_ no \_\_\_\_\_

If yes, what filter do you want? 10 micron \_\_\_\_\_ 25 micron \_\_\_\_\_

**\*WE RECOMMEND A 3-LINE SYSTEM FOR LONGER LASTING SYSTEMS.**

# REPLACEMENT PTO REQUIREMENTS

Model number from existing unit \_\_\_\_\_

Transmission Make and Model: \_\_\_\_\_

P.T.O. Mounting Location: LH / Bottom \_\_\_\_\_ RH \_\_\_\_\_ Rear Countershaft \_\_\_\_\_

Percentage of Engine Speed Desired: \_\_\_\_\_%

Type of Output shaft: Round 1-1/4 Keyed \_\_\_\_\_ Splined \_\_\_\_\_

If splined how many? \_\_\_\_\_

Shifter type: Cable Shift \_\_\_\_\_ Air Shift \_\_\_\_\_

Cab Controller Required: Yes \_\_\_\_\_ No \_\_\_\_\_

## REPLACEMENT PUMP REQUIREMENTS

Model number from existing unit \_\_\_\_\_

Duty Application: Dump \_\_\_\_\_ Walking Floor \_\_\_\_\_ Other \_\_\_\_\_

\*Pump Shifter Type: Manual Shift \_\_\_\_\_ Air Shift \_\_\_\_\_

\*Flow Required: \_\_\_\_\_ GPM

\*Pressure Required: \_\_\_\_\_ PSI

\*How is the pump mounted: Direct \_\_\_\_\_ Remote \_\_\_\_\_

\*Rotation: Left (CCW) \_\_\_\_\_ Right (CW) \_\_\_\_\_

Number of bolt holes on Flange: Two \_\_\_\_\_ Four \_\_\_\_\_

Bolt Hole Center to Center (Fig.1): A \_\_\_\_\_ Inches B \_\_\_\_\_ Inches

Type of Input: Round \_\_\_\_\_ Splined \_\_\_\_\_ if splined how many \_\_\_\_\_

Shaft Diameter: \_\_\_\_\_

Pilot size (Fig. 1): \_\_\_\_\_ inches

Rear Housing Cover (Fig. 2): \_\_\_\_\_ inches

Main Body (Fig. 3): \_\_\_\_\_ inches

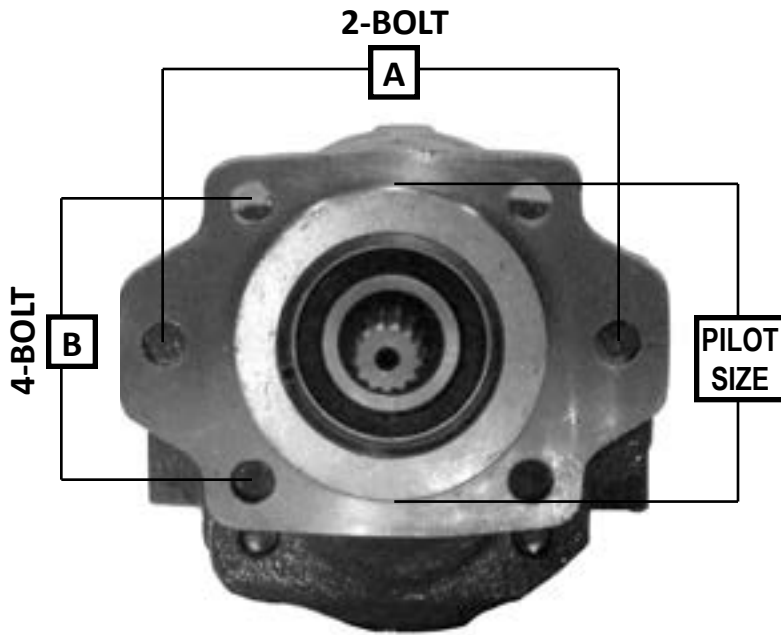
Location of ports: Side \_\_\_\_\_ Rear \_\_\_\_\_ Both \_\_\_\_\_

Port Sizes Required: Left Side \_\_\_\_\_ Right Side \_\_\_\_\_ Rear Left \_\_\_\_\_ Rear Right \_\_\_\_\_

**\*Stop here if working on a Dump Pump**



# REPLACEMENT PUMP MEASUREMENTS

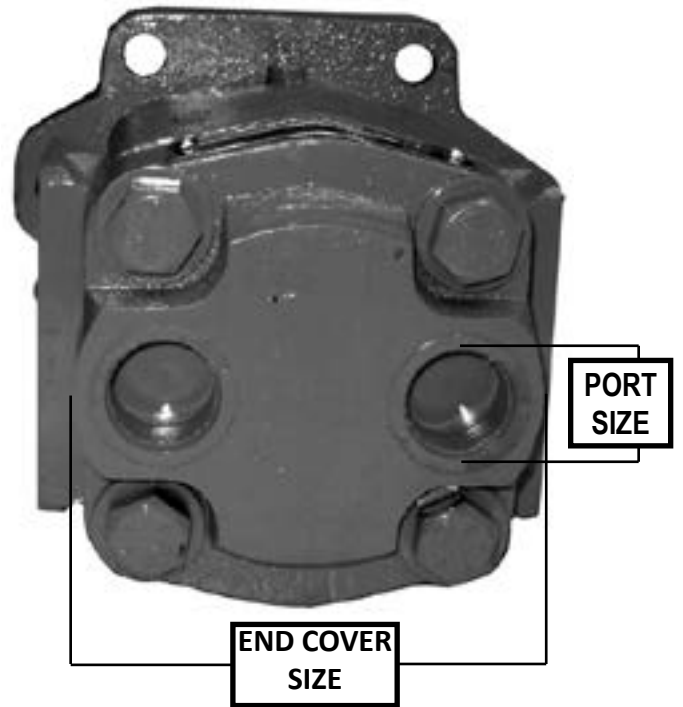


**FRONT (fig.1)**

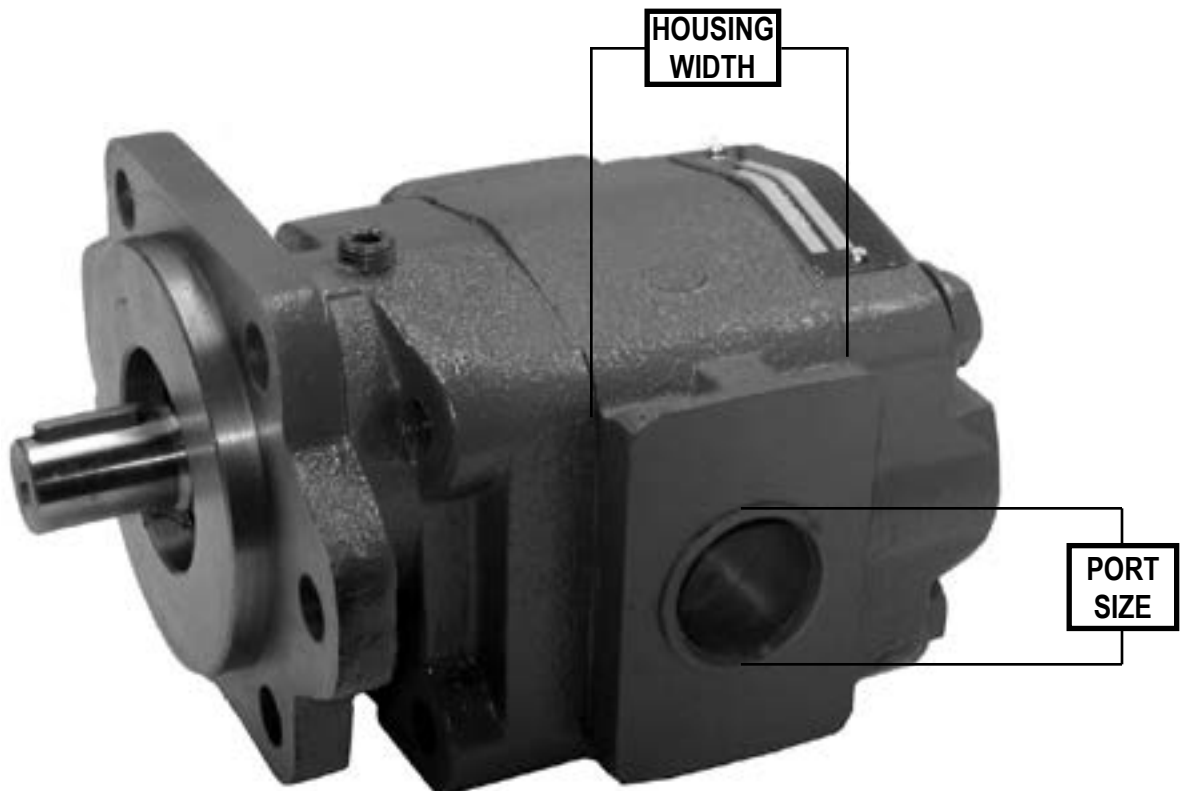
*MAIN BODY DOWN  
FACING SHAFT*

LEFT

RIGHT

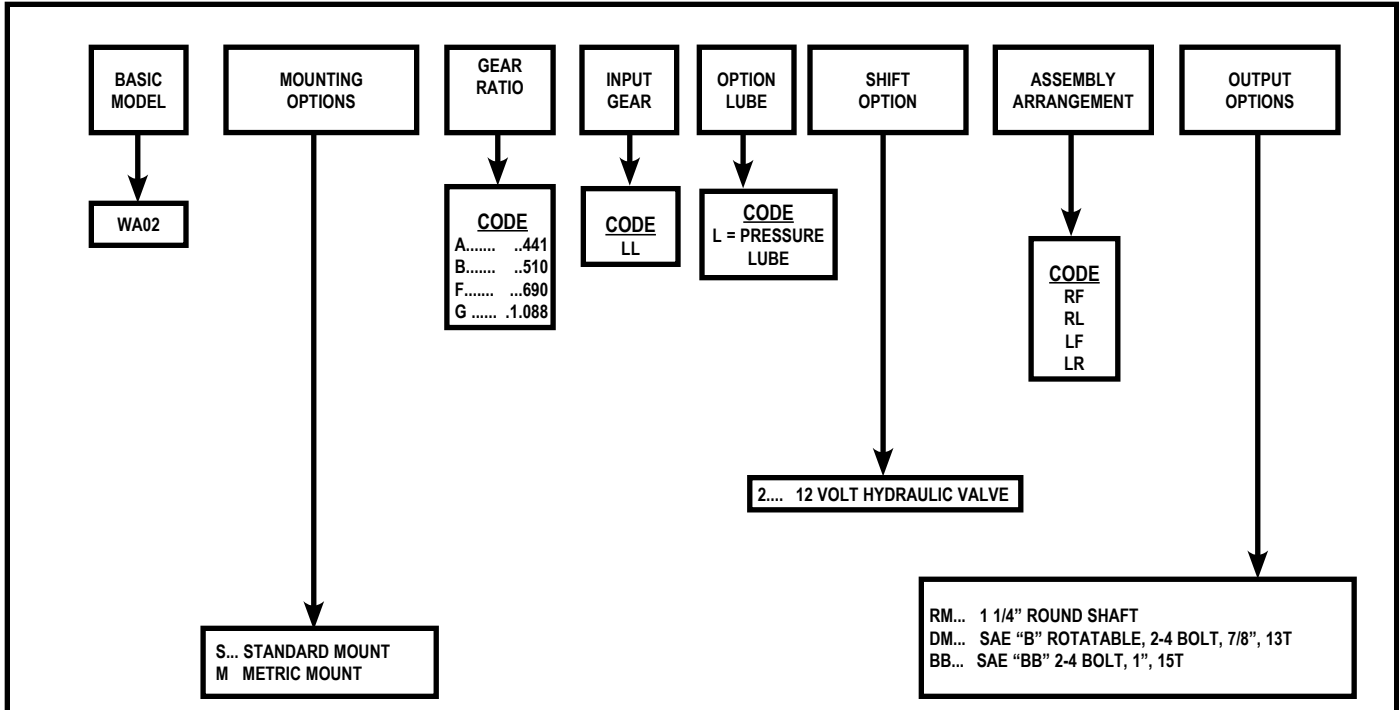


**BACK (fig. 2)**



**SIDE (fig. 3)**

# SIX BOLT CLUTCH SHIFT PTO: WAO2-MODEL

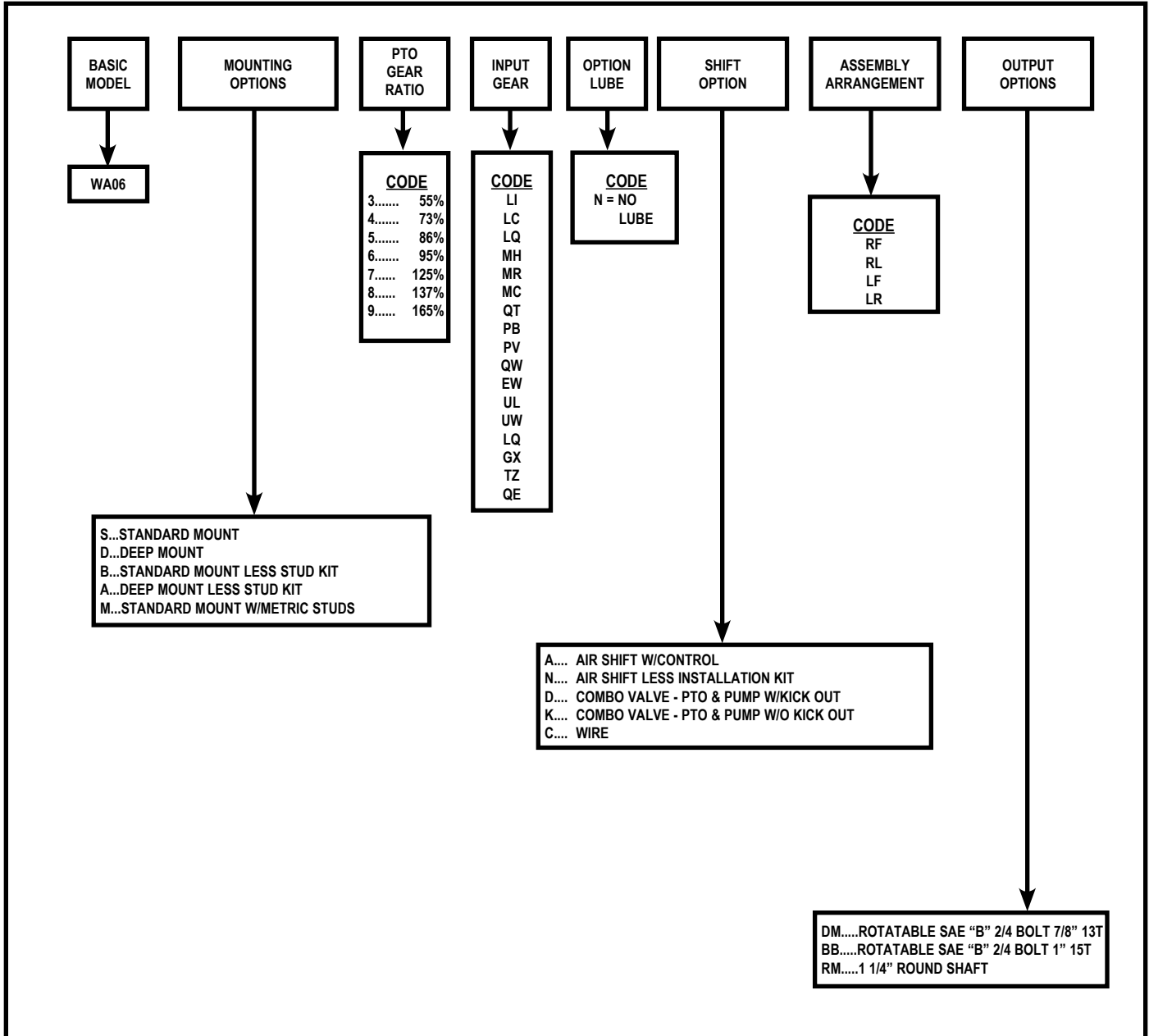


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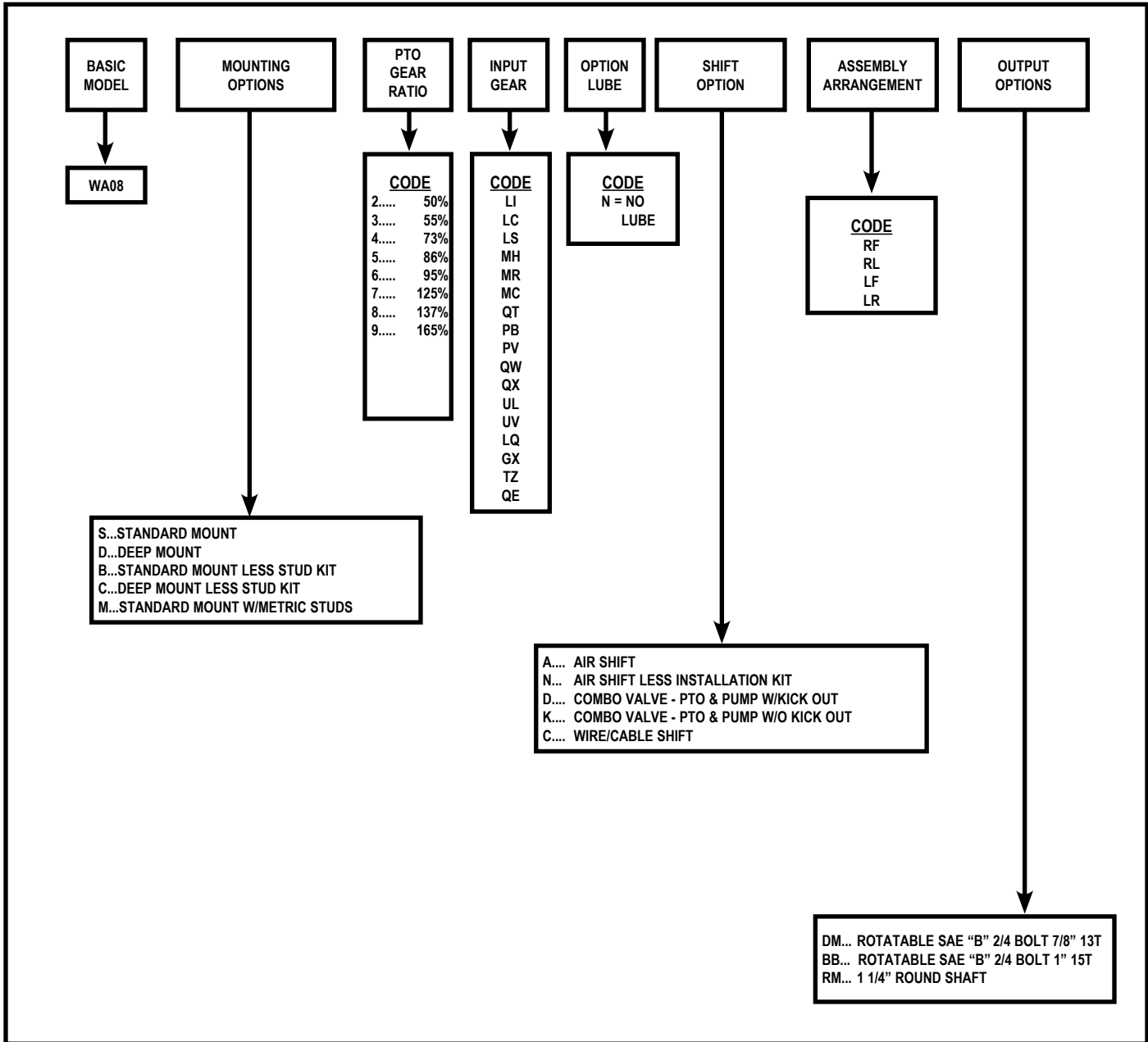
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# TYPICAL SIX BOLT PTO: WA06-MODEL



# TYPICAL EIGHT BOLT PTO: WA08-MODEL

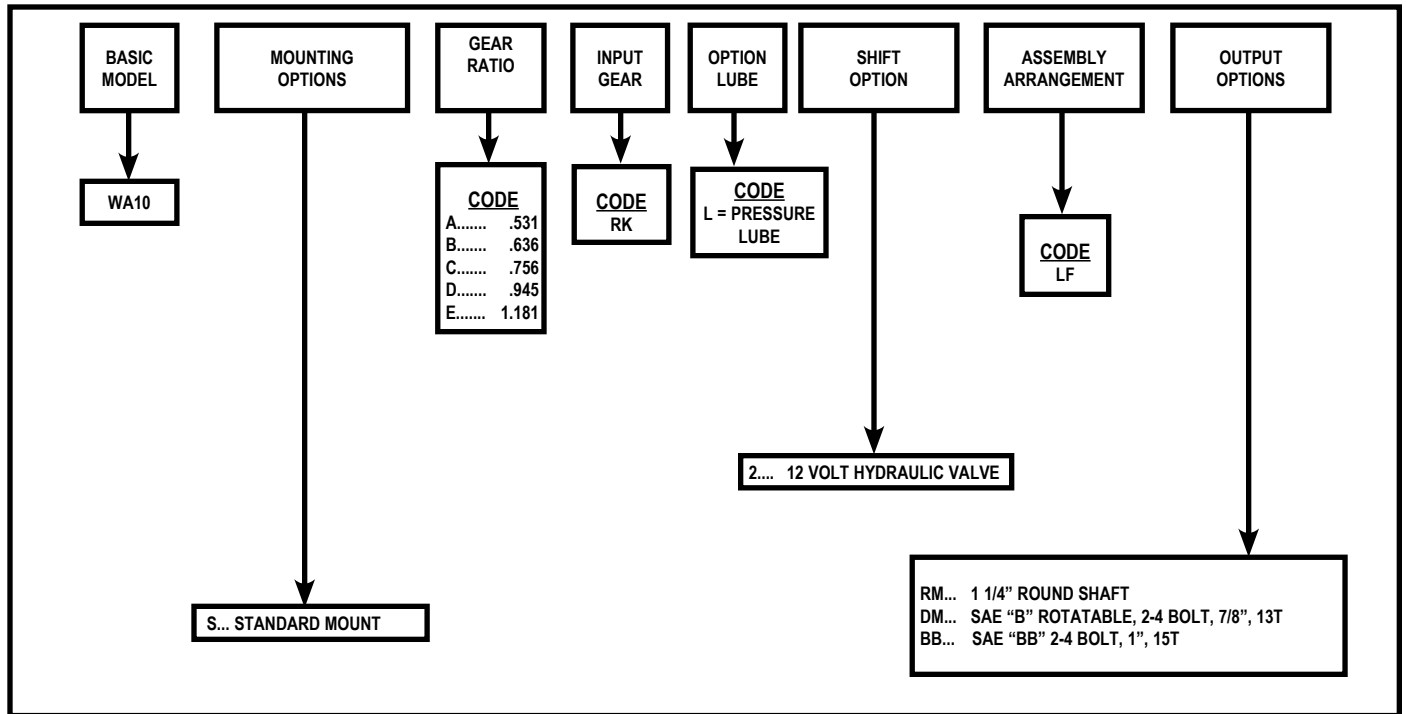


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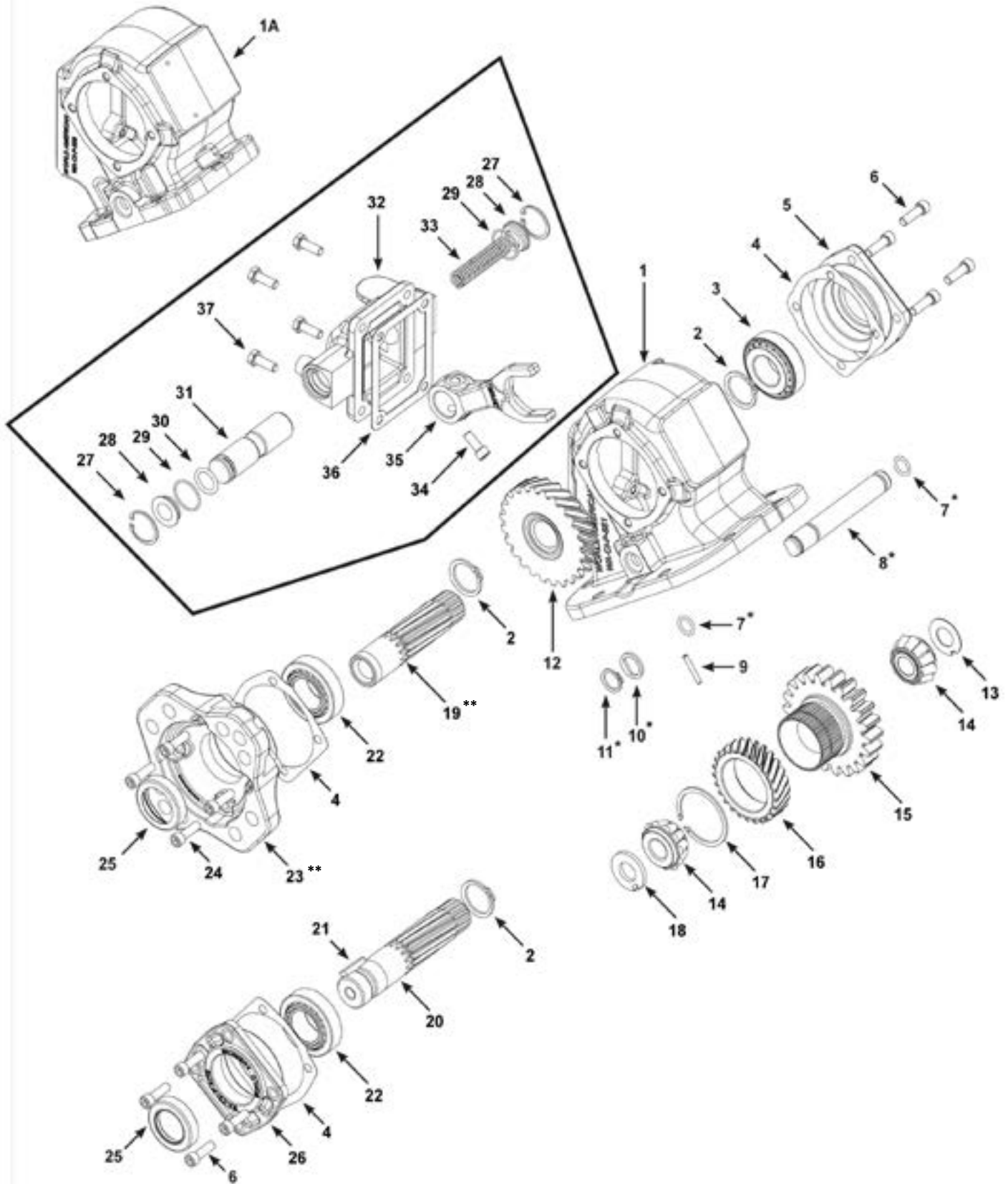
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# TEN BOLT CLUTCH SHIFT PTO: WA10-MODEL



**800.934.2727**

# WA06 / 08 Series Breakdown



# WA06 / 08 Series Breakdown

ITEM#	WA PART#	QTY	DESCRIPTION	REPLACES CHELSEA® REF #'s
1	WA20-03-1004	1	8 Bolt Standard Mount Housing	1P552X
1A	WA20-03-1005	1	6 Bolt standard Mount Housing	1P557X
N.I.	WA20-03-1006	1	6 Bolt Deep Mount Housing	1P558X
N.I.	WA20-03-1007	1	8 Bolt Deep Mount Housing	1P562X
2	WA20-03-1028	2	Snap Ring	378391
3	WA20-03-1031	1	Bearing	550532
4	SEE CHART 1	A/R	End Cover Gasket	CHART 1
5	WA20-03-1064	1	End Cover	328274X
6	WA20-03-1035	A/R	Cap Bolts	378430-10
7*	WA20-03-1036	2	O-ring	28P191
8*	WA20-03-1025	1	Idler Shaft	9P88
9	WA20-03-1049	1	Dowel Pin	500597-16
10*	WA20-03-1058	1	D Washer	WA28P99
11*	WA20-03-1076	1	Snap Ring	WA378000
12	See Chart 3	1	Lower Ratio Gear	CHART 3
13	WA20-03-1026	1	Thrust Washer	31P102
14	WA20-03-1042	2	Bearing	550439
15	See Below list	1	Input Gear	see below
16	SEE CHART 3	1	Upper Ratio Gear	CHART 3
17	WA20-03-1069	1	Snap Ring	379522
18	SEE CHART 2	A/R	Washer	CHART 2
19	WA20-03-1021*	A/R	7/8" 13 SPLINE Output Shaft DM	3P282
20	WA20-03-1022	A/R	1.25" Round Keyed Output Shaft	3P202
21	WA20-03-1045	A/R	Woodruff Key	500007-29
22	WA20-03-1046	1	Bearing	550397
23	WA20-03-1063	A/R	Direct Mount XK Flange	328333X
24	WA20-03-1037	4	"XK" Flange Mounting Bolts	378430-8
25	WA20-03-1040	1	Seal	28P216
26	WA20-03-1034	A/R	Remote Mount XD cover	328273X
27-35	WA20-03-1030	1	Air Shift Cover - All Position	329361X
N.I.	WA20-03-1070	A/R	Wire Shift Cover, ratios 5,9,0 positions RF & LR	329119-1X
N.I.	WA20-03-1074	A/R	Wire Shift Cover, ratios 5,9,0 positions RR & LF	329119-2X
N.I.	WA20-03-1067	A/R	Wire Shift Cover, ratios 3,4,6,7,8 positions RF&LR	329121-1X
N.I.	WA20-03-1091	A/R	Wire Shift Cover, ratios 3,4,6,7,8 positions RR&LF	329121-2X
36	WA20-03-1038	1	Top Cover Gasket	35P8
37	WA20-03-1039	4	Top Cover Bolts	378430-9
N.I.	WA20-03-1051	2	End Cover Races	550221
N.I.	WA091	1	Flange to Pump Gasket	

INCLUDED WITH IDLER PIN.

\*\* TO REPLACE THE CHELSEA® 2 PIECE OUTPUT SHAFT 3P283, 21P573 AND 21P571 YOU MUST REPLACE THE FLANGE AND SHAFT WITH A WAXK CONVERSION KIT.

INPUT GEAR LIST			
INPUT GEAR CODE	WA# PART #	INPUT GEAR LIST	REPLACES CHELSEA® REF #'s
LI	WA20-03-1008	Universal Input Gear for Ratios 4,5,6,7,8,9,0	5P1004 AH
3LI	WA20-03-1013*	Universal Input Gear for Ratios 3	See Chart 3
PB	WA20-03-1033	Mack Input Gear for ratios 4,5,6,7,8,9,0	5P1037 DA
3PB	WA20-03-1010	Mack input Gear with 3 ratios	See Chart 3
LS	WA20-03-1072	Spicer Input Gear for ratios 4,5,6,7,8,9,0	5P1008 AR
LQ	WA20-03-1073	Spicer Input Gear for ratios 4,5,6,7,8,9,0	5P1006 AP
LY	WA20-03-1124	Fuller Input Gear for ratios 4,5,6,7,8,9,0	5P1010 AX
MH	WA20-03-1081	Spicer Input Gear for ratios 4,5,6,7,8,9,0	5P1015 BG
MR	WA20-03-1082	Chevy & Spicer Input Gear for ratios 4,5,6,7,8,9	5P1023 BQ
QE	WA20-03-1125	ZF Input Gear for ratios 4,5,6,7,8,9,0	5P1056 ED
QT	WA20-03-1032	Fuller Input Gear for ratios 4,5,6,7,8,9,0	5P1059 ES
QW	WA20-03-1075	Fuller Input Gear for ratios 4,5,6,7,8,9,0	5P1060 EV
RP	WA20-03-1084	Spicer Input Gear for ratios 4,5,6,7,8,9,0	5P1070 FN
TZ	WA20-03-1065	ZF Input Gear for ratios 4,5,6,7,8,9,0	5P1237 HY
UL	WA20-03-1123	Fuller Input Gear for ratios 4,5,6,7,8,9,0	5P1261 JK

CHART 1		
WA PART#	DESCRIPTION	REPLACES CHELSEA® REF #

WA20-03-1027	0.010" GASKET	22P24-1
WA20-03-1041	0.020" GASKET	22P24-2
WA20-03-1126	0.032" GASKET	22P24-3

CHART 2		
WA PART#	DESCRIPTION	REPLACES CHELSEA® REF #

WA20-03-1029	THRUST WASHER	14P73-1
WA20-03-1132	THRUST WASHER	14P73-2
WA20-03-1133	THRUST WASHER	14P73-3
WA20-03-1143	THRUST WASHER	14P73-4
WA20-03-1135	THRUST WASHER	14P73-5

CHART 3		
RATIO CODE	PART NUMBER	REPLACES CHELSEA® REF#'S

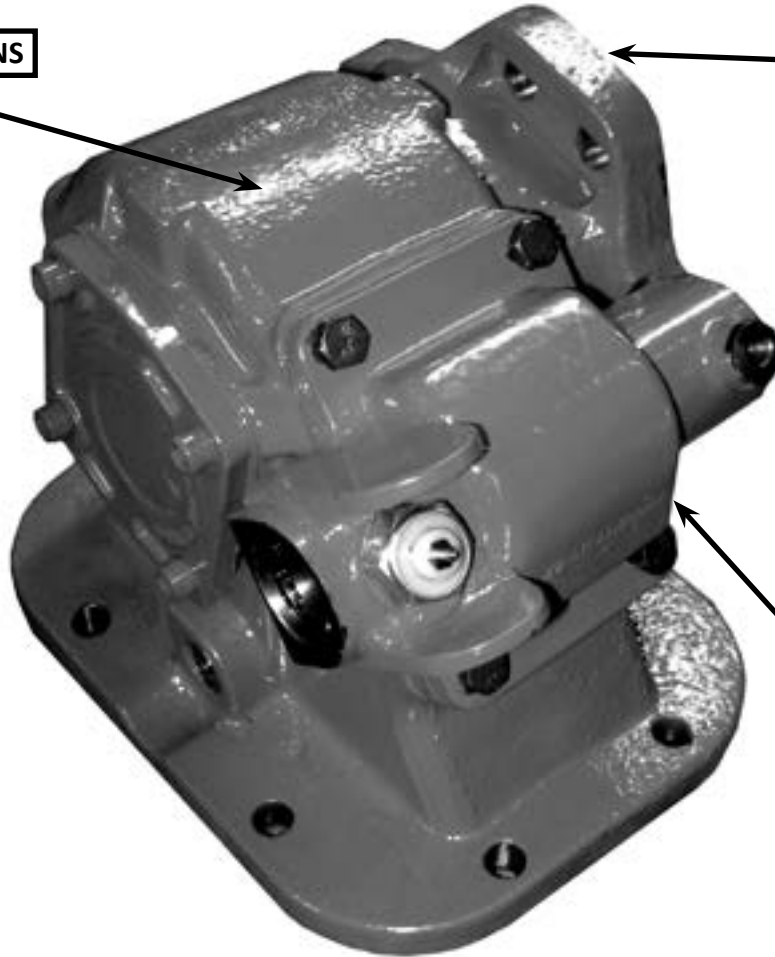
3LI	WA20-03-1013 (ABOVE CONTAINS) WA20-03-1016 WA20-03-1014	FAH 5P1077 2P726
3PB	WA20-03-1010 (ABOVE CONTAINS) WA20-03-1083 WA20-03-1014	FDA 5P1085 2P726
4	WA20-03-1009 (ABOVE CONTAINS) WA20-03-1088 WA20-03-1017	L 5P964 2P727
5	WA20-03-1012 (ABOVE CONTAINS) WA20-03-1015 WA20-03-1011	Q 5P965 2P559
6	WA20-03-1127 (ABOVE CONTAINS) WA20-03-1109 WA20-03-1011	R 5P1214 2P559
7	WA20-03-1003 (ABOVE CONTAINS) WA20-03-1113 WA20-03-1103	S 5P966 2P637
8	WA20-03-1092 (ABOVE CONTAINS) WA20-03-1114 WA20-03-1101	U 5P967 2P560
9	WA20-03-1128 (ABOVE CONTAINS) WA20-03-1115 WA20-03-1102	W 5P968 2P561
0	WA20-03-1139 (ABOVE CONTAINS) WA20-03-1129 WA20-03-1130	X 5P969 2P728



# WORLD AMERICAN BUILD YOUR OWN PTO KIT PROGRAM

PTO HOUSING OPTIONS

OUTPUT SHAFT ASSEMBLY OPTIONS



SHIFT COVER OPTIONS

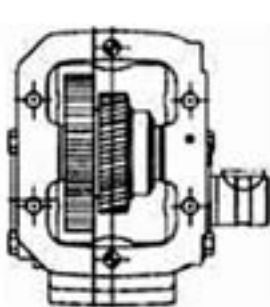


RATIO GEAR KITS

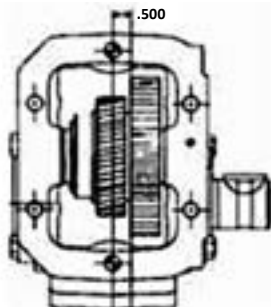


INPUT GEARS KITS

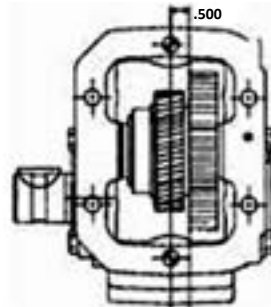
## ARRANGEMENT CONFIGURATIONS



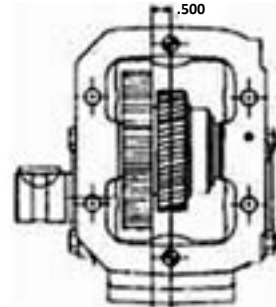
RF  
RIGHT, FORWARD



RR  
RIGHT, REAR



LF  
LEFT, FORWARD



LR  
LEFT, REAR

# WORLD AMERICAN BUILD YOUR OWN PTO KIT PROGRAM

## PTO Housing Kit Options

<u>Kit Number</u>	<u>Description</u>	<u>BOM Code</u>
WA20-03-1085	06 series bolt Standard Mount Housing	WA06S
WA20-03-1136	06 series bolt Deep Mount Housing	WA06D
WA20-03-1137	08 series bolt Standard Mount Housing	WA08S
WA20-03-1138	08 series bolt Deep Mount Housing	WA08D

## Ratio Gear Kit Options

<u>Kit Number</u>	<u>Description</u>	<u>BOM Code</u>
WA20-03-1013*	Ratio .52:1 unigear includes Universal Input Gear AH	3LI
WA20-03-1010*	Ratio .52:1 unigear includes Mack Input Gear DA	3PB
WA20-03-1009	Ratio .69:1	4
WA20-03-1012	Ratio .87:1	5
WA20-03-1127	Ratio .94:1	6
WA20-03-1003	Ratio 1.2:1	7
WA20-03-1092	Ratio 1.41:1	8
WA20-03-1128	Ratio 1.71:1	9
WA20-03-1131	Ratio 2:1	0

\* This is a unigear that is made with the lower ratio gear as a one piece gear sold only in sets with the lower ratio

## Input Gear Kit Options

<u>Kit Number</u>	<u>Description</u>	<u>BOM Code</u>
WA20-03-1089	Universal Input Gear for Ratios 4,5,6,7,8,9,0	LC
WA20-03-1008	Universal Input Gear for Ratios 4,5,6,7,8,9,0	LI
WA20-03-1073	Spicer Input Gear for ratios 4,5,6,7,8,9,0	LQ
WA20-03-1072	Spicer Input Gear for ratios 4,5,6,7,8,9,0	LS
WA20-03-1124	Fuller Input Gear for ratios 4,5,6,7,8,9,0	LY
WA20-03-1081	Spicer Input Gear for ratios 4,5,6,7,8,9,0	MH
WA20-03-1082	Chevy & Spicer Input Gear for ratios 4,5,6,7,8,9,0	MR
WA20-03-1033	Mack Input Gear for ratios 4,5,6,7,8,9,0	PB
WA20-03-1125	ZF Input Gear for ratios 4,5,6,7,8,9,0	QE
WA20-03-1032	Fuller Input Gear for ratios 4,5,6,7,8,9,0	QT
WA20-03-1075	Fuller Input Gear for ratios 4,5,6,7,8,9,0	QW
WA20-03-1013*	Universal Input Gear for 3 Ratios	3LI
WA20-03-1010*	Mack Input Gear for 3 Ratio	3PB
WA20-03-1084	Spicer Input Gear for ratios 4,5,6,7,8,9,0	RP
WA20-03-1141	ZF Input Gear for ratios 4,5,6,7,8,9,0	ST
WA20-03-1065	ZF Input Gear for ratios 4,5,6,7,8,9,0	TZ
WA20-03-1123	Fuller Input Gear for ratios 4,5,6,7,8,9,0	UL

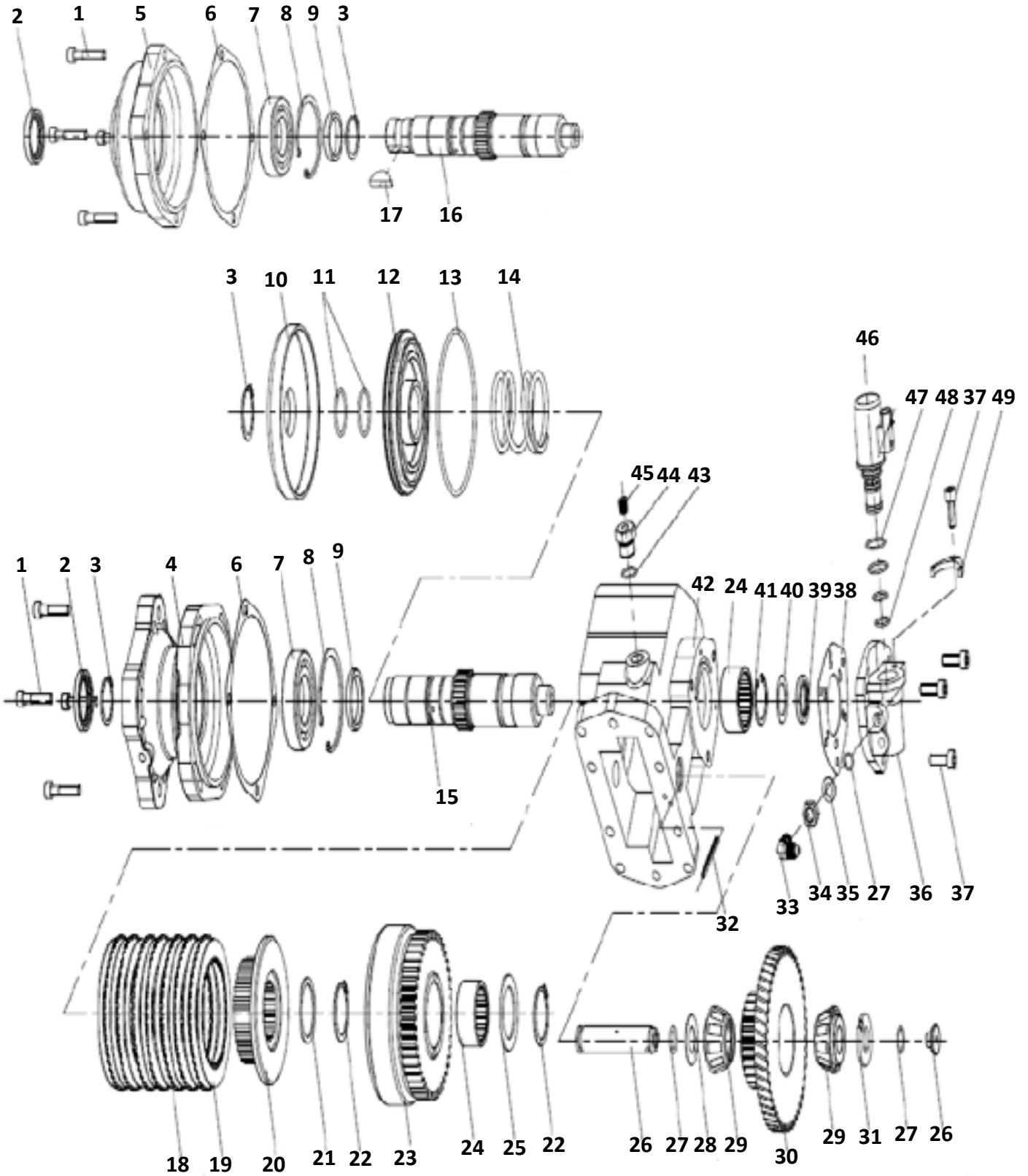
## Shift Cover Kit Options

<u>Part Number</u>	<u>Description</u>	<u>BOM Code</u>
WA20-03-1030 A	Air Shift Cover for All Positions	
WA20-03-1070	Wire Shift Cover for ratios 5,9,0 positions RF and LR	C
WA20-03-1074	Wire Shift Cover for ratios 5,9,0 positions RR and LF	C
WA20-03-1067	Wire Shift Cover for ratios 3,4,6,7,8 positions RF and LR	C
WA20-03-1091	Wire Shift Cover for ratios 3,4,6,7,8 positions RR and LF	C

## Output Shaft & Cover Assembly Kit Options

<u>Part Number</u>	<u>Description</u>	<u>BOM Code</u>
WA20-03-1019	1.25" round keyed shaft with cover	RM
WA20-03-1020	7/8" 13 Spline with a 2/4 bolt rotatable "B" flange	DM
WA20-03-1090	1" 15 spline with a rotatable "BB" flange	BB
WA20-03-1105	DIn Shaft	EU

# WA10 Series Breakdown



# WA10 Series Breakdown

ITEM#	WA PART#	QTY	DESCRIPTION	REPLACES CHELSEA® REF#'S
1	WA20-03-1037	4	CAP BOLTS	378447-8
2	WA20-04-3001	1	OIL SEAL	28P225
3	WA20-04-3002	1	SNAP RING	378576
4	WA20-04-3003	1	XK END COVER	21P482
5	WA20-04-3004	1	XD END COVER	21P480
6	WA20-04-3005	1	GASKET	22P101
7	WA20-04-3006	1	BEARING	550010
8	WA20-04-3007	1	SNAP RING	378895
9	WA20-04-3008	1	SPACER	4P147
10	WA20-04-3009	1	BACK-UP CYLINDER	379323-1
11	WA20-04-3010	2	O-RINGS	28P244
12	WA20-04-3011	1	PISTON	380057-1
13	WA20-04-3012	1	O-RING	28P178
14	WA20-04-3013	1	SPRING	37P39
15	WA20-04-3014	1	XK OUTPUT SHAFT	3P832
15A	WA20-04-3060		XK OUTPUT SHAFT SUB ASSEMBLY	329006-1X
16	WA20-04-3015	1	XD OUTPUT SHAFT	3P831
16A	WA20-04-3061		XD OUTPUT SHAFT SUB ASSEMBLY	329006-8X
17	WA20-03-1045	1	WOODRUFF KEY	500007-29
18	WA20-04-3059	NSS	FRICITION DISC	CHART 3
19	WA20-04-3059	NSS	CLUTCH PLATE	CHART 3
20	WA20-04-3016	1	INNER CLUTCH GEAR	2P458
21	WA20-04-3017	1	SPACER	14P49
22	WA20-04-3018	1	SNAP RING	379746
23	SEE CHART 2	1	OUTPUT GEAR SUB ASSEMBLY	CHART 2
24	WA20-04-3019	1	BEARING	560972
25	WA20-04-3020	1	SPACER	31P70
26	WA20-04-3021	1	IDLER PIN	9P91
27	WA20-03-1036	1	O-RING	28P191
28	WA20-03-1026	1	THRUST WASHER	31P102
29	WA20-03-1042	1	BEARING	550439
30	SEE CHART 2	1	INPUT GEAR	CHART 2
31	SEE CHART 1	1	THRUST WASHER	CHART 1
32	WA20-03-1049	1	DOWEL PIN	500597-16
33	WA20-04-3024	1	ELBOW	379486
34	WA20-04-3025	1	NUT	379486-1
35	WA20-04-3026	1	WASHER	379486-2
36*	WA20-04-3027	1	VALVE CAP	34P143
37*	WA20-03-1035	4	CAP BOLT	378447-6
38*	WA20-04-3028	1	GASKET	22P112
39*	WA20-04-3029	1	SEAL	28P119
40*	WA20-04-3030	1	THRUST WASHER	378811
41*	WA20-04-3031	1	SNAP RING	378849
42	WA20-04-3032	1	10 BOLT HOUSING	1P603
43	WA20-04-3033	1	O-RING	28P171
44	WA20-04-3034	1	BOSS PLUG	379242
45	WA20-04-3035	1	PIPE PLUG	379231
46*	WA20-04-3036	1	12V SOLENOID VALVE	379993-12
47*	WA20-04-3037	2	O-RING	379000
48*	WA20-04-3038	2	O-RING	379001
49*	WA20-04-3039	1	RETAINER	380012

\*INCLUDED IN SOLENOID VALVE ASSMEBLY

CHART 1		
WA PART#	DESCRIPTION	REPLACES CHELSEA® REF #
WA20-04-3043	THRUST WASHER	14P79-1
WA20-04-3044	THRUST WASHER	14P79-2
WA20-04-3045	THRUST WASHER	14P79-3
WA20-04-3046	THRUST WASHER	14P79-4

CHART 2		
RATIO CODE	PART NUMBER	REPLACES CHELSEA® REF#'S
ARK	WA20-04-3047	329005-1X BFJ
	(ABOVE CONTAINS)	
	WA20-04-3048	5P912
	WA20-04-3049	2P688
BRK	WA20-04-3050	329005-2X DFJ
	(ABOVE CONTAINS)	
	WA20-04-3051	5P913
	WA20-04-3052	2P684
CRK	WA20-04-3053	329005-3X GFJ
	(ABOVE CONTAINS)	
	WA20-04-3054	5P914
	WA20-04-3055	2P683
DRK	WA20-04-3056	329005-4X MFJ
	(ABOVE CONTAINS)	
	WA20-04-3057	5P915
	WA20-03-3058	2P682

CHART 3		
WA PART NUMBER	DESCRIPTION	REPLACES CHELSEA® REF#'S
WA20-04-3059	CLUTCH PACK KIT	329071-7X

CHART 3		
WA PART NUMBER	DESCRIPTION	REPLACES CHELSEA® REF#'S
WA20-04-3023	SOLENOID VALVE	329463-12X

# CONTROL COMBO KITS



WA#	DESCRIPTION
WASC8	8" Tower and Single PTO Control
WASC10	10" Tower and Single PTO Control
WASC12	12" Tower and Single PTO Control
WATC8	8" Tower and Dual PTO Control
WATC8K	8" Tower and Dual PTO Control without Kickout
WATC10	10" Tower and Dual PTO Control
WATC10K	10" Tower and Dual PTO Control without Kickout
WATC12	12" Tower and Dual PTO Control
WATC12K	12" Tower and Dual PTO Control without Kickout

## PTO & DUMP PUMP CONTROL VALVE INSTALLATION KITS



WA#	DESCRIPTION	REPLACES OEM REF#
WA101X	SINGLE VALVE (PTO ONLY) AIR KIT <i>CONTAINS: HOSE, FITTINGS, VALVE &amp; LED LIGHT</i>	328365-37X 35M18653



WA#	DESCRIPTION	REPLACES OEM REF#
WA201X	DUAL VALVE (PTO & DUMP PUMP) AIR KIT WITH KICKOUT <i>CONTAINS: HOSE, FITTINGS, VALVE &amp; LED LIGHT</i>	328388-75X 35T36353



WA#	DESCRIPTION	REPLACES OEM REF#
WA202X	DUAL VALVE (PTO & DUMP PUMP) AIR KIT WITHOUT KICKOUT <i>CONTAINS: HOSE, FITTINGS, VALVE &amp; LED LIGHT</i>	328388-72X

## CONTROL TOWERS (CONSOLES)



WA600221



WA600222



WA600223

WA#	DESCRIPTION	REPLACES OEM REF#
WA600221	8" TOWER	329219X / K90C
WA600222	10" TOWER	TO - 10
WA600223	12" TOWER	TO - 12



# REPLACEMENT CAB CONTROL VALVES FOR PTO'S & DUMP PUMPS

WA#	DESCRIPTION	REPLACES OEM REF#
WA118373	SINGLE VALVE ONLY	329214X
WAAV295	DUAL VALVE W/ KICKOUT	K90D / 329358X (DEAD MAN SWITCH)
WAAV295M	DUAL VALVE W/O KICKOUT	329316X

## AIR PROTECTION VALVE KIT



WA#	DESCRIPTION	REPLACES OEM REF#
WA9054107	AIR PROTECTION VALVE KIT	378414 118181 31MT15759

## PUSH / PULL CABLES



WA#	DESCRIPTION	REPLACES OEM REF#
WA4306-10	10 FOOT PTO CABLE	328346-10X, 2570-10
WA4306-12	12 FOOT PTO CABLE	2570-12
WA4306-15	15 FOOT PTO CABLE	328346-15X, 2570-15
WA4306-20	20 FOOT PTO CABLE	328346-20X, 2570-20
WA4306-25	25 FOOT PTO CABLE	328346-25X, 2570-25
WA20-03-1059	CABLE HARDWARE KIT	328380X

## SHIFTER CONVERSION KITS

WA#	TYPE OF CONVERSION	POSITION	REPLACES OEM REF#
WA20-03-1030	WIRE TO AIR	AIR SHIFT COVER FOR ALL POSITIONS	329361X
WA20-03-1070	AIR TO WIRE	WIRE SHIFT COVER FOR RATIOS Q,W,X, POSITIONS 3 & 6	329119-1X
WA20-03-1074	AIR TO WIRE	WIRE SHIFT COVER FOR RATIOS Q,W,X, POSITIONS 4 & 5	329119-2X
WA20-03-1067	AIR TO WIRE	WIRE SHIFT COVER FOR RATIOS F,L,R,S,U POSITIONS 3 & 6	329121-1X
WA20-03-1091	AIR TO WIRE	WIRE SHIFT COVER FOR RATIOS F,L,R,S,U POSITIONS 4 & 5	329121-2X

Note: See Page 17 Kit # 5 for output shaft conversion kits

## POPULAR PTO REPAIR KITS

DESCRIPTION	06 SERIES	REPLACES OEM REF#	08 SERIES	REPLACES OEM REF#	10 SERIES	REPLACES OEM REF#
SEAL & GASKET KIT	WA20-03-1053	328356-13X	WA20-03-1052	328356-50X	WA20-04-3062	329071-19X
BEARING KIT	WA20-03-1080	328594-13X	WA20-03-1080	328594-13X	WA20-04-3063	329071-36X
CLUTCH PACK KIT					WA20-04-3059	329071-7X

## POPULAR PTO STUD KITS

DESCRIPTION	06 SERIES	REPLACES OEM REF#	08 SERIES	REPLACES OEM REF#	10 SERIES	REPLACES OEM REF#
STANDARD	WA20-03-1117	8170-76	WA20-03-1116	8170-200X	WA20-04-3064	7170-107X
DEEP	WA20-03-1071	8170-77X	WA20-03-1116	8170-200X		
METRIC	WA20-03-1060	170-78X	WA20-03-1056	170-68X		

# PTO MOUNTING GASKETS AND SHIMS

THICKNESS	6-BOLT	REPLACES OEM REF #	THICKNESS	8-BOLT	REPLACES OEM REF #
0.010 GASKET	WA6010	35-P-9-1 23M60010S	0.010 GASKET	WA8010	8-A-15-1 23M80010S
0.020 GASKET	WA6020	35-P-9-2 23M60020S	0.020 GASKET	WA8020	8-A-15-2 23M80020S
0.032 GASKET	WA6032	7-A-032 23M60032S	0.032 GASKET	WA8032	8-A-032 23M80032
0.062 SHIM	WA6062	7-A-062 23M60062S	0.062 SHIM	WA8062	8-A-062 23M80062
0.093 SHIM	WA6093	7-A-093 23M60093S	0.093 SHIM	WA8093	8-A-093 23M80093
0.125 SHIM	WA6125	7-A-125 23M60125S	0.165 SHIM	WA8165	8-A-165 23M80165
0.140 SHIM	WA6140	7-A-140 23M60140S	0.190 SHIM	WA8190	8-A-190 23M80190
0.165 SHIM	WA6165	7-A-165 23M60165S	0.248 SHIM	WA8248	8-A-248 23M80248
0.187 SHIM	WA6187	7-A-187 23M60187S	0.295 SHIM	WA8295	8-A-295 23M80295
0.200 SHIM	WA6200	7-A-200 23M60200S	0.375 SHIM	WA8375	8-A-375
0.240 SHIM	WA6240	7-A-240 23M60240S	0.500 SHIM	WA8500	8-A-500 23M80500
0.270 SHIM	WA6270	7-A-270 23M60270	0.700 SHIM	WA8700	8-A-700 23M80700
0.300 SHIM	WA6300	7-A-300 23M60300	0.1005 SHIM	WA81005	8-A-1005 23M81005
0.350 SHIM	WA6350	7-A-350 23M60350			
0.400 SHIM	WA6400	7-A-400 23M60400			
0.450 SHIM	WA6450	7-A-450 23M60450			
0.500 SHIM	WA6500	7-A-500 23M60500			
0.550 SHIM	WA6550	7-A-550 23M60550			
0.800 SHIM	WA6800	7-A-800 23M60800			



# REPLACEMENT INDICATOR LIGHT PARTS



WA#	DESCRIPTION	REPLACES OEM REF#
WAI-750	INDICATOR LIGHT	378978



WA#	DESCRIPTION	REPLACES OEM REF#
WASW-003	SENDING UNIT SENSOR	379639



WA#	DESCRIPTION	OEM REF#
WASWK-699	REPLACEMENT WIRING HARNESS	379640

## Indicator light Kit



WA#	DESCRIPTION	REPLACES OEM REF#
WA20-03-1134	INDICATOR LIGHT KIT	329202X 328751-1X

## PTO SHAFT ASSY



WA#	DESCRIPTION
10270-5729	NON-WELDED 1000 SERIES COMPLETE PTO SHAFT ASSY. REPLACES DANA® REF #: 10270-5729
9553SF	NON-WELDED 1310 SERIES COMPLETE PTO SHAFT ASSY. REPLACES IHC® REF #: 2A29553SF

## PTO SHAFT CENTER BEARING



WA#	DESCRIPTION	REPLACES OEM REF#
HB88107A	1310 Series Center Bearing	386418C91 210088-1X 81-2012

## U-JOINTS FOR PTO



WA#	DESCRIPTION	REPLACES OEM REF#
5-153XR	PTO U-JOINT 1310 SERIES	5-153X
5-170XR	PTO U-JOINT 1000 SERIES	5-170X

# PTO YOKES



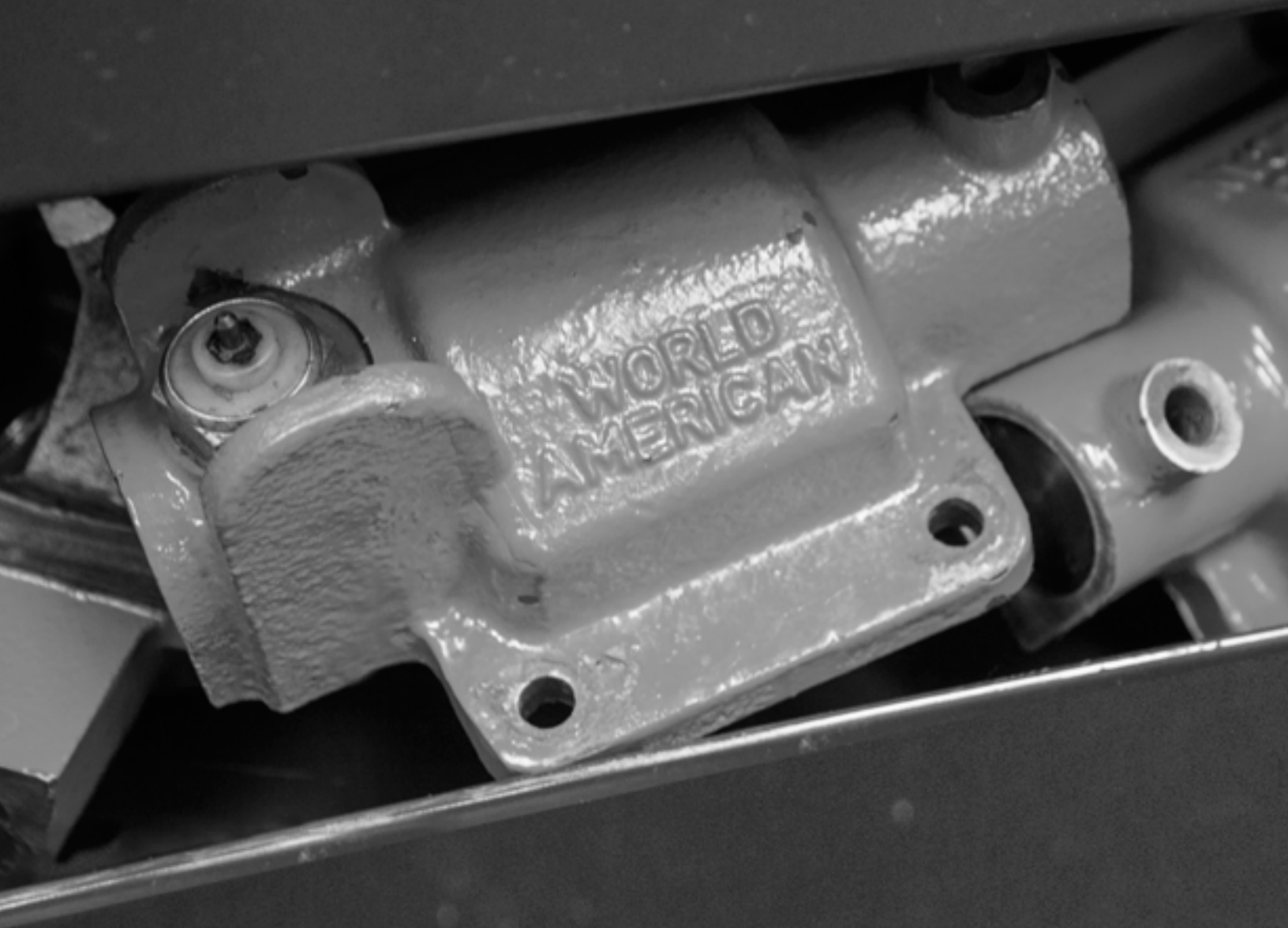
WA#	REPLACES MERITOR®#	SERIES	DESCRIPTION
2-4-473R	131N4-473	1310	1" ROUND
2-4-503R	131N4-503	1310	1 1/8" ROUND
2-4-533R	131N4-533	1310	1 1/4" ROUND
10-3-18KXR	10N3-18X	1000	1 1/4" - 16 SPLINE
10-3-22XR	10N3-22X	1000	7/8" SQUARE
10-3-32XR	10N3-32X	1000	1 1/8" HEX
10-3-83XR	10N3-83X	1000	1" ROUND
10-3-163XR	10N3-163X	1000	1 1/4" ROUND
10-4-12R	10N4-12	1000	7/8" SQUARE
10-4-23R	10N4-23	1000	3/4" ROUND
10-4-32R	10N4-32	1000	1 1/8" HEX
10-4-63R	10N4-63	1000	7/8" ROUND
10-4-93R	10N4-93	1000	1" ROUND
10-4-103R	10N4-103	1000	1 1/8" ROUND
10-4-113R	10N4-113	1000	1 1/8" ROUND
10-4-123R	10N4-123	1000	1 1/4" ROUND
10-4-183R	10N4-183	1000	1 1/4" ROUND
10-4-193R	10N4-193	1000	1 1/4" ROUND
10-4-282R	10N4-282	1000	7/8" HEX
10-4-22R	10N4-22	1000	3/4" HEX

## SLIP YOKES FOR PTO



WA#	REPLACES MERITOR®#	DESCRIPTION
2-3-8001XKXR	131N-3-8001KX	SLIP YOKE 1310 SERIES
2-3-8021KXR	131N-3-8021KX	SLIP YOKE 1310 SERIES
2-28-1757R	131N-28-1759	WELD YOKE 1310 SERIES
2-40-1701R	131N-40-1701	SPLINED STUB END 1310 SERIES

# HYDRAULIC SECTION



# HYDRAULIC DUMP PUMPS

## C-SERIES

WA101-25



WA102-25L



WA#	DESCRIPTION
WAP101-25	DUMP PUMP - EITHER SHAFT ROTATION, 1" DIAMETER KEYED SHAFT, 49 GPM FLOW @ 1800 RPM - MAX. RPM 2400
WAP101-25AS	DUMP PUMP - EITHER SHAFT ROTATION, 1" DIAMETER KEYED SHAFT, 49 GPM FLOW @ 1800 RPM - MAX. RPM 2400 WITH AIR SHIFT
WAP102-25L	DUMP PUMP - FACTORY SET ROTATION, 7/8" - 13 TOOTH SPLINE SHAFT, 49 GPM FLOW @ 1800 RPM - MAX. RPM 2400 - EXTENDED STUDS FOR SUPPORT BRACKET
WAP102-25R	DUMP PUMP - RIGHT HAND ROTATION, 7/8" - 13 TOOTH SPLINE SHAFT, 49 GPM FLOW @ 1800 RPM - MAX. RPM 2400 - EXTENDED STUDS FOR SUPPORT BRACKET
WAP102-25LAS	DUMP PUMP - FACTORY SET ROTATION, 7/8" - 13 TOOTH SPLINE SHAFT, 49 GPM FLOW @ 1800 RPM - MAX. RPM 2400 - EXTENDED STUDS FOR SUPPORT BRACKET WITH AIR SHAFT
WAP102-25RAS	DUMP PUMP - RIGHT HAND ROTATION, 7/8" - 13 TOOTH SPLINE SHAFT, 49 GPM FLOW @ 1800 RPM - MAX. RPM 2400 - EXTENDED STUDS FOR SUPPORT BRACKET WITH AIR SHAFT

## G-SERIES

WA101G



WA102G



WA#	DESCRIPTION
WA101G	DUMP PUMP G101 - 3 PC. CAST IRON DESIGN, HIGH PRESSURE BALANCED THRUST PLATES, HEAVY DUTY ROLLER BEARINGS, 2 OR 3 LINE HOOK-UP - AVAILABLE WITH CLOCKWISE OR COUNTER CLOCKWISE SHAFT ROTATION - 1" DIAMETER SHAFTS, 15 GPM AT 1000 RPM TO 37 GPM AT 2400 RPM
WAP102G	DUMP PUMP G102 - 3 PC. CAST IRON DESIGN, LEFT HAND ROTATION, HIGH PRESSURE SHAFT SEALS, FACTORY SET 2000 PSI, RELIEF WITH LOAD CHECK, PRESSURE BALANCED THRUST PLATES, HEAVY DUTY ROLLER BEARINGS, 2 OR 3 LINE HOOK-UP, 7/8" 13 TOOTH SPLINE SHAFT, 15 GPM AT 1000 RPM TO 37 GPM AT 2400 RPM
WA101GAS	DUMP PUMP G101 - 3 PC. CAST IRON DESIGN, HIGH PRESSURE BALANCED THRUST PLATES, HEAVY DUTY ROLLER BEARINGS, 2 OR 3 LINE HOOK-UP - AVAILABLE WITH CLOCKWISE OR COUNTER CLOCKWISE SHAFT ROTATION - 1" DIAMETER SHAFTS, 15 GPM AT 1000 RPM TO 37 GPM AT 2400 RPM WITH AIR SHIFT
WAP102GAS	DUMP PUMP G102 - 3 PC. CAST IRON DESIGN, LEFT HAND ROTATION, HIGH PRESSURE SHAFT SEALS, FACTORY SET 2000 PSI, RELIEF WITH LOAD CHECK, PRESSURE BALANCED THRUST PLATES, HEAVY DUTY ROLLER BEARINGS, 2 OR 3 LINE HOOK-UP, 7/8" 13 TOOTH SPLINE SHAFT, 15 GPM AT 1000 RPM TO 37 GPM AT 2400 RPM WITH AIR SHIFT
WA102G-20R	DUMP PUMP G102 - 3 PC. CAST IRON DESIGN, RIGHT HAND ROTATION, HIGH PRESSURE SHAFT SEALS, FACTORY SET 2000 PSI, RELIEF WITH LOAD CHECK, PRESSURE BALANCED THRUST PLATES, HEAVY DUTY ROLLER BEARINGS, 2 OR 3 LINE HOOK-UP, 7/8" 13 TOOTH SPLINE SHAFT, 15 GPM AT 1000 RPM TO 37 GPM AT 2400 RPM

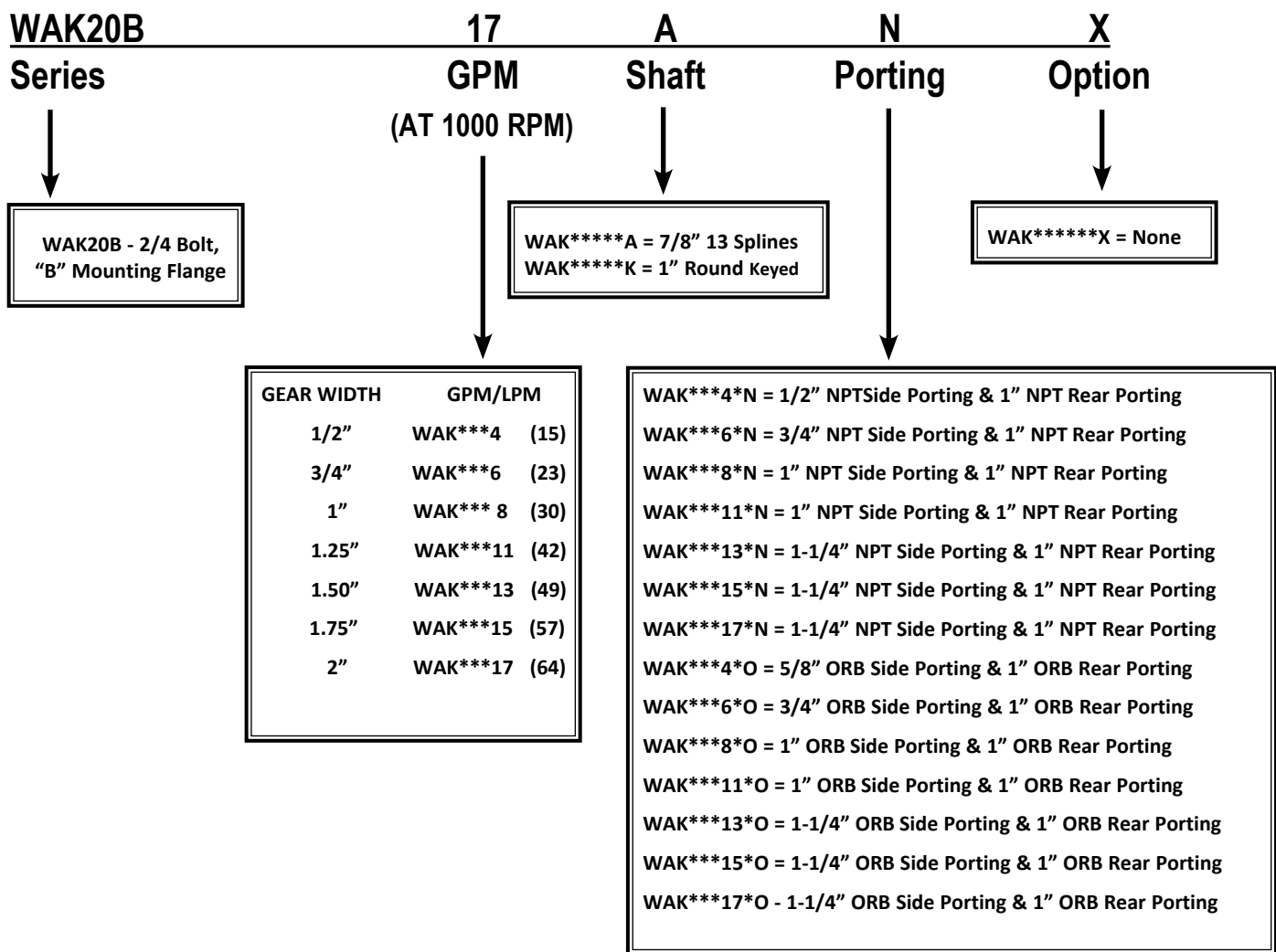
NOTE 1: ALL DUMP PUMPS CAN BE USED WITH 2 OR 3 LINE INSTALLATIONS.

NOTE 2: IT IS RECOMMENDED THAT A SUPPORT BRACKET (SEE PAGE 34) BE USED WITH ALL DUMP PUMPS.

# WAK20B SERIES UNIVERSAL GEAR PUMPS

## FEATURES

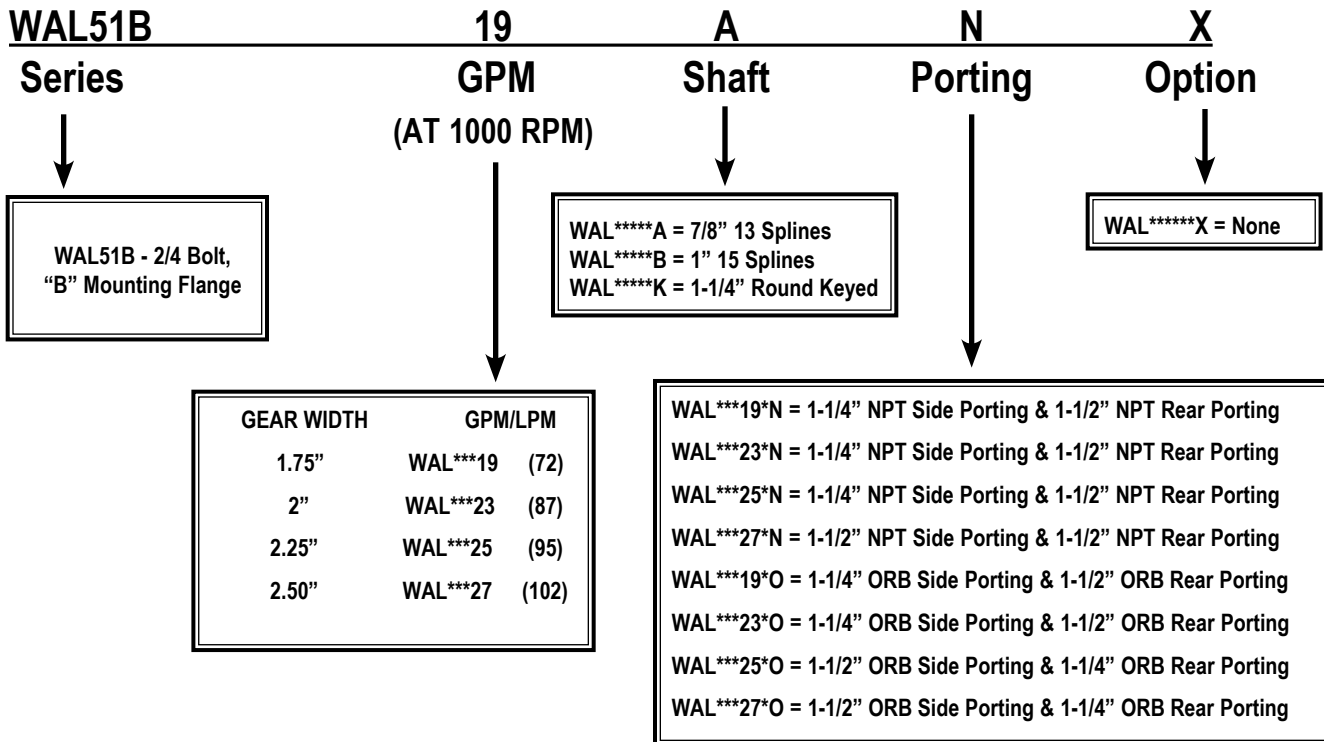
- Replaces all Commercial® P20 and Permco® 2100 Series Pumps
- Direct Replacement for the Muncie® MK Series Pumps
- Bi-Rotational
- Handles Pressures up to 3000 PSI
- Dual Porting Side and Rear
- Lower Stocking Quantities



# WAL51B Series Universal Gear Pumps

## FEATURES

- Replaces all Commercial® P50, P51 and Permco® 5100 Series Pumps
- Direct Replacement for the Muncie® ML Series Pumps
- Bi-Rotational
- Handles Pressures up to 3000 PSI
- Handles Speeds up to 3000 RPM
- Dual Porting Side and Rear
- Hi Flow Body Design for increased Flow and Performance
- Available with Integral Adjustable Relief Valve



# MUNCIE® TO WORLD AMERICAN® PUMP CROSSOVER

<b>WORLD AMERICAN®</b>	<b>REPLACES MUNCIE®</b>
WAK20B4ANX	PK1-04-02-BPBB
WAK20B4KNX	PK1-04-09-BPBB
WAK20B6ANX	PK1-06-02-BPBB
WAK20B6KNX	PK1-06-09-BPBB
WAK20B8ANX	PK1-08-02-BPBB
WAK20B8KNX	PK1-08-09-BPBB
WAK20B11ANX	PK1-11-02-BPBB
WAK20B11KNX	PK1-11-09-BPBB
WAK20B13ANX	PK1-13-02-BPBB
WAK20B13KNX	PK1-13-09-BPBB
WAK20B15ANX	PK1-15-02-BPBB
WAK20B15KNX	PK1-15-09-BPBB
WAK20B17ANX	PK1-17-02-BPBB
WAK20B17KNX	PK1-17-09-BPBB
WAL51B-19ANX	PL1-19-02-BPBB
WAL51B-19KNX	PL1-19-07-BPBB
WAL51B-23ANX	PL1-23-02-BPBB
WAL51B-23KNX	PL1-23-07-BPBB
WAL51B-25ANX	PL1-25-02-BPBB
WAL51B-25KNX	PL1-25-07-BPBB
WAL51B-27ANX	PL1-27-02-BPBB
WAL51B-27KNX	PL1-27-07-BPBB



**WAK20B-15KNX**



**WAL51B-27ANX**

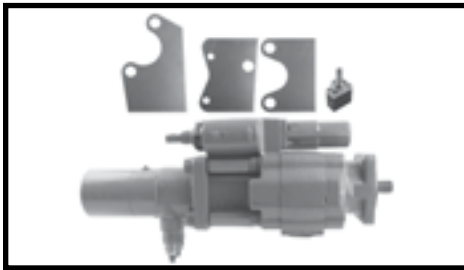


# LOW SPEED HIGH TORQUE MOTORS

WA#	DESCRIPTION	REPLACES OEM REF #
WA20-LS-2000	H SERIES 50 DISP, 4 BOLT 1.75", 1" KEYED, 1/2" NPT	101-1101
WA20-LS-2001	H SERIES 80 DISP, 4 BOLT 1.75", 1" KEYED, 1/2" NPT	101-1002
WA20-LS-2002	H SERIES 100 DISP 4BOLT 1.75", 1" KEYED, 1/2" NPT	101-1003
WA20-LS-2003	H SERIES 200 DISP 4 BOLT 1.75" 1" KEYED, 1/2" NPT	101-1005
WA20-LS-2004	H SERIES 250 DISP 4 BOLT 1.75", 1" KEYED, 1/2" NPT	101-1006
WA20-LS-2005	H SERIES 400 DISP 4 BOLT 1.75", 1" KEYED, 1/2" NPT	101-1008
WA20-LS-2006	H SERIES 200 DISP 4 BOLT 1.75", 1" KEYED, 7/8" ORING	101-1013
WA20-LS-2007	H SERIES 80 DISP 2A, 1" KEYED, 1/2" NPT	101-1026
WA20-LS-2008	H SERIES 100 DISP 2A, 1" KEYED, 1/2" NPT	101-1027
WA20-LS-2009	H SERIES 160 DISP 2A, 1" KEYED, 1/2" NPT	101-1028
WA20-LS-2010	H SERIES 250 DISP 2A, 1" KEYED, 1/2" NPT	101-1030
WA20-LS-2011	H SERIES 400 DISP 2A, 1" KEYED, 1/2" NPT	101-1032
WA20-LS-2012	H SERIES 50 DISP, 2A, 1" KEYED, 7/8" O-RING	101-1033
WA20-LS-2013	H SERIES 200 DISP 2A, 1" KEYED, SAE-10 PORT	101-1037
WA20-LS-2014	H SERIES 160 DISP 4 BOLT 1.75", 1" KEYED, 7/8" ORING	101-1060
WA20-LS-2015	H SERIES 100 DISP 4 BOLT 1.75", 1" KEYED, 7/8" ORING	101-1314
WA20-LS-2016	S SERIES 80 DISP 4 BOLT 1.75", 1" KEYED, 1/2" NPT	103-1002
WA20-LS-2017	S SERIES 375 DISP 4 BOLT 1.75", 1" KEYED, 1/2" NPT	103-1008
WA20-LS-2018	S SERIES 250 DISP 4 BOLT 1.75", 1" KEYED, 7/8" ORING	103-1014
WA20-LS-2019	S SERIES 200 DISP 2 BOLT SAE A, 1" KEYED, 7/8" ORING	103-1037
WA20-LS-2020	S SERIES 375 DISP 2 BOLT SAE A, 1" KEYED, 7/8" ORING	103-1040
WA20-LS-2021	S SERIES 50 DISP 2 BOLT SAE A, 1" KEYED, 7/8" ORING	103-1540
WA20-LS-2022	2K SERIES 125 DISP 2A, 1" KEYED, 7/8" ORING	104-1003
WA20-LS-2023	2K SERIES 100 DISP 2A, 1" KEYED, 1-1/16" ORING	104-1038
WA20-LS-2024	2K SERIES 100 DISP 2A, 1-1/4" STRAIGHT, 1-1/16" ORING	104-1062
WA20-LS-2025	2K SERIES 400 DISP 2A, 1-1/4" STRAIGHT, 7/8" ORING	104-1228
WA20-LS-2026	4K SERIES 315 DISP 2B, 1-1/4" STRAIGHT, G 3/4" BSP	109-1056
WA20-LS-2027	4K SERIES 7.9 cu.in DISP 1-1/4" STRAIGHT SAE-12 ORING	109-1101
WA20-LS-2028	4K SERIES 250 DISP 2B, 1-1/4" STRAIGHT, 1-1/16" ORING	109-1104
WA20-LS-2029	6K SERIES 990 DISP 4C, 1-1/2" STRAIGHT, 1-1/16" ORING	112-1069
WA20-LS-2030	10K SERIES 990 DISP 4C, 2-1/4" STRAIGHT, 1-5/16" ORING	119-1031



# COMBO WALKING FLOOR / DUMP PUMP



WA#	DESCRIPTION	REPLACES OEM REF#
WAWFDPUMP	DUAL PRESSURE COMBINATION WALKING FLOOR AND DUMP PUMP	DG20ZLAS-25/32

## DRY VALVE PUMP



WA#	DESCRIPTION	REPLACES OEM REF#
WADVLPUMP	DRY VALVE REFUGE PUMP	P76A678B3ON22011DV 316-9310-298 97023A VP42-4COFLDV

## DRY VALVE PUMP VALVE



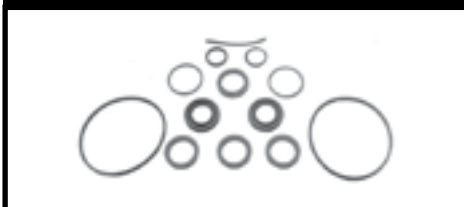
WA#	DESCRIPTION	REPLACES OEM REF#
WADVVALVE	DRY VALVE FOR REFUGE	

## IN-LINE RELIEF VALVE



WA#	DESCRIPTION	REPLACES OEM REF#
WARF75	IN-LINE RELIEF VALVE 3/4" NPT	RPL75-A
WARF100	IN-LINE RELIEF VALVE 1" NPT	RPL100-A

## DUMP PUMP SEAL KIT



WA#	DESCRIPTION
WA102SK	102 DUMP PUMP SEAL KIT
WA101SK	101 DUMP PUMP SEAL KIT
WA100GK	101 & 102 "G" SERIES SEAL KIT

# REPLACEMENT DUMP PUMP AIR SHIFT CYLINDER



WA#	DESCRIPTION
AS102	REPLACEMENT "C" SERIES DUMP PUMP AIR SHIFT CYLINDER
AS102G	REPLACEMENT "G" SERIES DUMP PUMP AIR SHIFT CYLINDER

## PUMP SUPPORT BRACKETS



WA#	DESCRIPTION
WAPBK-1000	102 SERIES SUPPORT BRACKET
WAPBK-1001	101 SERIES SUPPORT BRACKET

## REPLACEMENT RESERVOIR FILLER CAP



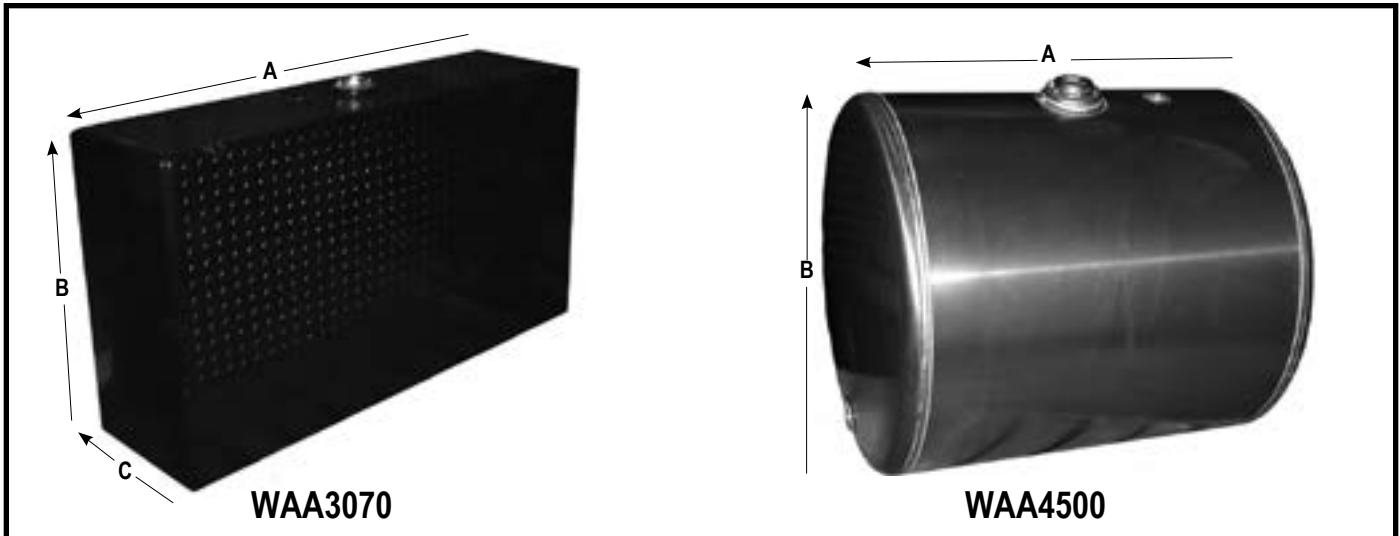
WA#	DESCRIPTION
WA015	RESERVOIR CAP

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# RESERVOIRS



WA#	REPLACES OEM REF #	DESCRIPTION
WAA2000	A-2000, URP50	50 GALLON POLYETHYLENE UPRIGHT A - 38" B - 29" C - 16.25"
WAA3000	A-3000, URS50	50 GALLON STEEL UPRIGHT A - 34" B - 25.5" C - 14.75"
WAA3070	A-3070, URS70	70 GALLON STEEL UPRIGHT A - 49.25" B - 25.5" C - 14.75"
WAA3500	A-3500, SMS50	50 GALLON STEEL SADDLE MOUNT A - 27" B - 26.5"
WAA3535	A-3535, SMS35	35 GALLON STEEL SADDLE MOUNT A - 24" B - 19"
WAA4000	A-4000, URA50	50 GALLON ALUMINUM UPRIGHT A - 34" B - 25.5" C - 14.75"
WAA4035	A-4035, URA35	35 GALLON ALUMINUM UPRIGHT A - 42" B - 24" C -
WAA4070	A-4070, URA70	70 GALLON ALUMINUM UPRIGHT A - 49.75" B - 25.5" C - 14.75"
WAA4500	A-4500, SMA50	50 GALLON ALUMINUM SADDLE MOUNT WITH STEEL STRAPS A - 27.5" B - 26.5"
WAA4500SS	A-4500SS, SMA50SS	50 GALLON ALUMINUM SADDLE MOUNT WITH STAINLESS STRAPS A - 27.5" B - 26.5"
WAA4535	A-4535, SMA35	35 GALLON ALUMINUM SADDLE MOUNT A - 24" B - 19"

## RESERVOIR STRAP KITS

WA#	REPLACES OEM REF #	DESCRIPTION
WAS005BK	AMK624-C	SADDLE MOUNT STRAP KIT
WAS005BKSS	SMS5005BK, AMK624-S	SADDLE MOUNT STRAP KIT STAINLESS STEEL.



# HOSE KITS



WA#	DESCRIPTION
WAK8-8-2L	8' PRESSURE 8' SUCTION 2 LINE HOSE KIT
WAK12-8-2L	12' PRESSURE 8' SUCTION 2 LINE HOSE KIT
WAK14-8-2L	14' PRESSURE 8' SUCTION 2 LINE HOSE KIT
WAK16-8-2L	16' PRESSURE 8' SUCTION 2 LINE HOSE KIT
WAK20-12-2L	20' PRESSURE 12' SUCTION 2 LINE HOSE KIT
WAK9-8-3L*	9' PRESSURE 8' SUCTION 3 LINE HOSE KIT
WAK12-12-3L*	12' PRESSURE 12' SUCTION 3 LINE HOSE KIT
WAK16-24-3L*	16' PRESSURE 24' SUCTION 3 LINE HOSE KIT

\* Recommended for continuous duty / prolonged system life.

## 2 LINE KITS INCLUDE:

1" PRESSURE HOSE w/ 1 FIXED END AND 1 SWIVEL END  
1.25" SUCTION HOSE  
2 BARB ENDS  
2 WORM CLAMPS  
1 - 1" WING STYLE QUICK DISCONNECT

Note: We may substitute 1 swivel end for a fixed end and adaptor

## 3 LINE KITS INCLUDE:

1" PRESSURE HOSE w/ 1 FIXED END AND 1 SWIVEL END  
1.25" SUCTION HOSE  
4 BARB ENDS  
4 WORM CLAMPS  
1 - 1" WING STYLE QUICK DISCONNECT

Note: We may substitute 1 swivel end for a fixed end and adaptor

# FILTER ASSEMBLIES



WA#	DESCRIPTION
WAF110	1.25" FILTER HEAD WITH 10 MICRON FILTER
WAF125	1.25" FILTER HEAD WITH 25 MICRON FILTER
WADFH2	1.5" AND 2" DOUBLE HEAD WITH 2 -10 MICRON FILTERS
WADFH4	1.5" AND 2" DOUBLE HEAD WITH 2 - 25 MICRON FILTERS

## REPLACEMENT FILTER PARTS



WA#	DESCRIPTION
WA725FH	1.25" FILTER HEAD NPT PORTS WITH TWO 1/8" NPT GAUGE PORTS
WA425FH	1.5" AND 2" FILTER HEAD WITH 25 PSI BYPASS
WA10FLT	REPLACEMENT 10 MICRON FILTER
WA25FLT	REPLACEMENT 25 MICRON FILTER

## QUICK CONNECT COUPLER



WA#	DESCRIPTION
WAWC16	1" WINGED COUPLER SET
WAWC161	1" FEMALE WING
WAWC162	1" MALE COUPLER
WAQCB-16	1" QUICK CONNECT SET
WAISOB-16F	1" ISO-B FEMALE CONNECTOR
WAISOB-16M	1" ISO-B MALE CONNECTOR

## HYDRAULIC VALVES & FITTINGS



WA#	DESCRIPTION
WA125MN	1.25" NIPPLE
WABV20	1.25" BALL VALVE
WABH125	1.25" STEEL COMBO NIPPLE
WAMF9016	1" 90 DEGREE ELBOW MALE TO FEMALE
WAMM9020	1.25" 90 DEGREE ELBOW MALE TO MALE
WACL20	1.25" HOSE CLAMP

# REPLACEMENT PARKER® DVA20 SECTIONAL VALVE KITS

## INLETS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-IN-1000	INLET, 1" NPT PORTS	347-9175-001, DVA20-A440
WA20-IN-1001	INLET, SAE-16 PORTS	347-9175-002, DVA20-A880
WA20-IN-0000	INLET, NO PORTS	347-9175-003, DVA20-A000

## RELIEFS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-RF-2500	500 - 2500 PSI ADJUSTABLE	347-1873-001, DVA20-MRV
WA20-RF-3500	2000 - 3500 PSI ADJUSTABLE	347-1873-128, DVA20-HMRV
WA20-RF-PLUG	MRV PLUG	347-1873-002, DVA20-MRVP DVG-MRVP

## OUTLETS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-OT-0000	OUTLET, NO PORTS	347-9176-006, DVA20-TR00
WA20-OT-0010	OUTLET, 1" NPT PORT	347-9176-001, DVA20-TR44
WA20-OT-0011	OUTLET, SAE-16 PORTS	347-9176-002, DVA20-TR88
WA20-OT-0012	OUTLET, 1" NPT PORTS - POWER BEYOND	347-9176-003, DVA20-PB44
WA20-OT-0013	OUTLET, SAE-16 PORTS - POWER BEYOND	DVA20-PB88
WA20-OT-0001	OUTLET, NO PORTS - POWER BEYOND	347-9176-009, DVA20-PB00

## WORK SECTIONS (LO-BOY)

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-WS-0001	DOUBLE ACTION, SPRING RETURN NO PORT	347-9172-001, DVA20-DA0
WA20-WS-0002	DOUBLE ACTION, SPRING RETURN 3/4" NPT	347-9172-002, DVA20-DA3
WA20-WS-0003	DOUBLE ACTION, SPRING RETURN SAE-12	347-9172-003, DVA20-DA7
WA20-WS-0004	DBL ACTION, FLOAT SPG RETURN NO PORTS	347-9172-004, DVA20-MA0
WA20-WS-0005	DBL ACTION, FLOAT SPG RETURN 3/4" NPT	347-9172-005, DVA20-MA3
WA20-WS-0006	DBL ACTION, FLOAT SPG RETURN SAE-12	347-9172-006, DVA20-MA7
WA20-WS-0007	SINGLE ACTION, AIRSHIFT SPG RETURN SAE-12	347-9172-018, DVA20-SV7
WA20-WS-0008	DOUBLE ACTION, 3 POS. DETENT SAE-12	347-9172-026, DVA20-DB3
WA20-WS-0009	DOUBLE ACTION, 3 POS. DETENT SAE-12	347-9172-027, DVA20-DB7
WA20-WS-0010	DBL ACTION, AIRSHIFT SPG RETURN 3/4" NPT	347-9172-033, DVA20-DV3
WA20-WS-0011	DBL ACTION, AIRSHIFT SPG RETURN SAE-12	347-9172-034, DVA20-DA7
WA20-WS-0012	DBL ACTION, FLOAT 3 POS DETENT 3/4" NPT	347-9172-039, DVA20-MB3
WA20-WS-0013	DBL ACTION, FLOAT 3 POS DETENT SAE-12	347-9172-040, DVA20-MB7
WA20-WS-0014	DBL ACTION, METERED SPG RETURN 3/4" NPT	347-9172-043, DVA20-DX3
WA20-WS-0015	DBL ACTION METERED SPG RETURN SAE-12	347-9172-044, DVA20-DX7
WA20-WS-0016	DBL ACTION, FLOAT METERED SPG RTN 3/4"	347-9172-062, DVA20-MX3
WA20-WS-0017	BBL ACTION, FLOAT METERED SPG RTN SAE-12	347-9172-063, DVA20-MX7



# REPLACEMENT PARKER® DVA20 SECTIONAL VALVE KITS (cont.)

## WORK SECTIONS (HI-BOY)

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-WS-0100	SINGLE ACTION, SPRING RETURN NO PORTS	347-9171-004, DVA20-JA005
WA20-WS-0101	SINGLE ACTION SPRING RETURN 3/4" NPT	347-9171-005, DVA20-JA305
WA20-WS-0102	SINGLE ACTION, SPRING RETURN SAE-12	347-9171-006, DVA20-JA705
WA20-WS-0103	DOUBLE ACTION, SPRING RETURN NO PORTS	347-9172-007, DVA20-HA055
WA20-WS-0104	DOUBLE ACTION, SPRING RETURN 3/4" NPT	347-9172-008, DVA20-HA355
WA20-WS-0105	DOUBLE ACTION, SPRING RETURN SAE-12	347-9172-009, DVA20-HA755
WA20-WS-0106	DBL ACTION, FLOAT SPG RETURN NO PORTS	347-9172-010, DVA20-LA055
WA20-WS-0107	DBL ACTION, FLOAT SPG RETURN 3/4" NPT	347-9172-011, DVA20-LA355
WA20-WS-0108	DBL ACTION, FLOAT SPRING RETURN SAE-12	347-9172-012, DVA20-LA755
WA20-WS-0109	DOUBLE ACTION, 3POS DETENT 3/4" NPT	347-9172-017, DVA20-HB355
WA20-WS-0110	DOUBLE ACTION, 3 POS. DETENT SAE-12	347-9171-018, DVA20-HB755
WA20-WS-0111	DBL ACTION, FLOAT 3 POS. DETENT 3/4" NPT	347-9172-077, DVA20-LB355
WA20-WS-0112	DBL ACTION, FLOAT 3 POS. DETENT SAE-12	347-9172-078, DVA20-LB755

## HANDLE KITS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-HK-0080	8" HANDLE	391-1873-094, DVA20-H-4
WA20-HK-008H	8" HANDLE - H STYLE	391-1873-062, DVA20-H-8
WA20-HK-0010	10" HANDLE	391-1873-095, DVA20-H-5
WA20-HK-001H	10" HANDLE - H STYLE	391-1873-063, DVA20-H10

## STUD KITS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-SK-0001	STUD KIT, 1 WORK SECTION	391-1873-045, DVA20-SK-1
WA20-SK-0002	STUD KIT, 2 WORK SECTIONS	391-1873-046, DVA20-SK-2
WA20-SK-0003	STUD KIT, 3 WORK SECTIONS	391-1873-047, DVA20-SK-3
WA20-SK-0004	STUD KIT, 4 WORK SECTIONS	391-1873-048, DVA20-SK-4
WA20-SK-0005	STUD KIT, 5 WORK SECTIONS	391-1873-049, DVA20-SK-5
WA20-SK-0006	STUD KIT, 6 WORK SECTIONS	391-1873-050, DVA20-SK-6
WA20-SK-0007	STUD KIT, 7 WORK SECTIONS	391-1873-051, DVA20-SK-7
WA20-SK-0008	STUD KIT, 8 WORK SECTIONS	391-1873-052, DVA20-SK-8

## SPOOLS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-SP-4030	4 WAY, 3 POSITION HOLD IN NEUTRAL	391-1873-067, DVA20-SPL-1
WA20-SP-4031	4 WAY, 3 POSITION FLOAT IN NEUTRAL	391-1873-071, DVA20-SPL-3
WA20-SP-3030	3 WAY, 3 POSITION HOLD IN NEUTRAL	391-1873-075, DVA20-SPL-5
WA20-SP-3031	3 WAY, 3 POSITION FLOAT IN NEUTRAL	391-1873-079, DVA20-SPL-7

# REPLACEMENT PARKER® DVA20 SECTIONAL VALVE KITS (cont.)

## PORT RELIEF VALVE

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-PR-5000	PORT RELIEF VALVE W/ AC 500 - 5000 PSI	391-1873-006, DV-PRVAC
WA20-PR-PLUG	PORT RELIEF VALVE PLUG	391-1873-011, DV-PRVP
WA20-PR-5001	PORT VALVE AC ONLY	391-1873-010, DV-AC
WA20-PR-1000	PORT RELIEF ADJUSTABLE 500 - 1000 PSI	391-1873-344, DV-PRVS1
WA20-PR-2500	PORT RELIEF ADJUSTABLE 1000 - 2500 PSI	391-1873-345, DV-PRVS2
WA20-PR-3500	PORT RELIEF ADJUSTABLE 2500 - 3500 PSI	391-1873-346, DV-PRVS3
WA20-PR-2000	PILOT PORT RELIEF VALVE 2000+/- 100 PSI	391-9109-027, DV-PPRV-2000

## SPOOL ACTUATION KITS

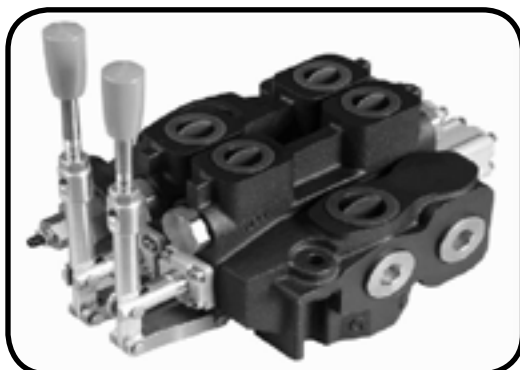
WA#	DESCRIPTION	REPLACES OEM REF#
WA20-SA-3206	SPOOL SINGLE ENDED AIR SHIFT	391-1873-203, DV20-K-113
WA20-SA-3207	APSCO SPOOL SINGLE ENDED AIR SHIFT	391-1873-206A, DV20-K-113A
WA20-SA-3019	SPOOL SPRING RETURN KIT	391-1873-019, DV20-K-100
WA20-SA-3020	SPOOL 3 POSITION DETENT KIT	391-1873-020, DV20-K-101

## Plugs

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-PG-0050	1/2" NPT PLUG	391-1873-012, DV-DPL-50
WA20-PG-0075	3/4" NPT PLUG	391-1873-013, DV-DPL-75
WA20-PG-0100	1" NPT PLUG	391-1873-014, DV-DPL-100
WA20-PG-0125	1.25" NPT PLUG	391-1873-015, DV-DPL-125
WA20-PG-0150	1.5" NPT PLUG	391-1873-228, DV-DPL-150
WA20-PG-0008	SAE-8 PLUG	391-1873-229, DV-DPL-8
WA20-PG-0010	SAE-10 PLUG	391-1873-230, DV-DPL-10
WA20-PG-0012	SAE-12 PLUG	391-1873-016, DV-DPL-12
WA20-PG-0016	SAE-16 PLUG	391-1873-017, DV-DPL-16
WA20-PG-0020	SAE-20 PLUG	391-1873-018, DV-DPL-20

## REPLACEMENT SECTIONAL VALVE REPAIR KITS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-WS-AK01	WORK SECTION ASSEMBLY KIT	391-1873-035, DV20-K-1
WA20-WS-RK01	WORK SECTION REPAIR KIT	391-1873-036, DV20-K-2
WA20-WS-SK01	WORK SECTION SEAL KIT	391-1873-040, DV35-K11
WA20-WS-RK02	WORK SECTION REPAIR KIT	391-1873-041, DV35-K12T



# REPLACEMENT MAJOR PACKING KITS FOR HYDRAULIC CYLINDERS

COMMERCIAL®			CUSTOM HOIST®		
WA#	DESCRIPTION	REPLACES OEM REF#	WA#	DESCRIPTION	REPLACES OEM REF#
WA20-CM-RK53	3 STAGE 5" MAJOR KIT	CM-375-1804-020	WA20-CH-RK53	3 STAGE 5" MAJOR KIT	MRK-53
WA20-CM-RK63	3 STAGE 6" MAJOR KIT	CM-375-1804-109	WA20-CH-RK63	3 STAGE 6" MAJOR KIT	MRK-63
WA20-CM-RK64	4 STAGE 6" MAJOR KIT	CM-375-1804-237	WA20-CH-RK64	4 STAGE 6" MAJOR KIT	MRK-46
WA20-CM-RK73	3 STAGE 7" MAJOR KIT	CM-375-1804-002	WA20-CH-RK73	3 STAGE 7" MAJOR KIT	MRK-73
WA20-CM-RK74	4 STAGE 7" MAJOR KIT	CM-375-1804-003	WA20-CH-RK74	4 STAGE 7" MAJOR KIT	MRK-74
WA20-CM-RK84	4 STAGE 8" MAJOR KIT	CM-375-1804-054	WA20-CH-RK84	4 STAGE 8" MAJOR KIT	MRK-84
WA20-CM-RK85	5 STAGE 8" MAJOR KIT	CM-375-1804-060	WA20-CH-RK85	5 STAGE 8" MAJOR KIT	MRK-85
WA20-CM-RK95	5 STAGE 9" MAJOR KIT	CM-375-1804-004	WA20-CH-RK95	5 STAGE 9" MAJOR KIT	MRK-95

**COMMERCIAL KIT CONTENTS**

PACKING SET  
WIPERS  
BEARING RINGS  
PISTON BEARINGS  
WAVE SPRINGS  
SET SCREWS  
NYLON BALLS

**CUSTOM HOIST KIT CONTENTS**

PACKING SET  
WIPERS  
WAVE SPRINGS  
2 BUSHINGS  
RETAINER RINGS  
WEAR RINGS  
PLUNGER STOP  
SET SCREWS  
SLUGS

# REPLACEMENT SEAL KITS FOR HYDRAULIC CYLINDERS

COMMERCIAL®			CUSTOM HOIST®		
WA#	DESCRIPTION	REPLACES OEM REF#	WA#	DESCRIPTION	REPLACES OEM REF#
WA20-CM-53SK	3 STAGE 5" SEAL KIT	CM-1804-017	WA20-CH-53SK	3 STAGE 5" SEAL KIT	SK-53
WA20-CM-63SK	4 STAGE 6" SEAL KIT	CM-1804-018	WA20-CH-63SK	4 STAGE 6" SEAL KIT	SK-63
WA20-CM-64SK	3 STAGE 6" SEAL KIT	CM-1804-021	WA20-CH-64SK	3 STAGE 6" SEAL KIT	SK-64
WA20-CM-73SK	3 STAGE 7" SEAL KIT	CM-1804-019	WA20-CH-73SK	5 STAGE 7" SEAL KIT	SK-73
WA20-CM-74SK	4 STAGE 7" SEAL KIT	CM-1804-022	WA20-CH-74SK	4 STAGE 7" SEAL KIT	SK-74
WA20-CM-84SK	4 STAGE 8" SEAL KIT	CM-1804-023	WA20-CH-84SK	4 STAGE 8" SEAL KIT	SK-84
WA20-CM-85SK	5 STAGE 8" SEAL KIT	CM-1804-024	WA20-CH-85SK	5 STAGE 8" SEAL KIT	SK-85
WA20-CM-95SK	5 STAGE 9" SEAL KIT	CM-1804-025	WA20-CH-95SK	5 STAGE 9" SEAL KIT	SK-95

**COMMERCIAL KIT CONTENTS**

PACKING SET  
WIPERS RINGS

**CUSTOM HOIST KIT CONTENTS**

PACKING SET  
1 WIPER  
1 NYLON BUSHING  
1 SET SCREW  
1 PLUG PER STAGE

# REPLACEMENT PACKING & WIPERS FOR HYDRAULIC CYLINDERS

COMMERICAL®			CUSTOM HOIST®		
WA#	DESCRIPTION	REPLACES OEM REF#	WA#	DESCRIPTION	REPLACES OEM REF#
WA20-CH-VW03	3" VEE & WIPER SET	CH-400-3VSW	WA20-CH-VW03	3" VEE & WIPER SET	CM-3VSW
WAH4VSW	4" VEE & WIPER SET	CH-400-4VSW	WAC4VSW	4" VEE & WIPER SET	CM-4VSW
WAH5VSW	5" VEE & WIPER SET	CH-400-5VSW	WAC5VSW	5" VEE & WIPER SET	CM-5VSW
WAH6VSW	6" VEE & WIPER SET	CH-400-6VSW	WAC6VSW	6" VEE & WIPER SET	CM-6VSW
WAH7VSW	7" VEE & WIPER SET	CH-400-7VSW	WAC7VSW	7" VEE & WIPER SET	CM-7VSW
WAH8VSW	8" VEE & WIPER SET	CH-400-8VSW	WAC8VSW	8" VEE & WIPER SET	CM-8VSW
WAH8.25VSW	9" VEE & WIPER SET	CH-400-9VSW	WAC9VSW	9" VEE & WIPER SET	CM-9VSW

## REPLACEMENT CUSTOM HOIST® CYLINDERS MINOR REPAIR KITS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-CH-MR53	3 STAGE 5" SEAL KIT	MPK-53
WA20-CH-MR63	3 STAGE 6" SEAL KIT	MPK-63
WA20-CH-MR64	4 STAGE 6" SEAL KIT	MPK-64
WA20-CH-MR73	3 STAGE 7" SEAL KIT	MPK-73
WA20-CH-MR74	4 STAGE 7" SEAL KIT	MPK-74
WA20-CH-MR84	4 STAGE 8" SEAL KIT	MPK-84
WA20-CH-MR85	5 STAGE 8" SEAL KIT	MPK-85
WA20-CH-MR95	5 STAGE 9" SEAL KIT	MPK-95

**CUSTOM HOIST KIT CONTENTS:**

PACKING SET  
 1 WIPER  
 1 WAVE SPRINGS  
 2 BUSHINGS  
 1 SET SCREWS  
 2 SLUGS

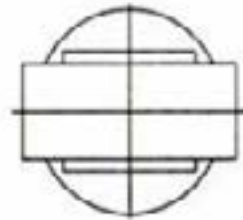
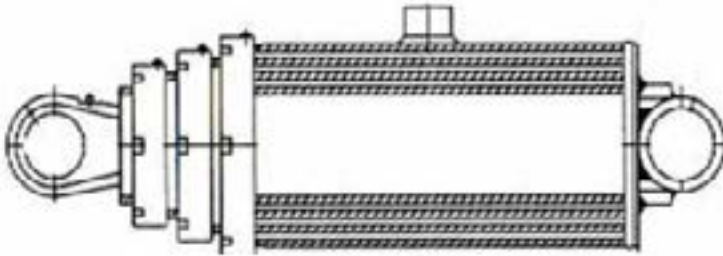


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# REPLACEMENT HYDRAULIC CYLINDERS

## OPERATING FEATURES

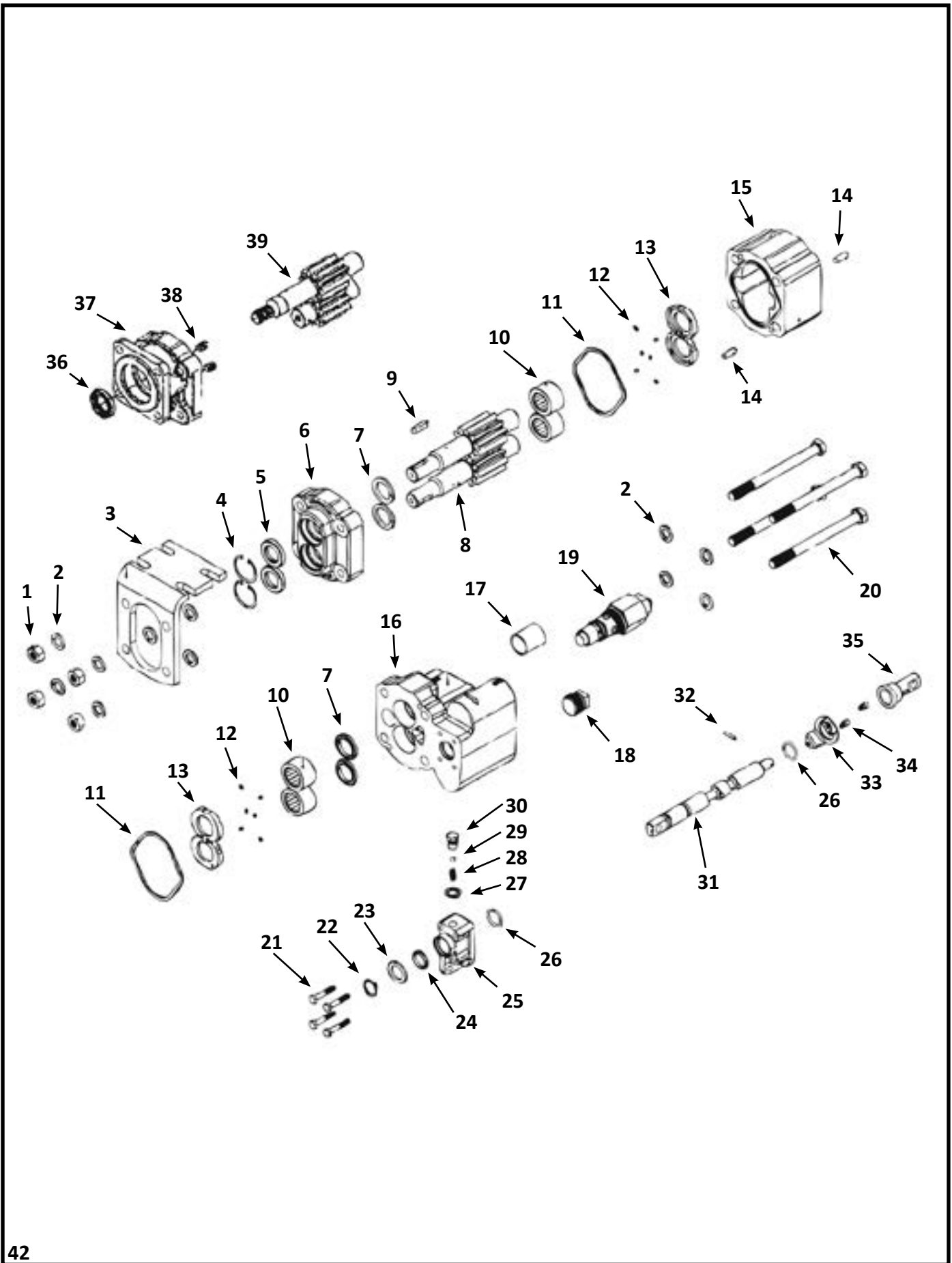
- REQUIRES LESS OIL
- FASTER DURING OPERATION
- LIGHTER AND THINNER THEN THE OEM's
- MORE LOAD CAPACITY PER STAGE
- MAINTENANCE FREE
- NO BLEEDING REQUIRED



WA#	LARGEST STAGE DIAMETER	# OF STAGES	STROKE LENGTH	REPLACES HYVA® REF#	REPLACES CUSTOM HOIST®
WA20-CH-63108	6"	3	108"	FEE-6-3-108	63-702-108
WA20-CH-63136	6"	3	136"	FEE-6-3-136	63-702-132
WA20-CH-74157	7"	4	157"	FEE-7-4-157	74-701-156
WA20-CH-74169	7"	4	169"	FEE-7-4-169	74-701-167
WA20-CH-84188	8"	5	188"	FEE 8 5 188	85 402 190
WA20-CH-85211	8"	5	211"	FEE-8-5-211	85-402-200
WA20-CH-85228	8"	5	228"	FEE 8 5 228	85 402 220
WA20-CH-95228	9"	5	228"	FEE-9-5-228	95-461-220

OTHER SIZES AVAILABLE BY SPECIAL ORDER

# WA101 / WA102 DUMP PUMP





# WA101 / WA102 DUMP PUMP

#	WA #	QTY WA101	QTY WA102	DESCRIPTION	REPLACES OEM REF #
1	WA20-51-0258	4		HEX NUT	391-1451-076
2	WA20-51-0238	4		WASHER	391-3784-028
3	WAPBK-1001	1		SUPPORT BRACKET (optional)	314-0100-005
N.I	WAPBK-1000		1	SUPPORT BRACKET (optional)	P810
4	WA20-12-0001	2	1	SNAP RING	391-2681-493
5	WA20-12-0002	2	1	LIP SEAL	391-2883-096
6	WA20-12-0003	1	1	SHAFT END COVER	314-5039-201
7	WA20-51-0224	4	2	RING SEAL	391-2585-009
8	WA20-12-0004	2		GEAR SET	314-29XX-640
9	WA20-20-0147	1		SHAFT KEY	391-1781-021
10	WA20-51-0225	4	4	ROLLER BEARINGS	391-0381-059
11	WA20-51-0230	2	2	GEAR HOUSING GASKET	391-2884-021
12	WA20-51-0225	12	12	POCKET SEALS	391-2882-050
13	WA20-51-0227	2	2	THRUST PLATES	391-2185-012
14	WA20-51-0231	2	2	HOUSING DOWEL PINS	391-2082-032
15	WA20-12-0005	1	1	GEAR HOUSING	314-80XX-100
16a	WA20-12-0006	1		PORT END COVER	314-3910-903
16b	WA20-12-0007		1	PORT END COVER	314-3910-904
17	WA20-12-0008	1	1	OPTIONAL SLEEVE	391-3283-052
18	WA20-12-0009	1	1	PIPE PLUG	391-2282-006
19	WA20-12-0010	1	1	RELIEF VALVE	355-9001-067
20	WA20-12-0011	4	4	BOLTS	391-1401-110
21	WA20-12-0012		4	CAP SCREWS	391-1401-082
22	WA20-12-0013	1	1	SNAP RING	391-2688-003
23	WA20-12-0014	1	1	RETAINER RING	391-3782-126
24	WA20-12-0015	1	1	WIPER RING	391-2883-147
25	WA20-12-0016	1	1	DETENT CAP	314-0100-003
26	WA20-51-0204	1	1	O RING	391-2881-103
27	WA20-12-0017	1	1	LOCK WASHER	391-3788-002
28	WA20-12-0018	1	1	DETENT SPRING	391-3581-383
29	WA20-12-0019	1	1	DETENT BALL	391-0282-009
30	WA20-12-0020	1	1	DETENT RETAINER	391-2583-079
31	WA20-12-0021	1	1	SPOOL VALVE	314-4000-001
32	WA20-12-0022	1	1	PIN	391-2085-009
33	WA20-12-0023	1	1	SPOOL BRACKET	391-0981-010
34	WA20-12-0024	2	2	SOCKET CAP SCREW	391-1402-063
35	WA20-12-0025	1	1	SPOOL END CAP	391-1881-073
36	WA20-51-0205		1	LIP SEAL	391-2883-115
37	WA20-12-0026		1	SHAFT END COVER	313-5033-201
38	WA20-20-0122		2	CHECK VALVES	391-3681-001
39	WA20-12-0028		1	DRIVE GEAR	314-29XX-130



# P20 SERIES SEAL AND REPAIR KITS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-20-RPKT	P20 REPAIR KIT	391-1802-217
WA20-20-1315	P20 REBUILD KIT 1.5" HOUSING AND GEAR SET 13 SPLINE	399-1362-515
WA20-20-1317	P20 REBUILD KIT 1.75" HOUSING AND GEAR SET 13 SPLINE	399-1362-517
WA20-20-1320	P20 REBUILD KIT 2" HOUSING AND GEAR SET 13 SPLINE	399-1362-520
WA20-20-1015	P20 REBUILD KIT 1.5" HOUSING AND GEAR SET 1" ROUND	399-1364-315
WA20-20-1017	P20 REBUILD KIT 1.75" HOUSING AND GEAR SET 1" ROUND	399-1364-317
WA20-20-1020	P20 REBUILD KIT 2" HOUSING AND GEAR SET 1" ROUND	399-1364-320

# P30 SERIES REPAIR AND REBUILD KITS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-30-RPKT	30 REPAIR KIT	391-1802-317
WA20-30-7815	P30 REBUILD KIT 1.5" HOUSING AND GEAR SET 13 SPLINES	399-1372-515
WA20-30-7817	P30 REBUILD KIT 1.75" HOUSING AND GEAR SET 13 SPLINES	399-1372-517
WA20-30-7820	P30 REBUILD KIT 2" HOUSING AND GEAR SET 13 SPLINES	399-1372-520
WA20-30-1010	P30 REBUILD KIT 1.5" HOUSING AND GEAR SET 15 SPLINES	399-1374-315
WA20-30-1017	P30 REBUILD KIT 1.75" HOUSING AND GEAR SET 15 SPLINES	399-1374-517
WA20-30-1020	P30 REBUILD KIT 2" HOUSING AND GEAR SET 15 SPLINES	399-1374-320



WA399-1372-515

## REPAIR KIT CONTENTS

HOUSING GASKETS  
SHAFT BEARING  
LIP SEAL  
SNAP RING  
RETAINER  
POCKET SEALS

## REBUILD KIT CONTENTS

HOUSING  
GEAR SET  
THRUST PLATES  
BEARINGS  
SNAP RING  
RETAINER  
LIP SEAL  
HOUSING GASKETS  
POCKET SEALS  
RING SEAL

# P50 & P51 SERIES SEAL AND REPAIR KITS

WA#	DESCRIPTION	REPLACES OEM REF#
WA20-51-RPKT	P50 REPAIR KIT	391-1802-174
WA20-51-7815	P50 REBUILD KIT 1.5" HOUSING AND GEAR SET 13 SPLINES	399-1382-515
WA20-51-7817	P50 REBUILD KIT 1.75" HOUSING AND GEAR SET 13 SPLINES	399-1382-517
WA20-51-7820	P50 REBUILD KIT 2" HOUSING AND GEAR SET 13 SPLINES	399-1382-520
WA20-51-1015	P50 REBUILD KIT 1.5" HOUSING AND GEAR SET 15 SPLINES	399-1384-315
WA20-51-1017	P50 REBUILD KIT 1.75" HOUSING AND GEAR SET 15 SPLINES	399-1384-517
WA20-51-1020	P50 REBUILD KIT 2" HOUSING AND GEAR SET 15 SPLINES	399-1384-320
WA20-51-1215	P50 REBUILD KIT 1.5" HOUSING AND GEAR SET 1.25" ROUND	399-1380-715
WA20-51-1217	P50 REBUILD KIT 1.75" HOUSING AND GEAR SET 1.25" ROUND	399-1380-717
WA20-51-1220	P50 REBUILD KIT 2" HOUSING AND GEAR SET 1.25" ROUND	399-1380-720
WA20-51-1415	P50 REBUILD KIT 1.5" HOUSING AND GEAR SET 14 SPLINES	399-1381-115
WA20-51-1417	P50 REBUILD KIT 1.75" HOUSING AND GEAR SET 14 SPLINES	399-1381-117
WA20-51-1420	P50 REBUILD KIT 2" HOUSING AND GEAR SET 14 SPLINES	399-1381-120



WA399-1382-520

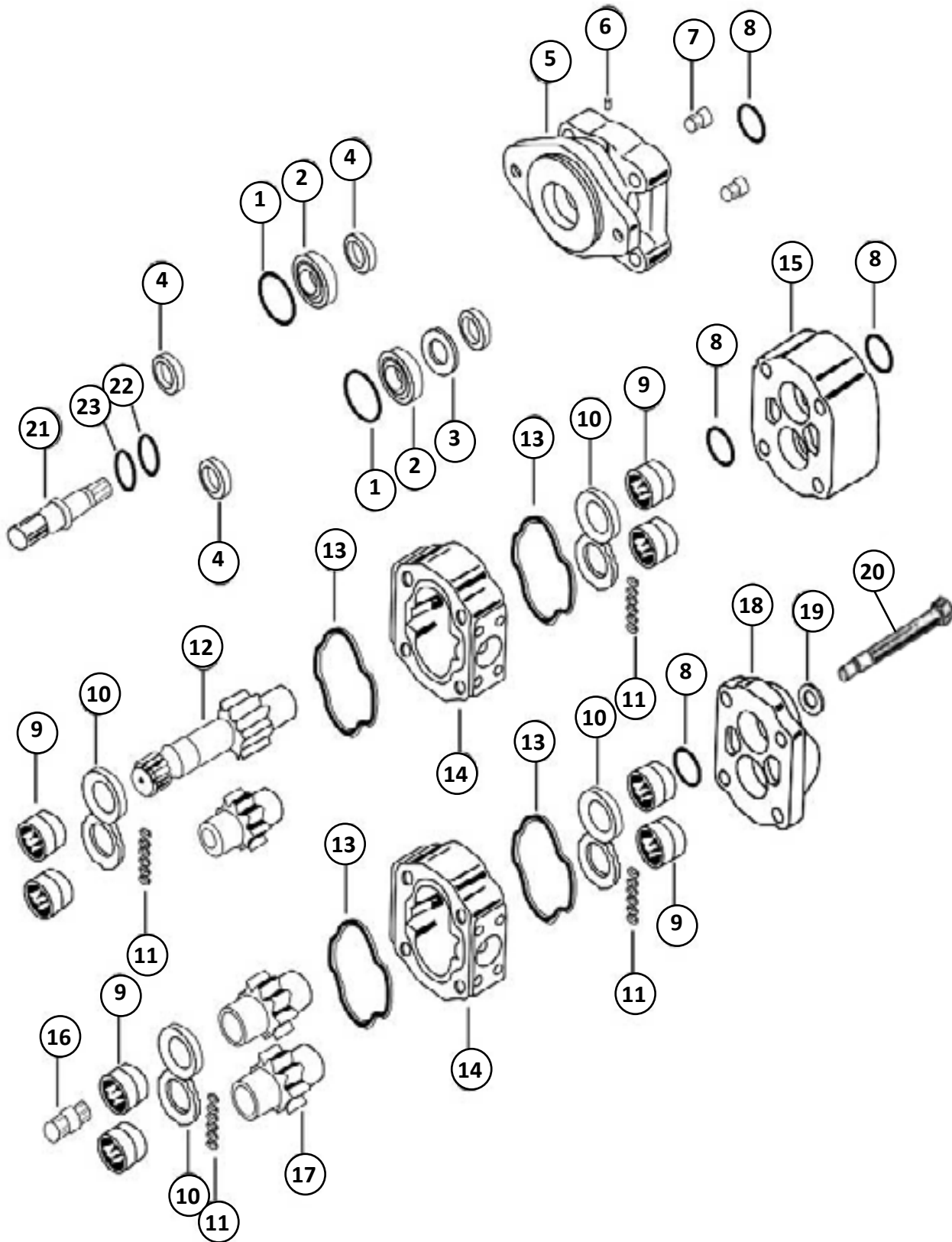
## REPAIR KIT CONTENTS

HOUSING GASKETS  
SHAFT BEARING  
LIP SEAL  
SNAP RING  
RETAINER  
POCKET SEAL

## REBUILD KIT CONTENTS

HOUSING  
GEAR SET  
THRUST PLATES  
BEARINGS  
SNAP RING  
RETAINER  
LIP SEAL  
HOUSING GASKETS  
POCKET SEALS  
RING SEAL

# P20 SERIES



# P20 SERIES

#	WA #	DESCRIPTION	REPLACES OEM REF #
1	WA20-20-0100	SHAFT BEARING SNAP RING	X05-03-56200, 391-2686-063
2a	WA20-20-0101	BEARING SPACER ( IN PLACE OF SHAFT BEARING )	A30-92-38520, 391-3383-069
2b	WA20-20-0102	INPUT SHAFT BEARING	X03-16-12552, 391-0381-040
3	WA20-20-0103	MOTOR SEAL RETAINER USED WITH SHAFT BEARING OR SPACER	A20-60-10000, 391-3381-040
4a	WA20-20-0104	PUMP LIP SEAL FOR CONTINENTAL SHAFT ONLY	X89-11-02508, 391-2883-107
4b	WA20-20-0105	MOTOR LIP SEAL FOR CONTINENTAL SHAFT ONLY	X83-36-02509, 391-2883-126
4c	WA20-20-0106	PUMP LIP SEAL FOR SHAFT END COVER	X83-11-02708, 391-2883-058
4d	WA20-20-0107	MOTOR LIP SEAL	X83-36-02709, 391-2883-119
5a	WA20-20-0108	6 BOLT ROUND WITH 2.625" OR 66,67 mm PILOT PUMP S.E.C. TYPE 05	A20-10-21650, 308-5043-201
5b	WA20-20-0109	PAD PILOT PUMP TYPE 2 S.E.C. TYPE 10	A20-10-22100, 308-5016-203
5c	WA20-20-0110	4 BOLT CLOVERLEAF PILOT TYPE 2 PUMP S.E.C. TYPE 27	A20-10-22460, 308-5036-201
5d	WA20-20-0111	4 BOLT B PILOT PUMP S.E.C. TYPE 42 (4" or 101,6 mm pilot)	A20-10-21420, 308-5030-201
5e	WA20-20-0112	2/4 BOLT B PILOT PUMP S.E.C. TYPE 46 (4" or 101,6 mm pilot)	A20-10-21320, 308-5053-202
5f	WA20-20-0113	2 BOLT A PILOT PUMP S.E.C. TYPE 94 (3 1/4" or 82,55 mm pilot)	A20-10-21210, 308-5020-204
5g	WA20-20-0114	2 BOLT B PILOT PUMP S.E.C. TYPE 97 (4" or 101,6 mm pilot)	A20-10-21220, 308-5020-201
5h	WA20-20-0115	2 BOLT B PILOT TYPE 2 PUMP S.E.C. TYPE 96 (4" or 101,6 mm pilot)	A20-10-22220, 308-5029-205
5i	WA20-20-0116	6 BOLT ROUND WITH 2.625" or 66,67 mm PILOT MOTOR S.E.C. TYPE 05	A20-10-41650, 308-5043-401
5j	WA20-20-0117	4 BOLT B PILOT MOTOR S.E.C. TYPE 42 (4" or 101,6 mm pilot)	A20-10-41420, 308-5030-401
5k	WA20-20-0118	2/4 BOLT B PILOT MOTOR S.E.C. TYPE 46 (4" or 101,6 mm pilot)	A20-10-41320, 308-5053-402
5l	WA20-20-0119	2 BOLT A PILOT MOTOR S.E.C. TYPE 94 (3 1/4" or 82,55 mm pilot)	A20-10-41210, 308-5020-404
5m	WA20-20-0120	2 BOLT B PILOT MOTOR S.E.C. TYPE 97 (4" or 101,6 mm pilot)	A20-10-41220, 308-5020-401
6	WA20-20-0121	CASE DRAIN PLUG	X02-03-22060, 391-2282-056
7a	WA20-20-0122	CHECK VALVE MOTOR	A00-75-11000, 391-3681-001
7b	WA20-20-0123	PRESSURE PLUG PUMP	X02-03-32110, 391-2286-004
8	WA20-20-0124	RING SEAL	X81-76-02706, 391-2585-006
9	WA20-20-0125	ROLLER BEARING (Ø 1.687" O.D.)	X03-25-12743, 391-0381-068
10	WA20-20-0126	PUMP & MOTOR THRUST PLATE	A30-70-10000, 391-2185-013
11	WA20-20-0127	POCKET SEAL	X85-11-00002, 391-2882-086
12a	WA20-20-10XX	SHAFT & GEAR TYPE 30 (0.875" Ø x 1/4" x 3/8" x 1" key)	A30-50-XX125, 312-29XX-730
12b	WA20-20-78XX	SHAFT & GEAR TYPE 25 ( 0.875" Ø - 13-Tooth spline)	A30-50-XX225, 312-29XX-230
12c	WA20-20-12XX	SHAFT & GEAR TYPE 43 (1.00" Ø x 1/4" x 3/8" x 1 1/4" key)	A30-50-XX135, 312-29XX-740
12d	WA20-20-11XX	SHAFT & GEAR TYPE 67 TYPE 2 (0.875" Ø x 1/4" x 3/8" x 1" key)	A30-50-XX132, 312-29XX-940
12e	WA20-20-11XX	SHAFT & GEAR TYPE 66 TYPE 2 (0.875" Ø x 1/4" x 3/8" x 1" key)	A30-50-XX126, 312-29XX-930
12f	WA20-20-13XX	SHAFT & GEAR TYPE 65 TYPE 2 ( 0.875" Ø - 13-Tooth spline)	A30-50-XX226, 312-29XX-430
13	WA20-20-0128	PUMP & MOTOR HOUSING GASKET	X85-11-09203, 391-2884-019
14	WA20-20-01XX	PUMP & MOTOR GEAR HOUSING	A20-32-XX000, 308-80XX-100
15a	WA20-20-0130	MOTOR BEARING CARRIER BLANK	A20-40-00000, 308-7300-100
15b	WA20-20-0131	PUMP BEARING CARRIER WITH COMMON PASSAGE	A20-40-20000, 308-7363-100
16	WA20-20-0132	CONNECTING SHAFT	A30-50-00500, 312-1133-001
17	WA20-20-XXXX	GEAR SET ONLY	A30-50-XX000, 312-28XX-000
18	WA20-20-0133	PUMP & MOTOR PORT END COVER	A20-22-00000, 308-3100-100
19	WA20-20-0134	FLAT WASHER (9/16")	X45-19-15005, 391-3782-146
20	Length Required	BOLTS / STUDS (9/16" UNC)	
21a	WA20-20-0135	CONTINENTAL SHAFT TYPE 30 (0.875" Ø x 1/4" x 3/8" x 1" key)	A30-50-00121, 312-1500-300
21b	WA20-20-0136	CONTINENTAL SHAFT TYPE 30 Long (0.875" Ø x 1/4" x 3/8" x 1" key)	A30-50-00124, 312-1135-192
21c	WA20-20-0137	CONTINENTAL SHAFT TYPE 7 ( 1.250" Ø - 14-tooth spline, Continental only)	A30-50-00241, 312-1135-133
21d	WA20-20-0138	CONTINENTAL SHAFT TYPE 25 ( 0.875" Ø - 13-Tooth spline)	A30-50-00221, 312-1135-138
21e	WA20-20-0139	CONTINENTAL SHAFT TYPE 43 (1.00" Ø x 1/4" x 3/8" x 1 1/4" key)	A30-50-00131, 312-1500-400
21f	WA20-20-0140	CONTINENTAL SHAFT TYPE 43 Long (1.00" Ø x 1/4" x 3/8" x 1 1/4" key)	A30-50-00134, 312-1135-193
21g	WA20-20-0141	CONTINENTAL SHAFT TYPE 12 (0.750" Ø x 3/16" x 3/16" 1 9/16" key)	A30-50-00169, 312-1135-152
21h	WA20-20-0142	CONT SHAFT THREADED & KEYED END TYPE 15 (5/8"-18UNF+1/4"x3/8"x7/8"key)	A30-50-00127, 312-1135-171
21i	WA20-20-0143	CONTINENTAL SHAFT TYPE 95 (0.625" Ø x 9-tooth spline)	A30-50-00211, 312-1000-200
22	WA20-20-0144	CONTINENTAL SHAFT BRG. RETAINER SNAP RING	X05-02-28110, 391-2685-011
23	WA20-20-0145	CONTINENTAL SHAFT BRG. RETAINER	A20-60-20000, 312-0100-002
N.I.	WA20-20-0146	SHAFT KEY FOR TYPE 12 SHAFT	X01-02-50540, 391-1781-075
N.I.	WA20-20-0147	SHAFT KEY FOR TYPE 43 & 67 SHAFT	X01-01-61032, 391-1781-021
N.I.	WA20-20-0148	SHAFT KEY FOR TYPE 30 & 66 SHAFT	X01-01-61025, 391-1781-025
N.I.	WA20-20-0149	SHAFT KEY FOR TYPE Spl. SHAFT	X01-01-61044, 391-1781-020
N.I.	WA20-20-0150	HEX NUT (9/16" UNC)	X42-11-14012, 391-1451-115

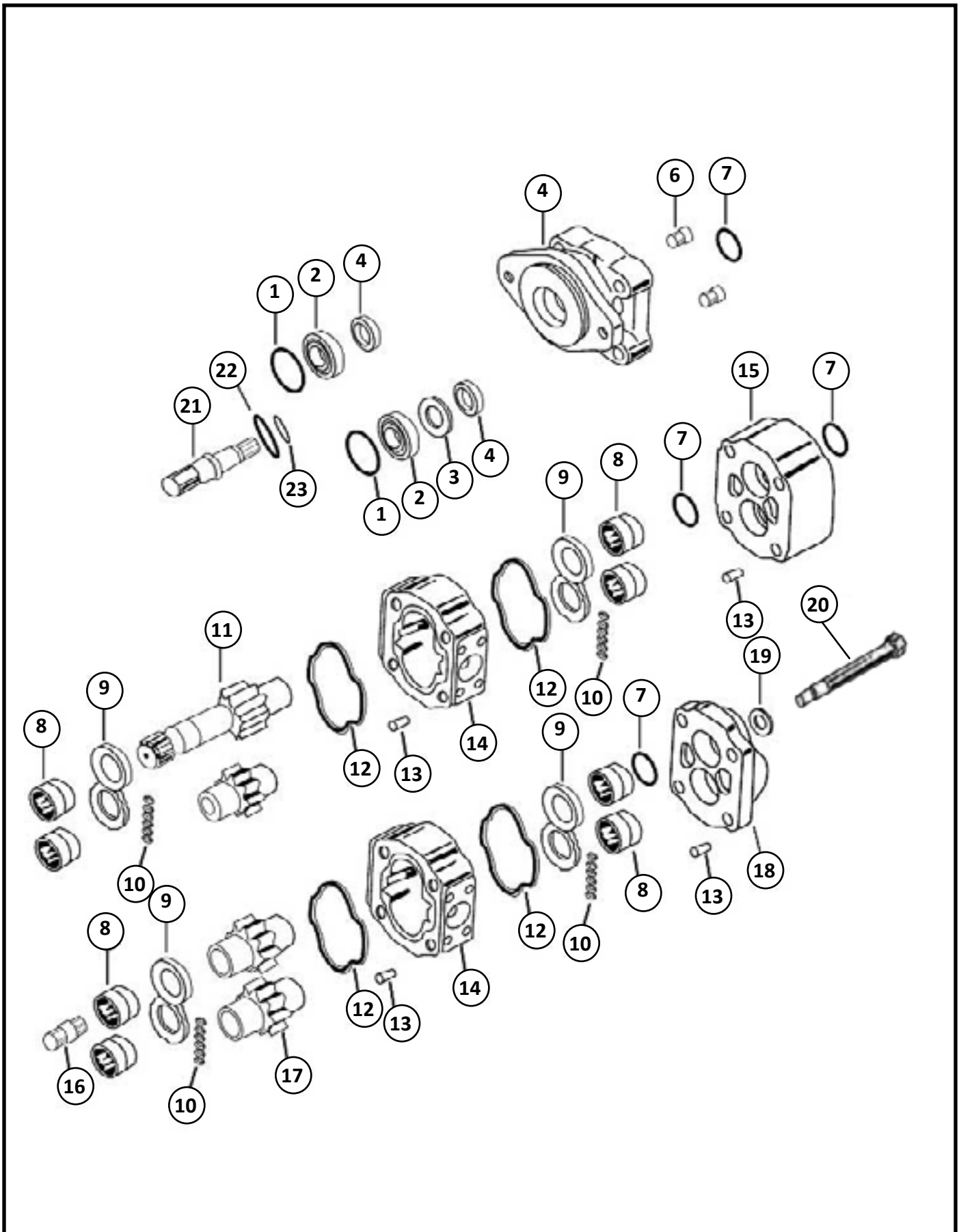
NOTE The XX shown in the part number is in place of the size the true value must be placed into the part number when ordering parts.

(eg.) Gear set no. WA20-20-78XX changes to WA20-20-7815 for a 1.5" gear size

Housing no. WA20-20-01XX changes to WA20-20-0115 for a 1.5" housing size

No porting sizes have been indicated all porting must be specified when ordering parts.

# P51 SERIES





# P51 SERIES

#	WA #	DESCRIPTION	REPLACES OEM REF #
1	WA20-51-0200	SHAFT BRG. SNAP RING	X05-03-77250, 391-2686-065
2a	WA20-51-0201	BRG SPACER & SEAL RETAINER FOR MOTORS	A50-60-10000, 391-3383-087
2b	WA20-51-0202	INPUT SHAFT BEARING	X03-16-13272, 391-0381-077
3	WA20-51-0203	MOTOR SEAL RETAINER USED WITH SHAFT BRG	A50-60-30000, 391-3383-020
4a	WA20-51-0204	PUMP LIP SEAL	X83-11-03308, 391-2883-103
4b	WA20-51-0205	MOTOR LIP SEAL	X83-36-03309, 391-2883-115
4c	WA20-51-0206	PUMP LIP SEAL FOR CONTINENTAL SHAFT ONLY	X89-11-03308, 391-2883-133
5a	WA20-51-0207	PAD PILOT PUMP SHAFT END COVER TYPE 00	A51-10-21100, 313-5017-201
5b	WA20-51-0208	4 BOLT B PILOT PUMP SHAFT END COVER TYPE 42 (4" or 101,6 mm pilot)	A51-10-21420, 313-5037-201
5c	WA20-51-0209	4 BOLT C PILOT PUMP SHAFT END COVER TYPE 78 (5" or 127 mm pilot)	A51-10-21430, 313-5037-202
5d	WA20-51-0210	2 BOLT B PILOT PUMP SHAFT END COVER TYPE 97 (4" or 101,6 mm pilot)	A51-10-21220, 313-5027-201
5e	WA20-51-0212	2 BOLT C PILOT PUMP SHAFT END COVER TYPE 98 (5" or 127 mm pilot)	A51-10-21230, 313-5027-202
5f	WA20-51-0213	2 BOLT B (TYPE 2) PILOT PUMP SHAFT END CVR TYPE 96 (4" or 101,6 mm pilot)	A51-10-22220, 313-5027-205
5g	WA20-51-0214	2 BOLT C (TYPE 2) PILOT PUMP SHAFT END COVER TYPE 99 (5" or 127 mm pilot)	A51-10-22230, 313-5027-206
5h	WA20-51-0215	51/51 SHAFT END COVER FOR PIGGYBACK UNITS TYPE 91	A43-10-21500, 313-5027-208
5i	WA20-51-0216	76/51 SHAFT END COVER FOR PIGGYBACK UNITS TYPE 92	A44-10-21500, 313-5027-209
5j	WA20-51-0217	51 PAD PILOT MOTOR SHAFT END COVER TYPE 00	A51-10-41100, 313-5017-401
5k	WA20-51-0218	4 BOLT B PILOT MOTOR SHAFT END COVER TYPE 42 (4" or 101,6 mm pilot)	A51-10-41420, 313-5037-401
5l	WA20-51-0219	4 BOLT C PILOT MOTOR SHAFT END COVER TYPE 78 (5" or 127 mm pilot)	A51-10-41430, 313-5037-402
5m	WA20-51-0220	2 BOLT B PILOT MOTOR SHAFT END COVER TYPE 97 (4" or 101,6 mm pilot)	A51-10-41220, 313-5027-401
5n	WA20-51-0221	2 BOLT C PILOT MOTOR SHAFT END COVER TYPE 98 (5" or 127 mm pilot)	A51-10-41230, 313-5027-402
6a	WA20-20-0122	CHECK VALVE MOTOR	A00-75-11000, 391-3681-001
6b	WA20-20-0123	PRESSURE PLUG PUMP	X02-03-32110, 391-2286-004
7	WA20-51-0222	RING SEAL	X81-76-03305, 391-2585-009
8	WA20-51-0223	ROLLER BEARING (Ø 1.937" O.D.)	X03-25-13349, 391-0381-059
9a	WA20-51-0224	PUMP THRUST PLATE	A51-70-20000, 391-2185-029
9B	WA20-51-0225	MOTOR THRUST PLATE	A25-70-10000, 391-2185-012
9C	WA20-51-0226	DRY VALVE THRUST PLATE	A50-70-10000 391-2185-041
10	WA20-51-0227	POCKET SEAL	X85-11-00002, 391-2882-050
11a	WA20-51-14XX	SHAFT & GEAR 14 TOOTH SPLINE 1.228" maj. dia. TYPE 7	A50-50-XX245, 313-29XX-250
11b	WA20-51-12XX	SHAFT & GEAR 1.250" KEYED (5/16") TYPE 11	A50-50-XX145, 313-29XX-750
11c	WA20-51-78XX	SHAFT & GEAR SET 13 TOOTH SPLINE 0.858" maj. dia TYPE 25	A50-50-XX225, 313-29XX-230
11d	WA20-51-10XX	SHAFT & GEAR SET 0.9984" dia. KEYED (1/4" x 3/8" x 1 1/4") TYPE 43	A50-50-XX135, 313-29XX-740
11e	WA20-51-41XX	SHAFT & GEAR 14 TOOTH SPLINE 1.228" maj. dia. TYPE 53 TYPE 2	A50-50-XX246, 313-29XX-450
11f	WA20-51-31XX	SHAFT & GEAR SET 13 TOOTH SPLINE 0.858" maj. dia TYPE 65 TYPE 2	A50-50-XX226, 313-29XX-430
12	WA20-51-0228	PUMP & MOTOR HOUSING GASKET	X85-11-10803, 391-2884-021
13	WA20-51-0229	HOUSING DOWEL PIN	A00-94-11025, 391-2082-032
14	WA20-51-02XX	PUMP & MOTOR GEAR HOUSING	A51-32-XX000, 313-82XX-100
15a	WA20-51-0230	MOTOR BEARING CARRIER BLANK	A51-40-00000, 313-7740-100
15b	WA20-51-0231	PUMP BEARING CARRIER WITH COMMON PASSAGE	A51-40-20000, 313-7723-100
16	WA20-51-0232	CONNECTING SHAFT	A50-50-00500, 313-1133-001
17	WA20-51-XXXX	GEAR SET ONLY	A50-50-XX000, 313-28XX-000
18a	WA20-51-0233	PUMP & MOTOR PORT END COVER	A51-22-00000, 313-3120-100
18b	WA20-51-0234	PUMP & MOTOR PORT END COVER SPECIAL LARGER PORTING	A51-27-00000, 313-3420-100
18c	WA20-51-0235	PIGGY BACK REAR PORT END COVER	A51-22-03000, 313-5027-212
19	WA20-51-0236	FLAT WASHER (5/8")	X45-10-17005, 391-3784-028
20	Length Required	BOLTS / STUDS (5/8"-UNC)	
21a	WA20-51-0237	CONTINENTAL SHAFT TYPE 11 (1.250" Ø KEYED 5/16")	A50-50-00141, 313-1500-500
21b	WA20-51-0238	CONTINENTAL SHAFT TYPE 7 (1.250" Ø - 14 TOOTH SPLINE)	A50-50-00241, 313-1135-194
21c	WA20-51-0239	CONTINENTAL SHAFT TYPE 25 (0.875" Ø- 13 TOOTH SPLINE)	A50-50-00221, 313-1000-300
21d	WA20-51-0240	CONTINENTAL SHAFT TYPE 43 (1.00" Ø x 1/4" x 3/8" x 1 1/4" key)	A50-50-00131, 313-1500-400
21e	WA20-51-0241	CONTINENTAL SHAFT TYPE 73 LONG (1.250" Ø KEYED 5/16")	A50-50-00147, 313-1500-502
22	WA20-51-0242	CONTINENTAL SHAFT BRG. RETAINER (MAY NOT BE REQUIRED)	A50-60-20000, 391-3381-046
23	WA20-51-0243	CONTINENTAL SHAFT BRG. RETAINER SNAP RING (MAY NOT BE REQ)	X05-02-35120, 391-2685-040
N.I.	WA20-51-0244	SEAL RETAINER FOR 51/51 PIGGY BACK PUMP S.E.C	A30-60-10001, 391-2584-063
N.I.	WA20-51-0245	SEAL RETAINER O RING FOR PIGGY BACK PUMP S.E.C.	X81-11-04704, 391-2881-124
N.I.	WA20-51-0246	SEAL RETAINER O RING FOR PIGGY BACK PUMP S.E.C.	X81-11-05704 391-2881-120
N.I.	WA20-51-0247	SEAL RETAINER FOR 76/51 PIGGY BACK PUMP S.E.C.	A50-60-10003, 391-2585-013
N.I.	WA20-20-0121	CASE DRAIN PLUG	X02-03-22060, 391-2282-056
N.I.	WA20-51-0248	DRY VALVE SEAL RETAINER	A50-60-10001, 391-2584-050
N.I.	WA20-20-0106	PUMP LIP SEAL FOR PIGGY BACK S.E.C. & P.E.C.	X83-11-02708, 391-2883-058
N.I.	WA20-51-0249	SHAFT KEY FOR TYPE 73 SHAFT	X01-01-81257, 391-1781-008
N.I.	WA20-20-0147	SHAFT KEY FOR TYPE 43 SHAFT	X01-01-61032, 391-1781-021
N.I.	WA20-51-0250	SHAFT KEY FOR TYPE 11	X01-01-81238, 391-1781-045
N.I.	WA20-51-0251	50/50 PIGGY BACK CONNECTING SHAFT	A41-50-00400, 313-1133-004
N.I.	WA20-51-0252	75/50 PIGGY BACK CONNECTING SHAFT	A42-50-00400, 313-1133-003
N.I.	WA20-51-0253	HEX NUT (5/8"-UNC)	X42-11-16000, 391-1451-076

NOTE The XX shown in the part number is in place of the size the true value must be placed into the part number when ordering parts.  
 (eg.) Gear set no. WA20-51-78XX changes to WA20-51-7815 for 1.5" gear size  
 Housing no. WA20-51-XXXX changes to WA20-51-0215 for a 1.5" housing size  
 No porting sizes have been indicated all porting must be specified when ordering parts.

# TECHNICAL SECTION





## Chelsea® to World American® Interchange

Sample Chelsea Number

489    X    2

Your Chelsea Number

1

Mounting Options

2

Basic Model

1

440 = W/A06  
441 = W/A06  
442 = W/A06  
488 = W/A08  
489 = W/A08  
230 = W/A02  
277 = W/A10

G = M (Standard mount w/ Metric Studs)  
K = B (Standard Mount less Installation Kit)  
L = A (Deep Mount less Installation Kit)  
X = S (Standard Mount)  
Z = D (Deep Mount)

3 Gear Ratio →  
C = 2  
F = 3  
H = 4  
L = 4  
Q = 5  
R = 6  
S = 7  
U = 8  
W = 9  
**Hot Shift Only**  
B = A  
D = B  
G = C  
M = D  
S = E

4 Input Gear →  
AB = LC  
AH = LI  
AP = LQ  
AR = LS  
AX = LY  
BG = MH  
BQ = MR  
DA = PB  
ED = QE  
ES = QT  
EV = QW  
FN = RP  
GS = ST  
HY = TZ  
JK = UL  
**Hot Shift Only**  
FJ = RK

5 Lube Option →  
X = N (No Lube)  
**Hot Shift Only**  
P = L (Pressure lube)

6 Shift Option →  
A = A (Air Shift)  
S = D (Combo Valve PTO & Pump w/ Kickout)  
T = K (Combo Valve PTO & Pump w/o Kickout)  
V = N (Air Shift less Installation Kit)  
W = C (Wire Shift)  
X = C (Wire Shift w/o wire)  
**Hot Shift Only**  
B = 2 (12v. Electric Over Hydraulic)  
D = 4 (24v Electric over Hydraulic)

7 Assembly Arrangement →  
3 = RF  
4 = RR  
5 = LF  
6 = LR

8 Output options →  
AK = DM (SAE "B" 2 Bolt 7/8" 13T)  
RA = DM (Rotatable SAE "B" 2 Bolt 7/8" 13T)  
RB = DM (Rotatable SAE "B" 2/4 Bolt 7/8" 13T)  
XD = RM (1-1/4" Round Shaft)  
XK = DM (Rotatable SAE "B" 2/4 Bolt 7/8" 13T)  
XQ = DM (SAE "2 or 4 Bolt 7/8" 13T)

World American® Part Number =

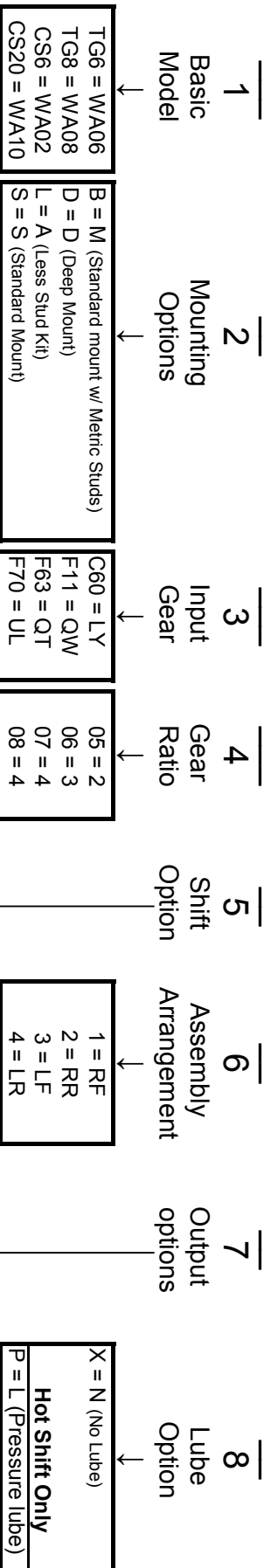
--- 1 --- 2 --- 3 --- 4 --- 5 --- 6 --- 7 --- 8

## Muncie® to World American® Interchange

Sample P.T.O Number

CS20    S    A10    05    H    3    K    P  
 1    2    3\*    4\*    5    6    7    8\*

Your P.T.O Number



World American® Part Number =

1    2    4\*    3\*    8\*    5    6    7

\* Be Aware of numbering Sequence

**Power Transmission Options® (P.T.O.) to World American® Interchange**

Sample P.T.O Number

1000  
1    X    2

E    3

A    4

01    5

1    6

RA    7

Your P.T.O Number

1    2    3    4    5    6    7

Basic Model

1000 = WA06S  
1001 = WA06M  
1010 = WA06D  
2000 = WA08S  
2001 = WA08M  
2010 = WA08D  
2300 = WA02S  
3100 = WA10S  
3200 = WA06S

Lube Option

X = N (No Lube)  
**Hot Shift Only**  
P = L (Pressure lube)

Gear Ratio

A = 2  
B = 3  
C = 4  
E = 5  
J = 6  
O = 7  
R = 8  
T = 9  
**HOT SHIFT ONLY**  
B = A  
C = B  
G = C  
M = D  
S = E

Shift Option

A = A (Air Shift w/ Installation Kit)  
L = L (Lever Shift)  
N = N (Air Shift less installation Kit)  
M = M (Constant Mesh)  
S = D (Combo Valve PTO & Pump w/ Kickout)  
T = K (Combo Valve PTO & Pump w/o Kickout)  
W = C (Wire Shift)  
**Hot Shift Only**  
E = 2 (Electric Over Hydraulic)

Input Gear

01 = LI  
02 = LC  
05 = LS  
06 = LY  
08 = MH  
11 = MR  
17 = QT  
21 = ST  
24 = PB  
27 = QW  
28 = UL  
33 = LQ  
34 = RP  
50 = TZ  
52 = QD

Assembly Arrangement

1 = RF  
2 = RR  
3 = LF  
4 = LR

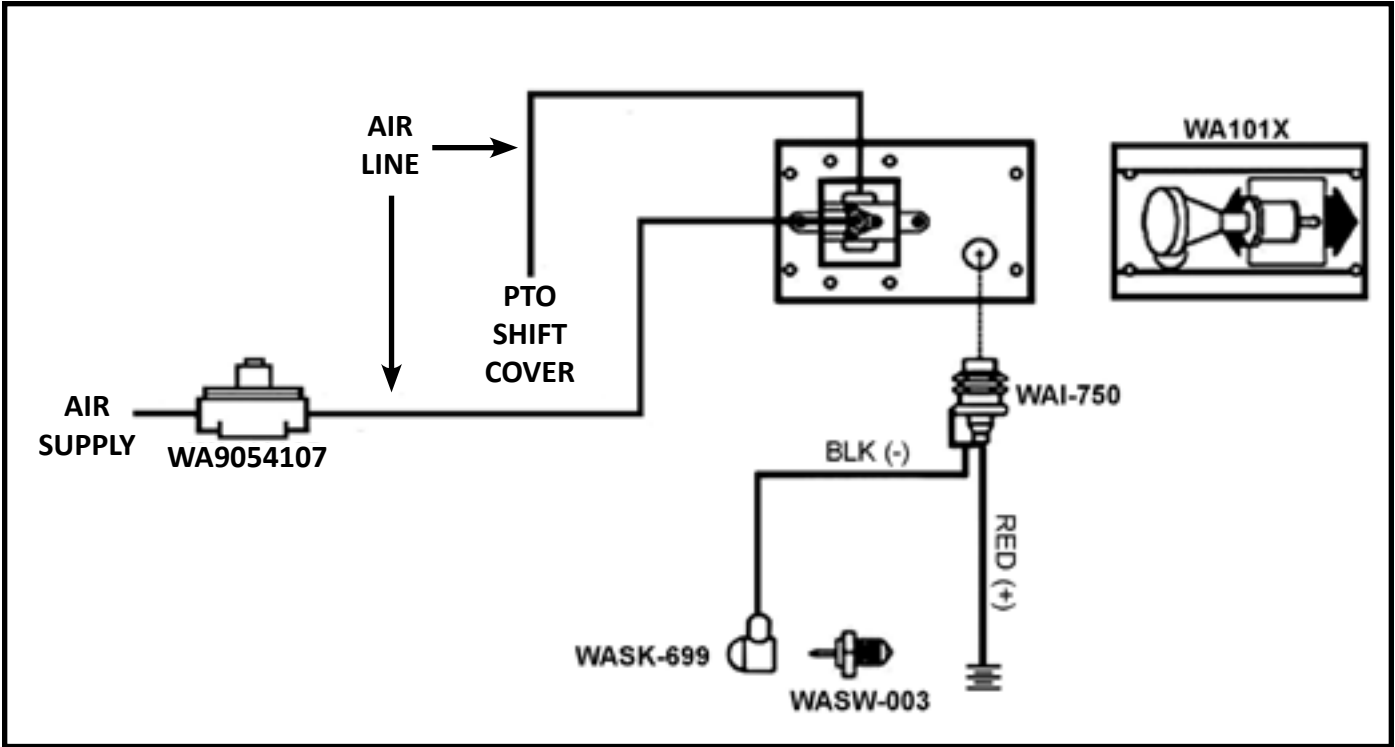
Output options

RA = DM (Rotatable SAE "B" 2/4 Bolt 7/8" 13T)  
SD = DM (SAE "B" 2 Bolt 7/8" 13T)  
SE = RM (1-1/4" Round Shaft)

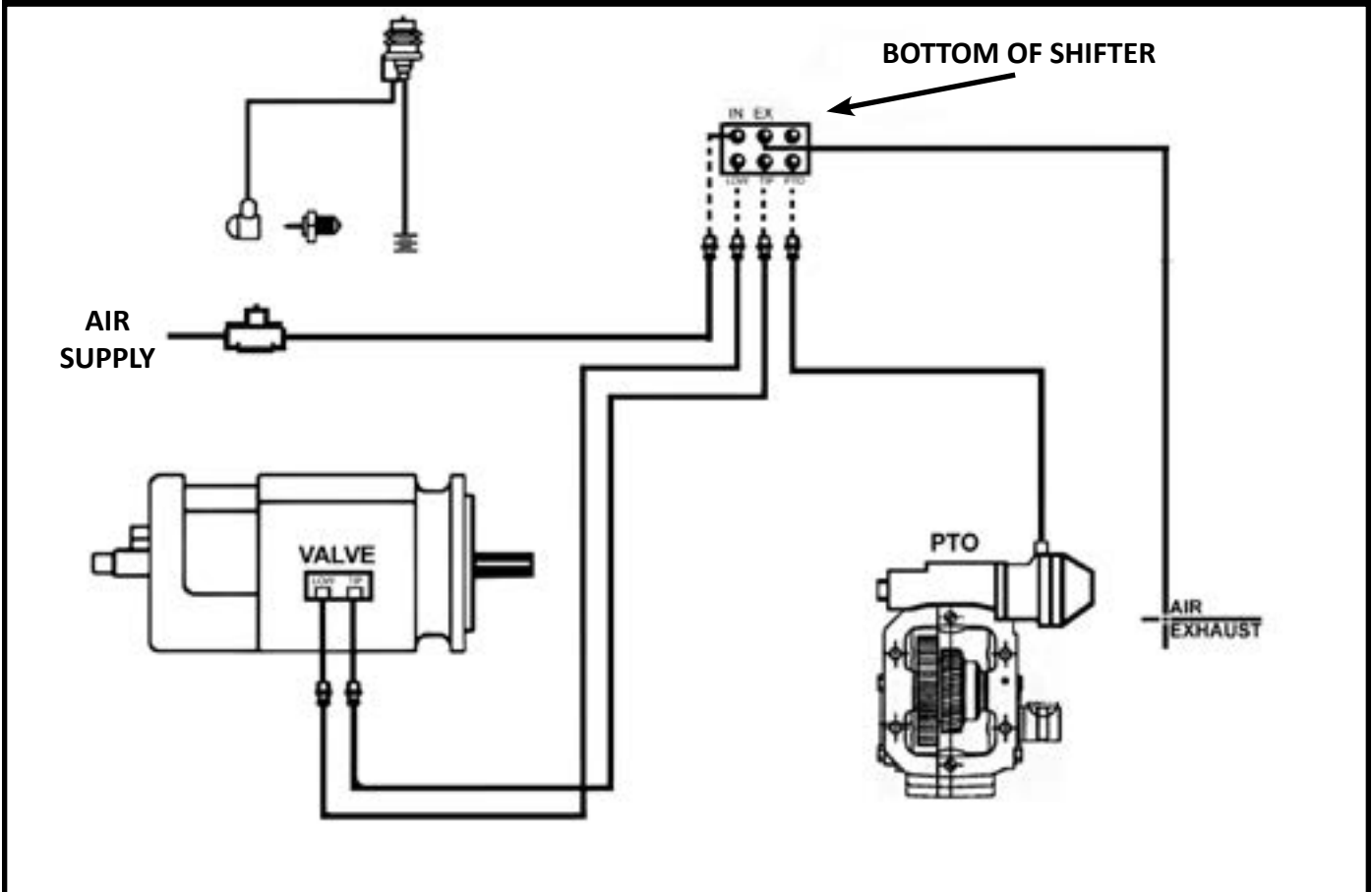
**World American® Part Number =**    1    3\*    5\*    2\*    4\*    6    7

\* Be Aware of numbering Sequence

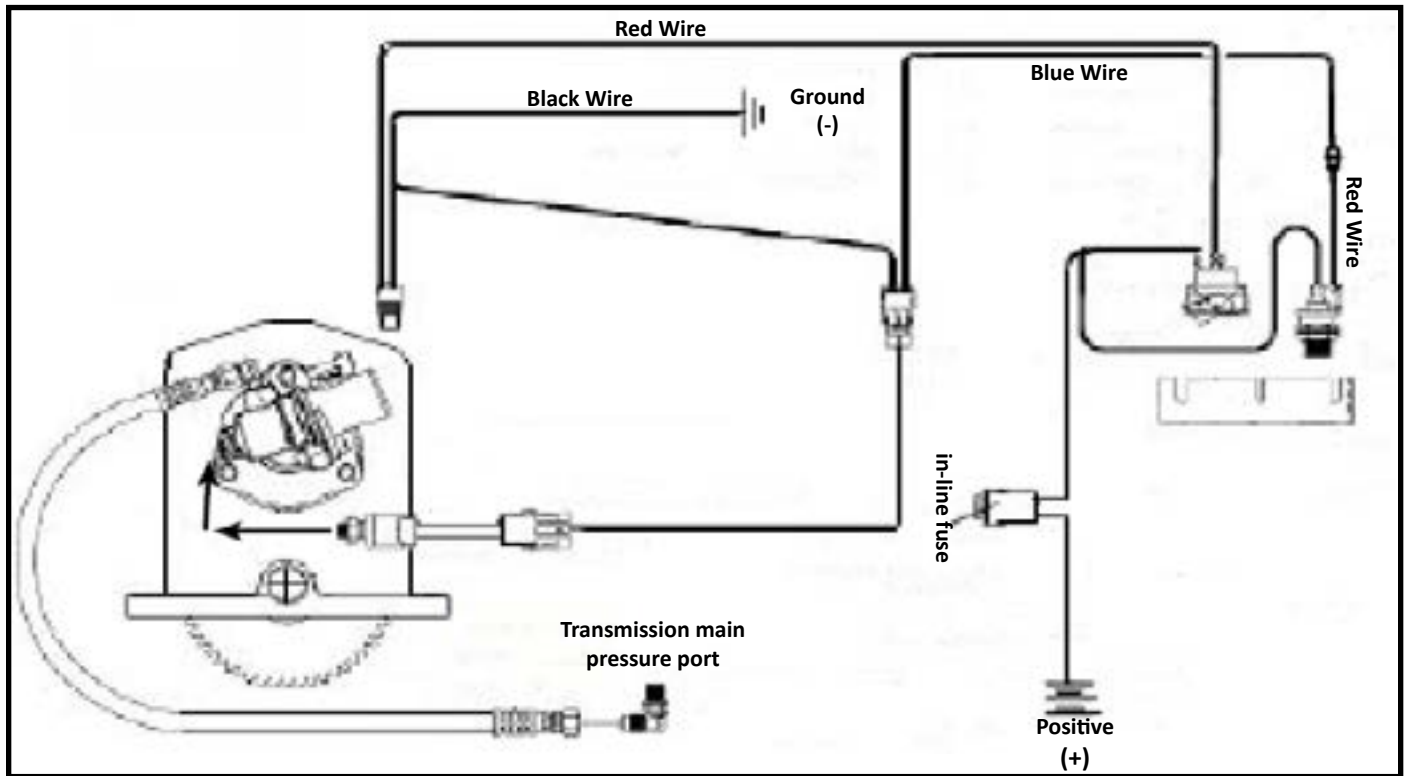
# PTO SINGLE CONTROL AIR & ELECTRICAL INSTALLATION GUIDE



# PTO & PUMP DUAL CONTROL AIR & ELECTRICAL INSTALLATION GUIDE



# HOT SHIFT PTO ELECTRICAL & HYDRAULIC INSTALLATION GUIDE

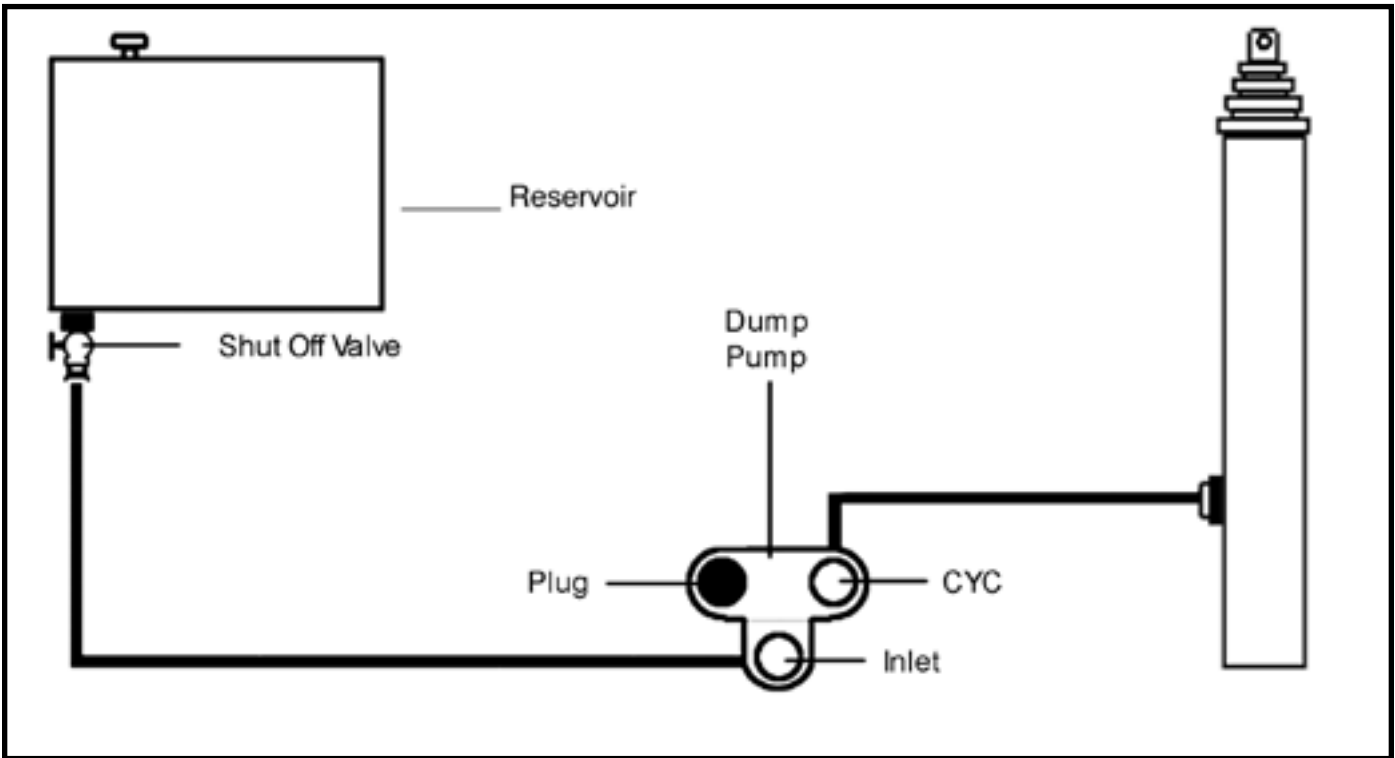


**GO TO:**

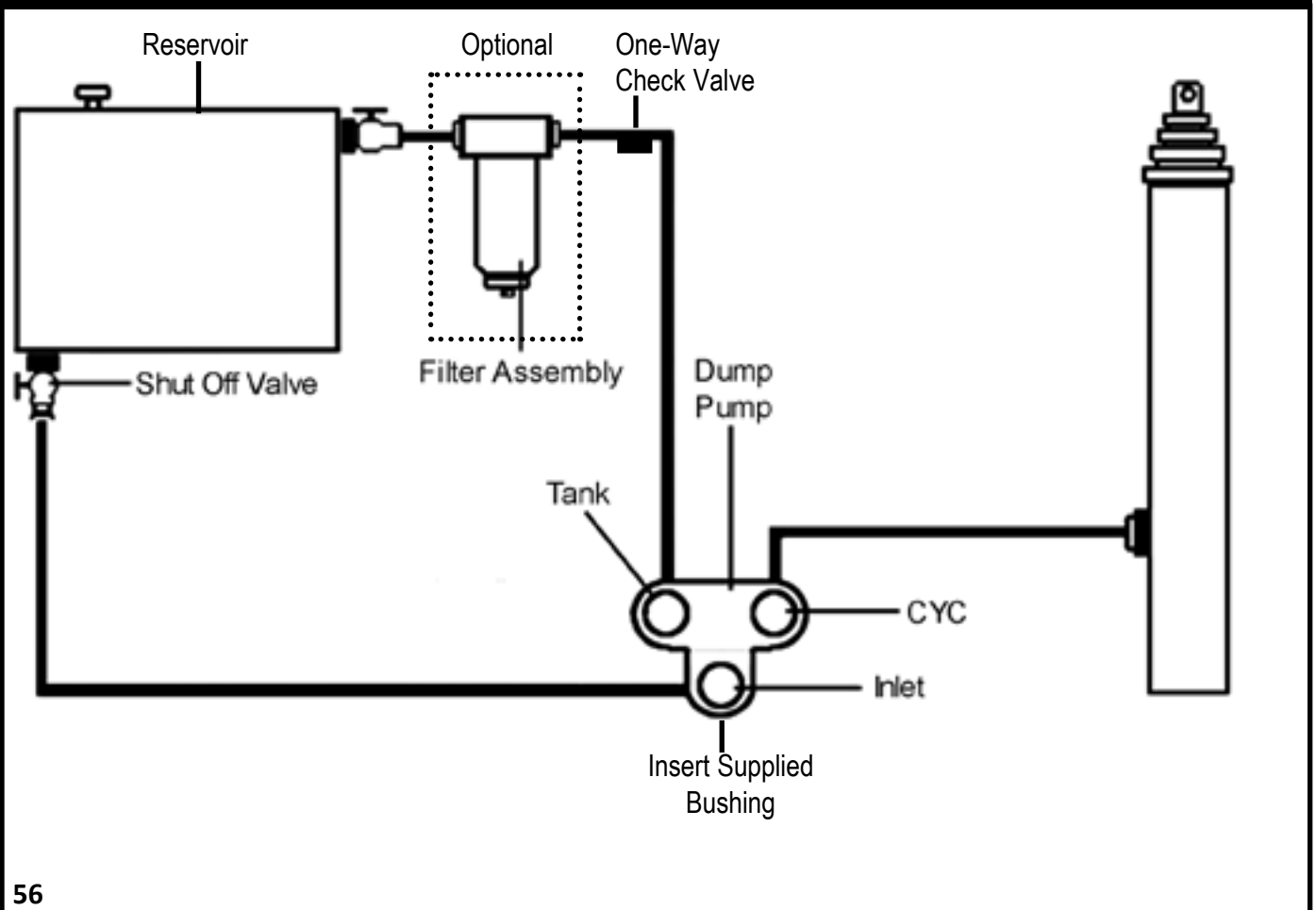
**[HTTP://PTO.WORLDAMERICAN.COM](http://PTO.WORLDAMERICAN.COM)**

**FOR OUR ONLINE INTERCHANGE AND  
APPLICATION GUIDE.**

## 2-LINE HYDRAULIC HOSE INSTALLATION GUIDE

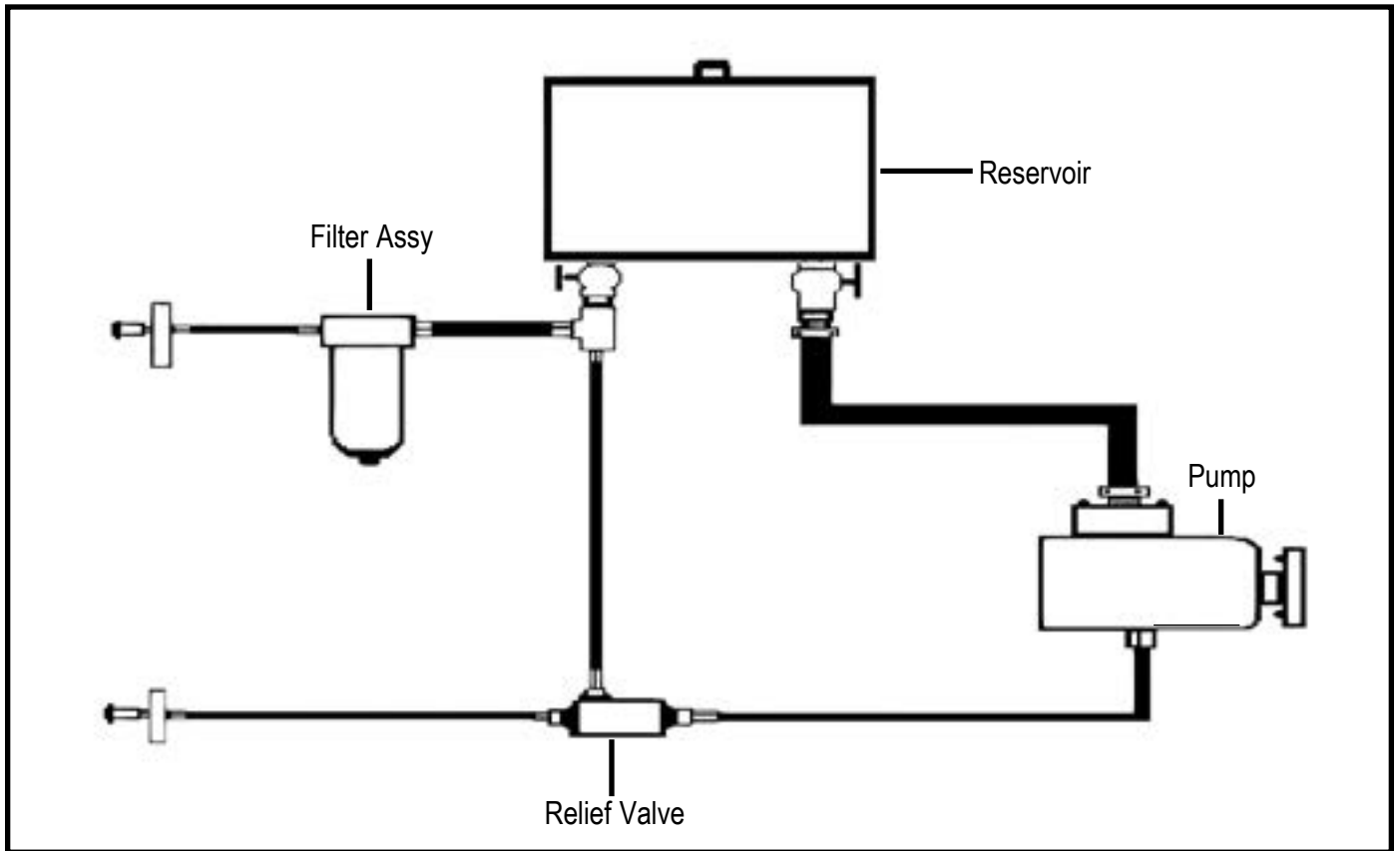


## 3-LINE HYDRAULIC HOSE INSTALLATION GUIDE

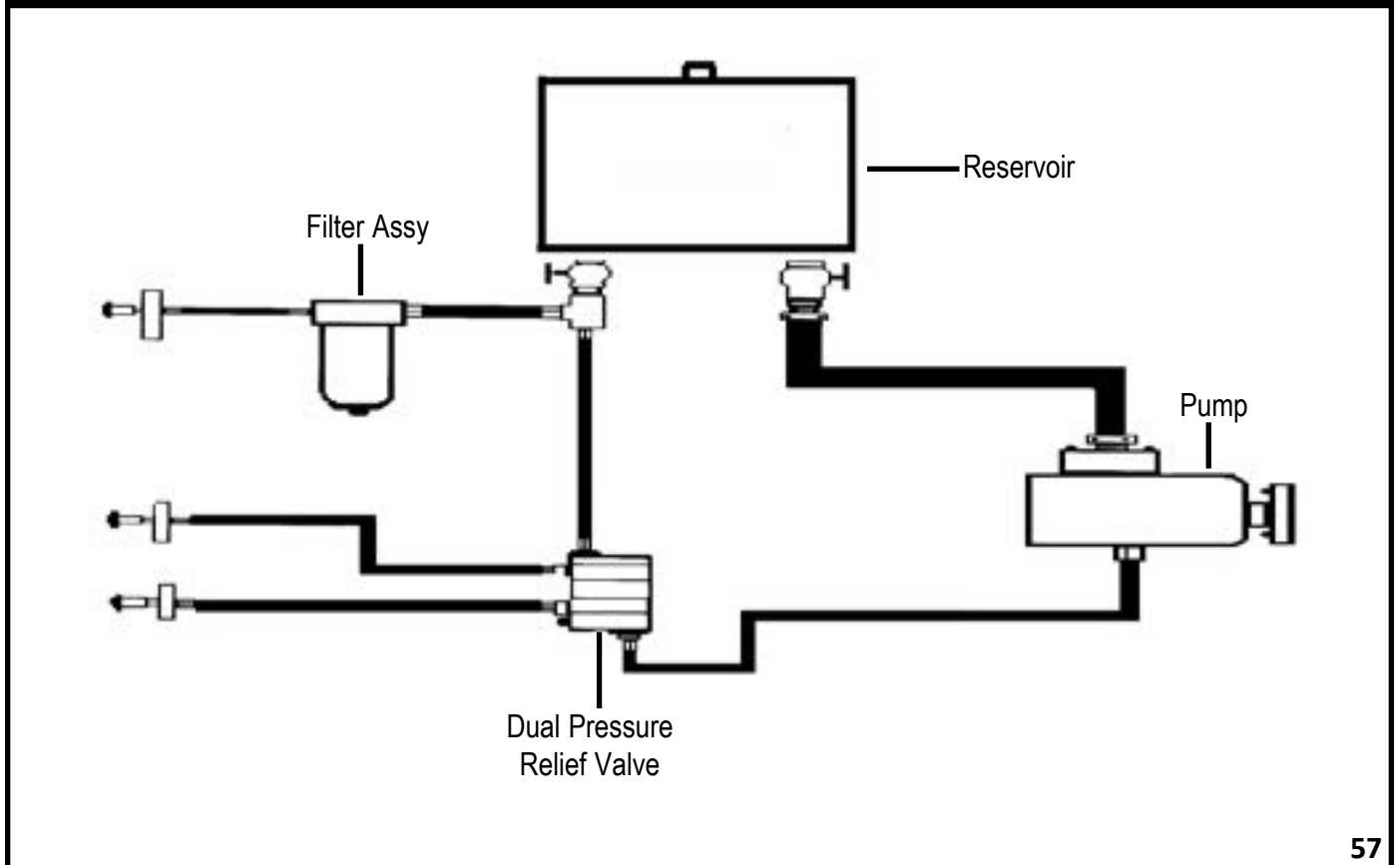




# WALKING FLOOR HYDRAULIC SCHEMATIC



# COMBINATION WALKING FLOOR/DUMP TRAILER HYDRAULIC SCHEMATIC



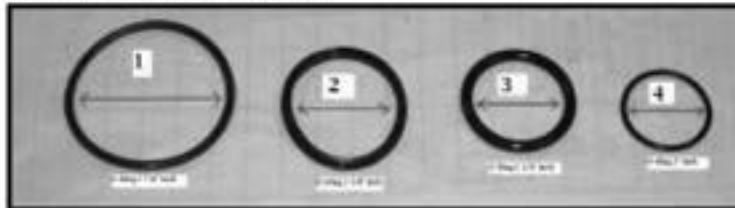
# AIR SHIFT CYLINDER INSTALLATION

English



## Air Shifter Installation Procedure

**Step 1:** When replacing or installing an air shifter on any series pump, you must check that the air shifter housing has sufficient lubrication.



**Step 2:** Verify that all O-Rings are in the proper position.

The "O-Ring" on the air shifter piston is # 2



The "O-Ring" shown on the



**Step 3:** Insert the Pressure Cap onto the spool of the unit. Next, insert the # 4 O-Ring onto the spool.

Pressure cap



# 4 O-Ring



**Step 4:** Insert the Piston on the spool.



Piston

**Step 5:** Insert the "Clevis Pin" into the air shifter Piston and secure it with the Snap Ring.

Clevis Pin



Clevis Pin in Piston



Snap Ring



**Step 6:** Once you have completed steps 1-6, insert the air shifter housing onto the Piston assembly.

Note: Make sure the "O-Ring" on the air shifter housing does not move out of place when installing it onto the piston assembly as shown in the image.



O-Ring #1

Continued>

# AIR SHIFT CYLINDER INSTALLATION (continued)

English



**Step 7:** Hold the housing in place so that it does not move and insert the 4 **cap screws** into each screw opening.

Note: Only "hand tight" the 4 screws at this point. You may use a wrench, but do not tight securely.

4 "Cap Screws"



**Paso 8:** Once the screws are in place, we recommend the use of a rubber mallet or equivalent to gently tap the air shifter housing all the way around.

Note: This step is necessary in order to establish the next step.



**Step 9:** Using a small screwdriver or equivalent, rotate the **end cap** on the pump's spool 360°degrees to the left and then to the right a few times each.

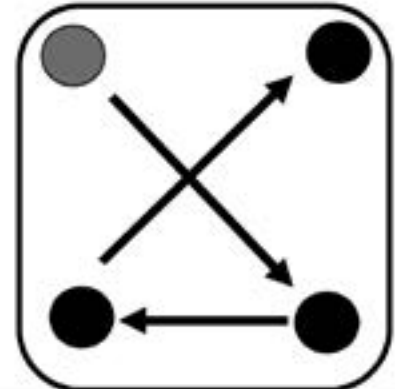
Note: This allows the air shifter to self adjust to the installation preformed.



End Cap

**Step 10:** Using the following images as your reference, follow the sequence shown in order to bolt down the **cap screws**. You may use an Allen wrench at this point to bolt down the screws tight and secure.

Warning: Air sifter failure may occur if the recommended sequence is not followed.



**Step 11:** Once you have established that the air shifter is secure, we recommend applying more lubricant to the air shifter installation. Remove the caps from the air shifter to apply the lubricant, as shown in the image.



End.

# START-UP PROCEDURES AND RECOMMENDATIONS

## START-UP PROCEDURE

A

FILL THE HYDRAULIC CYLINDER & SYSTEM WITH OIL. THE CYLINDER SHOULD BE IN THE RETRACTED POSITION. TO AID IN THE FILLING OF THE SYSTEM WITH OIL, IT MAY BE NECESSARY TO CRACK THE OUTLET LINE AT THE CYLINDER TO ALLOW TRAPPED AIR TO BLEED OFF.

**NOTE: THE SPOOL VALVE SHOULD BE IN THE LOWER POSITION.**

B

OPERATE THE PUMP AT ZERO PRESSURE FOR TWO MINUTES AT THE MINIMUM RPM OF THE TRUCK. BE SURE THE PUMP IS ENGAGED AND THE SPOOL IS SET AT THE LOWER POSITION. DURING THE BREAK-IN PROCEDURE THE PUMP WILL RUN FREE AND NOT DEVELOP EXCESSIVE HEAT.

C

**CYCLE THE TRUCK BED UP & DOWN A FEW TIMES TO BLEED THROUGH ANY REMAINING AIR TRAPPED IN THE SYSTEM, THEN RE-CHECK THE OIL LEVEL & ADD OIL IF REQUIRED.**

## OIL RECOMMENDATIONS

### VISCOSITY

OPTIMUM OPERATING VISCOSITY IS CONSIDERED TO BE ABOUT 100 SUS (20 cSt)

MINIMUM VISCOSITY 5 SUS (7.5 cSt)

MAXIMUM VISCOSITY AT STARTUP 7500 SUS (1600 cSt)

#### FLUID GRADES OFTEN USED:

ISO GRADE	40C	100C
32	32 cSt	5 cSt
46	46 cSt	7 cSt

\*COLUMN FIGURES ARE BASED ON PUBLISHED INFORMATION FROM VARIOUS OIL COMPANIES.

ADDITIVES SUCH AS RUST, OXIDATION INHIBITORS & FOAM DEPRESSANT ARE USUALLY RECOMMENDED.

NOTE: ANTI-WEAR ADDITIVES CAN CAUSE DAMAGE TO PUMP AND SYSTEM COMPONENTS THAT ARE MADE OF, OR CONTAIN BRASS, COPPER OR BRONZE. THESE ANTI-WEAR ADDITIVES ARE THE SOLE RESPONSIBILITY OF THE USER.

## COLD WEATHER OPERATION

OIL FOR USE IN COLD WEATHER OPERATIONS SHOULD HAVE A VISCOSITY NOT MORE THAN 7500 SUS AT THE MINIMUM STARTUP TEMPERATURE. STARTUP PROCEDURES MUST ALLOW FOR A WARM-UP TIME AND THE EQUIPMENT MUST NOT BE OPERATED AT FULL SYSTEM PRESSURES UNTIL THE OIL COMES TO OPERATING TEMPERATURES OR A FULL FLUID STATE



# TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSES	REMEDIES
<b>PUMP IS MAKING NOISE</b>	-INSUFFICIENT OIL SUPPLY	CHECK OIL LEVEL. FILL AS REQUIRED
	-AIR LEAKING INTO INLET CONNECTION	CORRECT THE AIR LEAK. INSURE CONNECTIONS ARE TIGHT
	-RESTRICTED OR COLLAPSED INLET HOSE	REMOVE BLOCKAGE OR REPLACE THE COLLAPSED HOSE
	-RESERVOIR AIR VENT PLUGGED	CLEAN OR REPLACE AIR VENT FILTER
	-OIL IS TOO THICK	REPLACE THE OIL TO A LOWER VISCOSITY OIL
<b>PUMP IS OVERHEATING</b>	-INSUFFICIENT OIL SUPPLY	CHECK OIL LEVEL. FILL AS REQUIRED
	-DRIVING WITH PTO ENGAGED	DISENGAGE PTO BEFORE HIGHWAY USE
	-INTERNAL LEAK DUE TO EXCESSIVE WEAR	REPAIR OR REPLACE THE PUMP, CLEAN THE RESERVOIR, REPLACE OIL, REPLACE FILTER
	-OIL IS TOO THICK	REPLACE THE OIL TO A LOWER VISCOSITY OIL
	-LEAKING RELIEF VALVE	INSPECT AND CLEAN THE RELIEF VALVE & CHECK VALVE SEAT
<b>PUMP IS LEAKING EXTERNALLY</b>	-WORN SHAFT OR SHAFT SEAL DUE TO ABRASIVE MATERIAL IN THE OIL OR AROUND THE SHAFT.	REPAIR THE PUMP, CLEAN RESERVOIR & REPLACE FLUID. REPLACE FILTER
	-DAMAGED BODY GASKET	REPLACE ALL GASKETS & RETORQUE THE STUDS TO 2400 in. lbs. / 200 ft. lbs.
	-WORN OR DAMAGED SPOOL SEAL	REPLACE THE SEAL
<b>PUMP WILL NOT DELIVER FLOW</b>	-INSUFFICIENT OIL SUPPLY	CHECK OIL LEVEL. FILL AS REQUIRED
	-RESTRICTED OR COLLAPSED INLET HOSE	REMOVE BLOCKAGE OR REPLACE THE COLLAPSED HOSE
	-WRONG DRIVE ROTATION	CHECK ROTATION OF DRIVE TO PUMP
	-AIR LEAK IN THE INLET LINE PREVENTING PRIMING	INSURE ALL FITTINGS AND CONNECTIONS ARE TIGHT
	-PUMP WORN DUE TO ABRASIVE MATERIAL IN THE OIL	REBUILD OR REPLACE PUMP & CLEAN THE RESERVOIR. REPLACE FILTER
<b>NO PRESSURE IN THE SYSTEM</b>	-PUMP NOT DELIVERING OIL	CHECK OIL LEVEL. FILL AS REQUIRED
	-RELIEF VALVE SET TOO LOW	CHECK PRESSURE & TURN ADJUSTMENT SCREW CW TO INCREASE
	-RELIEF VALVE LEAKING	INSPECT SEAT FOR DAMAGE OR FOREIGN MATERIAL. REPLACE IF REQUIRED
<b>FAILURE TO HOLD THE LOAD</b>	-VALVE SPOOL IS NOT IN THE NEUTRAL POSITION	INSPECT LINKAGE & ADJUST FOR CENTER POSITION
	-FOREIGN MATERIAL LODGED IN THE HOLDING CHECK VALVE OR THE SEAT AREA	REMOVE RELIEF VALVE & CLEAN. INSPEC VALVE & HOUSING SEAT FOR DAMAGE

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## WORLD AMERICAN - NEW/OLD NUMBERS

WA OLD#	WA NEW#	NOTES	WA OLD#	WA NEW#	NOTES
WAAIRSHIFTCYC	AS102		WA379746	WA20-03-1061	
WAAIRSHIFTCYG	AS102G		WA329333X	WA20-03-1063	
WA9P88	WA20-03-1002		WA328274X	WA20-03-1064	
WAS	WA20-03-1003		WAHY	WA20-03-1065	
WA1P552X	WA20-03-1004		WA379745	WA20-03-1066	
WA1P557X	WA20-03-1005		WA329121-1X	WA20-03-1067	
WA1P558X	WA20-03-1006		WA379747	WA20-03-1068	
WA1P562X	WA20-03-1007		WA379522	WA20-03-1069	
WAAH	WA20-03-1008		WA329119-1X	WA20-03-1070	
WA5P1004	WA20-03-1008		WA8170-77X	WA20-03-1071	
WAL	WA20-03-1009		WAAR	WA20-03-1072	
WA5P1085	WA20-03-1010		WAAP	WA20-03-1073	
WA2P559	WA20-03-1011		WA329119-2X	WA20-03-1074	
WAR	WA20-03-1012		WAEV	WA20-03-1075	
WAQ	WA20-03-1012		WA378000	WA20-03-1076	
WAFAH	WA20-03-1013		WA379426-16	WA20-03-1077	
WA2P726	WA20-03-1014		WA8170-76XO	WA20-03-1078	
WA5P965	WA20-03-1015		WA328594-13X	WA20-03-1080	
WA5P1077	WA20-03-1016		WABG	WA20-03-1081	
WA2P727	WA20-03-1017		WABQ	WA20-03-1082	
WAXD	WA20-03-1019		WAFDA	WA20-03-1083	
WAXK	WA20-03-1020		WAFDA	WA20-03-1083	
WA3P282	WA20-03-1021		WAFN	WA20-03-1084	
WA3P202	WA20-03-1022		WA244X	WA20-03-1085	
WA3P282-1	WA20-03-1023		WA328170-14X	WA20-03-1086	
WA3P202-1	WA20-03-1024		WA328333X	WA20-03-1087	
WAAX	WA20-03-1024		WA5P964	WA20-03-1088	
WA9P88-1	WA20-03-1025		WAAB	WA20-03-1089	
WA31P102	WA20-03-1026		WAAF	WA20-03-1090	
WA22P24-1	WA20-03-1027		WA329121-2X	WA20-03-1091	
WA378391	WA20-03-1028		WAU	WA20-03-1092	
WA14P73-1	WA20-03-1029		550890	WA20-03-1094	
WA329361X	WA20-03-1030		561006	WA20-03-1095	
550532	WA20-03-1031		14P75	WA20-03-1096	
WAES	WA20-03-1032		WA2P560	WA20-03-1101	
WADA	WA20-03-1033		WA2P561	WA20-03-1102	
WA5P1037	WA20-03-1033		WA2P637	WA20-03-1103	
WA328273X	WA20-03-1034		WA2P833	WA20-03-1104	
WA378430-10	WA20-03-1035		WA328591-92X	WA20-03-1105	
WA28P191	WA20-03-1036		WA379424-29	WA20-03-1107	
WA378430-8	WA20-03-1037		WA3P979	WA20-03-1108	
WA35P8	WA20-03-1038		WA5P1214	WA20-03-1109	
WA378430-9	WA20-03-1039		WA5P1358	WA20-03-1111	
WA28P216	WA20-03-1040		WA5P966	WA20-03-1113	
WA22P24-2	WA20-03-1041		WA5P967	WA20-03-1114	
550439	WA20-03-1042		WA5P968	WA20-03-1115	
WA328274-1X	WA20-03-1043		WA8170-200X	WA20-03-1116	
WA500007-29	WA20-03-1045		WA8170-76X	WA20-03-1117	
550397	WA20-03-1046		WAEW	WA20-03-1119	
WA329333-1X	WA20-03-1047		WAJB	WA20-03-1120	
WA500597-16	WA20-03-1049		WAKX	WA20-03-1121	
550221	WA20-03-1051		WAED	WA20-03-1125	
WA328356-50X	WA20-03-1052		WA5P1056	WA20-03-1125	
WA328356-13X	WA20-03-1053		WA22P24-3	WA20-03-1126	
WA328273-1X	WA20-03-1054		WAR	WA20-03-1127	
WA170-68X	WA20-03-1056		WAW	WA20-03-1128	
WA28P99	WA20-03-1058		WA5P969	WA20-03-1129	
WA328380X	WA20-03-1059		WA2P728	WA20-03-1130	
WA170-78X	WA20-03-1060		WAX	WA20-03-1131	



# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## WORLD AMERICAN - NEW/OLD NUMBERS

WA OLD#	WA NEW#	NOTES	WA OLD#	WA NEW#	NOTES
WA14P73-2	WA20-03-1132		WA14P79-1	wa20-04-3043	
WA14P73-3	WA20-03-1133		WA14P79-2	wa20-04-3044	
WA329202X	WA20-03-1134		WA14P79-3	wa20-04-3045	
WA328751	WA20-03-1134		WA14P79-4	wa20-04-3046	
WA14P73-5	WA20-03-1135		WA329005-1X	wa20-04-3047	
WA244Z	WA20-03-1136		WA5P912	wa20-04-3048	
WA984X	WA20-03-1137		WA2P688	wa20-04-3049	
WA984Z	WA20-03-1138		WA329005-2X	wa20-04-3050	
WA5P1050	WA20-03-1139		WA5P913	wa20-04-3051	
WADU	WA20-03-1139		WA2P684	wa20-04-3052	
WAJU	WA20-03-1140		WA329005-3X	wa20-04-3053	
WAGS	WA20-03-1141		WA5P914	wa20-04-3054	
WA5P1152	WA20-03-1141		WA2P683	wa20-04-3055	
WA14P73-4	WA20-03-1143		WA329005-4X	wa20-04-3056	
WA348447-8	WA20-04-3000		WA5P915	wa20-04-3057	
WA378447-8	WA20-04-3000		WA2P682	wa20-04-3058	
WA378447-8	WA20-04-3000		WA329071-7X	wa20-04-3059	
WA28P225	WA20-04-3001		WA329006-1X	wa20-04-3060	
WA378579	WA20-04-3002		WA329006-8X	wa20-04-3061	
WA21P482	WA20-04-3003		WA329071-19X	wa20-04-3062	
WA21P480	WA20-04-3004		WA329071-36X	wa20-04-3063	
WA22P101	WA20-04-3005		WA7170-107X	wa20-04-3064	
550010	WA20-04-3006		WA442XQFNX-W5XD	WA20-05-5079	
WA378395	WA20-04-3007		WA244XQAHX-V3XK	WA20-06-5000	
WA4P147	WA20-04-3008		WA06S5LIX-NRFDM	WA20-06-5000	
WA379323-1	WA20-04-3009		WA244GQAHX-S3XK	WA20-06-5001	
WA28P244	WA20-04-3010		WA06M5LIX-DRFDM	WA20-06-5001	
WA380057-1	WA20-04-3011		WA244XFAHX-W6XK	WA20-06-5002	
WA28P178	WA20-04-3012		WA06S3LIX-CLRDM	WA20-06-5002	
WA37P39	WA20-04-3013		WA244XQAHX-S3XK	WA20-06-5003	
WA3P832	WA20-04-3014		WA06S5LIX-DRFDM	WA20-06-5003	
WA3P831	WA20-04-3015		WA244XRAHX-W3XK	WA20-06-5004	
WA2P458	WA20-04-3016		WA06S6LIX-CRFDM	WA20-06-5004	
WA14P49	WA20-04-3017		WA244GFAHX-V3XD	WA20-06-5005	
WA379746	WA20-04-3018		WA06M3LIX-NRFRM	WA20-06-5005	
560972	WA20-04-3019		WA244ZLDAX-V5XK	WA20-06-5006	
WA31P70	WA20-04-3020		WA06D4PBX-NLFDM	WA20-06-5006	
WA9P91	WA20-04-3021		WA244XQESX-A3XK	WA20-06-5007	
WA28P191	WA20-04-3022		WA06S5QTX-ARFDM	WA20-06-5007	
WA31P102	WA20-04-3023		WA244XQAHX-W3XK	WA20-06-5008	
550439	WA20-04-3024		WA06S5LIX-CRFDM	WA20-06-5008	
WA500597-16	WA20-04-3025		WA244XLAHX-V3XK	WA20-06-5009	
WA379486	WA20-04-3026		WA06S4LIX-NRFDM	WA20-06-5009	
WA379486-1	WA20-04-3027		WA244XLAHX-A3XK	WA20-06-5010	
WA379486-2	WA20-04-3028		WA06S4LIX-ARFDM	WA20-06-5010	
WA34P143	WA20-04-3029		WA244GBHVX-V5XK	WA20-06-5011	
WA378447-6	WA20-04-3030		WA06MATWX-NLFDM	WA20-06-5011	
WA22P112	WA20-04-3031		WA244GFAHX-V3XK	WA20-06-5012	
WA28P119	WA20-04-3032		WA06M3LIX-NRFDM	WA20-06-5012	
WA378811	WA20-04-3033		WA244GFAHX-W3XD	WA20-06-5013	
WA378849	WA20-04-3034		WA06M3LIX-CRFRM	WA20-06-5013	
WA1P603	WA20-04-3035		WA244GLAHX-A3XK	WA20-06-5014	
WA28P171	WA20-04-3036		WA06M4LIX-ARFDM	WA20-06-5014	
WA379242	WA20-04-3037		WA244GLAHX-V3XD	WA20-06-5015	
WA379231	WA20-04-3038		WA06M4LIX-NRFRM	WA20-06-5015	
WA379993-12	WA20-04-3039		WA244GLAHX-V3XK	WA20-06-5016	
WA379000	WA20-04-3040		WA06M4LIX-NRFDM	WA20-06-5016	
WA379001	WA20-04-3041		WA244GQJCX-V3XK	WA20-06-5017	
WA380012	WA20-04-3042		WA06M5UDX-NRFDM	WA20-06-5017	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## WORLD AMERICAN - NEW/OLD NUMBERS

WA OLD#	WA NEW#	NOTES	WA OLD#	WA NEW#	NOTES
WA244GRJAX-V5XK	WA20-06-5018		WA06S7QTX-NRFD	WA20-06-5046	
WA06M6UBX-NLFD	WA20-06-5018		WA244XSEEX-V5XK	WA20-06-5047	
WA244KSQX-W5XK	WA20-06-5019		WA06S7QTX-NLFD	WA20-06-5047	
WA06B7MRX-CLFD	WA20-06-5019		WA244XSEEX-W3XD	WA20-06-5048	
WA244KUAPX-W5XD	WA20-06-5020		WA06S7QTX-CRFR	WA20-06-5048	
WA06B8LQX-CLFR	WA20-06-5020		WA244XSEEX-W5XK	WA20-06-5049	
WA244XFAHX-V3XD	WA20-06-5021		WA06S7QTX-CLFD	WA20-06-5049	
WA244XFAHX-V3XD	WA20-06-5021		WA244XSFNX-A5XK	WA20-06-5050	
WA06S3LIX-NRFR	WA20-06-5021		WA06S7RPX-ALFD	WA20-06-5050	
WA244XFAHX-V3XK	WA20-06-5022		WA244XSFNX-V5XK	WA20-06-5051	
WA244XFAHX-V3XK	WA20-06-5022		WA06S7RPX-NLFD	WA20-06-5051	
WA06S3LIX-NRFD	WA20-06-5022		WA244XSHYX-W5XD	WA20-06-5052	
WA244XFAHX-W3XD	WA20-06-5023		WA06S7TZX-CLFR	WA20-06-5052	
WA06S3LIX-CRFR	WA20-06-5023		WA244XSKXX-V5XD	WA20-06-5053	
WA244XLHYX-W5XD	WA20-06-5024		WA06S7VYX-NLFR	WA20-06-5053	
WA06S4TZX-CLFR	WA20-06-5024		WA244XUAHX-V6XK	WA20-06-5054	
WA244XLKXX-W5XD	WA20-06-5025		WA06S8LIX-NLRD	WA20-06-5054	
WA06S4VYX-CLFR	WA20-06-5025		WA244XUAHX-W3XD	WA20-06-5055	
WA244XQABX-A3XD	WA20-06-5026		WA06S8LIX-CRFR	WA20-06-5055	
WA06S5LCX-ARFR	WA20-06-5026		WA244XUAHX-W6XK	WA20-06-5056	
WA244XQABX-V3XD	WA20-06-5027		WA06S8LIX-CLRD	WA20-06-5056	
WA06S5LCX-NRFR	WA20-06-5027		WA244XUAPX-W5XK	WA20-06-5057	
WA244XQAHX-A3XD	WA20-06-5028		WA06S8LQX-CLFD	WA20-06-5057	
WA06S5LIX-ARFR	WA20-06-5028		WA244XUESX-W3XK	WA20-06-5058	
WA244XQAHX-A3XK	WA20-06-5029		WA06S8QTX-CRFD	WA20-06-5058	
WA06S5LIX-ARFD	WA20-06-5029		WA244XUESX-W5XD	WA20-06-5059	
WA244XRAHX-A3XD	WA20-06-5030		WA244XUESX-W5XD	WA20-06-5059	
WA06S6LIX-ARFR	WA20-06-5030		WA06S8QTX-CLFR	WA20-06-5059	
WA244XRAHX-A3XK	WA20-06-5031		WA244XUEWX-W3XD	WA20-06-5060	
WA06S6LIX-ARFD	WA20-06-5031		WA06S8QXX-CRFR	WA20-06-5060	
WA244XRAHX-V3XD	WA20-06-5032		WA244XWAHX-T3XK	WA20-06-5061	
WA06S6LIX-NRFR	WA20-06-5032		WA06S9LIX-KRFD	WA20-06-5061	
WA244XRAHX-V3XK	WA20-06-5033		WA244XWAHX-V3XK	WA20-06-5062	
WA06S6LIX-NRFD	WA20-06-5033		WA06S9LIX-NRFD	WA20-06-5062	
WA244XRAHX-W3XD	WA20-06-5034		WA244XWAHX-V6XK	WA20-06-5063	
WA06S6LIX-CRFR	WA20-06-5034		WA06S9LIX-NLRD	WA20-06-5063	
WA244XRARX-A5XD	WA20-06-5035		WA244XWAHX-W6XD	WA20-06-5064	
WA06S6LSX-ALFR	WA20-06-5035		WA06S9LIX-CLRR	WA20-06-5064	
WA244XRARX-V5XD	WA20-06-5036		WA244XWAHX-W6XK	WA20-06-5065	
WA06S6LSX-NLFR	WA20-06-5036		WA06S9LIX-CLRD	WA20-06-5065	
WA244XRBQX-W4XD	WA20-06-5037		WA244XWBQX-W5XK	WA20-06-5066	
WA06S6MRX-CRRR	WA20-06-5037		WA06S9MRX-CLFD	WA20-06-5066	
WA244XRESX-A3XK	WA20-06-5038		WA244XWESX-A3XD	WA20-06-5067	
WA06S6QTX-ARFD	WA20-06-5038		WA06S9QTX-ARFR	WA20-06-5067	
WA244XRESX-V3XK	WA20-06-5039		WA244XWESX-V3XD	WA20-06-5068	
WA06S6QTX-NRFD	WA20-06-5039		WA06S9QTX-NRFR	WA20-06-5068	
WA244XRJAX-V5XK	WA20-06-5040		WA244XWESX-W5XD	WA20-06-5069	
WA06S6UBX-NLFD	WA20-06-5040		WA06S9QTX-CLFR	WA20-06-5069	
WA244XSQX-V5XD	WA20-06-5041		WA244XWKXX-W5XD	WA20-06-5070	
WA06S7MRX-NLFR	WA20-06-5041		WA06S9VYX-CLFR	WA20-06-5070	
WA244XSEEX-A3XD	WA20-06-5042		WA244ZFAHX-A3XK	WA20-06-5071	
WA06S7QTX-ARFR	WA20-06-5042		WA06D3LIX-ARFD	WA20-06-5071	
WA244XSEEX-A3XK	WA20-06-5043		WA244ZLDAX-A3XK	WA20-06-5072	
WA06S7QTX-ARFD	WA20-06-5043		WA06D4PBX-ARFD	WA20-06-5072	
WA244XSEEX-T3XK	WA20-06-5044		WA244ZLDAX-V3XK	WA20-06-5073	
WA06S7QTX-KRFD	WA20-06-5044		WA06D4PBX-NRFD	WA20-06-5073	
WA244XSEEX-V3XD	WA20-06-5045		WA06D4PBN-NRFD	WA20-06-5073	
WA06S7QTX-NRFR	WA20-06-5045		442ZLDAX-V3XK	WA20-06-5073	
WA244XSEEX-V3XK	WA20-06-5046		WA244ZQFNX-A5XK	WA20-06-5074	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## WORLD AMERICAN - NEW/OLD NUMBERS

WA OLD#	WA NEW#	NOTES	WA OLD#	WA NEW#	NOTES
WA06D5RPX-ALFDM	WA20-06-5074		WA244XLDUX-V3XK	WA20-06-5093	
WA244ZQFNX-V5XK	WA20-06-5075		WA244ZSFNX-W3XK	WA20-06-5094	
WA06D5RPX-NLFDM	WA20-06-5075		WA244ZLDAX-T3XK	WA20-06-5095	
WA244ZWJBX-W4XK	WA20-06-5076		WA244XQESX-A3XD	WA20-06-5096	
WA06D9UCX-CRRDM	WA20-06-5076		WA244XQARX-V3XD	WA20-06-5097	
WA244XLAHX-V3XD	WA20-06-5077		WA244XUESX-W5XK	WA20-06-5098	
WA244ZFAHX-V3XK	WA20-06-5078		WA06S8QTN-CLFDM	WA20-06-5098	
WA244XRFNX-W5XK	WA20-06-5079		442XUESX-W5XK	WA20-06-5098	
WA244XQFNX-W5XD	WA20-06-5079		WA244XFSFNX-V3XK	WA20-06-5099	
WA06S7TZN-CLFRM	WA20-06-5079		WA244XFSFNX-A3XK	WA20-06-5100	
WA06S5RPN-CLFDM	WA20-06-5079		WA244XRJKX-V5XK	WA20-06-5101	
442ZXSHYX-W5XD	WA20-06-5079		WA244XRJKX-A5XK	WA20-06-5102	
442ZXSHYX-W5	WA20-06-5079		WA244XQAHX-W3XD	WA20-06-5104	
WA244GQJAX-A5XK	WA20-06-5080		WA244XQAHX-V3XD	WA20-06-5105	
WA244GQJAX-A5XK	WA20-06-5080		WA06S7TZN-CLFDM	WA20-08-5088	
WA06M5UBN-ALFDM	WA20-06-5080		WA984XFAHX-V3XK	WA20-08-7000	
442GQJAX-A5XK	WA20-06-5080		WA08S3LIX-NRFDM	WA20-08-7000	
WA244KSAPX-W5XD	WA20-06-5081		WA984XLAHX-V3XK	WA20-08-7001	
WA244ZSAPX-W5XD	WA20-06-5081		WA08S4LIX-NRFDM	WA20-08-7001	
WA06D7LQN-CLFRM	WA20-06-5081		WA984XLAHX-V3XD	WA20-08-7002	
442ZSAPX-W5XD	WA20-06-5081		WA08S4LIX-NRFRM	WA20-08-7002	
WA244XFAHX-A3XK	WA20-06-5082		WA984XFAHX-V5XK	WA20-08-7003	
WA06S3LIN-ARFDM	WA20-06-5082		WA08S3LIX-NLFDM	WA20-08-7003	
442XFAHX-A3XK	WA20-06-5082		WA984XFAHX-V3XD	WA20-08-7004	
WA244XSAPX-W5XD	WA20-06-5083		WA08S3LIX-NRFRM	WA20-08-7004	
WA06SLQN-CLFRM	WA20-06-5083		WA984XQAHX-V3XK	WA20-08-7005	
WA06S7LQN-CLFRM	WA20-06-5083		WA08S5LIX-NRFDM	WA20-08-7005	
WA244ZWFNX-W5XD	WA20-06-5084		WA984XQAHX-V3XD	WA20-08-7006	
WA06D9RPN-CLFRM	WA20-06-5084		WA08S5LIX-NRFRM	WA20-08-7006	
442ZWFNX-W5XD	WA20-06-5084		WA984XFAHX-V5XD	WA20-08-7007	
WA244ZWDAX-W3XK	WA20-06-5085		WA08S3LIX-NLFRM	WA20-08-7007	
WA244ZFDAX-V3XK	WA20-06-5085		WA984XFAHX-A3XK	WA20-08-7008	
WA06D3PBN-NRFDM	WA20-06-5085		WA08S3LIX-ARFDM	WA20-08-7008	
244XFDAX-V3XK	WA20-06-5085		WA984GQAHX-V3XD	WA20-08-7009	
WA244XWEWX-W3XK	WA20-06-5086		WA08M5LIX-NRFRM	WA20-08-7009	
WA06S9QXN-CRFDM	WA20-06-5086		WA984XQAHX-W3XD	WA20-08-7010	
WA244XWFNX-V5XD	WA20-06-5087		WA06S5LIX-CRFRM	WA20-08-7010	
WA244ZWFNX-V5XD	WA20-06-5087		WA984GLAHX-A3XD	WA20-08-7011	
WA06D9RPN-NLFRM	WA20-06-5087		WA08M4LIX-ARFRM	WA20-08-7011	
442ZWFNX-V5XD	WA20-06-5087		WA984XLAHX-V5XK	WA20-08-7012	
WA244XSHYX-W5XK	WA20-06-5088		WA08S4LIX-NLFDM	WA20-08-7012	
WA244XSHYX-W5XK	WA20-06-5088		WA06S5LIX-NRFRM	WA20-08-7013	
WA06S7TZN-CLFDM	WA20-06-5088		WA984XLAHX-S3XK	WA20-08-7014	
442XSHYX-W5XK	WA20-06-5088		WA08S4LIX-DRFDM	WA20-08-7014	
WA244XQARX-A3XD	WA20-06-5089		WA984XLAHX-A3XK	WA20-08-7015	
WA244XQARX-A3XD	WA20-06-5089		WA08S4LIX-ARFDM	WA20-08-7015	
WA06S5LSN-ARFRM	WA20-06-5089		WA984GFAHX-A3XK	WA20-08-7016	
442XQARX-A3XD	WA20-06-5089		WA08M3LIX-ARFDM	WA20-08-7016	
WA244XQESX-V3XK	WA20-06-5090		WA984XQAHX-A3XK	WA20-08-7017	
WA6NE17X-N1RA	WA20-06-5090		WA08S5LIX-ARFDM	WA20-08-7017	
WA06S5QTN-NRFDM	WA20-06-5090		WA984XQAHX-A3XD	WA20-08-7018	
442XQESX-V3XK	WA20-06-5090		WA08S5LIX-ARFRM	WA20-08-7018	
WA244XQESX-V3XD	WA20-06-5091		WA984XSAHX-A3XK	WA20-08-7019	
WA442XQESX-V3XD	WA20-06-5091		WA08S7LIX-ARFDM	WA20-08-7019	
WA244XQARX-V3XD	WA20-06-5091		WA984XSAHX-V3XD	WA20-08-7020	
WA06SLSN-NRFRM	WA20-06-5091		WA08S7LIX-NRFRM	WA20-08-7020	
442XQESX-V3XD	WA20-06-5091		WA984GQAHX-A3XD	WA20-08-7021	
442XQARX-V3XD	WA20-06-5091		WA08M5LIX-ARFRM	WA20-08-7021	
WA244XUESX-V3XK	WA20-06-5092		WA984XLAHX-W3XD	WA20-08-7022	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## WORLD AMERICAN - NEW/OLD NUMBERS

WA OLD#	WA NEW#	NOTES	WA OLD#	WA NEW#	NOTES
WA08S4LIX-CRFRM	WA20-08-7022		WA08S3LIX-ALFDM	WA20-08-7052	
WA984XRAHX-W3XD	WA20-08-7023		WA984XFAHX-S3XK	WA20-08-7053	
WA08S6LIX-CRFRM	WA20-08-7023		WA08S3LIX-DRFDM	WA20-08-7053	
WA06S5QTX-NRFDM	WA20-08-7024		WA984XFAHX-S5XK	WA20-08-7054	
WA984GFAHX-V3XD	WA20-08-7025		WA08S3LIX-DLFDM	WA20-08-7054	
WA08M3LIX-NRFRM	WA20-08-7025		WA984XFAHX-T3XK	WA20-08-7055	
WA984XQAHX-V5XD	WA20-08-7026		WA08S3LIX-KRFDM	WA20-08-7055	
WA08S5LIX-NLFRM	WA20-08-7026		WA984XFAHX-T5XK	WA20-08-7056	
WA984XQAHX-V5XK	WA20-08-7027		WA08S3LIX-KLFDM	WA20-08-7056	
WA08S5LIX-NLFDM	WA20-08-7027		WA984XFAHX-V3AF	WA20-08-7057	
WA984XQAHX-W3XK	WA20-08-7028		WA08S3LIX-NRFBB	WA20-08-7057	
WA08S5LIX-CRFDM	WA20-08-7028		WA984XLAHX-W3XK	WA20-08-7058	
WA984XFAHX-A3XD	WA20-08-7029		WA08S4LIX-CRFDM	WA20-08-7058	
WA08S3LIX-ARFRM	WA20-08-7029		WA984XLDAX-A5XK	WA20-08-7059	
WA984GFAHX-V3XK	WA20-08-7030		WA08S4PBX-ALFDM	WA20-08-7059	
WA08M3LIX-NRFDM	WA20-08-7030		WA984XLDAX-V5XK	WA20-08-7060	
WA984XFAHX-V3XY	WA20-08-7031		WA08S4PBX-NLFDM	WA20-08-7060	
WA08S3LIX-NRFEU	WA20-08-7031		WA984XQAHX-S3XK	WA20-08-7061	
WA984XLAHX-T3XK	WA20-08-7032		WA08S5LIX-DRFDM	WA20-08-7061	
WA08S4LIX-KRFDM	WA20-08-7032		WA984XQARX-A3XK	WA20-08-7062	
WA984XQAHX-A5XD	WA20-08-7033		WA08S5LSX-ARFDM	WA20-08-7062	
WA08S5LIX-ALFRM	WA20-08-7033		WA984XQARX-V3XK	WA20-08-7063	
WA984XRAHX-A3XD	WA20-08-7034		WA08S5LSX-NRFDM	WA20-08-7063	
WA08S6LIX-ARFRM	WA20-08-7034		WA984XQEVX-A5XK	WA20-08-7064	
WA984XSAHX-A3XD	WA20-08-7035		WA08S5QWX-ALFDM	WA20-08-7064	
WA08S7LIX-ARFRM	WA20-08-7035		WA984XRAHX-A3XK	WA20-08-7065	
WA984GLAHX-V3XK	WA20-08-7036		WA08S6LIX-ARFDM	WA20-08-7065	
WA08M4LIX-NRFDM	WA20-08-7036		WA984XRAHX-A5XK	WA20-08-7066	
WA984GQAHX-A3XK	WA20-08-7037		WA08S6LIX-ALFDM	WA20-08-7066	
WA08M5LIX-ARFDM	WA20-08-7037		WA984XRAHX-V3XD	WA20-08-7067	
WA984GRAHX-V3XK	WA20-08-7038		WA08S6LIX-NRFRM	WA20-08-7067	
WA08M6LIX-NRFDM	WA20-08-7038		WA984XRAHX-V3XK	WA20-08-7068	
WA984GSAHX-V3XK	WA20-08-7039		WA08S6LIX-NRFDM	WA20-08-7068	
WA08M7LIX-NRFDM	WA20-08-7039		WA984XREX-V5XK	WA20-08-7069	
WA984XQAHX-A5XK	WA20-08-7040		WA08S6QWX-NLFDM	WA20-08-7069	
WA08S5LIX-ALFDM	WA20-08-7040		WA984XSAHX-V3XK	WA20-08-7070	
WA984XRAHX-W3XK	WA20-08-7041		WA08S7LIX-NRFDM	WA20-08-7070	
WA08S6LIX-CRFDM	WA20-08-7041		WA984XSAHX-W3XK	WA20-08-7071	
WA984XLAHX-A3XD	WA20-08-7042		WA08S7LIX-CRFDM	WA20-08-7071	
WA08S4LIX-ARFRM	WA20-08-7042		WA984XSEVX-T5XK	WA20-08-7072	
WA984GFAHX-A3XD	WA20-08-7043		WA08S7QWX-KLFDM	WA20-08-7072	
WA08M3LIX-ARFRM	WA20-08-7043		WA984XSEVX-V5XK	WA20-08-7073	
WA984GFAHX-A5XK	WA20-08-7044		WA08S7QWX-NLFDM	WA20-08-7073	
WA08M3LIX-ALFDM	WA20-08-7044		WA984ZFAHX-V3XK	WA20-08-7074	
WA984GFAHX-S3XK	WA20-08-7045		WA08D3LIX-NRFDM	WA20-08-7074	
WA08M3LIX-DRFDM	WA20-08-7045		WA984ZFDAX-A5XD	WA20-08-7075	
WA984GLAHX-A3XK	WA20-08-7046		WA08D3PBX-ALFRM	WA20-08-7075	
WA08M4LIX-ARFDM	WA20-08-7046		WA984ZFDAX-A5XK	WA20-08-7076	
WA984GLAHX-A5XK	WA20-08-7047		WA08D3PBX-ALFDM	WA20-08-7076	
WA08M4LIX-ALFDM	WA20-08-7047		WA08D3PBN-ALFDM	WA20-08-7076	
WA984GLAHX-V5XK	WA20-08-7048		WA984ZFDAX-V5XD	WA20-08-7077	
WA08M4LIX-NLFDM	WA20-08-7048		WA08D3PBX-NLFRM	WA20-08-7077	
WA984GQAHX-V3XK	WA20-08-7049		WA984ZFDAX-V5XK	WA20-08-7078	
WA08M5LIX-NRFDM	WA20-08-7049		WA08D3PBX-NLFDM	WA20-08-7078	
WA984GRAHX-A3XD	WA20-08-7050		WA984ZLDAX-A5XK	WA20-08-7079	
WA08M6LIX-ARFRM	WA20-08-7050		WA08D4PBX-ALFDM	WA20-08-7079	
WA984GRAHX-A3XK	WA20-08-7051		WA984ZLDAX-T5XK	WA20-08-7080	
WA08M6LIX-ARFDM	WA20-08-7051		WA08D4PBX-KLFDM	WA20-08-7080	
WA984XFAHX-A5XK	WA20-08-7052		WA984ZLDAX-V5XK	WA20-08-7081	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## WORLD AMERICAN - NEW/OLD NUMBERS

WA OLD#	WA NEW#	NOTES	WA OLD#	WA NEW#	NOTES
WA08D4PBX-NLFD	WA20-08-7081		WA08D6PBN-NLFD	WA20-08-7085	
WA984ZRDAX-V5XD	WA20-08-7082		489ZRDAX-V5XK	WA20-08-7085	
WA08D6PBX-NLFR	WA20-08-7082		WA984XFAHX-S3XD	WA20-08-7086	
WA984ZSDAX-A5XD	WA20-08-7083		WA984GSAHX-A3XK	WA20-08-7087	
WA08D7PBX-ALFR	WA20-08-7083		WA984GFAHX-V5XK	WA20-08-7088	
WA984ZSDAX-V5XD	WA20-08-7084		WA984XLAHX-A5XK	WA20-08-7089	
WA08D7PBX-NLFR	WA20-08-7084		WA984XRAHX-V5XK	WA20-08-7090	
WA984ZRDAX-V5XK	WA20-08-7085				

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## BEZARES® TO WA#

BEZARES®#	WA#	NOTES
1000PBA011RA	WA20-06-5082	
1000PBN011RA	WA20-06-5022	
1000PBN011SE	WA20-06-5021	
1000XBN011RA	WA20-06-5022	
1000XBN011RA	WA20-06-5012	
1000XBN011SE	WA20-06-5021	
1000XBN011SE	WA20-06-5005	
1000XBW011SE	WA20-06-5023	
1000XBW011SE	WA20-06-5013	
1000XBW014XK	WA20-06-5002	
1000XCA011RA	WA20-06-5010	
1000XCA011RA	WA20-06-5014	
1000XCN011RA	WA20-06-5009	
1000XCN011RA	WA20-06-5016	
1000XCN011SE	WA20-06-5077	
1000XCN011SE	WA20-06-5015	
1000XCN251RA	WA20-06-5093	
1000XCW503SE	WA20-06-5024	
1000XEA011RA	WA20-06-5029	
1000XEA011SE	WA20-06-5028	
1000XEA021SE	WA20-06-5026	
1000XEA171RA	WA20-06-5007	
1000XEA171SE	WA20-06-5096	
1000XEN011RA	WA20-06-5000	
1000XEN011SE	WA20-06-5105	
1000XEN021SE	WA20-06-5027	
1000XEN171RA	WA20-06-5090	
1000XEN171SE	WA20-06-5091	
1000XES011RA	WA20-06-5003	
1000XES011RA	WA20-06-5001	
1000XEW011RA	WA20-06-5008	
1000XEW011SE	WA20-06-5104	
1000XEW343SE	WA20-06-5079	
1000XJA011RA	WA20-06-5031	
1000XJA011SE	WA20-06-5030	
1000XJA053SE	WA20-06-5035	
1000XJA171RA	WA20-06-5038	
1000XJN011RA	WA20-06-5033	
1000XJN011SE	WA20-06-5032	
1000XJN053SE	WA20-06-5036	
1000XJN171RA	WA20-06-5039	
1000XJW011RA	WA20-06-5004	
1000XJW011SE	WA20-06-5034	
1000XJW112SE	WA20-06-5037	
1000XOA171RA	WA20-06-5043	
1000XOA171SE	WA20-06-5042	
1000XOA343RA	WA20-06-5050	
1000XOA663RA	WA20-06-5018	
1000XON113SE	WA20-06-5041	
1000XON171RA	WA20-06-5046	
1000XON171SE	WA20-06-5045	
1000XON173RA	WA20-06-5047	
1000XON343RA	WA20-06-5051	
1000XOT171RA	WA20-06-5044	
1000XOW113RA	WA20-06-5019	
1000XOW171SE	WA20-06-5048	
1000XOW173RA	WA20-06-5049	
1000XOW333SE	WA20-06-5083	
1000XOW513SE	WA20-06-5052	

BEZARES®#	WA#	NOTES
1000XRN014RA	WA20-06-5054	
1000XRN171RA	WA20-06-5092	
1000XRW011SE	WA20-06-5055	
1000XRW014RA	WA20-06-5056	
1000XRW171RA	WA20-06-5058	
1000XRW173RA	WA20-06-5098	
1000XRW173SE	WA20-06-5059	
1000XRW333RA	WA20-06-5057	
1000XRW333SE	WA20-06-5020	
1000XTA171SE	WA20-06-5067	
1000XTN011RA	WA20-06-5062	
1000XTN014RA	WA20-06-5063	
1000XTN171SE	WA20-06-5068	
1000XTT011RA	WA20-06-5061	
1000XTW014RA	WA20-06-5065	
1000XTW014SE	WA20-06-5064	
1000XTW113RA	WA20-06-5066	
1000XTW173SE	WA20-06-5069	
1010XBA011RA	WA20-06-5071	
1010XBN011RA	WA20-06-5078	
1010XBN241RA	WA20-06-5085	
1010XCA241RA	WA20-06-5072	
1010XCN241RA	WA20-06-5073	
1010XCN243RA	WA20-06-5006	
1010XCT241RA	WA20-06-5095	
1010XEA343RA	WA20-06-5074	
1010XEN343RA	WA20-06-5075	
1010XTW241RA	WA20-06-5085	
1010XTW343SE	WA20-06-5084	
2000CEA013RA	WA20-08-7040	
2000XBA011RA	WA20-08-7008	
2000XBA011RA	WA20-08-7016	
2000XBA011SE	WA20-08-7029	
2000XBA011SE	WA20-08-7043	
2000XBA013RA	WA20-08-7052	
2000XBA013RA	WA20-08-7044	
2000XBN011DA	WA20-08-7031	
2000XBN011RA	WA20-08-7000	
2000XBN011RA	WA20-08-7030	
2000XBN011RB	WA20-08-7057	
2000XBN011SE	WA20-08-7004	
2000XBN011SE	WA20-08-7025	
2000XBN013RA	WA20-08-7003	
2000XBN013RA	WA20-08-7088	
2000XBN013SE	WA20-08-7007	
2000XBS011RA	WA20-08-7045	
2000XBS011RA	WA20-08-7053	
2000XBS011SE	WA20-08-7086	
2000XBS013RA	WA20-08-7054	
2000XBT011RA	WA20-08-7055	
2000XBT013RA	WA20-08-7056	
2000XCA011RA	WA20-08-7015	
2000XCA011RA	WA20-08-7046	
2000XCA011SE	WA20-08-7011	
2000XCA011SE	WA20-08-7042	
2000XCA013RA	WA20-08-7047	
2000XCA013RA	WA20-08-7089	
2000XCA243RA	WA20-08-7059	
2000XCN011RA	WA20-08-7001	



# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## BEZARES® TO WA#

BEZARES®#	WA#	NOTES	BEZARES®#	WA#	NOTES
2000XCN011RA	WA20-08-7036		2000XJN011RA	WA20-08-7038	
2000XCN011SE	WA20-08-7002		2000XJN011RA	WA20-08-7068	
2000XCN013RA	WA20-08-7012		2000XJN011SE	WA20-08-7067	
2000XCN013RA	WA20-08-7048		2000XJN013RA	WA20-08-7090	
2000XCN243RA	WA20-08-7060		2000XJN273RA	WA20-08-7069	
2000XCS011RA	WA20-08-7014		2000XJW011RA	WA20-08-7041	
2000XCT011RA	WA20-08-7032		2000XJW011SE	WA20-08-7023	
2000XCW011RA	WA20-08-7058		2000XOA011RA	WA20-08-7019	
2000XCW011SE	WA20-08-7022		2000XOA011RA	WA20-08-7087	
2000XEA011RA	WA20-08-7017		2000XOA011SE	WA20-08-7035	
2000XEA011RA	WA20-08-7037		2000XON011RA	WA20-08-7039	
2000XEA011SE	WA20-08-7018		2000XON011RA	WA20-08-7070	
2000XEA011SE	WA20-08-7021		2000XON011SE	WA20-08-7020	
2000XEA013SE	WA20-08-7033		2000XON273RA	WA20-08-7073	
2000XEA051RA	WA20-08-7062		2000XOT273RA	WA20-08-7072	
2000XEA273RA	WA20-08-7064		2000XOW011RA	WA20-08-7071	
2000XEN011RA	WA20-08-7005		2010XBA243RA	WA20-08-7076	
2000XEN011RA	WA20-08-7049		2010XBA243SE	WA20-08-7075	
2000XEN011SE	WA20-08-7006		2010XBN011RA	WA20-08-7074	
2000XEN011SE	WA20-08-7009		2010XBN243RA	WA20-08-7078	
2000XEN013RA	WA20-08-7027		2010XBN243SE	WA20-08-7077	
2000XEN013SE	WA20-08-7026		2010XCA243RA	WA20-08-7079	
2000XEN051RA	WA20-08-7063		2010XCN243RA	WA20-08-7081	
2000XES011RA	WA20-08-7061		2010XCT243RA	WA20-08-7080	
2000XEW011RA	WA20-08-7028		2010XJN243RA	WA20-08-7085	
2000XEW011SE	WA20-08-7010		2010XJN243SE	WA20-08-7082	
2000XJA011RA	WA20-08-7051		2010XOA243SE	WA20-08-7083	
2000XJA011RA	WA20-08-7065		2010XON243SE	WA20-08-7084	
2000XJA011SE	WA20-08-7034		ACM300	AS102	
2000XJA011SE	WA20-08-7050		BASK16	AS102G	
2000XJA013RA	WA20-08-7066				

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## CHELSEA® TO WA

CHELSEA®#	WA#	NOTES	CHELSEA®#	WA#	NOTES
3149414017	AS102		28P99	WA20-03-1058	
9P88	WA20-03-1002		328380X	WA20-03-1059	
5P966	WA20-03-1003		7170-78X	WA20-03-1060	
1P552X	WA20-03-1004		329333X	WA20-03-1063	
1P557X	WA20-03-1005		328274X	WA20-03-1064	
1P558X	WA20-03-1006		5P1237	WA20-03-1065	
1P562X	WA20-03-1007		329121-1X	WA20-03-1067	
5P1004	WA20-03-1008		379522	WA20-03-1069	
5P1004	WA20-03-1008		329119-1X	WA20-03-1070	
5P1004	WA20-03-1008		328170-77X	WA20-03-1071	
5P1004	WA20-03-1008		5P1008	WA20-03-1072	
2P727	WA20-03-1009		5P1006	WA20-03-1073	
5P1085	WA20-03-1010		329119-2X	WA20-03-1074	
2P559	WA20-03-1011		5P1060	WA20-03-1075	
5P1214	WA20-03-1012		378000	WA20-03-1076	
5P965	WA20-03-1012		328594-13X	WA20-03-1080	
5P1077	WA20-03-1013		5P1015	WA20-03-1081	
2P726	WA20-03-1014		5P1023	WA20-03-1082	
5P965	WA20-03-1015		5P1085	WA20-03-1083	
5P1077	WA20-03-1016		5P1070	WA20-03-1084	
5P1077	WA20-03-1016		328170-14X	WA20-03-1086	
2P727	WA20-03-1017		328333X	WA20-03-1087	
3P282	WA20-03-1021		5P964	WA20-03-1088	
3P202	WA20-03-1022		5P1001	WA20-03-1089	
3P282-1	WA20-03-1023		3P854	WA20-03-1090	
3P202-1	WA20-03-1024		329121-2X	WA20-03-1091	
9P88	WA20-03-1025		2P560	WA20-03-1092	
31P102	WA20-03-1026		550890	WA20-03-1094	
22P24-1	WA20-03-1027		561006	WA20-03-1095	
378391	WA20-03-1028		14P75	WA20-03-1096	
14P73-1	WA20-03-1029		5P1243	WA20-03-1097	
329361X	WA20-03-1030		2P560	WA20-03-1101	
328723X	WA20-03-1030		2P561	WA20-03-1102	
329361X	WA20-03-1030		2P637	WA20-03-1103	
550532	WA20-03-1031		2P833	WA20-03-1104	
5P1059	WA20-03-1032		328591-92X	WA20-03-1105	
5P1085	WA20-03-1033		379424-29	WA20-03-1107	
328273X	WA20-03-1034		3P979	WA20-03-1108	
378430-10	WA20-03-1035		5P1214	WA20-03-1109	
28P191	WA20-03-1036		5P1358	WA20-03-1111	
348447-8	WA20-03-1037		5P966	WA20-03-1113	
378430-8	WA20-03-1037		5P967	WA20-03-1114	
35P8	WA20-03-1038		5P968	WA20-03-1115	
378430-9	WA20-03-1039		8170-200X	WA20-03-1116	
28P216	WA20-03-1040		8170-76X	WA20-03-1117	
22P24-2	WA20-03-1041		5P1061	WA20-03-1119	
21075	WA20-03-1042		5P1244	WA20-03-1120	
328274-1X	WA20-03-1043		5P1411	WA20-03-1121	
500007-29	WA20-03-1045		5P1056	WA20-03-1125	
550397	WA20-03-1046		22P24-3	WA20-03-1126	
15126	WA20-03-1046		2P561	WA20-03-1128	
329333X-1X	WA20-03-1047		5P969	WA20-03-1129	
500597-16	WA20-03-1049		2P728	WA20-03-1130	
550221	WA20-03-1051		14P73-2	WA20-03-1132	
15245	WA20-03-1051		14P73-3	WA20-03-1133	
328356-50X	WA20-03-1052		14P73-4	WA20-03-1134	
328356-13X	WA20-03-1053		329202X	WA20-03-1134	
328273X-1X	WA20-03-1054		328751	WA20-03-1134	
7170-68X	WA20-03-1056		5P1056	WA20-03-1135	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## CHELSEA® TO WA

CHELSEA®#	WA#	NOTES	CHELSEA®#	WA#	NOTES
14P73-5	WA20-03-1135		2P683	WA20-04-3055	
5P1050	WA20-03-1139		329005-4X	WA20-04-3056	
5P1316	WA20-03-1140		5P915	WA20-04-3057	
5P1152	WA20-03-1141		2P682	WA20-04-3058	
378447-8	WA20-04-3000		329071-7X	WA20-04-3059	
28P225	WA20-04-	3001	329006-1X	WA20-04-3060	
378576	WA20-04-3002		329006-8X	WA20-04-3061	
21P482	WA20-04-3003		329071-19X	WA20-04-3062	
21P480	WA20-04-3004		329071-36X	WA20-04-3063	
22P101	WA20-04-3005		7170-107X	WA20-04-3064	
550010	WA20-04-3006		442XQAHXV3XK	WA20-06-5000	
378895	WA20-04-3007		442GQAHXS3XK	WA20-06-5001	
4P147	WA20-04-3008		442XFAHXW6XK	WA20-06-5002	
379323-1	WA20-04-3009		442XQAHXS3XK	WA20-06-5003	
28P244	WA20-04-3010		442XRAHXW3XK	WA20-06-5004	
380057-1	WA20-04-3011		442GFAHXV3XD	WA20-06-5005	
28P178	WA20-04-3012		442ZLDAXV5XK	WA20-06-5006	
37P39	WA20-04-3013		442XQESXA3XK	WA20-06-5007	
3P832	WA20-04-3014		442XQAHXW3XK	WA20-06-5008	
3P831	WA20-04-3015		442XLAHXV3XK	WA20-06-5009	
2P458	WA20-04-3016		442XLAHXA3XK	WA20-06-5010	
14P49	WA20-04-3017		442GBHVX-V5XK	WA20-06-5011	
379746	WA20-04-3018		442GFAHXV3XK	WA20-06-5012	
560972	WA20-04-3019		442GFAHXW3XD	WA20-06-5013	
31P70	WA20-04-3020		442GLAHXA3XK	WA20-06-5014	
9P91	WA20-04-3021		442GLAHXV3XD	WA20-06-5015	
28P191	WA20-04-3022		442GLAHXV3XK	WA20-06-5016	
31P102	WA20-04-3023		442GQJCX-V3XK	WA20-06-5017	
550439	WA20-04-3024		442GRJAXV5XK	WA20-06-5018	
500597-16	WA20-04-3025		442KSBQXW5XK	WA20-06-5019	
379486	WA20-04-3026		442KUAPXW5XD	WA20-06-5020	
379486-1	WA20-04-3027		221XEJJPV3XD	WA20-06-5021	
379486-2	WA20-04-3028		442XFAHXV3XD	WA20-06-5021	
34P143	WA20-04-3029		221XEJJPV3XK	WA20-06-5022	
378447-6	WA20-04-3030		442XFAHXV3XK	WA20-06-5022	
22P112	WA20-04-3031		442XFAHXW3XD	WA20-06-5023	
28P119	WA20-04-3032		442XLHYXW5XD	WA20-06-5024	
378811	WA20-04-3033		44X2LKXX-W5XD	WA20-06-5025	
378849	WA20-04-3034		442XQABXA3XD	WA20-06-5026	
1P603	WA20-04-3035		442XQABXV3XD	WA20-06-5027	
28P171	WA20-04-3036		442XQAHXA3XD	WA20-06-5028	
379242	WA20-04-3037		442XQAHXA3XK	WA20-06-5029	
379231	WA20-04-3038		442XRAHXA3XD	WA20-06-5030	
379993-12	WA20-04-3039		442XRAHXA3XK	WA20-06-5031	
379000	WA20-04-3040		442XRAHXV3XD	WA20-06-5032	
379001	WA20-04-3041		442XRAHXV3XK	WA20-06-5033	
380012	WA20-04-3042		442XRAHXW3XD	WA20-06-5034	
14P79-1	WA20-04-3043		442XRARXA5XD	WA20-06-5035	
14P79-2	WA20-04-3044		442XRARXV5XD	WA20-06-5036	
14P79-3	WA20-04-3045		442XRBQXW4XD	WA20-06-5037	
14P79-4	WA20-04-3046		442XRESXA3XK	WA20-06-5038	
329005-1X	WA20-04-3047		442XRESXV3XK	WA20-06-5039	
5P912	WA20-04-3048		442XRJAXV5XK	WA20-06-5040	
2P688	WA20-04-3049		442XSBQXV5XD	WA20-06-5041	
329005-2X	WA20-04-3050		442XSESXA3XD	WA20-06-5042	
5P913	WA20-04-3051		442XSESXA3XK	WA20-06-5043	
2P684	WA20-04-3052		442XSESXT3XK	WA20-06-5044	
329005-3X	WA20-04-3053		442XSESXV3XD	WA20-06-5045	
5P914	WA20-04-3054		442XSESXV3XK	WA20-06-5046	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## CHELSEA® TO WA

CHELSEA®#	WA#	NOTES
442XSESXV5XK	WA20-06-5047	
442XSESXW3XD	WA20-06-5048	
442XSESXW5XK	WA20-06-5049	
442XSFNXA5XK	WA20-06-5050	
442XSFNXV5XK	WA20-06-5051	
442XSHYXW5XD	WA20-06-5052	
442XSKXX-V5XD	WA20-06-5053	
442XUAHXV6XK	WA20-06-5054	
442XUAHXW3XD	WA20-06-5055	
442XUAHXW6XK	WA20-06-5056	
442XUAPXW5XK	WA20-06-5057	
442XUESXW3XK	WA20-06-5058	
442XUESXW5XD	WA20-06-5059	
442XUEWX-W3XD	WA20-06-5060	
442XWAHXT3XK	WA20-06-5061	
442XWAHXV3XK	WA20-06-5062	
442XWAHXV6XK	WA20-06-5063	
442XWAHXW6XD	WA20-06-5064	
442XWAHXW6XK	WA20-06-5065	
442XWBQXW5XK	WA20-06-5066	
442XWESXA3XD	WA20-06-5067	
442XWESXV3XD	WA20-06-5068	
442XWESXW5XD	WA20-06-5069	
442ZFAHXA3XK	WA20-06-5071	
442ZLDAXA3XK	WA20-06-5072	
442ZLDAXV3XK	WA20-06-5073	
442ZQFNXA5XK	WA20-06-5074	
442ZQFNXV5XK	WA20-06-5075	
442ZWJBX-W4XK	WA20-06-5076	
442XLAHXV3XD	WA20-06-5077	
442ZFAHXV3XK	WA20-06-5078	
442XQFNXW5XD	WA20-06-5079	
442GQJAX-A5XK	WA20-06-5080	
442XSAPX-W5XD	WA20-06-5081	
442XFAHX-A3XK	WA20-06-5082	
442XSAPXW5XD	WA20-06-5083	
442ZWFNXW5XD	WA20-06-5084	
442ZWDAXW3XK	WA20-06-5085	
442ZFDAXV3XK	WA20-06-5085	
442XWEWX-W3XK	WA20-06-5086	
442ZWFNX-V5XD	WA20-06-5087	
442XSHYX-W5XK	WA20-06-5088	
442XQARX-A3XD	WA20-06-5089	
442XQESXV3XK	WA20-06-5090	
442XQESXV3XD	WA20-06-5091	
442XUESXV3XK	WA20-06-5092	
442XLDUXV3XK	WA20-06-5093	
442ZSFNX-W3XK	WA20-06-5094	
442ZLDAXT3XK	WA20-06-5095	
442XQESXA3XD	WA20-06-5096	
442XUESXW5XK	WA20-06-5098	
442XFSFNX-V3XK	WA20-06-5099	
442XFSFNX-A3XK	WA20-06-5100	
442XRJKX-V5XK	WA20-06-5101	
442XRJKX-A5XK	WA20-06-5102	
442XQAHXW3XD	WA20-06-5104	
442XQAHXV3XD	WA20-06-5105	
442XSHYX-W5XK	WA20-06-5088	
489XFAHXV3XK	WA20-08-7000	

CHELSEA®#	WA#	NOTES
489XLAHXV3XK	WA20-08-7001	
489XLAHXV3XD	WA20-08-7002	
489XFAHXV5XK	WA20-08-7003	
489XFAHXV3XD	WA20-08-7004	
489XQAHXV3XK	WA20-08-7005	
489XQAHXV3XD	WA20-08-7006	
489XFAHXV5XD	WA20-08-7007	
489XFAHXA3XK	WA20-08-7008	
489GQAHXV3XD	WA20-08-7009	
489XQAHXW3XD	WA20-08-7010	
489GLAHXA3XD	WA20-08-7011	
489XLAHXV5XK	WA20-08-7012	
489XLAHXS3XK	WA20-08-7014	
489XLAHXA3XK	WA20-08-7015	
489GFAHXA3XK	WA20-08-7016	
489XQAHXA3XK	WA20-08-7017	
489XQAHXA3XD	WA20-08-7018	
489XSAHXA3XK	WA20-08-7019	
489XSAHXV3XD	WA20-08-7020	
489GQAHXA3XD	WA20-08-7021	
489XLAHXW3XD	WA20-08-7022	
489XRAHXW3XD	WA20-08-7023	
489XQESX-V3XK	WA20-08-7024	
489GFAHXV3XD	WA20-08-7025	
489XQAHXV5XD	WA20-08-7026	
489XQAHXV5XK	WA20-08-7027	
489XQAHXW3XK	WA20-08-7028	
489XFAHXA3XD	WA20-08-7029	
489GFAHXV3XK	WA20-08-7030	
489XFAHX-V3XY	WA20-08-7031	
489XLAHXT3XK	WA20-08-7032	
489XQAHXA5XD	WA20-08-7033	
489XRAHXA3XD	WA20-08-7034	
489XSAHXA3XD	WA20-08-7035	
489GLAHXV3XK	WA20-08-7036	
489GQAHXA3XK	WA20-08-7037	
489GRAHXV3XK	WA20-08-7038	
489GSAHXV3XK	WA20-08-7039	
489XQAHXA5XK	WA20-08-7040	
489XRAHXW3XK	WA20-08-7041	
489XLAHXA3XD	WA20-08-7042	
489GFAHXA3XD	WA20-08-7043	
489GFAHXA5XK	WA20-08-7044	
489GFAHXS3XK	WA20-08-7045	
489GLAHXA3XK	WA20-08-7046	
489GLAHXA5XK	WA20-08-7047	
489GLAHXV5XK	WA20-08-7048	
489GQAHXV3XK	WA20-08-7049	
489GRAHXA3XD	WA20-08-7050	
489GRAHXA3XK	WA20-08-7051	
489XFAHXA5XK	WA20-08-7052	
489XFAHXS3XK	WA20-08-7053	
489XFAHXS5XK	WA20-08-7054	
489XFAHXT3XK	WA20-08-7055	
489XFAHXT5XK	WA20-08-7056	
489XFAHXV3AF	WA20-08-7057	
489XLAHXW3XK	WA20-08-7058	
489XLDAXA5XK	WA20-08-7059	
489XLDAXV5XK	WA20-08-7060	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## CHELSEA® TO WA

CHELSEA®#	WA#	NOTES	CHELSEA®#	WA#	NOTES
489XQAHXS3XK	WA20-08-7061		489XFAHXS3XD	WA20-08-7086	
489XQARXA3XK	WA20-08-7062		489GSAHXA3XK	WA20-08-7087	
489XQARXV3XK	WA20-08-7063		489GFAHXV5XK	WA20-08-7088	
489XQEVXA5XK	WA20-08-7064		489XLAHXA5XK	WA20-08-7089	
489XRAHXA3XK	WA20-08-7065		489XRAHXV5XK	WA20-08-7090	
489XRAHXA5XK	WA20-08-7066		35P9-1	WA6010	
489XRAHXV3XD	WA20-08-7067		35P9-2	WA6020	
489XRAHXV3XK	WA20-08-7068		7-A-032	WA6032	
489XREVXV5XK	WA20-08-7069		7-A-093	WA6093	
489XSAHXV3XK	WA20-08-7070		7-A-125	WA6125	
489XSAHW3XK	WA20-08-7071		35P15-1	WA8010	
489XSEVXT5XK	WA20-08-7072		35P15-2	WA8020	
489XSEVXV5XK	WA20-08-7073		8-A-032	WA8032	
489ZFAHXV3XK	WA20-08-7074		GA8190	WA8190	
489ZFDAXA5XD	WA20-08-7075		326-8217-100	WA8217100	
489ZFDAXA5XK	WA20-08-7076		GA8248	WA8248	
489ZFDAXV5XD	WA20-08-7077		A2000	WAA2000	
489ZFDAXV5XK	WA20-08-7078		A3000	WAA3000	
489ZLDAXA5XK	WA20-08-7079		A3070	WAA3070	
489ZLDAXT5XK	WA20-08-7080		A3500	WAA3500	
489ZLDAXV5XK	WA20-08-7081		A3575	WAA3575	
489ZRDAXV5XD	WA20-08-7082		A4000	WAA4000	
489ZSDAXA5XD	WA20-08-7083		A4070	WAA4070	
489ZSDAXV5XD	WA20-08-7084		A4500	WAA4500	
489ZRDAXV5XK	WA20-08-7085		A4500SS	WAA4500SS	

# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## MUNCIE® TO WA

MUNCIE®#	WA#	NOTES
WA600140	WASWK-699	
WA600138	WASW-003	
TG8SU6812P1KX	WA20-08-7070	
TG8SU6812P1BX	WA20-08-7020	
TG8SU6812C1KX	WA20-08-7071	
TG8SU6812A1KX	WA20-08-7019	
TG8SU6812A1BX	WA20-08-7035	
TG8SU6809PIBX	WA20-08-7067	
TG8SU6809P3KX	WA20-08-7090	
TG8SU6809P1KX	WA20-08-7068	
TG8SU6809C1KX	WA20-08-7041	
TG8SU6809C1BX	WA20-08-7023	
TG8SU6809A3KX	WA20-08-7066	
TG8SU6809A1KX	WA20-08-7065	
TG8SU6809A1BX	WA20-08-7034	
TG8SU6808P3KX	WA20-08-7027	
TG8SU6808P3BX	WA20-08-7026	
TG8SU6808P1KX	WA20-08-7005	
TG8SU6808P1BX	WA20-08-7006	
TG8SU6808C1KX	WA20-08-7028	
TG8SU6808C1BX	WA20-08-7010	
TG8SU6808A3KX	WA20-08-7040	
TG8SU6808A3BX	WA20-08-7033	
TG8SU6808A1KX	WA20-08-7015	
TG8SU6808A1KX	WA20-08-7017	
TG8SU6808A1BX	WA20-08-7018	
TG8SU6807P3KX	WA20-08-7012	
TG8SU6807P1KX	WA20-08-7001	
TG8SU6807P1BX	WA20-08-7002	
TG8SU6807C1KX	WA20-08-7058	
TG8SU6807C1BX	WA20-08-7022	
TG8SU6807A3KX	WA20-08-7089	
TG8SU6807A1BX	WA20-08-7042	
TG8SU6806P3KX	WA20-08-7003	
TG8SU6806P3BX	WA20-08-7007	
TG8SU6806P1PX	WA20-08-7057	
TG8SU6806P1BX	WA20-08-7000	
TG8SU6806P1BX	WA20-08-7004	
TG8SU6806A3KX	WA20-08-7052	
TG8SU6806A1KX	WA20-08-7008	
TG8SU6806A1BX	WA20-08-7029	
TG8SS6008P1KX	WA20-08-7063	
TG8SS6008A1KX	WA20-08-7062	
TG8SM6507P3KX	WA20-08-7060	
TG8SM6507P3KX	WA20-08-7081	
TG8SM6507A3KX	WA20-08-7059	
TG8SM6507A3KX	WA20-08-7079	
TG8SF1112P3KX	WA20-08-7073	
TG8SF1109P3KX	WA20-08-7069	
TG8SF1108A3KX	WA20-08-7064	
TG8DS6806P1KX	WA20-08-7074	
TG8DM6512P3BX	WA20-08-7084	
TG8DM6512A3BX	WA20-08-7083	
TG8DM6509P3KX	WA20-08-7085	
TG8DM6509P3BX	WA20-08-7082	
TG8DM6506P3KX	WA20-08-7078	
TG8DM6506P3BX	WA20-08-7077	
TG8DM6506A3KX	WA20-08-7076	
TG8DM6506A3BX	WA20-08-7075	

CHELSEA®#	WA#	NOTES
TG8BU6812P1KX	WA20-08-7039	
TG8BU6812A1KX	WA20-08-7087	
TG8BU6809P1KX	WA20-08-7038	
TG8BU6809A1KX	WA20-08-7051	
TG8BU6809A1BX	WA20-08-7050	
TG8BU6808P3KX	WA20-08-7048	
TG8BU6808P1KX	WA20-08-7036	
TG8BU6808P1KX	WA20-08-7049	
TG8BU6808P1BX	WA20-08-7009	
TG8BU6808A1KX	WA20-08-7037	
TG8BU6808A1BX	WA20-08-7021	
TG8BU6807A3KX	WA20-08-7047	
TG8BU6807A1KX	WA20-08-7046	
TG8BU6807A1BX	WA20-08-7011	
TG8BU6806P3KX	WA20-08-7088	
TG8BU6806P1KX	WA20-08-7030	
TG8BU6806P1BX	WA20-08-7025	
TG8BU6806A3KX	WA20-08-7044	
TG8BU6806A1KX	WA20-08-7016	
TG8BU6806A1BX	WA20-08-7043	
TG6SZ9207C3BX	WA20-06-5024	
TG6SU6818P4KX	WA20-06-5063	
TG6SU6818P1KX	WA20-06-5062	
TG6SU6818C4KX	WA20-06-5065	
TG6SU6818C4BX	WA20-06-5064	
TG6SU6815P4KX	WA20-06-5054	
TG6SU6815C4KX	WA20-06-5056	
TG6SU6815C1BX	WA20-06-5055	
TG6SU6809P1KX	WA20-06-5033	
TG6SU6809P1BX	WA20-06-5032	
TG6SU6809C1KX	WA20-06-5004	
TG6SU6809C1BX	WA20-06-5034	
TG6SU6809A1KX	WA20-06-5031	
TG6SU6809A1BX	WA20-06-5030	
TG6SU6808P1KX	WA20-06-5000	
TG6SU6808P1BX	WA20-06-5105	
TG6SU6808C1KX	WA20-06-5008	
TG6SU6808C1BX	WA20-06-5104	
TG6SU6808A1KX	WA20-06-5029	
TG6SU6808A1BX	WA20-06-5028	
TG6SU6807P1KX	WA20-06-5009	
TG6SU6807P1BX	WA20-06-5077	
TG6SU6807A1KX	WA20-06-5010	
TG6SU6806P1KX	WA20-06-5022	
TG6SU6806P1BX	WA20-06-5021	
TG6SU6806C4KX	WA20-06-5002	
TG6SU6806C1BX	WA20-06-5023	
TG6SU5708P1BX	WA20-06-5027	
TG6SU5708A1BX	WA20-06-5026	
TG6SS7112P3KX	WA20-06-5051	
TG6SS7112C3BX	WA20-06-5052	
TG6SS7112A3KX	WA20-06-5050	
TG6SS6115C3KX	WA20-06-5057	
TG6SS6112C3BX	WA20-06-5083	
TG6SS6009P3BX	WA20-06-5036	
TG6SS6009A3BX	WA20-06-5035	
TG6SG7318C3KX	WA20-06-5066	
TG6SG7312P3BX	WA20-06-5041	
TG6SG7309C2BX	WA20-06-5037	



# INTERCHANGE - OLD WA# TO NEW WORLD AMERICAN

## MUNCIE® TO WA

MUNCIE®#	WA#	NOTES	CHELSEA®#	WA#	NOTES
TG6SF8410P3KX	WA20-06-5040		TG6DS7118C3BX	WA20-06-5084	
TG6SF7507P1KX	wa20-06-5093		TG6DS7108P3KX	WA20-06-5075	
TG6SF7108C3BX	WA20-06-5079		TG6DS7108A3KX	WA20-06-5074	
TG6SF6318P1BX	WA20-06-5068		TG6DS6806P1KX	WA20-06-5078	
TG6SF6318C3BX	WA20-06-5069		TG6DS6806A1KX	WA20-06-5071	
TG6SF6318A1BX	WA20-06-5067		TG6DM6518C1KX	wa20-06-5085	
TG6SF6315P1KX	wa20-06-5092		TG6DM6507P3KX	WA20-06-5006	
TG6SF6315C3KX	WA20-06-5098		TG6DM6507P1KX	WA20-06-5073	
TG6SF6315C3BX	WA20-06-5059		TG6DM6507A1KX	WA20-06-5072	
TG6SF6315C1KX	WA20-06-5058		TG6DM6506P1KX	WA20-06-5085	
TG6SF6312P3KX	WA20-06-5047		TG6BU6807P1KX	WA20-06-5016	
TG6SF6312P1KX	WA20-06-5046		TG6BU6807P1BX	WA20-06-5015	
TG6SF6312P1BX	WA20-06-5045		TG6BU6807A1KX	WA20-06-5014	
TG6SF6312C3KX	WA20-06-5049		TG6BU6806P1KX	WA20-06-5012	
TG6SF6312C1BX	WA20-06-5048		TG6BU6806P1BX	WA20-06-5005	
TG6SF6312A1KX	WA20-06-5043		TG6BU6806C1BX	WA20-06-5013	
TG6SF6312A1BX	WA20-06-5042		TG6BF8409P3KX	WA20-06-5018	
TG6SF6310A1KX	WA20-06-5038		B35P93	WA6032	
TG6SF6309P1KX	WA20-06-5039		B35P92	WA6020	
TG6SF6308P1KX	WA20-06-5090		B35P91	WA6010	
TG6SF6308P1BX	WA20-06-5091		B35P152	WA8020	
TG6SF6308A1KX	WA20-06-5007		B35P151	WA8010	
TG6SF6308A1BX	wa20-06-5096		AS102G	AS102G	
TG6LS6115C3BX	WA20-06-5020		AS102	AS102	

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# WARRANTY CLAIM FORM

## HYDRAULIC UNITS

DATE: \_\_\_\_\_  
RGA NUMBER: \_\_\_\_\_ INVOICE OR SALES ORDER NUMBER: \_\_\_\_\_  
COMPANY NAME: \_\_\_\_\_ CONTACT: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CITY, STATE, ZIP: \_\_\_\_\_  
PHONE: \_\_\_\_\_ FAX OR EMAIL: \_\_\_\_\_

### TYPE OF UNIT

DUMP PUMP: \_\_\_\_\_ GEAR PUMP: \_\_\_\_\_ PTO: \_\_\_\_\_ POWER STEERING PUMP \_\_\_\_\_  
PART NUMBER: \_\_\_\_\_ SERIAL NUMBER: \_\_\_\_\_  
DATE INSTALLED: \_\_\_\_\_ DATE OF COMPLAINT: \_\_\_\_\_  
HOW IS UNIT SHIFTED (CIRCLE ONE):    AIR    CABLE/WIRE

### APPLICATION

TRANSMISSION MODEL: \_\_\_\_\_ PTO NUMBER OF PUMPS ONLY: \_\_\_\_\_  
OPERATING ENGINE RPM: \_\_\_\_\_ DUTY CYCLE (HOW LONG IT RUNS FOR): \_\_\_\_\_  
OPERATING PSI: \_\_\_\_\_ RELIEF VALVE SETTING: \_\_\_\_\_  
TYPE OF HYDRAULIC HOSE SYSTEM (CIRCLE ONE):    2 LINE / 3 LINE

REASON FOR RETURN (BE SPECIFIC): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

.....

**MIDWEST QUALITY CONTROL ONLY** **RGA ISSUED BY:** \_\_\_\_\_

VENDOR CODE: \_\_\_\_\_ BATCH CODE: \_\_\_\_\_

VISUAL INSPECTION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DISASSEMBLY INSPECTION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONCLUSION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

APPROVED: \_\_\_\_\_ DENIED: \_\_\_\_\_ DENIAL LETTER #: \_\_\_\_\_ FORM S/N: \_\_\_\_\_

QUALITY ASSURANCE MANAGER: \_\_\_\_\_ DATE: \_\_\_\_\_



