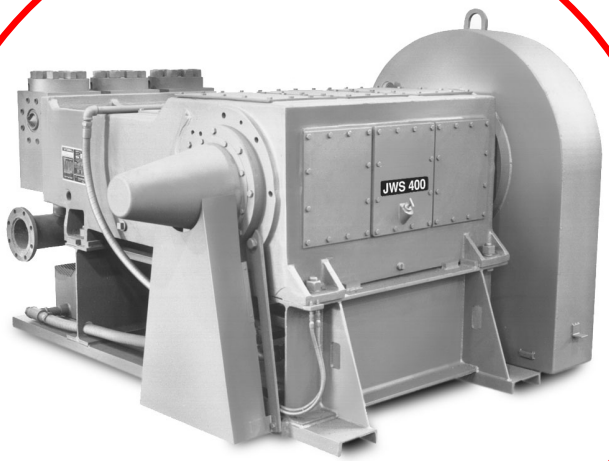
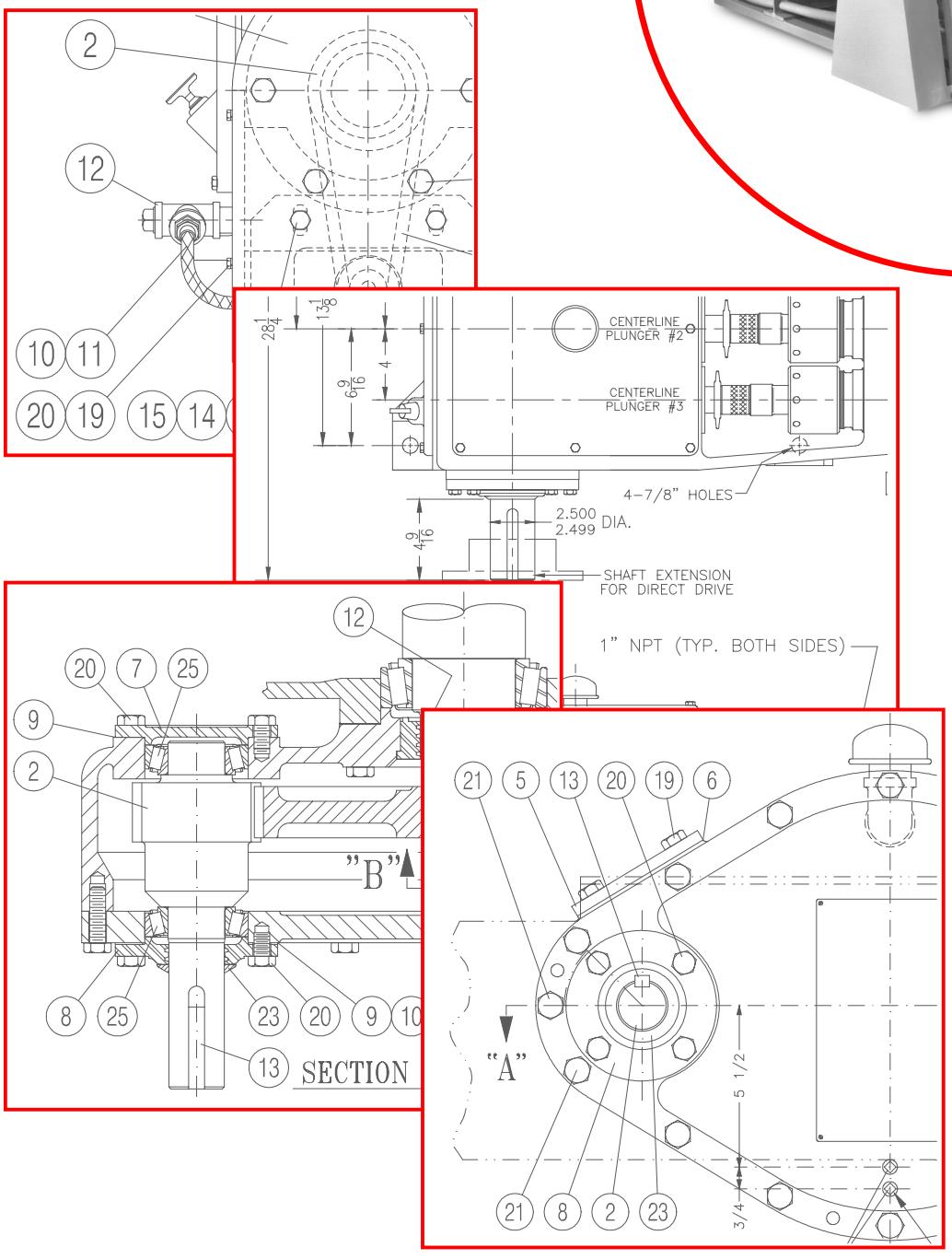
NATIONAL OILWELL

# JWS-400 Triplex Plunger Pump

## Parts List




JWS-400




**Types:**
**JWS-400**

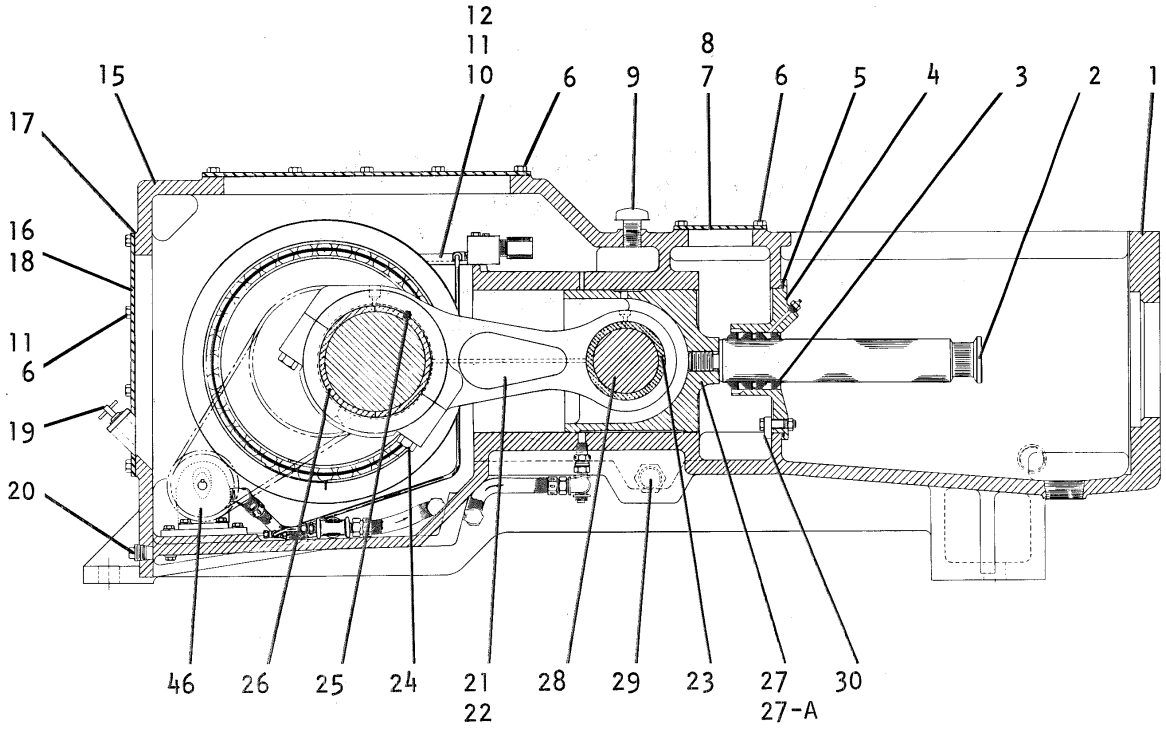

**Sales / Technical Information**

**USA Tollfree:** 1 (800) 800-4110
**Phone:** 1 (713) 462-4110
**Fax:** 1 (713) 462-3152
**Internet:** http://www.natoil.com

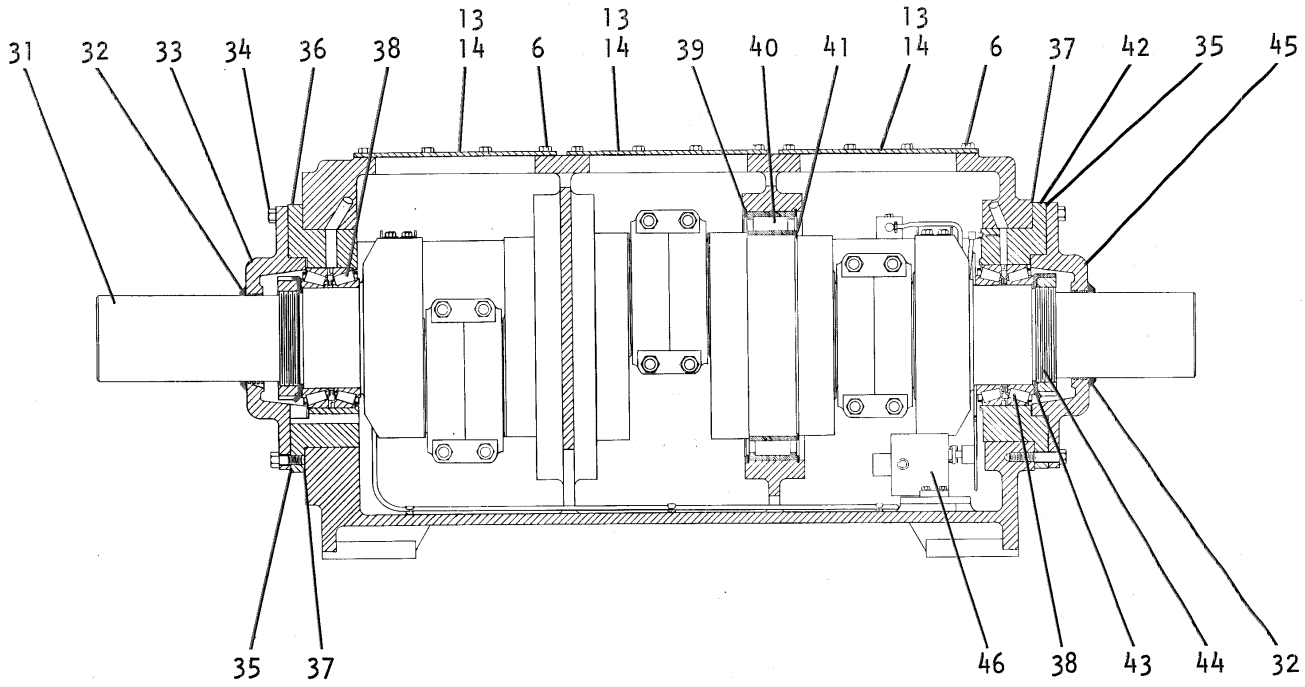
**P.O. Box 4638** **Houston, Texas 77210-4638**



ISSUE: November 29, 2000

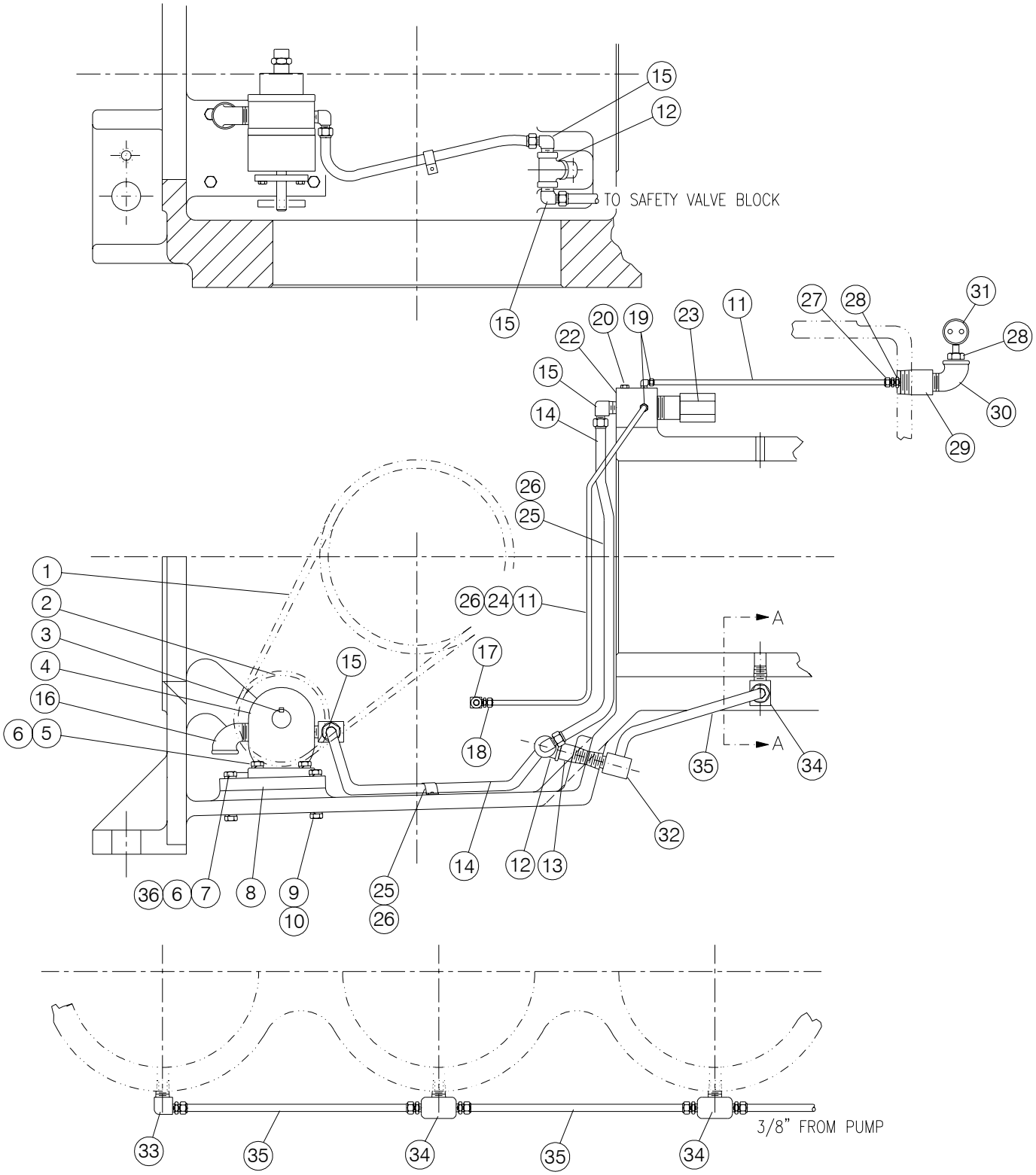



## SECTION THRU POWER END




## SECTION THRU CRANKSHAFT

| POWER END COMPLETE | | | |
|---|---|---|---|
| **ITEM** | **PART NO.** | **DESCRIPTION** | **QTY.** |
| 1 | G1714046 | POWER END COMPLETE (Composed of) | 1 |
| 2 | 1714296 | ROD, Intermediate | 3 |
| 3 | 1714297 | WIPER, Intermediate Rod | 12 |
| 4 | 1714299 | RETAINER, Intermediate Rod Wiper | 3 |
| 5 | 2410031-274 | GASKET, Wiper Retainer | 3 |
| 6 | 7000301-11 | SCREW, 1/2" x 3/4" Hex Head Cap: For Crosshead Cover Plate<br>For Power End Top Cover Plate<br>For Power End Rear Cover Plate (Outside Only) | 18<br>42<br>28 |
| 7 | 1714013 | PLATE, Crosshead Cover | 3 |
| 8 | 1714011 | GASKET, Crosshead Cover Plate | 3 |
| 9 | 7802020 | CAP, Breather – 1” | 1 |
| 10 | 1714024P | TROUGH, Oil | 2 |
| 11 | 7000303-11 | SCREW, 1/2" x 1” Hex Head Cap | 18 |
| 12 | 7600032 | WASHER, 1/2" Plain | 4 |
| 13 | 1714027 | GASKET, Top Cover Plate | 3 |
| 14 | 1714014 | PLATE, Top Cover | 3 |
| 15 | 1714041 | FRAME, Main | 1 |
| 16 | 1715014 | PLATE, Rear Outside Cover | 2 |
| 17 | 1715028 | GASKET, Rear Outside Cover Plate | 3 |
| 18 | 1714443 | PLATE, Rear Center Name – JWS-400 | 1 |
| 19 | 2400029 | DIPSTICK, Oil | 1 |
| 20 | 6874008 | PLUG, 1” Standard Pipe | 1 |
| 21 | 1714000 | ROD, Complete Connecting (Composed of☺ | 3 |
| 22 | 1714003 | ROD, Only, Includes: | |
| 23 | 1715010 | BUSHING, Bronze – Crosshead End (Service) | 1 |
| 24 | 21032043 | SCREW, 3/4-10 x 4½” DRLD HD Cap | 4 |
| 25 | 6510604 | PIN, 3/8” x 1/2" Dowel | 1 |
| 26 | 1714012 | BUSHING, Aluminum – Crank End | 2 |
| 27 | 1715005 | CROSSHEAD | 3 |
| 27-A | 1716021 | PIN, Spring Roll 7/16” x 5/8” | 3 |
| 28 | 1715008<br>6875002 | PIN, Crosshead – Includes:<br>PLUG, 1/4" Standard Countersunk | 3<br>2 |
| 29 | 6874012 | PLUG, 1½” Std. Solid Pipe | 1 |
| 30 | 1716031<br>6310082<br>7618018 | BOLT, Intermediate Rod Hook<br>NUT, 1/2" Stainless Lock<br>WASHER, 1/2" Stat-O-Seal | 6<br>6<br>6 |
| 31 | G1714002 | CRANKSHAFT ONLY | 1 |
| 32 | 1121800 | EXCLUDER, Dirt | 1 |
| 33 | 1714022 | RETAINER, Bearing (L.H. Side) | 1 |
| 34 | 7000401-11 | SCREW, 5/8” x 3” Hex Head Cap:<br>For L.H. Side<br>For R.H. Side | <br>8<br>8 |
| 35 | 1714032 | GASKET, Bearing Retainer (Both Sides) | 2 |
| 36 | 1714007 | CAGE, Bearing (L.H. Side) | 1 |
| 37 | 1715030 | GASKET, Bearing Cage (L.H. Side) | 1 |
| 37-A | 1712016 | GASKET, Bearing Cage (R.H. Side) | 1 |
| 38 | ZT-7086 | BEARING, Main | 2 |
| 39 | 1714017 | RING, Frame Snap | 4 |
| 40 | 49012081 | BEARING, Center Main | 2 |
| 41 | 1715020 | RING, Crankshaft Snap | 2 |
| 42 | 1714018 | CAGE, Bearing (L.H. Side) | 1 |
| 43 | 7610058 | WASHER, Timken Lock (TW-134) | 2 |
| 44 | 6304058 | NUT, Timken Lock (TAN-134) | 2 |
| 45 | 1714022SPCL | RETAINER, Bearing (R.H. Side) | 1 |
| 46 | G1714043 | LUBRICATION SYSTEM COMPLETE (See page 4) | 1 |



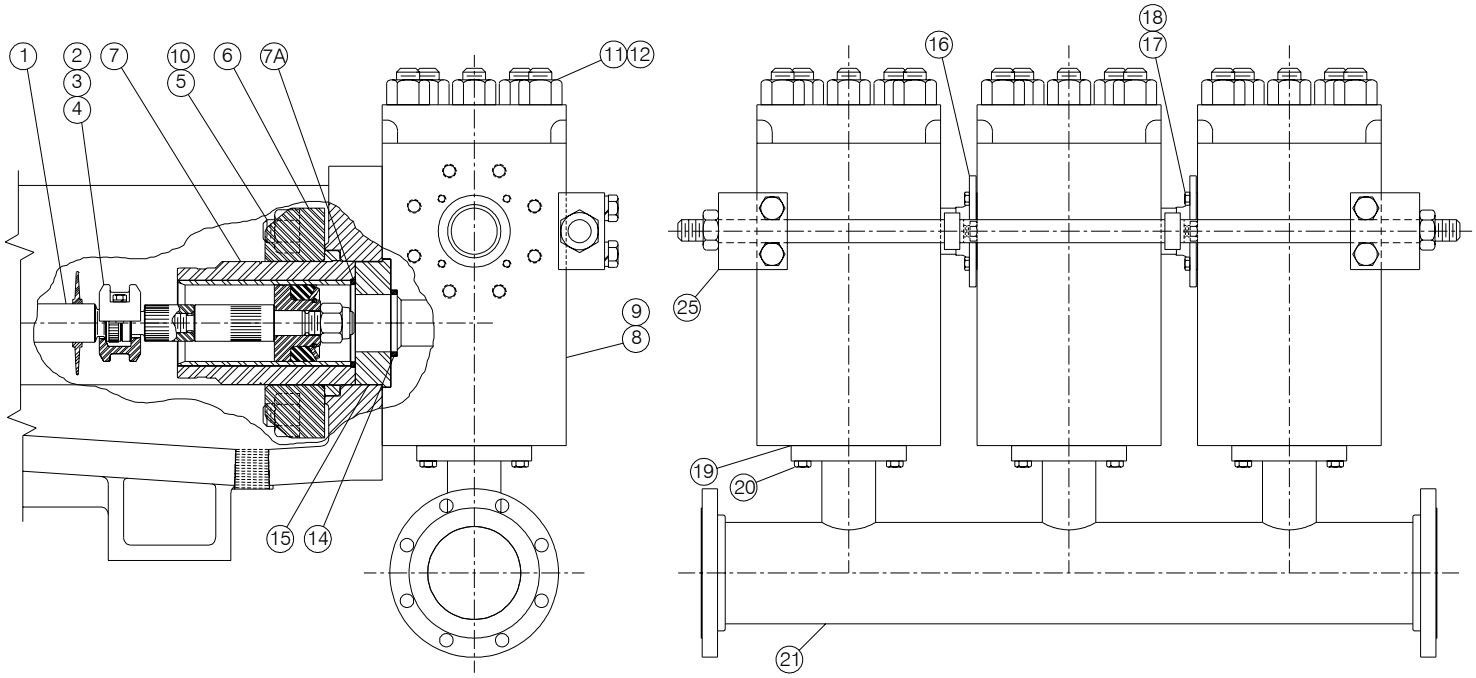

SECTION 'A-A'

## LUBRICATION SYSTEM

| LUBRICATION SYSTEM | | | |
|---|---|---|---|
| **ITEM** | **PART NO.** | **DESCRIPTION** | **QTY.** |
| | G1714043 | LUBRICATION SYSTEM COMPLETE | 1 |
| 1 | G5700011128 | CHAIN, RC35, 3/8” P-128 PITCHES | 1 |
| 2 | G7818144 | SPROCKET, 3/8” P-23 TEETH | 1 |
| 3 | 2402570 | KEY, 3/16” x 3/16” x 3/8” RBE | 1 |
| 4 | 7815071 | PUMP, B&S #2 | 1 |
| 5 | 7000207-11 | CAPSCREW, HEX HD. 3/8” x 7/8” | 4 |
| 6 | 7619041 | WASHER, 3/8” SPRING LOCK | 8 |
| 7 | 7000209-11 | CAPSCREW, HEX. HD. 3/8” x 1 1/4” | 4 |
| 8 | 1715327 | BLOCK, MOUNTING | 1 |
| 9 | 7618014 | WASHER, STAT-O-SEAL PARKER #600-0101 – 3/8” | 4 |
| 10 | 7000204-11 | CAPSCREW, HEX. HD. 3/8” x 1 1/2” | 4 |
| 11 | 7400420 | TUBING, 1/4” COPPER x .032 WALL | 7 FT, |
| 12 | 6888004 | TEE, STD. PIPE 1/2” | 1 |
| 13 | 86424003 | NIPPLE, STD. PIPE 1/2” x 1 1/2” | 1 |
| 14 | 7400820 | TUBING, 1/2” COPPER x .032 WALL | 5 FT. |
| 15 | 7804950 | ELBOW, SWAGELOK #B-810-2-8 | 4 |
| 16 | 6829004 | ELBOW, STD. M.I. STREET 90 DEG. X 1/2” | 1 |
| 17 | 7805050 | FITTING, BODY 1/8” N.P.T. M&F LINCOLN #20029 | 2 |
| 18 | 7804954 | CONNECTOR, SWAGELOK #B-400-1-2 | 2 |
| 19 | 7804951 | ELBOW, SWAGELOK #B-400-2-4 | 3 |
| 20 | 7000113-11 | CAPSCREW, HEX. HD. 1/4” x 2 1/4” | 2 |
| 21 | 6874002 | PLUG, STD. SQ. HD. 1/4” | 1 |
| 22 | 1715035 | BLOCK, SAFETY VALVE | 1 |
| 23 | 2232072 | VALVE, SAFETY | 1 |
| 24 | 7802204 | CLIP, 1/4” TUBE PARKER 3121-1-4 | 4 |
| 25 | 7802215 | CLIP, PARKER HANNIFIN 3121-1-8 | 3 |
| 26 | 7178088 | SCREW, RD. HD. DR. TYPE U #10 x 3/8” | 7 |
| 27 | 7804955 | CONNECTOR, SWAGELOK #B-400-1-4 | 1 |
| 28 | 6800031 | BUSHING, STD. PIPE 3/8” x 1/4” | 2 |
| 29 | G1717032 | ADAPTER, GAGE | 1 |
| 30 | 6829003 | ELBOW, STD. M.I. STREET 90 DEG. X 3/8” | 1 |
| 31 | 7806605 | GAGE, MARSH 2 1/2” 0-100 P.S.I. 1/4” N.P.T. | 1 |
| 32 | 7804952 | ELBOW, SWAGELOK #B-600-2-8 | 1 |
| 33 | 7804953 | ELBOW, SWAGELOK #B-600-2-6 | 1 |
| 34 | 7804956 | TEE, SWAGELOK #B-600-3-6 TTM | 2 |
| 35 | 7400620 | TUBING, 3/8” COPPER x .032” WALL | 3 FT. |
| 36 | 7621024 | WASHER, 3/8” N TYPE A .81” O.D. CAD. PLT. | 4 |
| 37 | | LOCTITE, PIPE SEALANT #70 | |

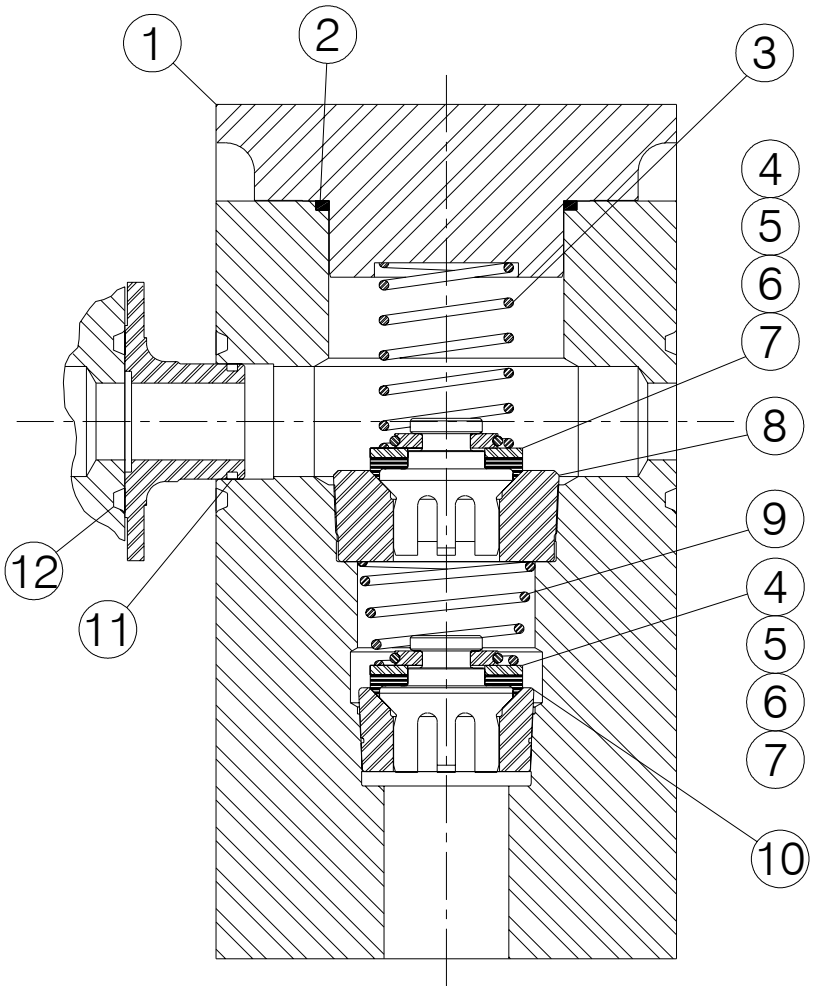
# WELL SERVICE PUMP
# JWS-400 PARTS LIST

NATIONAL OILWELL

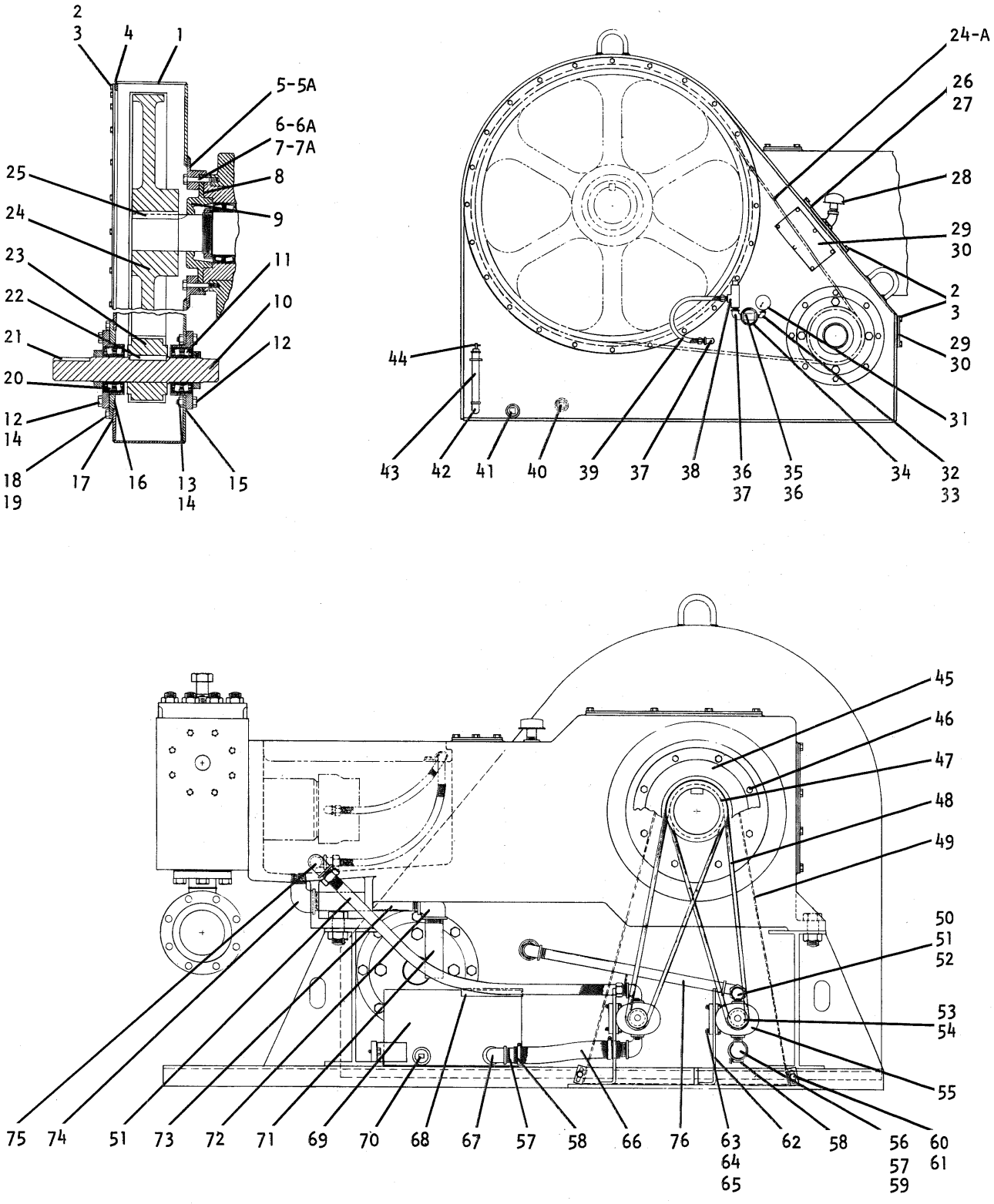



| PUMP AND FLUID END PARTS – TAPERED VALVES | | | |
|---|---|---|---|
| **ITEM** | **PART NO.** | **DESCRIPTION** | **QTY.** |
| | | **PUMP PARTS:** | |
| 1 | 1714296 | ROD, Clamp Type Intermediate | 3 |
| 2 | 1715037 | CLAMP CPT., - Plunger Intermediate Rod (Includes Items 3 & 4) | 3 |
| 3 | 1715036 | CLAMP, 2 Halves | 1 |
| 4 | 7000314-31 | SCREW, 1/2" x 3½" Stainless Capscrew | 2 |
| 5 | 6300240 | NUT, 1½" Heavy Hex, Fluid Cylinder to Frame | 12 |
| 6 | 1715034 | RETAINER, Liner or Stuffing Box | 3 |
| 7 | -- | PISTON AND LINER ASSEMBLY (See Liner/Piston Assembly Page) | 3 |
| 7-A | -- | SEAL, Piston Liner – Included with Liner (See Liner/Piston Assembly Page) | 3 |
| | | **FLUID END PARTS:** | |
| 8 | 1714332-12 | CYLINDER COMPLETE, Forged Steel (Composed of) | 1 |
| 9 | 1714330-12 | CYLINDER MODULE ONLY (Includes items 10, 11, 12, & 13) | 3 |
| 10 | 49010365 | STUD, 1½" x 9¼" – Cylinder to Frame | 4 |
| 11 | 49010362 | STUD, 1½" x 6½" – Top Cover Plate | 8 |
| 12 | 6300240 | NUT, 1½" Heavy Hex, Top Cover Plate | 8 |
| 13 | 7006309 | SCREW, 1/2" x 2¼" Socket Head Cap | 2 |
| 14 | 1294192 | SEAL, Wear Plate | 3 |
| 15 | 1714042 | PLATE, Seal Wear | 3 |
| 16 | 1714289 | SPOOL, Discharge Connector | 2 |
| 17 | 7000305-11 | SCREW, 1/2" x 1½" Hex Head Cap – Connector | 8 |
| 18 | 7621032 | WASHER, 1/2" N Type A Flat | 8 |
| 19 | 6010019 | GASKET, 3" – 150# Flat Ring – Suction 6-5/8" I.D. x 8¾" O.D. | 2 |
| 20 | 7000397-11 | SCREW, 5/8" x 2" Hex Head Cap – Manifold | 12 |
| 21 | 1714286 | MANIFOLD, Suction | 1 |
| *22 | 6907324 | RING, BX-154 Oval Type 304 – Discharge | 2 |
| *23 | 7000440-11 | SCREW, 3/4" x 2" Cap – Grade 5 – Suction Flange | 16 |
| *24 | 7000530-10 | SCREW, 1" x 4" Cap – Grade 5 – Discharge Flange | 16 |
| 25 | 1714395 | TIE ASSEMBLY, MODULE | 2 |
| ** | **OPTIONAL:** | FLANGE, 3-1/16" – API-6BX-10,000# Ring Joint – Discharge<br>FLANGE, 6" ASA-150# Flat Face – Suction | 2<br>2 |

*Not Illustrated ** Optional



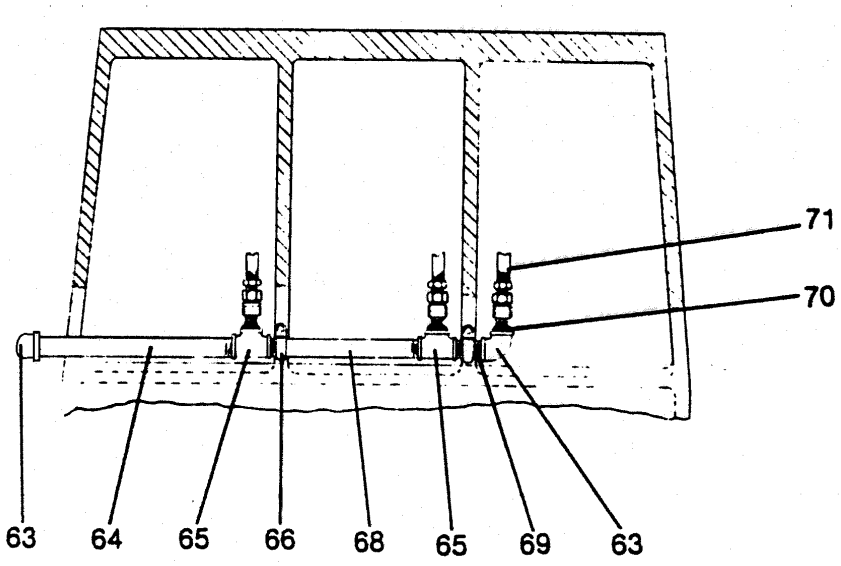

| TAPERED VALVES | | | |
|---|---|---|---|
| **ITEM** | **PART NO.** | **DESCRIPTION** | **QTY.** |
| 1 | G-1714303-1 | PLATE, Top Cover | 3 |
| 2 | 1715146 | SEAL, Top Cover Plate | 3 |
| 3 | 1717296 | SPRING, Discharge Valve | 3 |
| 4 | 1561575 | VALVE, Assembly Cpt. D & S ( Includes Items 5, 6, & 7) | 6 |
| 5 | 1560715 | RETAINER, Valve Disc | 1 |
| 6 | 1561577 | DISC, Valve - Polyurethane | 1 |
| 7 | 1561570 | BODY, Valve | 1 |
| 8 | 1561569 | SEAT, Discharge Valve | 3 |
| 9 | G-1560698 | SPRING, Suction Valve | 3 |
| 10 | 1561561 | SEAT, Suction Valve w/ 1-2410022-156 “O” -Ring | 3 |
| 11 | 2410031-334 | SEAL, Connector Spool – Male End | 2 |
| 12 | 2410031-331 | SEAL, Connector Spool – Flange End | 2 |




## CHAIN REDUCER

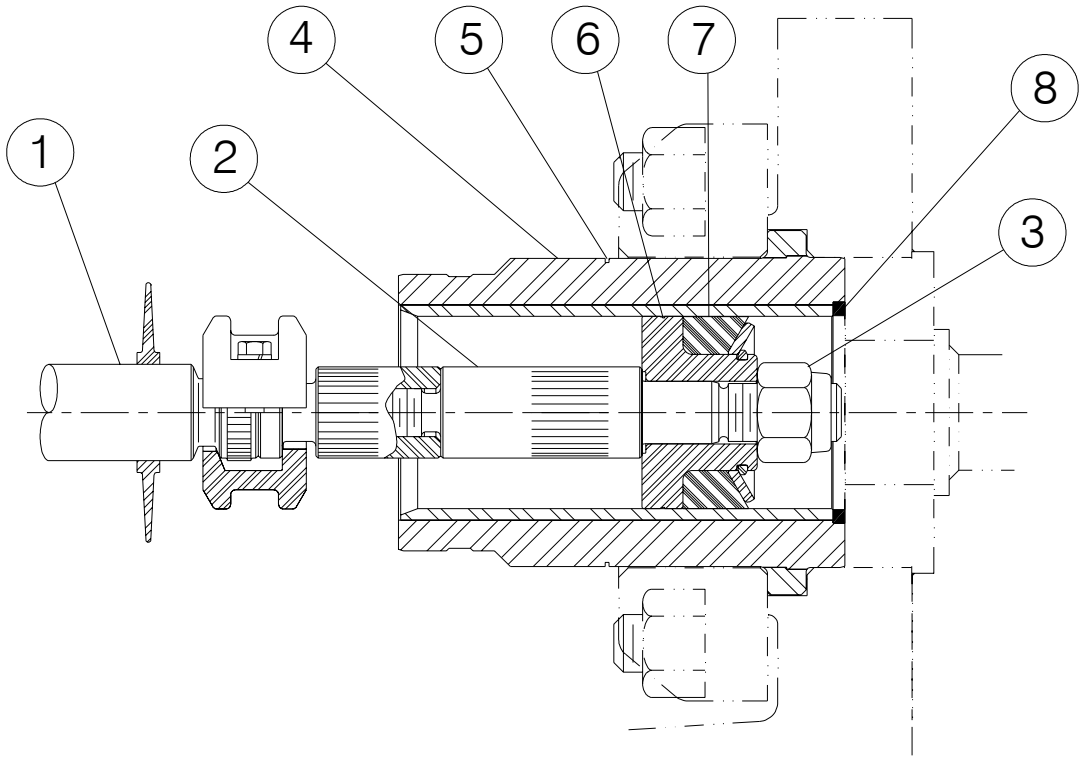
| CHAIN REDUCER | | | |
|---|---|---|---|
| **ITEM** | **PART NO.** | **DESCRIPTION** | **QTY.** |
| 1 | 1714510 | HOUSING, Chain R.H. – Includes: | 1 |
| 2 | 70000208-11 | SCREW, 3/8" x 1" Hex Head Cap | 48 |
| 3 | G-7608063 | WASHER, 3/8" Barseal | 48 |
| 4 | 7817170 | GASKET, 3/16" x 2" Neoprene Sponge – 12'-6" Lg | 1 |
| 5 | G-7000530-11 | SCREW, 1" x 4" Hex Head Cap | 8 |
| 6 | 7602081 | WASHER, 1" Spring Lock | 8 |
| 7 | 7817200-68 | RESIN, Locktite Gasket | 1 |
| 8 | 4600074 | BEARING, Input Shaft (Held) | 1 |
| 9 | 1714512 | SHAFT, Input | 1 |
| 10 | 7000442-11 | SCREW, Hex Head Cap | 8 |
| 11 | 7618024 | WASHER, 3/4" Stat-O-Seal | 8 |
| 12 | 6300121 | NUT, 3/4" Hex | 4 |
| 13 | 1714519 | GASKET, Bearing to Housing | 2 |
| 14 | 1273130 | GASKET, Bearing Retainer Plate | 1 |
| 15 | 7000395-11 | SCREW, 5/8" x 1½" Hex Head Cap | 8 |
| 16 | 7618022 | WASHER, 5/8" Stat-O-Seal | 8 |
| 17 | 1714513 | RETAINER, Bearing | 1 |
| 18 | 4600075 | BEARING, Input Shaft (Free) | 1 |
| 19 | 2404003 | KEY, Input Shaft Extension | 1 |
| 20 | 2404093 | KEY, Sprocket to Input Shaft | 1 |
| 21 | 1714524 | SPROCKET, Input – 30 Tooth RC-80-5 | 1 |
| 22 | 1714536 | SPROCKET, Crankshaft – 140 Tooth RC-80-8 | 1 |
| 23 | 1260284 | HUB, "P" QD Type | 1 |
| 24-A | 5702085-176 | CHAIN, 176 Pitches RC-80-5 | 1 |
| 26 | 1290110 | COVER, Top Hand Hole | 1 |
| 27 | 1290078 | GASKET, Top Hand Hole Cover | 1 |
| 28 | 7802020 | BREATHER, Chain Housing | 1 |
| 29 | 1283142 | COVER, Hand Hole | 3 |
| 30 | 1283143 | GASKET, Hand Hole Cover | 3 |
| 31 | 7806605 | GAGE, Pressure | 1 |
| 32 | 6829002 | ELBOW, ¼: - 90º Street | 1 |
| 33 | 6800041 | BUSHING, 1/2" x 1/4" Std. Pipe | 1 |
| 34 | 6800161 | BUSHING, 2" x 1/2" Std. Pipe | 1 |
| 35 | 6888004 | TEE, 1/2" Std. Pipe | 1 |
| 36 | 6817044 | NIPPLE, 1/2" x Close Std. Pipe | 2 |
| 37 | 6829004 | ELBOW, 1/2" – 90º Street | 2 |
| 38 | 1260688 | Valve, Pressure Relief | 1 |
| 39 | 1270113 | Hose, 1/2" x 1/2" | 1 |
| 40 | 1714516 | STRAINER, Suction Oil | 1 |
| 41 | 7815100 | PLUG, 1½" Magnetic Drain | 1 |
| 42 | 6829008 | ELBOW, 1" – 90º Street | 1 |
| 43 | G-6819009 | NIPPLE, 1" x 9½" Std. Pipe – T.O.E. | 1 |
| 44 | 2400029 | GAGE, Oil Level | 1 |
| 45 | 1714530 | COVER, Crankshaft Extension | 1 |
| 46 | 7000301-11 | SCREW, 1/2" x 3/4" Hex Head Cap – Ext. Cap | 11 |
| 47 | 1715211 | SHEAVE, Crankshaft Vee Belt (7.6" P.D.) | 2 |
| 48 | 4712610 | BELT, Pump Vee (2610) | 1 |
| 49 | 7000522-10 | SCREW, 1" x 2" Hex Head Cap – Support Plate | 3 |
| 50 | G-7619081 | WASHER, 1" Spring Lock – Support Plate | 3 |
| 51 | G-1714537 | PLATE, Lube and Wash Pump Support | 1 |
| 52 | 1714527 | GUARD, Lube Pump | 1 |
| 53 | 7200043 | SHEAVE, 2.4" P.D. – B&S Pump | 2 |
| 54 | 2401620 | KEY, 3/16" x 3/16" x 1" – B&S Pump | 2 |
| 55 | 7815072 | PUMP, #3 B&S | 2 |
| 56 | 7621032 | WASHER, 1/2" Flat | 2 |
| 57 | 7000258-11 | SCREW, 7/16" x 1½" Hex Head Cap | 8 |
| 58 | 7619045 | WASHER, 7/16" Spring Lock | 8 |
| 59 | 1290064 | PLATE, Pump Back-Up | 2 |
| 60 | 4712700 | BELT, Pump Vee (2700) | 1 |
| 61 | 1714529 | STRAINER, Water Wash Tank | 1 |
| 62 | 1714525 | TANK, Water Wash | 1 |

| CHAIN REDUCER (Continued) | | | |
|---|---|---|---|
| ITEM | PART NO. | DESCRIPTION | QTY. |
| * | 1289605 | HOSE, 1" x 54" Long | 2 |
| * | 6100009 | HOSE, 1½" x 47" Long | 2 |
| * | 6800163 | BUSHING, 2" x 1" Std. Pipe | 1 |
| * | 6817094 | NIPPLE, 1" x 21" Std. Pipe | 1 |
| * | 6817130 | NIPPLE, 2" x 15" Std. Pipe | 1 |
| * | 6819007 | NIPPLE, 2" x 8" T.O.E. | 1 |
| * | 6825000 | NIPPLE, 1½" King | 4 |
| * | 6826008 | ELBOW, 1" – 90° Std. Pipe | 1 |
| * | 6826008 | ELBOW, 2" – 90° Std. Pipe | 1 |
| * | 6826008 | ELBOW, 1" – 90° Std. Pipe – Street | 2 |
| * | 6826008 | ELBOW, 1½" – 90° Std. Pipe – Street | 2 |
| * | 6826008 | ELBOW, 2" – 90° Std. Pipe – Street | 1 |
| * | 6826008 | ELBOW, 1¾" Reducing Street | 2 |
| * | 6826008 | ELBOW, 1½" x 3/4" Reducing Street | 2 |
| * | 7802077 | CLAMP, 1½" Hose | 4 |




| LINER SPRAY SYSTEM | | | |
|---|---|---|---|
| ITEM | PART NO. | DESCRIPTION | QTY. |
| 63 | 6826008 | ELBOW, 1" – 90° Std. Pipe | 2 |
| 64 | 6817090 | NIPPLE, 1" x 16" Std. Pipe | 1 |
| 65 | 6888008 | TEE, 1" Std. Pipe | 2 |
| 66 | 7802065 | CLAMP, 1" Pipe | 2 |
| 67 | 7000153-11 | SCREW, 5/16" x 1/2" Hex Head Cap | 2 |
| 68 | 6817086 | NIPPLE, 1" x 12" Std. Pipe | 1 |
| 69 | 6817077 | NIPPLE, 1" x 3½" Std. Pipe | 1 |
| 70 | 6800083 | BUSHING, 1" x 1½" Std. Hex | 3 |
| | 1294190 | MANIFOLD, Spray System | 3 |
| | | composed of: | |
| | G-2400075 | HOSE, 1/2" x 16½" | 1 |
| | 1291193 | NOZZLE, Spray | 6 |
| | 1294191 | MANIFOLD, Spray (Only) | 1 |
| 71 | 7804075 | ELBOW, 1/2" – 90° Stainless Steel | 1 |
| | 7813050 | NUT, 3/8" – 16 Stainless Steel | 3 |
| | 7815099 | PLUG, 1/2" Stainless Steel Pipe | 2 |
| | 7818282 | SOCKET, 1/2" Female Hose (Hansen) | 1 |
| | 7815094 | PLUG, 1/2" Male Hose (Hansen) | 1 |
| | G-7818256 | SCREW, 3/8" – 16 Stainless Thumb | 3 |

*Not Illustrated

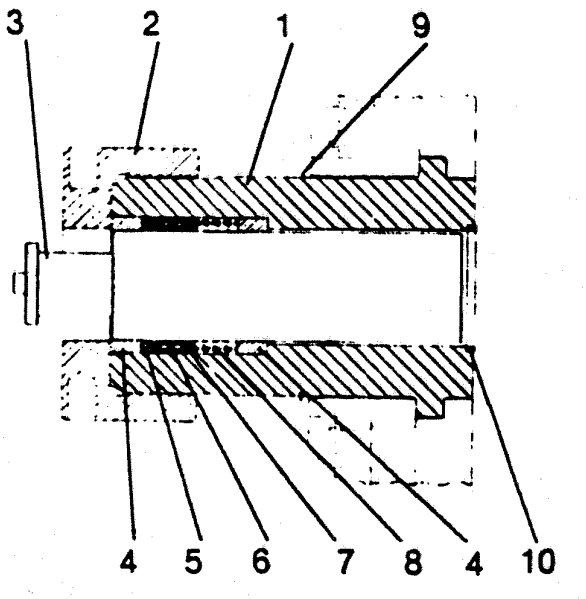



| STANDARD: 1" PISTON BORE | | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | PART NO. | | | | | DESCRIPTION | QTY. |
| | 4" | 4½" | 5" | 5¼" | 5½" | | |
| 1 | G1714295 | G1714295 | G1714295 | G1714295 | G1714295 | SUBROD, Piston – 2 Pc. | 3 |
| 2 | G1714294 | 1G714294 | G1714294 | G1714294 | G1714294 | ROD, Piston – 2 Pc. – Includes: | 3 |
| 3 | 6308160 | 6308160 | 6308160 | 6308160 | 6308160 | NUT, 1" Elastic Stop | 1 |
| 4 | 05524400 | 05524450 | 05524500 | 05524525 | 05524550 | LINER, Piston – Bi-Metal | 3 |
| 5 | 6912030 | 6912030 | 6912030 | 6912030 | 6912030 | RING, Snap (RS-800 Spiroloc) | 3 |
| 6 | 012180113 | 012180154 | 012180279 | 012180282 | 012180303 | PISTON ASSEMBLY | 3 |
| 7 | 015180102 | 015180144 | 015180185 | 015100605 | 015180227 | CUP ASSEMBLY | 3 |
| 8 | 1540140 | 1540142 | 1540144 | 1540145 | 1540146 | SEAL, Liner to Cylinder | 3 |

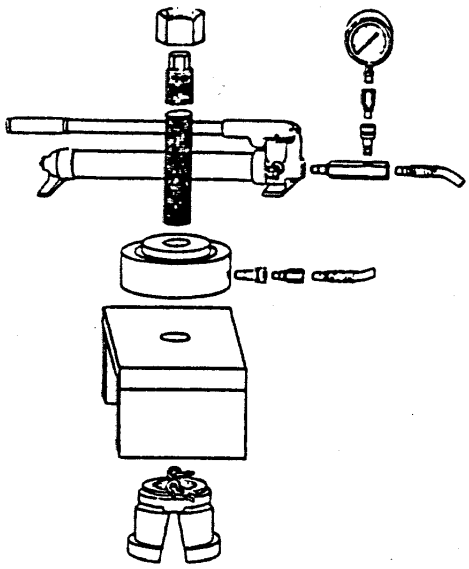
*G-1714293 PULLER, Two Piece Rod (1¼" Thread) – Not Illustrated

| STANDARD: 1½" PISTON BORE | | | | | | | |
|---|---|---|---|---|---|---|---|
| ITEM | PART NO. | | | | | DESCRIPTION | QTY. |
| | 4" | 4½" | 5" | 5¼" | 5½" | | |
| 1 | G1714295 | G1714295 | G1714295 | G1714295 | G1714295 | SUBROD, Piston – 2 Pc. | 3 |
| 2 | GX17-3276 | GX17-3276 | GX17-3276 | GX17-3276 | GX17-3276 | ROD, Piston – 2 Pc. – Includes: | 3 |
| 3 | 6308241 | 6308241 | 6308241 | 6308241 | 6308241 | NUT, 1" Elastic Stop | 1 |
| 4 | 05524400 | 05524450 | 05524500 | 05524525 | 05524550 | LINER, Piston – Bi-Metal | 3 |
| 5 | 6912030 | 6912030 | 6912030 | 6912030 | 6912030 | RING, Snap (RS-800 Spiroloc) | 3 |
| 6 | 012180170 | 012180220 | 012180253 | 012180410 | 012180337 | PISTON ASSEMBLY | 3 |
| 7 | 015180102 | 015180144 | 015180185 | 015100605 | 015180227 | CUP ASSEMBLY | 3 |
| 8 | 1540140 | 1540142 | 1540144 | 1540145 | 1540146 | SEAL, Liner to Cylinder | 3 |

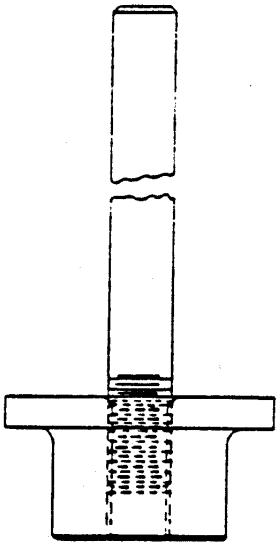
*G-1714293 PULLER, Two Piece Rod (1¼" Thread) – Not Illustrated




| ITEM | PART NO. | | DESCRIPTION | QTY. |
|---|---|---|---|---|
| | 4" | 4½" | | |
| | KIT: 171431912 | KIT: 171432112 | | |
| 1 | 1714310-12 | 1714316-12 | BOX, Stuffing | 3 |
| 2 | 1714311-2 | 1714317-2 | NUT, Stuffing Box Adjusting | 3 |
| 3 | 1715158 | 1715160 | PLUNGER, Hard Coated | 3 |
| 4 | 1714312-2 | 1714318-2 | WASHER, Packing | 6 |
| | 6423224 | 6423225 | PACKING, Spring Loaded Assembly consisting of: | 3 |
| 5 | 6423224-3 | 6423225-3 | ADAPTER, Top Packing | 1 |
| 6 | 6423224-1 | 6423225-1 | PACKING, Plunger Vee Ring | 2 |
| 7 | 6423224-4 | 6423225-4 | ADAPTER, Bottom Spring | 1 |
| 8 | 6423224-2 | 6423225-2 | SPRING, Packing | 1 |
| 9 | 6912030 | 6912030 | RING, Snap (RS-800 Spiroloc) | 3 |
| 10 | 2410031-347 | 2140031-426 | SEAL, Stuffing Box | 3 |



*HYDRAULIC SEAT PULLER



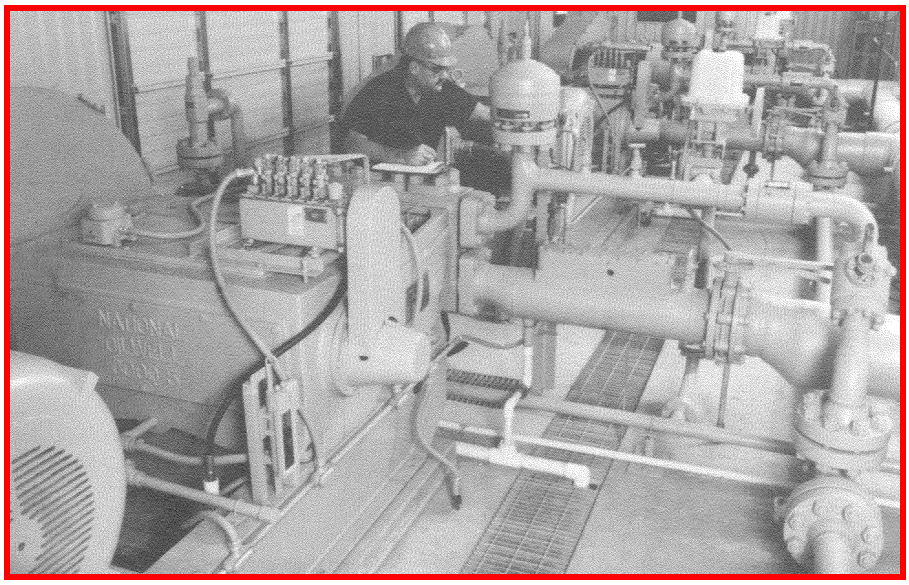
*SEAT REMOVAL TOOL
1714291

## VALVE SERVICING TOOLS

| VALVE SERVICING TOOLS | | |
|---|---|---|
| **PUMP** | **DISCHARGE VALVE SEAT** | **SUCTION VALVE SEAT** |
| JWS-400 – Tapered Valve | Use Puller for 4” Valve | Use Puller for 4” Valve |
| JWS-400 – Cage Valve | Use 1714291 Seat Removal Tool | Use Puller for 4” Valve |

*Available through Houston – Specify valve size to be pulled.

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