

# DATA SHEET

## 15 FRAME PLUNGER PUMPS



**Brass**

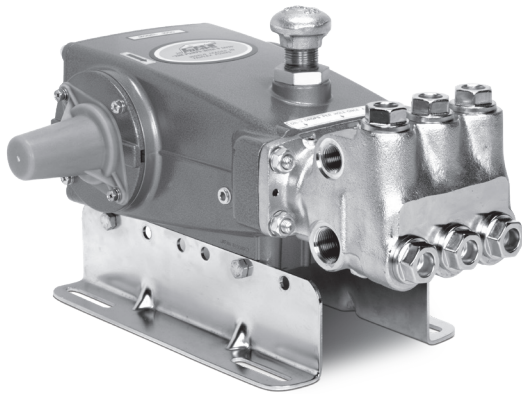
**1050.44101**

**Stainless Steel**

**1051.44101**

**Stainless Steel Flushed**

**1051C.44101**



Model 1050.44101 Shown  
(Mounting rails sold separately)

### FEATURES

- Field- tested, high pressure triplex pump configured for high temperature TEG (triethylene glycol) applications up to 240°F/115°C. May be used in other high temperature applications with fluids possessing adequate lubrication properties. Contact Cat Pumps for more information.
- Positive displacement technology for optimum energy efficiency.
- Re-configured pump .44101 option consists of following materials:
  - O-Ring material throughout the pump: Fluoropolymer elastomers.
  - Oil filler cap assembly: Brass adapters, chrome-plated steel vented cap.
  - Rear sight gauge assembly: Aluminum sight adapter and stainless steel sight gauge.
  - Seal retainers: Aluminum.
  - Low-pressure seals and V-Packings: Special PTFE blends.

### COMMON

| SPECIFICATIONS      | U.S.                  | Metric             |
|---------------------|-----------------------|--------------------|
| Bore                | 0.945"                | 24 mm              |
| Stroke              | 1.181"                | 30 mm              |
| Crankcase Capacity  | 42 oz.                | 1.26 l             |
| Inlet Ports (2)     | 3/4" NPT(F)           | 3/4" NPT(F)        |
| Flushing Ports (2)  | 1/8" NPT(F)           | 1/8" NPT(F)        |
| Discharge Ports (2) | 1/2" NPT(F)           | 1/2" NPT(F)        |
| Pulley Mounting     | Either Side           | Either Side        |
| Shaft Diameter      | 1.181"                | 30 mm              |
| Weight              | 44 lbs.               | 20 kg              |
| Dimensions          | 16.40 x 12.99 x 8.25" | 417 x 330 x 210 mm |

### SPECIFICATIONS

|                         | U.S. Measure      | Metric Measure     |
|-------------------------|-------------------|--------------------|
| Flow                    | 10 gpm            | 38 lpm             |
| Pressure Range          | 100 to 2200 psi   | 6.9 to 152 bar     |
| Pump RPM*               | 958 rpm           | 958 rpm            |
| Inlet Pressure Range    | Flooded to 60 psi | Flooded to 4.1 bar |
| Max. Liquid Temperature | 240° F            | 115° C             |

### ALTERNATE SPECIFICATIONS

|                         | U.S. Measure    | Metric Measure |
|-------------------------|-----------------|----------------|
| Flow                    | 12 gpm          | 45 lpm         |
| Pressure Range          | 100 to 1800 psi | 6.9 to 124 bar |
| Pump RPM*               | 1150 rpm        | 1150 rpm       |
| Inlet Pressure Range    | 20 to 60 psi    | 1.4 to 4.1 bar |
| Max. Liquid Temperature | 240° F          | 115° C         |

\*Pump minimum is 100 RPM.

### ELECTRIC HORSEPOWER REQUIREMENTS

| FLOW |     | PRESSURE    |             |             | RPM  |
|------|-----|-------------|-------------|-------------|------|
|      |     | psi<br>1800 | psi<br>2000 | psi<br>2200 |      |
| gpm  | lpm | bar<br>124  | bar<br>138  | bar<br>152  |      |
| 12.0 | 45  | 14.8        | N/A         | N/A         | 1150 |
| 10.0 | 38  | 12.4        | 13.7        | 15.1        | 958  |
| 9.0  | 34  | 11.1        | 12.4        | 13.6        | 836  |

#### DETERMINING THE PUMP R.P.M.

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$$

#### DETERMINING THE REQUIRED H.P.

$$\text{Hp (Electric Brake)} = \frac{\text{gpm} \times \text{psi}}{1460}$$

#### DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

Refer to pump **Service Manual** for repair procedure and additional technical information.

# PARTS LIST

| ITEM | PART NUMBER       | MATL   | PART NUMBER        | MATL   | DESCRIPTION   | QTY |
|------|-------------------|--------|--------------------|--------|---|-----|
|      | <b>1050.44101</b> |        | <b>1051.44101</b>  |        |   |     |
|      |                   |        | <b>1051C.44101</b> |        |   |     |
| 5    | <b>126540</b>     | STCP R | <b>49651</b>       | S      | Screw, HHC Sems (M8x20) (See Tech Bulletin 128)         | 8   |
| 8    | 134805            | ALE    | 134805             | ALE    | Cover, Bearing (See Tech Bulletin 118, 128)             | 2   |
| 9    | 855043            | FBR    | 855043             | FBR    | Shim, Split, Bearing Cover 2-Pc (See Tech Bulletin 128) | 0-2 |
| 10   | 76340             | FPM    | 76340              | FPM    | O-Ring, Bearing Cover - 75D                             | 2   |
| 11   | 76491             | FPM    | 76491              | FPM    | Seal, Oil, Crankshaft - 70D                             | 2   |
| 12   | 855044            | S      | 855044             | S      | Shim, Split, Bearing Cover 2-Pc (See Tech Bulletin 128) | 0-2 |
| 15   | 39060             | STL    | 39060              | STL    | Bearing, Roller   | 2   |
| 20   | 48600             | TNM    | 48600              | TNM    | Rod, Connecting Assembly                                | 3   |
| 25   | 43494             | FCM    | 43494              | FCM    | Crankshaft, Dual End (M30)                              | 1   |
| 31   | 76411             | BB     | 76411              | BB     | Adapter, [3/4" NPT(F)]                                  | 1   |
| 32   | 992623            | BB     | 992623             | BB     | Nipple, Close [3/4" NPT(M)]                             | 1   |
| 33   | 76331             | STCP   | 76331              | STCP   | Cap, Vented   | 1   |
| 36   | 76792             | SS     | 76792              | SS     | Gauge, Sight  | 1   |
| 37   | 76791             | AL     | 76791              | AL     | Adapter, Sight  | 1   |
| 38   | 44428             | NBR    | 44428              | NBR    | Gasket, Flat, Adapter - 80D                             | 1   |
| 40   | <b>126541</b>     | STCP R | <b>92542</b>       | S      | Screw, HHC Sems (M6x20)                                 | 4   |
| 48   | 25625             | STCP   | 25625              | STCP   | Plug, Drain (1/4"x19BSP)                                | 1   |
| 49   | 30322             | FPM    | 30322              | FPM    | O-Ring, Drain Plug                                      | 1   |
| 50   | 133576            | ALE    | 133576             | ALE    | Cover, Rear (See Tech Bulletin 118, 128)                | 1   |
| 51   | 76834             | FPM    | 76834              | FPM    | O-Ring, Rear Cover - 75D                                | 1   |
| 53   | <b>134836</b>     | ALE    | <b>134848</b>      | ALE    | Crankcase (Incls: 54, 55) (See Tech Bulletin 118, 128)  | 1   |
| 54   | 27488             | S      | 27488              | S      | Pin, Guide  | 2   |
| 55   | <b>126545</b>     | STCP R | <b>44005</b>       | S      | Stud, Manifold (M10x45)                                 | 4   |
| 64   | 43507             | CM     | 43507              | CM     | Pin, Crosshead  | 3   |
| 65   | <b>43501</b>      | SZZ    | <b>45258</b>       | SSZZ   | Rod, Plunger  | 3   |
| 69   | 126592            | STCP R | 126592             | STCP R | Washer, Oil Seal  | 3   |
| 70   | 76500             | FPM    | 76500              | FPM    | Seal, Oil, Crankcase                                    | 3   |
| 75   | 43506             | S      | 43506              | S      | Slinger, Barrier  | 3   |
| 88   | 45675             | S      | 45675              | S      | Washer, Keyhole   | 3   |
| 89   | <b>43553</b>      | BB     | <b>45879</b>       | SS     | Collar, Spacer  | 3   |
| 90   | 43552             | CC     | 43552              | CC     | Plunger (M24x77)  | 3   |
| 95   | —                 | —      | <b>89651</b>       | SS     | Stud, Plunger Retainer (M6x70)                          | 3   |
| 96   | 43235             | PTFE   | 43235              | PTFE   | Back-up-Ring, Plunger Retainer                          | 3   |
| 97   | 14160             | FPM    | 14160              | FPM    | O-Ring, Plunger Retainer - 80D                          | 3   |
| 98   | 44041             | SS     | 44041              | SS     | Gasket, Plunger Retainer                                | 3   |
| 99   | —                 | —      | <b>44031</b>       | SS     | Retainer, Plunger (M6)                                  | 3   |
|      | <b>104360</b>     | S      | —                  | —      | Retainer w/Stud Plunger                                 | 3   |
| 100  | 765001            | AL     | 765001             | AL     | Retainer, Seal  | 3   |
| 106  | 76035             | ST     | 76035              | ST     | Seal, LPS w/S-Spg                                       | 3   |
| 120  | <b>49290</b>      | BB     | <b>49286</b>       | SSNP   | Case, Seal [07/05]                                      | 3   |
| 121  | 11737             | FPM    | 11737              | FPM    | O-Ring, Seal Case - 75D                                 | 3   |
| 126  | <b>43558</b>      | BB     | <b>45073</b>       | SS     | Adapter, Female   | 3   |
| 127  | 76692             | ST4    | 76692              | ST4    | V-Packing   | 6   |
| 128  | <b>43560</b>      | BB     | <b>45074</b>       | SS     | Adapter, Male   | 3   |
| 139  | <b>20326</b>      | BBCP   | <b>44382</b>       | SS     | Plug, Inlet [3/4" NPT(M)]                               | 1   |
| 162  | 43248             | PTFE   | 43248              | PTFE   | Back-up-Ring, Valve Seat                                | 6   |
| 163  | 44383             | FPM    | 44383              | FPM    | O-Ring, Seat - 70D                                      | 6   |
| 164  | <b>44718</b>      | S      | <b>44037</b>       | SS     | Seat  | 6   |
| 166  | <b>43721</b>      | S      | <b>48793</b>       | SS     | Valve   | 6   |
| 167  | <b>43751</b>      | S      | <b>44039</b>       | SS     | Spring, Valve   | 6   |
| 168  | 44564             | PVDF   | 44564              | PVDF   | Retainer, Spring  | 6   |
| 172  | 11691             | FPM    | 11691              | FPM    | O-Ring, Valve Plug - 90D                                | 6   |
| 174  | <b>43851</b>      | BBCP   | <b>49293</b>       | SS     | Plug, Valve   | 6   |
| 185  | <b>46704</b>      | BBCP   | <b>134823</b>      | SS     | Head, Manifold [9/00]                                   | 1   |
|      | —                 | —      | <b>49188</b>       | SS     | Head, Manifold Flushed                                  | 1   |
| 192  | <b>126231</b>     | STCP R | <b>15847</b>       | S      | Lockwasher (M10)  | 4   |
| 194  | <b>126522</b>     | STCP R | <b>81258</b>       | S      | Nut, Hex (M10)  | 4   |
| 250  | <b>855046</b>     | NY     | <b>855047</b>      | NY     | Protector, Shaft w/Two Screws (See Tech Bulletin 128)   | 1   |

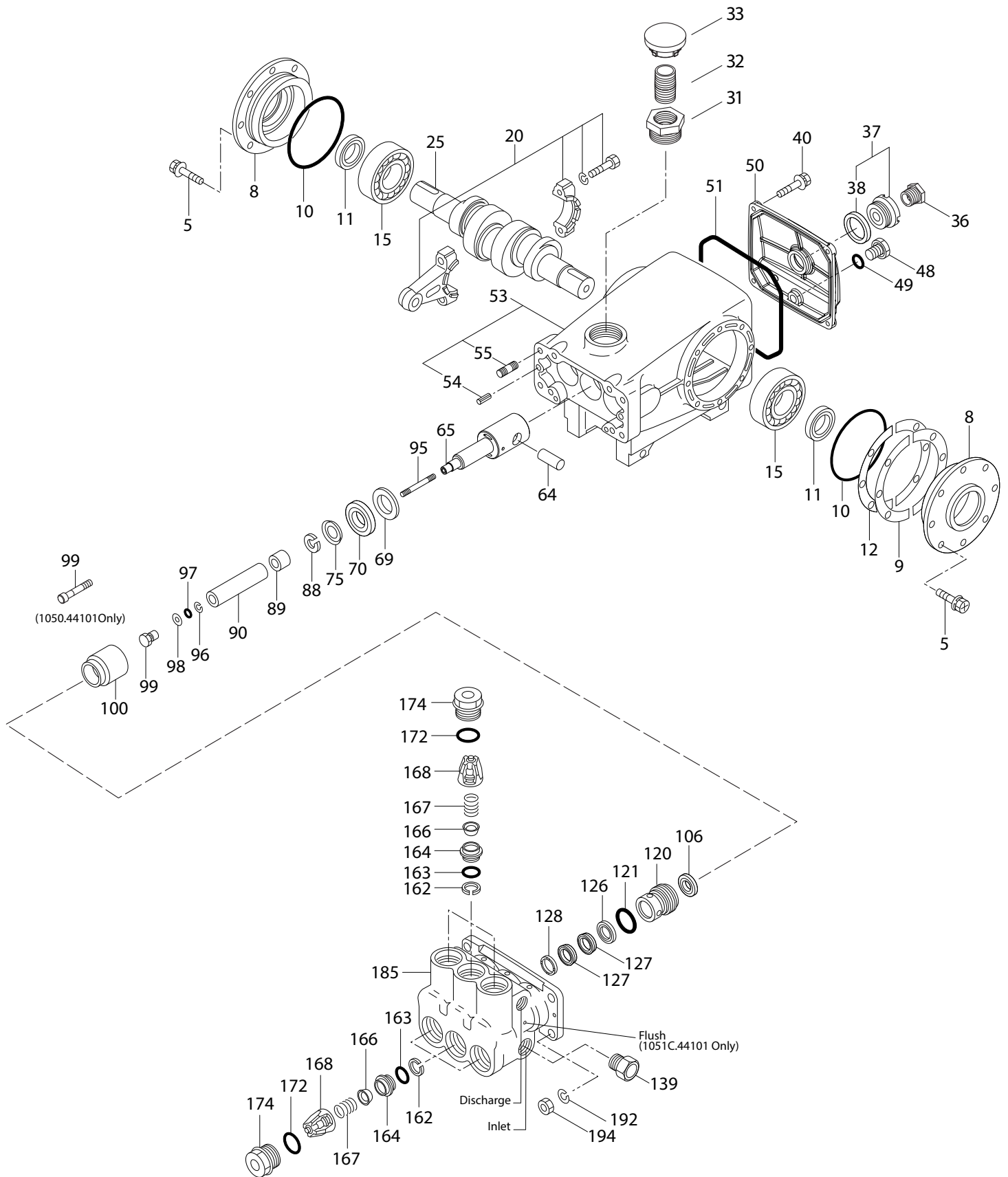
**Bold print part numbers are unique to a particular pump model.** [ ] Date of latest production change.

R components comply with RoHS Directive. \*Review individual parts in each kit for material code identification.

For additional technical information see [www.catpumps.com/literature/tech-bulletins](http://www.catpumps.com/literature/tech-bulletins).

MATERIAL CODES (Not Part of Part Number): AL=Aluminum ALE=Aluminum Epoxy BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-moly FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride NY=Nylon S=304SS SS=316SS ST4=Special PTFE 4 SSZZ=316SS/Zamak STCP=Steel/Chrome Plated SSNP=316SS/Nickel Plated ST=Polyetheretherketon STL=Steel SZZ=304SS/Zamak TNM=Special High Strength

# EXPLODED VIEW



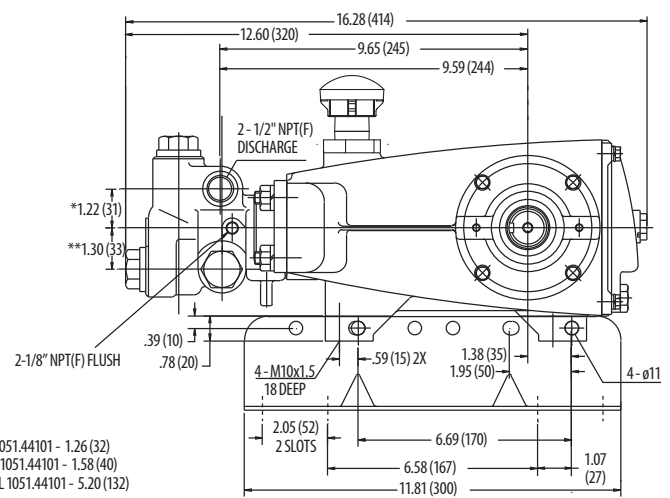
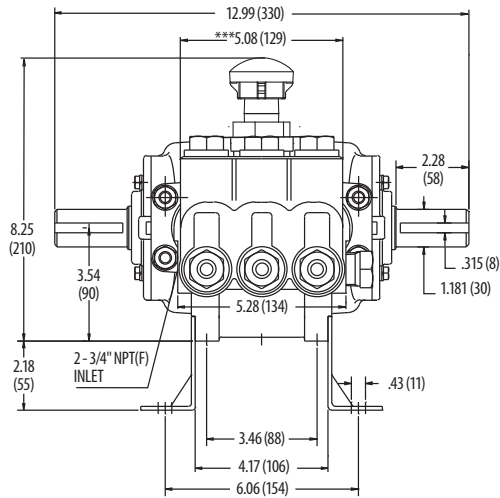
## Models

Brass - 1050.44101

Stainless Steel - 1051.44101

Stainless Steel Flushed - 1051C.44101

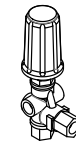
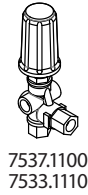
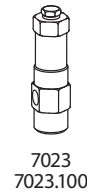
February 2020



\*MODEL 1051.44101 - 1.26 (32)  
 \*\*MODEL 1051.44101 - 1.58 (40)  
 \*\*\*MODEL 1051.44101 - 5.20 (132)

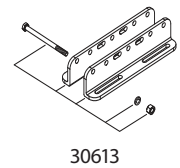
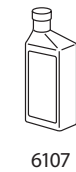
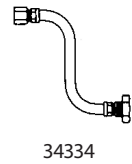
## REPAIR KITS AND PARTS

| PART NUMBER                   | DESCRIPTION   | QTY |
|-------------------------------|---|-----|
| 76094                         | Kit, Seal (Includes Items 97, 106, 121, and 127)                | 1   |
| 31256 (1050)                  | Kit, Valve (Includes Items 162, 163, 164, 166,167, 168 and 172) | 2   |
| 30986 (1051)                  | Kit, Valve (Includes Items 162, 163, 164, 166,167, 168 and 172) | 2   |
| 6107                          | Oil, Bottle (21 oz.) ISO 68 Hydraulic                           | 2   |
| 30067                         | Key (M8x7.5x25)   | 1   |
| 855046                        | Shaft Protector w/Two Screws                                    | 1   |
| 855047                        | Shaft Protector w/Two Stainless Steel Screws                    | 1   |
| 814560.44101/<br>816771.44101 | Complete Head (1050.44101 and 1051.44101 only)                  | 1   |



## OPTIONAL PARTS AND ACCESSORIES

| PART NUMBER          | DESCRIPTION   | QTY |
|----------------------|---|-----|
| 7023/ 7023.100       | Regulator (Primary Pressure Control)                      | 1   |
| 7537.0110/ 7533.0110 | Unloader (Primary Pressure Control)                       | 1   |
| 7537.1110/ 7533.0110 | Relief Valve (Secondary Pressure Control)                 | 1   |
| 7537.1110/ 7533.1110 | Pop-Off Valve (Secondary Pressure Control)                | 1   |
| 6073                 | Pressure Gauge  | 1   |
| 6030                 | Accumulator   | 1   |
| 30613                | Mounting Rails  | 1   |
| 76334                | Kit, Oil Indicator (3/8" x 24") See Individual Data Sheet | 1   |
| 34334                | Kit, Oil Drain (3/8" x 24") See Individual Data Sheet     | 1   |
| 30696                | Pliers (Reverse)  | 1   |
| 44050                | Tool, Sight Gauge Removal                                 | 1   |



### ⚠ CAUTIONS AND WARNINGS

All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from Cat Pumps.

### WARRANTY

View the Limited Warranty on-line at [www.catpumps.com/warranty](http://www.catpumps.com/warranty).