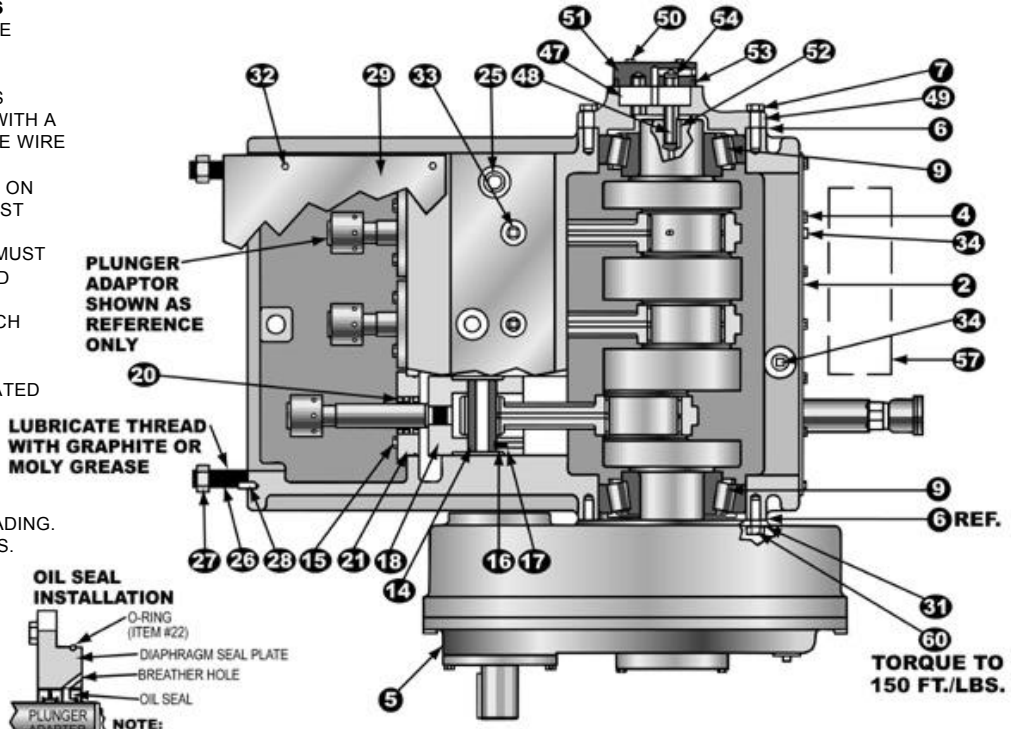
# TX-450

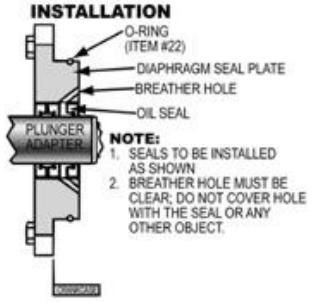
# 70-45000 Power End Parts

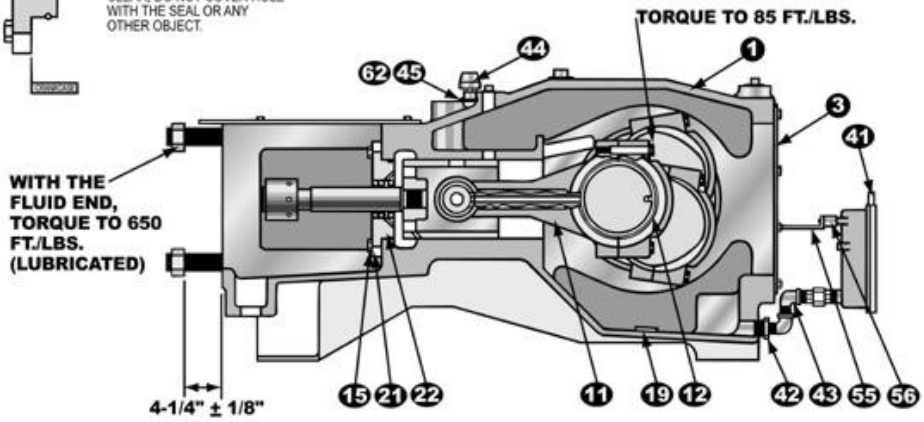
## 10 - 25 KPSI MAWP

**GENERAL ASSEMBLY INSTRUCTIONS**

1. NOTE THE ORIENTATION OF ALL LUBE HOLES IN THE CONNECTING ROD/CROSSHEAD ASSEMBLY.
   A. THE CROSSHEAD LUBE HOLE IS INSTALLED ON TOP; THIS MATCHES WITH A DRILLED HOLE IN THE POWER FRAME WIRE THAT LUBRICATES THE WRISTPIN.
   B. THE IDENTIFICATION NUMBERS ON THE CONNECTING ROD AND CAP MUST BOTH BE ON THE TOP SIDE.
2. THE BEARING LUBRICATION HOLES MUST MATCH THE HOLES IN BOTH THE ROD AND CAP. THE BEARINGS MAY HAVE ADDITIONAL LUBE HOLES THAT MATCH OTHER CONNECTING ROD CONFIGURATIONS.
3. THE JOURNALS SHOULD BE LUBIRCATED WITH A 70% MOLY-DISULFIDE GREASE BEFORE RUNNING.
4. TORQUE CONNECTING ROD CAP SHOULDER SCREWS TO 85 FT./LBS. LUBRICATED. TORQUE EVENLY AND ALTERNATELY TO ENSURE EVEN LOADING.
5. FILL THE CRANKCASE WITH 12-1/2 U.S. GALLONS OF SPARTAN EP-150 OIL.
   A. OIL SELECTION IS BASED ON AMBIENT TEMPERATURES BETWEEN 32 - 120° F.
   B. FOR ALTERNATE OIL SPECIFICATIONS, SEE MANUAL.
6. TORQUE ITEM #60 TO 150 FT./LBS. LUBRICATED. TORQUE EVENLY AND ALTERNATELY TO ENSURE EVEN LOADING.
7. INSERT ITEM #61 THROUGH 1/8" DIA. HOLE IN HEX HEAD BOLT LOCATED 60° TO RIGHT WITH ITEM #61. ONLY TWO (2) BOLTS PER STRAND LOCKED TOGETHER.




**NOTE:**

1. KEEP ITEM #44 CRANKCASE BREATHER FREE OF DIRT OR PAINT. CLOGGED BREATHER WILL CAUSE OIL TO LEAK FROM DIAPHRAGM SEAL.
2. OIL LEVEL TO BE 3-1/4" TO 3-7/8" BELOW CENTER LINE OF PUMP.

# 70-45000 Power End Parts

**TX-450**

## 10 - 25 KPSI MAWP

| ITEM | PART NO. | QUAN. | DESCRIPTION: |
|---|---|---|---|
| 1 | 70-45001 | 1 | POWER FRAME |
| 2 | 70-20011 | 1 | COVER, CRANKCASE |
| 3 | 22-20003 | 1 | GASKET, CRANKCASE COVER |
| 4 | 16-15212 | 18 | SCREW, HEX HEAD, 3/8" - 16 x 3/4" |
| 6 | 22-40005 | 2 | SHIM SET |
| 7 | 16-15056 | 6 | SCREW HEX HEAD, 3/4" - 10 x 2-1/2" |
| 9 | 52-40042 | 2 | BEARING, CRANKSHAFT |
| 11 | 70-45004 | 3 | CONNECTING ROD ASSEMBLY |
| 12 | 70-45021 | 3 | BEARING CONNECTING ROD |
| 14 | 70-45006 | 3 | PIN, CROSSHEAD |
| 15 | 16-75658 | 6 | SCREW, HEX HEAD, 1/2" - 13 x 1-1/4" |
| 16 | 16-15440 | 3 | SCREW, HEX SOCKET, 1/2" - 13 (HALF DOG) |
| 17 | 16-15439-001 | 3 | SCREW, HEX SOCKET, 1/2" - 13, LOCK, (CUP POINT) |
| 18 | 70-20003 | 3 | CROSSHEAD |
| 19 | 70-02355 | 6 | MAGNET |
| 20 | 22-20002 | 9 | OIL SEAL, DIAPHRAGM PLATE |
| 21 | 70-20009 | 3 | PLATE, DIAPHRAGM SEAL |
| 22 | 22-20015 | 3 | O-RING (2-258-N674-70) |
| 25 | 19-00370 | 1 | PIPE PLUG, 1-1/2" NPT |
| 26 | 16-45001 | 4 | STUD, 1-1/4" - 7 x 6", B7 |
| 27 | 16-15441 | 4 | NUT, HEX, 1-1/4" - 7 |
| 28 | 16-15442 | 2 | PIN, DOWEL, 1/2" x 1-1/2" |
| 29 | 70-20010 | 1 | COVER, WELL |
| 30 | 16-15025 | 4 | SCREW HEX HEAD, 1/4" - 20 x 1/2" |
| 31 | 16-40005 | 6 | WASHER, 3/4" STAR |
| 33 | 19-33283 | 2 | PLUG, 3/4" NPT |
| 34 | 19-77014 | 2 | PLUG, 1" NPT |
| 41 | 37-77063 | 1 | INDICATOR, OIL LEVEL |
| 42 | 19-33220-001 | 1 | BUSHING, 1" x 1/2" |
| 43 | 19-32020-001 | 2 | ELBOW, STREET 1/2" |
| 44 | 70-75515 | 1 | BREATHER, CRANKCASE |
| 45 | 19-32023-001 | 1 | BUSHING, 3/4" NPT x 1/2" NPT |
| 47 | 70-45051 | 1 | IDLER, GEAR |
| 48 | 70-45053 | 1 | GEAR |
| 49 | 70-45008 | 1 | BODY, GEAR PUMP |
| 50 | 16-45000 | 4 | BOLT, HEX HEAD, 5/16" - 18 x 2-1/2" |
| 51 | 70-45054 | 1 | CAP, GEAR PUMP |
| 52 | 02-163-00250 | 1 | KEY, 1/4" x 1/4" x 2" |
| 53 | 16-78515 | 2 | PIN, DOWEL, HARDENED, 1/4" x 1-1/4" |
| 54 | 70-80105 | 4 | BEARING, GEAR PUMP |
| 55 | 16-07036 | 1 | SUPPORT OIL GAUGE |
| 56 | 41-1494001 | 2 | MOUNT, SHOCK |
| 57 | 70-80103 | 1 | LUBRICATION & COOLING ASSEMBLY |
| 62 | 19-33252 | 1 | BUSHING, 1-1/2" x 3/4", BRS |

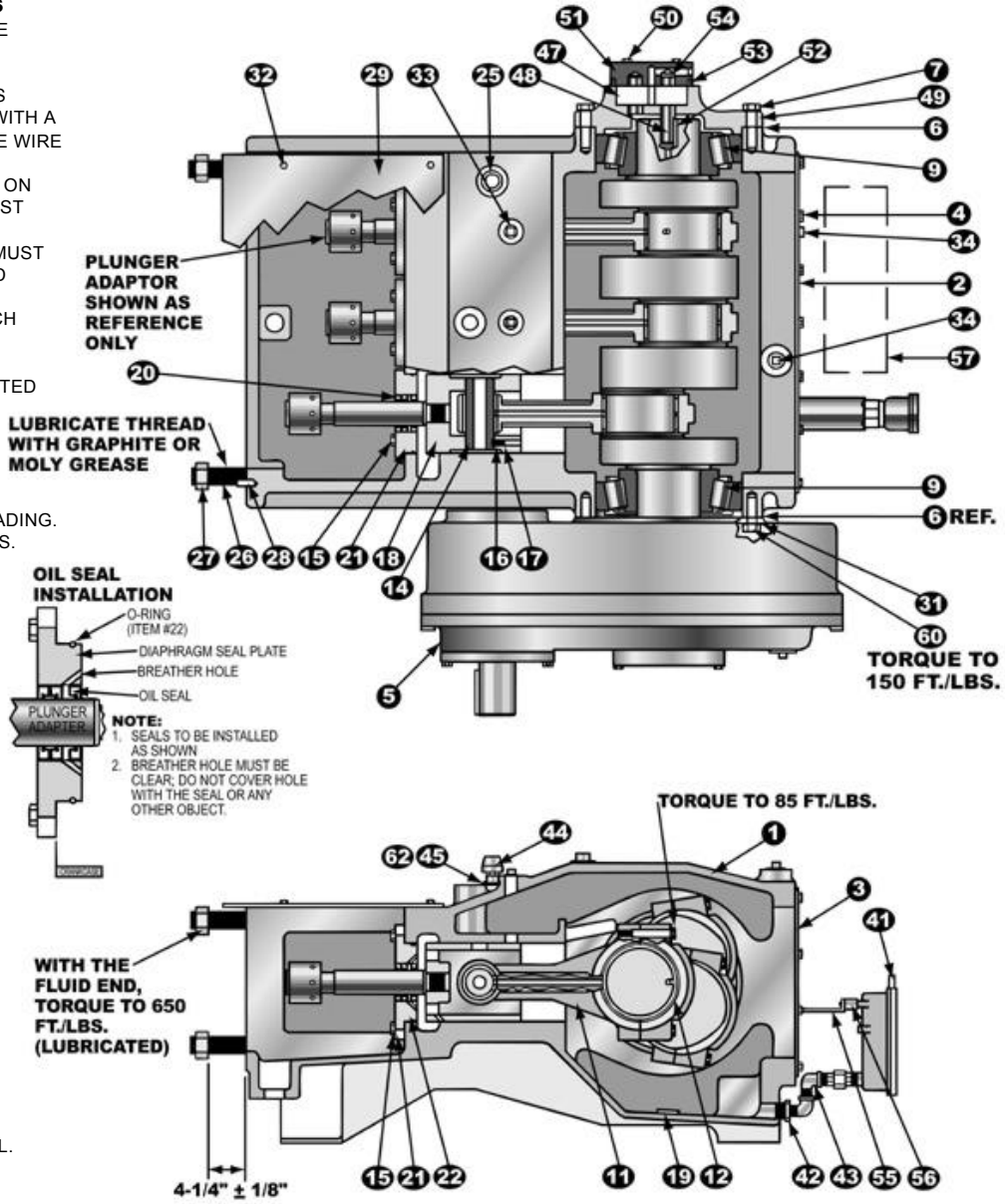
# TX-450

# 70-45000 Power End Gear Reduction Groups

## 10 - 25 KPSI MAWP

**GENERAL ASSEMBLY INSTRUCTIONS**

1. NOTE THE ORIENTATION OF ALL LUBE HOLES IN THE CONNECTING ROD/CROSSHEAD ASSEMBLY.
   A. THE CROSSHEAD LUBE HOLE IS INSTALLED ON TOP; THIS MATCHES WITH A DRILLED HOLE IN THE POWER FRAME WIRE THAT LUBRICATES THE WRISTPIN.
   B. THE IDENTIFICATION NUMBERS ON THE CONNECTING ROD AND CAP MUST BOTH BE ON THE TOP SIDE.
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   B. FOR ALTERNATE OIL SPECIFICATIONS, SEE MANUAL.
6. TORQUE ITEM #60 TO 150 FT./LBS. LUBRICATED. TORQUE EVENLY AND ALTERNATELY TO ENSURE EVEN LOADING.
7. INSERT ITEM #61 THROUGH 1/8" DIA. HOLE IN HEX HEAD BOLT LOCATED 60° TO RIGHT WITH ITEM #61. ONLY TWO (2) BOLTS PER STRAND LOCKED TOGETHER.




**NOTE:**

1. KEEP ITEM #44 CRANKCASE BREATHER FREE OF DIRT OR PAINT. CLOGGED BREATHER WILL CAUSE OIL TO LEAK FROM DIAPHRAGM SEAL.
2. OIL LEVEL TO BE 3-1/4" TO 3-7/8" BELOW CENTER LINE OF PUMP.

# 70-45000 Power End Gear Reduction Groups

**TX-450**

## 10 - 25 KPSI MAWP

### TX-450 POWER END WITH 3.542:1 GEAR REDUCTION

| ITEM | PART NO. | QTY. | DESCRIPTION: |
|---|---|---|---|
| 5 | 70-40070-354 | 1 | GEAR REDUCER ASSY., 3.542:1 RATIO |
| 8 | 70-45002 | 1 | CRANKSHAFT, 450X |
| 60 | 16-15058-001 | 6 | BOLT, HX HD, GR8, 3/4" - 10 (DRILLED) |
| 61 | 16-78525 | 1 | WIRE, BOLT LOCKING, .047 DIA. |

### TX-450 POWER END WITH 4.143:1 GEAR REDUCTION

| ITEM | PART NO. | QTY. | DESCRIPTION: |
|---|---|---|---|
| 5 | 70-40070-414 | 1 | GEAR REDUCER ASSY., 4.143:1 RATIO |
| 8 | 70-45002 | 1 | CRANKSHAFT, 450X |
| 60 | 16-15058-001 | 6 | BOLT, HX HD, GR8, 3/4" - 10 (DRILLED) |
| 61 | 16-78525 | 1 | WIRE, BOLT LOCKING, .047 DIA. |

### TX-450 POWER END WITH 4.737:1 GEAR REDUCTION

| ITEM | PART NO. | QTY. | DESCRIPTION: |
|---|---|---|---|
| 5 | 70-40070-474 | 1 | GEAR REDUCER ASSY., 4.737:1 RATIO |
| 8 | 70-45002 | 1 | CRANKSHAFT, 450X |
| 60 | 16-15058-001 | 6 | BOLT, HX HD, GR8, 3/4" - 10 (DRILLED) |
| 61 | 16-78525 | 1 | WIRE, BOLT LOCKING, .047 DIA. |

### TX-450 POWER END NO GEAR BOX

| ITEM | PART NO. | QTY. | DESCRIPTION: |
|---|---|---|---|
| 7 | 16-15056 | 1 | SCREW, HEX HEAD, 3/4" x 2-1/2" |
| 8 | 70-45002 | 1 | CRANKSHAFT, 450X, FORGED |
| 58 | 70-40008-001 | 1 | CAP, SEAL END |
| 59 | 70-45000-001 | 1 | SEAL, CRANKSHAFT OIL |