



RL~F60

PARTS LIST # 102692I

USE THIS PARTS LIST FOR:

Hoist Serial Number 6745 to _____

For older hoists use the following:
Parts List No. 102692H for Serial Number 2640 to 6744

IF YOUR HOIST DOES NOT FALL WITHIN THE SERIAL NUMBERS BREAKS,
CONTACT HARSH TO GET THE APPROPRIATE MANUAL

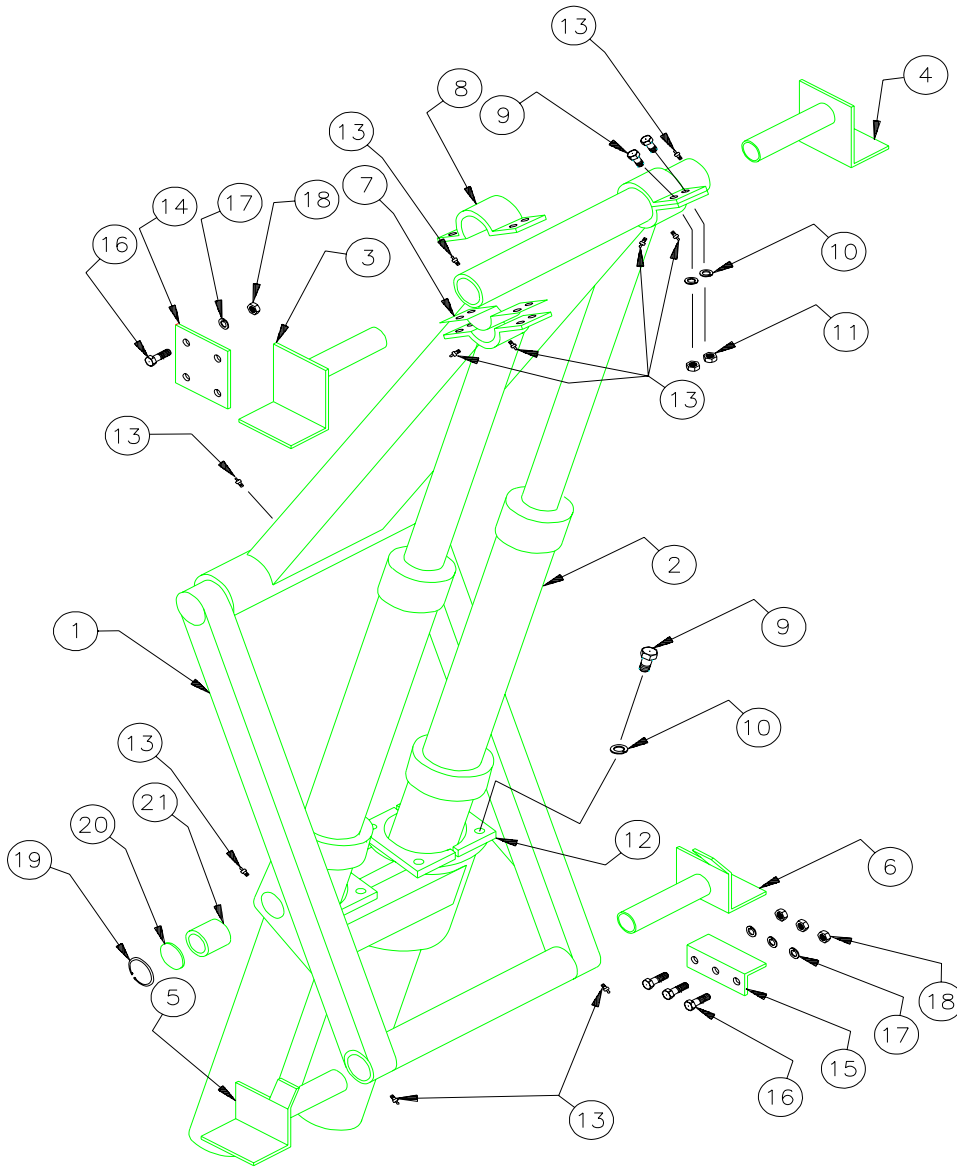
For pump replacement part numbers, consult the parts lists supplied with the pump

**IT IS RECOMMENDED THAT THIS HOIST
BE INSTALLED BY A QUALIFIED
TRUCK EQUIPMENT INSTALLER**

Harsh International, Inc.
600 Oak Avenue
Eaton, Colorado 80615

PHONE: (877) 427-7448 Toll-Free
(970) 454-1755 Local

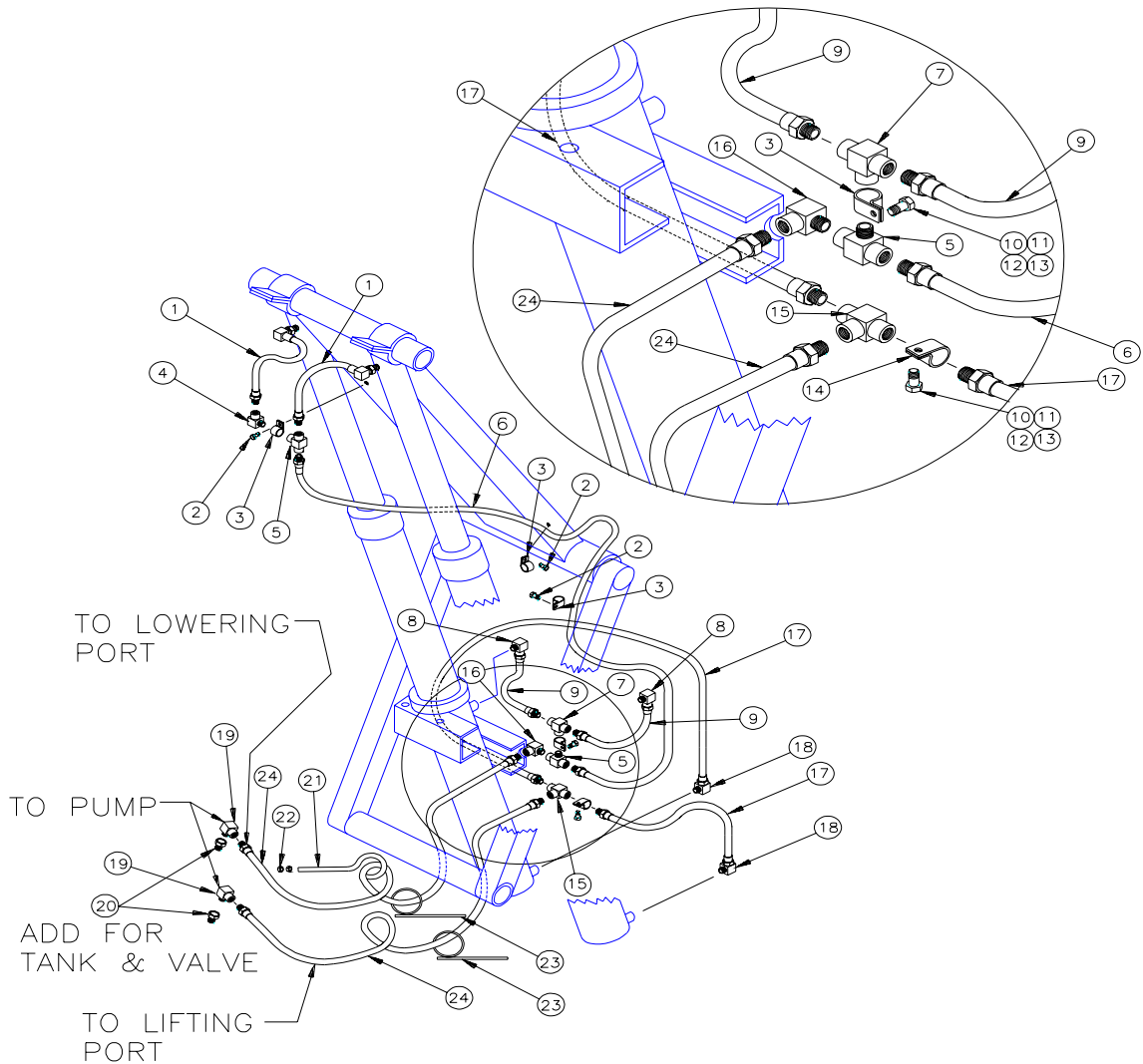
FAX: (970) 454-1761
EMAIL: customersupport@harshenviro.com



**F60 HOIST
SCISSOR ASSEMBLY**

| ITEM | PART # | QTY | DESCRIPTION | ITEM | PART # | QTY | DESCRIPTION |
|------|--------|-----|------------------------------|------|--------|-----|---------------------------|
| 1 | A13908 | 1 | SCISSOR ASSEMBLY | 12 | 14159 | 4 | MOUNTING FLANGE HALF |
| *2 | A1698 | 2 | CYLINDER ASSEMBLY (COMPLETE) | 13 | 100037 | 11 | GREASE FITTING, DRIVE IN |
| 3 | A14152 | 1 | UPPER MOUNT | 14 | 11126 | 2 | STRINGER ATTACHMENT PLATE |
| 4 | A14153 | 1 | UPPER MOUNT | 15 | 11127 | 2 | ANGLE, FRAME ATTACHMENT |
| 5 | A14155 | 1 | LOWER MOUNT | 16 | 100230 | 14 | SCREW, HEX HD CAP |
| 6 | A14156 | 1 | LOWER MOUNT | 17 | 100272 | 14 | WASHER, LOCK |
| 7 | 12907 | 2 | BUSHING, BRASS | 18 | 100250 | 14 | NUT, HEX |
| 8 | 18631 | 2 | CYLINDER TOP MOUNT | 19 | 100147 | 2 | SNAP RING |
| 9 | 100240 | 16 | SCREW, HEX HD CAP | 20 | 15886 | 2 | PLATE, GREASE RETAINING |
| 10 | 100271 | 16 | WASHER, LOCK | 21 | 15862 | 2 | BUSHING |
| 11 | 100254 | 8 | NUT, HEX | *22 | A9778 | 1 | DECAL KIT |

NOTE: *2 - A1698 INCLUDES CYLINDER ASSY, MOUNTING FLANGE HALVES, CYLINDER TOP MOUNT, BRASS BUSHING, SCREWS, LOCK WASHERS AND NUTS.
 *22 - A9778 INCLUDES ALL DECALS USED ON HOIST.
 SOME HOISTS MAY HAVE SELF TAPPING ZERKS IN VARIOUS LOCATIONS.

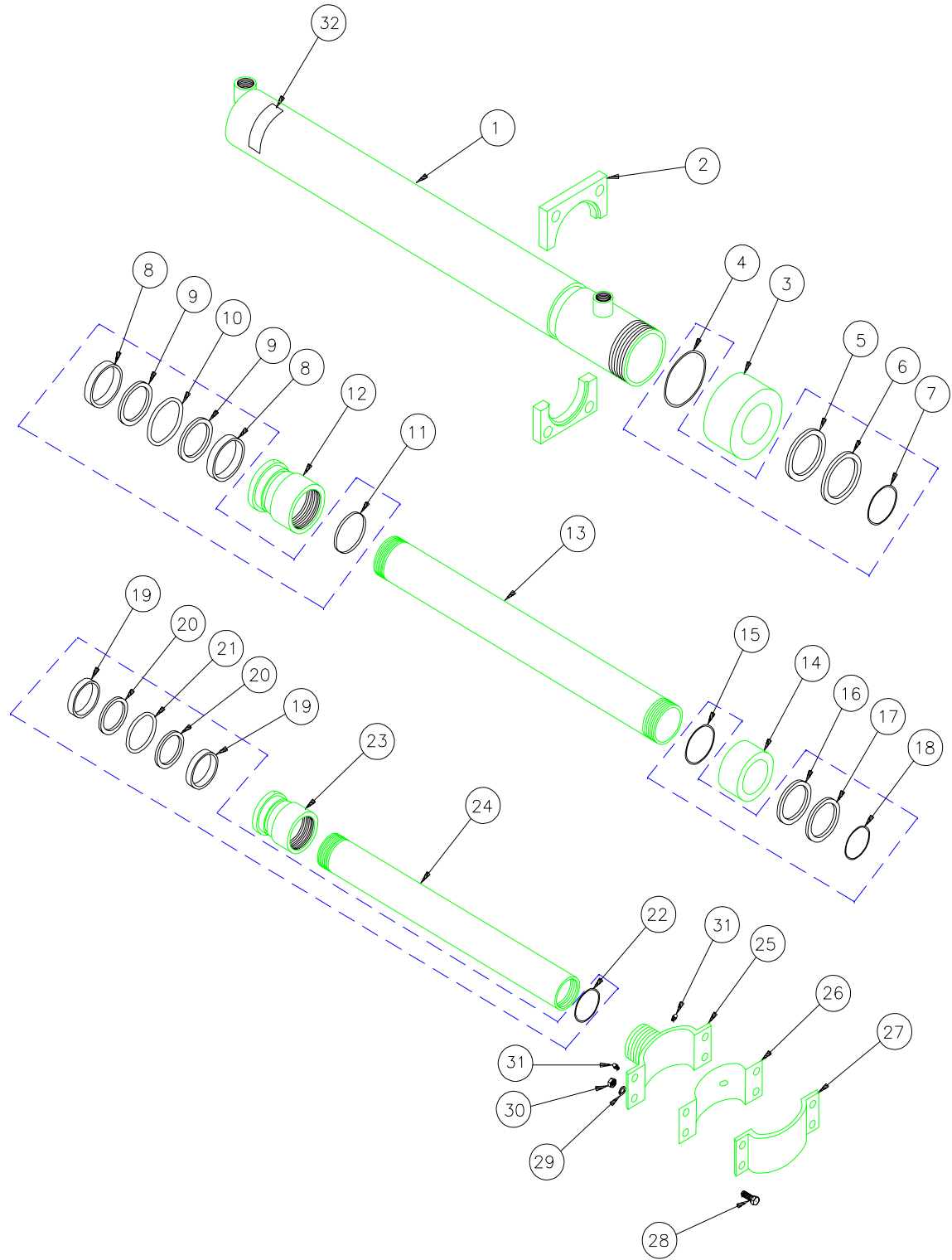


**F60 HOIST
HOSE ASSEMBLY**

| ITEM | PART # | QTY | DESCRIPTION | ITEM | PART # | QTY | DESCRIPTION |
|------|--------|-----|----------------------|------|--------|-----|----------------------|
| 1 | 100930 | 2 | HOSE ASSEMBLY | 13 | 100221 | 2 | NUT, HEX |
| 2 | 100544 | 3 | SCREW, HEX HD CAP | 14 | 100935 | 1 | HOSE CLAMP, 13/16 ID |
| 3 | 100547 | 4 | HOSE CLAMP, 11/16 ID | 15 | 100010 | 1 | TEE |
| 4 | 100531 | 1 | ELBOW | 16 | 100527 | 1 | ELBOW |
| 5 | 100526 | 2 | TEE | 17 | 101974 | 2 | HOSE ASSEMBLY |
| 6 | 101980 | 1 | HOSE ASSEMBLY | 18 | 101975 | 2 | ADAPTER |
| 7 | 100934 | 1 | TEE | *19 | 100451 | 2 | ELBOW |
| 8 | 101976 | 2 | ADAPTER | *20 | 100015 | 2 | BUSHING |
| 9 | 101982 | 2 | HOSE ASSEMBLY | *21 | 100563 | 1 | EYE BOLT |
| 10 | 100109 | 2 | SCREW, RD HD | *22 | 100254 | 2 | NUT, HEX |
| 11 | 100304 | 2 | WASHER, LOCK | *23 | A11166 | 2 | HOSE SUPPORT |
| 12 | 100443 | 2 | WASHER, FLAT | 24 | 100540 | 2 | HOSE ASSEMBLY |

NOTE: *19 - FOR PUMP USE 100451.
 *20 - FOR TANK & VALVE ADD BUSHINGS (100015) TO ELBOW (100451) BEFORE CONNECTING TO VALVE.
 *21,22,23 - USED TO SUPPORT ITEM #24 (100540) HOSE ASSEMBLY TO CHASSIS.

F60 HOIST CYLINDER PARTS



**F60 HOIST
CYLINDER PARTS LIST**

| ITEM | PART # | QTY | DESCRIPTION | ITEM | PART # | QTY | DESCRIPTION |
|------|--------|-----|------------------------------|-------|--------|----------|-------------------------------|
| * | A1698 | 2 | CYLINDER ASSEMBLY (COMPLETE) | A9230 | 1 | SEAL KIT | |
| 1 | A14167 | 1 | CYLINDER BODY ASSEMBLY | *19 | 100566 | 2 | WEAR RING |
| 2 | 14159 | 2 | MOUNTING FLANGE HALF | *20 | 100620 | 2 | BACK-UP RING |
| 3 | 19764 | 1 | GLAND NUT | *21 | 100155 | 1 | O-RING |
| | A9413 | 1 | SEAL KIT | *22 | 100519 | 1 | O-RING |
| *4 | 101986 | 1 | O-RING | 23 | 11145 | 1 | PISTON |
| *5 | 103580 | 1 | LOADED U-CUP 1/4 POLYPAK | 24 | 14171 | 1 | TUBE, CYLINDER (SECOND STAGE) |
| *6 | 100604 | 1 | BACK-UP RING | 25 | A11161 | 1 | CYLINDER MOUNT |
| *7 | 100384 | 1 | WIPER RING | 26 | 12907 | 1 | BUSHING, BRASS |
| | A9414 | 1 | SEAL KIT | 27 | 18631 | 1 | CYLINDER TOP MOUNT |
| *8 | 101972 | 2 | WEAR RING | 28 | 100240 | 4 | SCREW, HEX HD CAP |
| *9 | 100604 | 2 | BACK-UP RING | 29 | 100271 | 4 | WASHER, LOCK |
| *10 | 100158 | 1 | O-RING | 30 | 100254 | 4 | NUT, HEX |
| *11 | 100520 | 1 | O-RING | 31 | 101953 | 2 | GREASE FITTING, DRIVE IN |
| 12 | 14173 | 1 | PISTON | 32 | 101045 | 1 | DECAL, MAX CYL PRESS 3300PSI |
| 13 | 14170 | 1 | TUBE, CYLINDER (FIRST STAGE) | | | | |
| 14 | 11144 | 1 | GLAND NUT | | | | |
| | A9229 | 1 | SEAL KIT | | | | |
| *15 | 100191 | 1 | O-RING | | | | |
| *16 | 103216 | 1 | LOADED U-CUP 3/16 POLYPAK | | | | |
| *17 | 100619 | 1 | BACK-UP RING | | | | |
| *18 | 100137 | 1 | WIPER RING | | | | |

NOTE: * - A1698 INCLUDES CYLINDER ASSY, MOUNTING FLANGE HALVES, CYLINDER TOP MOUNT, BRASS BUSHING, SCREWS, LOCK WASHERS AND NUTS.

*4-7 - NOT SOLD SEPARATELY, SOLD AS SEAL KIT #A9413 ONLY.

*8-11 - NOT SOLD SEPARATELY, SOLD AS SEAL KIT #A9414 ONLY.

*15-18 - NOT SOLD SEPARATELY, SOLD AS SEAL KIT #A9229 ONLY.

*19-22 - NOT SOLD SEPARATELY, SOLD AS SEAL KIT #A9230 ONLY

**GLAND NUT (14172) SEAL KIT
PART # A9413**

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|--------------------------------|
| 1 | 4 | 100384 | WIPER RING, 2-7/8 ID—28 |
| 1 | 3 | 100604 | BACK-UP RING, 2-7/8 ID—336 |
| 1 | 2 | 100158 | O-RING, 2-7/8 ID x 3/16 CS—336 |
| 1 | 1 | 101986 | O-RING, 3-5/8 ID x 1/8 CS—239 |

**PISTON (14173) SEAL KIT
PART # A9414**

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|--------------------------------|
| 2 | 4 | 101972 | WEAR RING, 3-1/4 OD |
| 2 | 3 | 100604 | BACK-UP RING, 2-7/8 ID—336 |
| 1 | 2 | 100158 | O-RING, 2-7/8 ID x 3/16 CS—336 |
| 1 | 1 | 100520 | O-RING, 2-1/4 ID x 1/16 CS—037 |

**GLAND NUT (11144) SEAL KIT
PART # A9229**

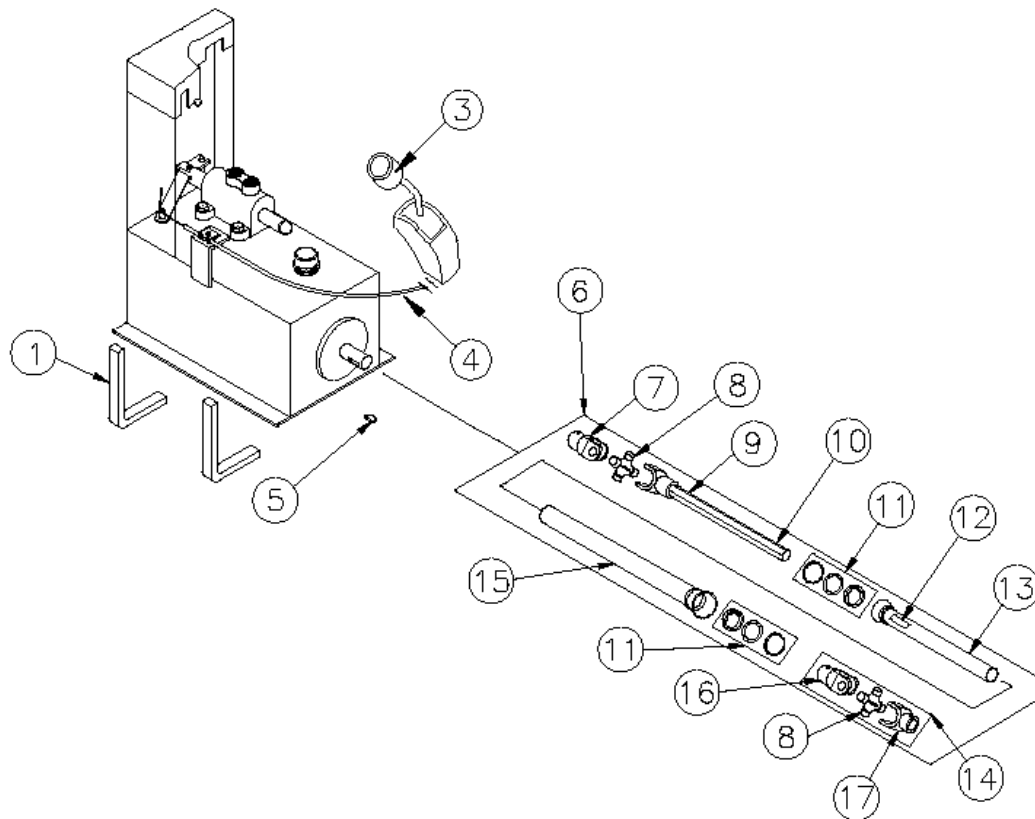
| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|-------------------------------|
| 1 | 4 | 100137 | WIPER RING, 2 ID—21 |
| 1 | 3 | 100619 | BACK-UP RING, 2 ID—329 |
| 1 | 2 | 100445 | O-RING, 2 ID x 3/16 CS—329 |
| 1 | 1 | 100191 | O-RING, 2-3/4 ID x 1/8 CS—232 |

**PISTON (11145) SEAL KIT
PART # A9230**

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|--------------------------------|
| 2 | 4 | 100566 | WEAR RING, 2-1/2 OD |
| 2 | 3 | 100620 | BACK-UP RING, 2-1/2 ID—330 |
| 1 | 2 | 100155 | O-RING, 2-1/8 ID x 3/16 CS—330 |
| 1 | 1 | 100519 | O-RING, 1-5/16 ID x 1/8 CS—219 |

**DECAL KIT
PART # A9778**

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|-----------------------------------|
| 1 | 6 | 101045 | DECAL, MAX CYL PRESSURE 3300 PSI |
| 1 | 5 | 101117 | DECAL, PUMP-PTO |
| 1 | 4 | 101102 | DECAL, BOX PROP |
| 1 | 3 | 101101 | DECAL, BOX PROP |
| 1 | 2 | 100974 | DECAL, TAIL HINGE |
| 1 | 1 | 100896 | DECAL, HOIST OPERATION (PTO PUMP) |



PTO SHAFT AND PUMP ACCESSORIES

| ITEM # | PART # | QTY | DESCRIPTION | ITEM # | PART # | QTY | DESCRIPTION |
|--------|--------|-----|----------------------------|--------|--------|-----|----------------------------|
| 1 | 10062 | 2 | PUMP BRACKET | 7 | 9802 | 1 | YOKE,PUMP 1RND BORE |
| *2 | 103057 | 1 | KIT, RVC BONNET | 8 | 9788 | 2 | CROSS & BEARING KIT |
| *3 | 103058 | 1 | CABLE HEAD,CURVED HANDLE | 9 | 9801 | 1 | DECAL,DANGER (SHAFT) |
| | 104071 | 1 | CABLE HEAD,STRAIGHT HANDLE | 10 | A9840 | 1 | YOKE & SHAFT ASSY |
| *4 | 103060 | 1 | CABLE, 6' W/SHORT FITTING | 11 | 9795 | 2 | KIT, BEARING SHIELD |
| | 103056 | 1 | CABLE, 7' W/SHORT FITTING | 12 | 9800 | 1 | DECAL, DANGER OUTER SHIELD |
| | 103061 | 1 | CABLE, 8' W/SHORT FITTING | 13 | 9793 | 1 | SHIELD, OUTER |
| | 103062 | 1 | CABLE, 10' W/SHORT FITTING | 14 | 102999 | 1 | U-JOINT ASSY,1-1/8 HEX |
| | 103075 | 1 | CABLE, 12' W/SHORT FITTING | 15 | 9794 | 1 | SHIELD, INNER |
| | 104072 | 1 | CABLE, 15' W/SHORT FITTING | 16 | 9797 | 1 | YOKE,HEX BORE,1-1/8 |
| 5 | 4451 | 1 | KEY,1/4x4/8 WOODRUFF | 17 | 9799 | 1 | YOKE, PTO 1-1/4 RND BORE |
| *6 | 102943 | 1 | DRIVE SHAFT | *18 | 100896 | 1 | DECAL, HOIST OPER-PTO PUMP |

NOTE: *2—CONNECTION HARDWARE NOT SHOWN

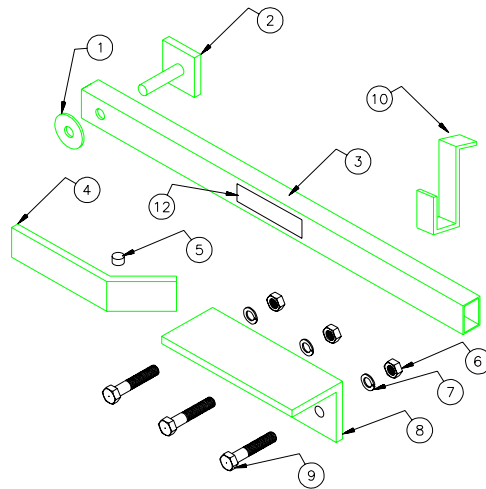
*3—UNIT IS SHIPPED WITH PART # 103058

*4—VARIOUS LENGTHS AVAILABLE.

*6—INCLUDES ITEMS 7 THROUGH 15.

*18—APPLY DECAL #100896 ON DASHBOARD AS NEAR AS POSSIBLE TO HOIST CONTROLS.
DECAL IS INCLUDED IN DECAL KIT #A9775.

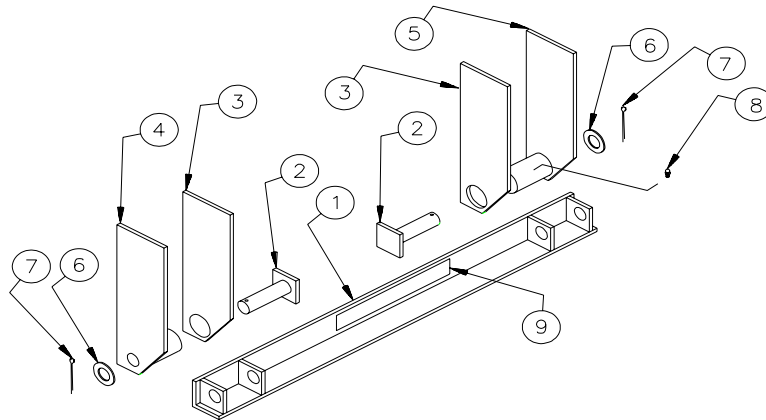
NEVER OPERATE PTO WITHOUT SHIELDS IN PLACE



**F60 HOIST
SAFETY PROP PARTS LIST**

| ITEM | PART # | QTY | DESCRIPTION | ITEM | PART # | QTY | DESCRIPTION |
|------|--------|-----|----------------------|------|--------|-----|---------------------------------|
| | A1387 | 1 | SAFETY PROP ASSEMBLY | 7 | 100272 | 3 | WASHER, LOCK |
| 1 | 101123 | 1 | WASHER, FLAT | 8 | 12251 | 1 | BOTTOM ANGLE |
| 2 | A12245 | 1 | PIN PLATE ASSEMBLY | 9 | 100230 | 3 | SCREW, HEX HD CAP |
| 3 | 12243 | 1 | SAFETY BOX PROP | 10 | 12256 | 1 | BRACKET, LATCHING |
| 4 | 12249 | 1 | SIDE PLATE | *11 | 101101 | 2 | DECAL, BOX PROP (10 x 4 3/4) |
| 5 | 12248 | 1 | STOP PEG | 12 | 101102 | 1 | DECAL, BOX PROP (9 1/4 x 1 1/2) |
| 6 | 100250 | 3 | NUT | | | | |

NOTE: *11 - APPLY ON OUTSIDE RUB RAIL IN AREA OF THE SERVICE SAFETY PROP. ONE DECAL ON EACH SIDE OF BOX.



**F60 HOIST
TAIL HINGE PARTS LIST**

| ITEM | PART # | QTY | DESCRIPTION | ITEM | PART # | QTY | DESCRIPTION |
|------|----------|-----|-----------------------|------|----------|-----|-----------------------|
| | A1281 | 1 | TAIL HINGE ASSY | 5 | A10138-2 | 1 | VERTICAL PLATE ASSY |
| 1 | A10141 | 1 | TAIL HINGE ANGLE ASSY | 6 | 101071 | 2 | WASHER, FLAT |
| 2 | A10137 | 2 | PIN ASSY | 7 | 101076 | 2 | COTTER PIN, 2 1/2 LG. |
| 3 | 10139 | 2 | VERTICAL PLATE | 8 | 100037 | 2 | GREASE ZERK |
| 4 | A10138-1 | 1 | VERTICAL PLATE ASSY | 9 | 100974 | 1 | DECAL, TAIL HINGE |

HOIST SHIPPING GROUP

| OPTION | PUMP | DESCRIPTION | SCISSOR | SM PARTS | PTO SHAFT | TAIL- HINGE | BOX PROP | QTY |
|--------|--------|--------------------------------|---------|-------------|--------------|----------------|-------------|-----|
| F60-00 | ~~ | NO PUMP | A1697 | A1785 | | | A1387 | 2 |
| F60-03 | 103067 | 8 PISTON-2 4W VALVES-27 QT | A1697 | A1745 | A1837 | A1281 | A1387 | 2 |
| | | WMS# F98-6-6R-27 QT | | | | | | |
| F60-04 | 103066 | 8 PISTON-4W VALVE-27 QT | A1697 | A1745 | A1837 | A1281 | A1387 | 2 |
| | | WMS# F98-6-27 QT | | | | | | |
| F60-08 | 102912 | TANK & VALVE-4W VALVE-27 QT | A1697 | A1745 | | A1281 | A1387 | 2 |
| | | WMS# W15-6C-27 QT | | | | | | |
| F60-09 | 102915 | TANK & VALVE-2 4W VALVES-27 QT | A1697 | A1745 | | A1281 | A1387 | 2 |
| F60-10 | 102912 | TANK & VALVE-4W VALVE-27 QT | A1697 | A1745 | | A1281 | A1387 | 2 |
| | 103053 | PUMP, GP2025, WILLIAMS | | | | | | |
| F60-11 | 102915 | TANK & VALVE-2 4W VALVES-27 QT | A1697 | A1745 | | A1281 | A1387 | 2 |
| | 103053 | PUMP, GP2025, WILLIAMS | | | | | | |
| F60-20 | ~~ | ENGLAND | A1728 | A1779 | | | | |

PUMP, 8P 2-4W VALVE, WMS# F98-6-6R-27QT-2416-7
PART # 103067

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|----------------------------|
| 1 | 15 | 9843 | MANUAL, SAFETY/MAINTENANCE |
| 1 | 14 | 100182 | CAP, BREATHER |
| 1 | 13 | 4451 | KEY, WOODRUFF 1/4 x 7/8 |
| 1 | 12 | 103055 | CABLE CONTROL |
| 1 | 11 | 9661 | PRESSURE LINE |
| 1 | 10 | 9331 | PRESSURE LINE |
| 2 | 9 | 9037 | SEAL, SHAFT |
| 2 | 8 | 101273 | GASKET, VALVE (4-BOLT) |
| 1 | 7 | 9036 | GASKET, PUMP-RESERVOIR |
| 1 | 6 | 9783 | KIT, F98 PUMP |
| 1 | 5 | 9785 | KIT, F98R PUMP |
| 1 | 4 | 9844 | VALVE, RELIEF (AUX) |
| 2 | 3 | 9282 | VALVE, RELIEF (SYSTEM) |
| 1 | 2 | 101275 | KIT, #6 R VALVE |
| 1 | 1 | 103068 | KIT, #6 VALVE, 4-WAY |

PUMP, 8P-4W VALVE, WMS# F98-6-27QT-2416-7
PART # 103066

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|----------------------------|
| 1 | 12 | 9843 | MANUAL, SAFETY/MAINTENANCE |
| 1 | 11 | 103055 | CABLE CONTROL |
| 1 | 10 | 100182 | CAP, BREATHER |
| 1 | 9 | 4451 | KEY, WOODRUFF 1/4 x 7/8 |
| 1 | 8 | 9661 | PRESSURE LINE |
| 2 | 7 | 9037 | SEAL, SHAFT |
| 2 | 6 | 101273 | GASKET, VALVE (4-BOLT) |
| 1 | 5 | 9036 | GASKET, PUMP-RESERVOIR |
| 1 | 4 | 9783 | KIT, F98 PUMP |
| 1 | 3 | 9785 | KIT, F98R PUMP |
| 2 | 2 | 9282 | VALVE, RELIEF (SYSTEM) |
| 1 | 1 | 103068 | KIT, #6 VALVE, 4-WAY |

**TANK & VALVE,4W VALVE,WMS#W15-6C-27QT-2416-7
PART # 102912**

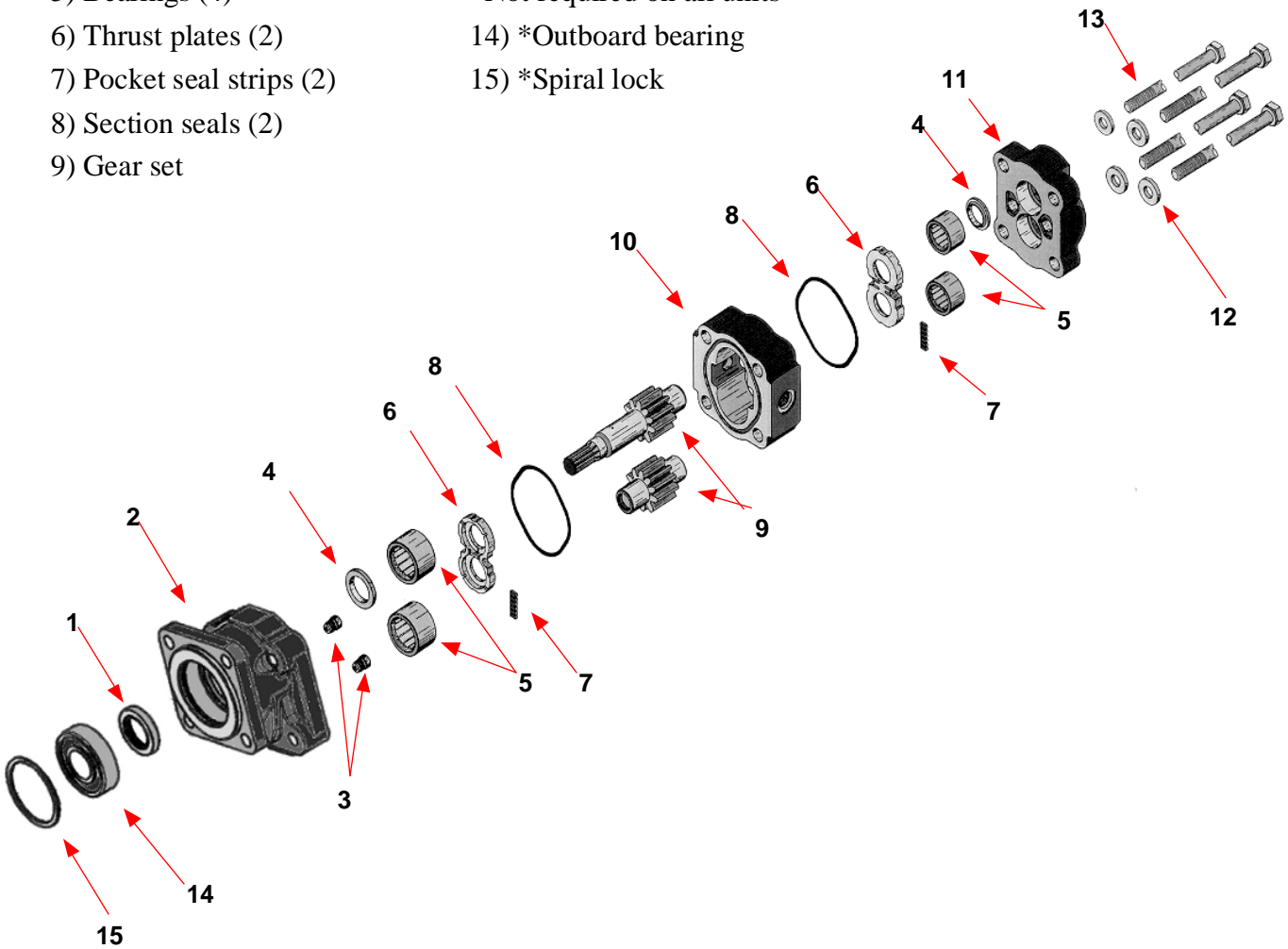
| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|-----------------------------|
| 1 | 10 | 9843 | MANUAL, SAFETY/MAINTENANCE |
| 1 | 9 | 103055 | CONTROL CABLE |
| 1 | 8 | 100182 | CAP, BREATHER |
| 1 | 7 | 9842 | SCREEN, INTAKE FILTER (W15) |
| | 6 | | |
| | 5 | | |
| 2 | 4 | 101273 | GASKET, VALVE (4-BOLT) |
| 1 | 3 | 9279 | VALVE, RELIEF (AUX) |
| 2 | 2 | 9282 | VALVE, RELIEF (SYSTEM) |
| 1 | 1 | 102671 | KIT, #6WRC VALVE 4-WAY |

**TANK & VALVE, 2-4W VALVES, WMS#W15-6-6R-27QT-2416-7
PART# 102915**

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|----------------------------|
| 1 | 11 | 9843 | MANUAL, SAFETY/MAINTENANCE |
| 1 | 10 | 103055 | CONTROL CABLE |
| 1 | 9 | 100182 | CAP, BREATHER |
| 1 | 8 | 9101 | SCREEN, INTAKE FILTER |
| | 7 | | |
| | 6 | | |
| 2 | 5 | 101273 | GASKET, VALVE (4-BOLT) |
| 1 | 4 | 8744 | VALVE, RELIEF (AUX) |
| 2 | 3 | 9282 | VALVE, RELIEF (SYSTEM) |
| 1 | 2 | 101275 | KIT, #6R VALVE 4-WAY |
| 1 | 1 | 102959 | KIT, #6WR VALVE 2-4 WAY |

PUMP, P-20 (GP2025)
PART # 103053

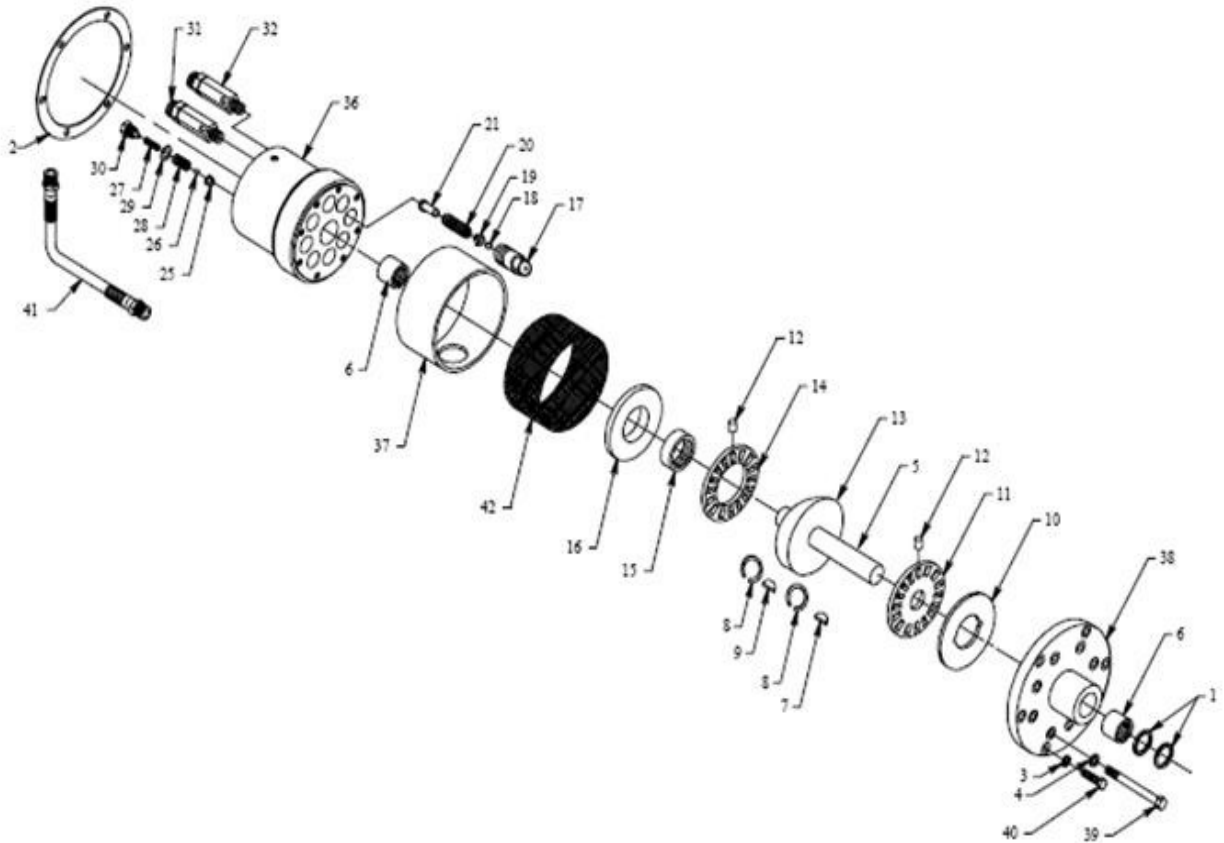
- 1) Lip seal
- 2) Shaft end cover
- 3) Checks (2)
- 4) Ring seals (2)
- 5) Bearings (4)
- 6) Thrust plates (2)
- 7) Pocket seal strips (2)
- 8) Section seals (2)
- 9) Gear set
- 10) Gear housing
- 11) Port end cover
- 12) Washers (4)
- 13) Cap screws (4)
- *Not required on all units
- 14) *Outboard bearing
- 15) *Spiral lock



SEAL KIT, P20 PUMP
PART # A9558

| QTY | ITEM # | PART # | DESCRIPTION |
|-----|--------|--------|-----------------------------|
| 2 | 3 | 102464 | SEAL, GASKET P20 PUMP |
| 1 | 2 | 102463 | SEAL, POCKET STRIP P20 PUMP |
| 1 | 1 | 102462 | SEAL, SHAFT P20 PUMP |

MODEL F98 DIRECT MOUNT PUMP PART # 9783



| QTY | ITEM# | PART# | DESCRIPTION |
|-----|-------|-------|------------------------|
| | | | SEAL KIT |
| | 1 | | OIL SEAL |
| | 2 | | PUMP GASKET |
| | 3 | | ALUMINUM WASHER |
| | 4 | | ALUMINUM WASHER |
| | | | SHAFT and BEARING KIT |
| | 5 | | SHAFT |
| | 6 | | NEEDLE BEARING |
| | 7 | | SHAFT KEY |
| | 8 | | SNAP RING |
| | 9 | | WOBBLE KEY |
| | | | THRUST BEARING KIT |
| | 10 | | THRUST RACE |
| | 11 | | FRONT ROLLER RETAINER |
| | 12 | | THRUST ROLLER RETAINER |
| | 13 | | WOBBLE PLATE |
| | 14 | | REAR ROLLER RETAINER |
| | 15 | | THRUST PLATE BEARING |
| | 16 | | PISTON THRUST PLATE |

| QTY | ITEM# | PART# | DESCRIPTION |
|-----|-------|-------|----------------------|
| | | | PISTON KIT |
| | 17 | | PISTON |
| | 18 | | BALL |
| | 19 | | BALL STOP |
| | 20 | | SPRING |
| | 21 | | SPRING PIVOT |
| | | | EXHAUST VALVE KIT |
| | 25 | | SEAT |
| | 26 | | BALL |
| | 27 | | EXHAUST SPRING |
| | 28 | | CAGE SPRING |
| | 29 | | WASHER |
| | 30 | | PORT STUD |
| | | | REMAINING PUMP PARTS |
| | 31,32 | | DUAL RELIEF VALVE |
| | | | *PUMP CASTING |
| | 37 | | INTAKE HOUSING TUBE |
| | 38 | | FRONT CASTING |
| | 39 | | PUMP ASSEMBLY BOLT |
| | 40 | | WASHER |
| | 42 | | INTAKE SCREEN |

*NOT SOLD SEPARATELY