

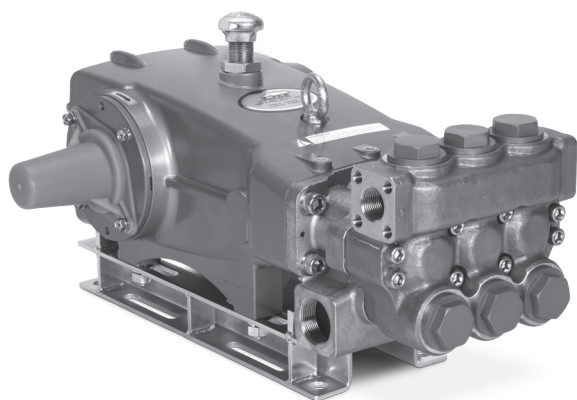
# DATA SHEET

## 35 FRAME PLUNGER PUMPS



**Stainless Steel Model:** **3531D.44101**

**Brass Model:** **3535.44101**



Model 3531D.44101 Shown  
(Shaft protector included, mounting rails sold separately)

| SPECIFICATIONS          | U.S.                  | Metric             |
|-------------------------|-----------------------|--------------------|
| Flow                    | 36 gpm                | 136 lpm            |
| Pressure Range          | 100 - 1200 psi        | 6.9 - 83 bar       |
| Inlet Pressure Range    | Flooded to 70 psi     | Flooded to 4.8 bar |
| RPM                     | 800 rpm               | 800 rpm            |
| Bore                    | 1.575"                | 40 mm              |
| Stroke                  | 1.890"                | 48 mm              |
| Crankcase Capacity      | 4.2 qts               | 4 l                |
| Max. Liquid Temperature | 240° F                | 115° C             |
| Inlet Ports (2)         | 1-1/2" NPT(F)         | 1-1/2" NPT(F)      |
| Discharge Ports (2)     | 1" NPT(F)             | 1" NPT(F)          |
| Pulley Mounting         | Either Side           | Either Side        |
| Shaft Diameter          | 1.378"                | 35 mm              |
| Weight                  | 139 lbs.              | 63 kg              |
| Dimensions              | 24.33 x 18.11 x 9.72" | 618 x 460 x 247 mm |

### 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.

### ELECTRIC HORSEPOWER REQUIREMENTS

| FLOW |     | PRESSURE   |             |             | RPM |
|------|-----|------------|-------------|-------------|-----|
|      |     | psi<br>800 | psi<br>1000 | psi<br>1200 |     |
| gpm  | lpm | bar<br>55  | bar<br>69   | bar<br>83   |     |
| 36   | 136 | 19.8       | 24.7        | 29.7        | 800 |
| 30   | 114 | 16.5       | 20.6        | 24.7        | 667 |
| 25   | 95  | 13.7       | 17.2        | 20.6        | 556 |

|                                          |                               |   |                               |
|------------------------------------------|-------------------------------|---|-------------------------------|
| <b>DETERMINING<br/>THE PUMP R.P.M.</b>   | Rated gpm                     | = | "Desired" gpm                 |
|                                          | Rated rpm                     | = | "Desired" rpm                 |
| <b>DETERMINING<br/>THE REQUIRED H.P.</b> | Hp<br>(Electric Brake)        | = | gpm x psi<br>1460             |
| <b>DETERMINING<br/>MOTOR PULLEY SIZE</b> | Motor Pulley O.D.<br>Pump rpm | = | Pump Pulley O.D.<br>Motor rpm |

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

## PARTS LIST

| ITEM | MATL          |        | MATL         |        | DESCRIPTION                                                        | QTY |
|------|---------------|--------|--------------|--------|--------------------------------------------------------------------|-----|
|      | 3531D.44101   |        | 3535.44101   |        |                                                                    |     |
| 5    | 96049         | S      | 96049        | S      | Screw, HHC Sems (M10 x 25) (See Tech Bulletin 125) (06/18)         | 8   |
| 8    | 134604        | AL     | 134604       | AL     | Cover, Bearing (See Tech Bulletin 118, 125) (06/18)                | 2   |
| 9    | 815279        | FBR    | 815279       | FBR    | Shim, Split 2-piece (See Tech Bulletin 125) (06/18)                | 2   |
| 10   | 76173         | FPM    | 76173        | FPM    | O-Ring, Bearing Cover                                              | 2   |
| 11   | 76172         | FPM    | 76172        | FPM    | Seal, Oil, Crankshaft                                              | 2   |
| 15   | 29326         | STL    | 29326        | STL    | Bearing, Roller                                                    | 2   |
| 20   | 121467        | TNM    | 121467       | TNM    | Rod, Connecting Assy (Incls: 21, 22, 23)                           | 3   |
| 21   | 126749        | STCP R | 126749       | STCP R | Washer, Locking                                                    | 3   |
| 22   | 126593        | STCP R | 126593       | STCP R | Shim, Washer (M10.5)                                               | 6   |
| 23   | 122045        | STZP   | 122045       | STZP   | Screw, HH (M10 x 55)                                               | 6   |
| 25   | 29325         | FCM    | 29325        | FCM    | Crankshaft, Dual End                                               | 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   |
| 34   | 126743        | STCP R | 126743       | STCP R | Bolt, Eye (M12 x 1.75) (For lifting Pump Only)                     | 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   | 125753        | S      | 125753       | S      | Screw, HHC Sems (M8 x 25)                                          | 8   |
| 48   | 25625         | STCP   | 25625        | STCP   | Plug, Drain (1/4" x 19BSP)                                         | 1   |
| 49   | 30322         | FPM    | 30322        | FPM    | O-Ring, Drain Plug                                                 | 1   |
| 50   | 45936         | AL     | 45936        | AL     | Cover, Rear (See Tech Bulletin 118)                                | 1   |
| 51   | 76174         | FPM    | 76174        | FPM    | O-Ring, Rear Cover - 75D                                           | 1   |
| 53   | 134784        | AL     | 134784       | AL     | Crankcase Assy (Incls: 34,54) (See Tech Bulletin 118, 125) (06/18) | 1   |
| 54   | 27488         | S      | 27488        | S      | Pin, Guide                                                         | 2   |
| 64   | 43864         | CM     | 43864        | CM     | Pin, Crosshead                                                     | 3   |
| 65   | 45116         | SSZZ   | 45116        | SSZZ   | Rod, Plunger                                                       | 3   |
| 69   | 126587        | STCP R | 126587       | STCP R | Washer, Oil Seal                                                   | 3   |
| 70   | 44739         | FPM    | 44739        | FPM    | Seal, Oil, Crankcase                                               | 3   |
| 75   | 43865         | S      | 43865        | S      | Slinger, Barrier                                                   | 3   |
| 88   | 45676         | S      | 45676        | S      | Washer, Keyhole                                                    | 3   |
| 90   | 43921         | CC     | 43921        | CC     | Plunger (M40 x 145)                                                | 3   |
| 95   | 89778         | SS     | 89778        | SS     | Stud, Plunger Retainer (M10 x 135)                                 | 3   |
| 96   | 20189         | PTFE   | 20189        | PTFE   | Back-up-Ring, Plunger Retainer                                     | 3   |
| 97   | 11375         | FPM    | 11375        | FPM    | O-Ring, Plunger Retainer                                           | 3   |
| 98   | 44085         | SS     | 44085        | SS     | Gasket, Plunger Retainer                                           | 3   |
| 99   | 44084         | SS     | 44084        | SS     | Retainer, Plunger (M10)                                            | 3   |
| 100  | 999324        | AL     | 999324       | AL     | Retainer, Seal                                                     | 3   |
| 106  | <b>701066</b> | SFTB   | <b>76398</b> | ST4    | Seal, LPS w/S-Spg                                                  | 3   |
| 107  | 45381         | SS     | —            | —      | Spacer, LPS                                                        | 3   |
| 110  | <b>45365</b>  | SS     | <b>49464</b> | BBCP R | Manifold, Inlet                                                    | 1   |
| 112  | 14183         | FPM    | 14183        | FPM    | O-Ring, Inlet Manifold                                             | 3   |
| 117  | 44585         | S      | 44585        | S      | Screw, HSH (M14 x 40)                                              | 4   |
| 126  | <b>45367</b>  | SS     | <b>46494</b> | BB     | Adapter, Female                                                    | 3   |
| 127  | 76780         | ST4    | 76780        | ST4    | V-Packing                                                          | 6   |
| 128  | <b>45368</b>  | SS     | <b>43928</b> | BB     | Adapter, Male                                                      | 3   |
| 141  | 49519         | SS     | 49519        | SS     | Spring, Coil                                                       | 3   |
| 155  | 20137         | FPM    | 20137        | FPM    | O-Ring, V-Packing Spacer - 70D                                     | 3   |
| 156  | 20464         | PTFE   | 20464        | PTFE   | Backup-Ring, V-Packing Spacer                                      | 3   |
| 157  | <b>49520</b>  | SS     | <b>49478</b> | BB     | Spacer, V-Packing                                                  | 3   |
| 158  | 20464         | PTFE   | 20464        | PTFE   | Back-up-Ring, V-Packing Spacer                                     | 3   |
| 159  | 20137         | FPM    | 20137        | FPM    | O-Ring, V-Packing Spacer - 70D                                     | 3   |
| 162  | 44614         | PTFE   | 44614        | PTFE   | Back-up-Ring, Valve Seat                                           | 6   |
| 163  | 14330         | FPM    | 14330        | FPM    | O-Ring, Valve Seat                                                 | 6   |
| 164  | <b>44612</b>  | SS     | <b>44727</b> | S      | Seat                                                               | 6   |
| 166  | <b>44108</b>  | SS     | <b>43932</b> | S      | Valve                                                              | 6   |
| 167  | 44109         | SS     | 44109        | SS     | Spring                                                             | 6   |
| 168  | 44728         | PVDF   | 44728        | PVDF   | Retainer, Spring                                                   | 6   |
| 170  | 44729         | SS     | 44729        | SS     | Washer, Spring Retainer                                            | 6   |
| 171  | 44644         | SS     | 44644        | SS     | Spring, Coil                                                       | 6   |
| 172  | 11747         | FPM    | 11747        | FPM    | O-Ring, Valve Plug - 90D                                           | 6   |
| 173  | 20388         | PTFE   | 20388        | PTFE   | Back-up-Ring, Valve Plug                                           | 6   |
| 174  | <b>49300</b>  | SSD    | <b>46444</b> | FBB    | Plug, Valve                                                        | 6   |
| 185  | <b>49299</b>  | SSD    | <b>49465</b> | BBCP R | Manifold, Discharge                                                | 1   |
| 188  | 89981         | S      | 89981        | S      | Screw, HSH (M12 x 70)                                              | 8   |
| 250  | 855042        | NY     | 855042       | NY     | Protector, Shaft (See Tech Bulletin 125) (06/18)                   | 1   |

**Bold face part numbers are unique to a particular pump model** R Compoments comply with RoHS Directive.

View Tech Bulletins 024, 040, 041, 050, 052, 053, 064, 069, 074, 083, 100, 105, 109, 114, 118, 125 and 127 for additional information. See Service Bulletin 001.

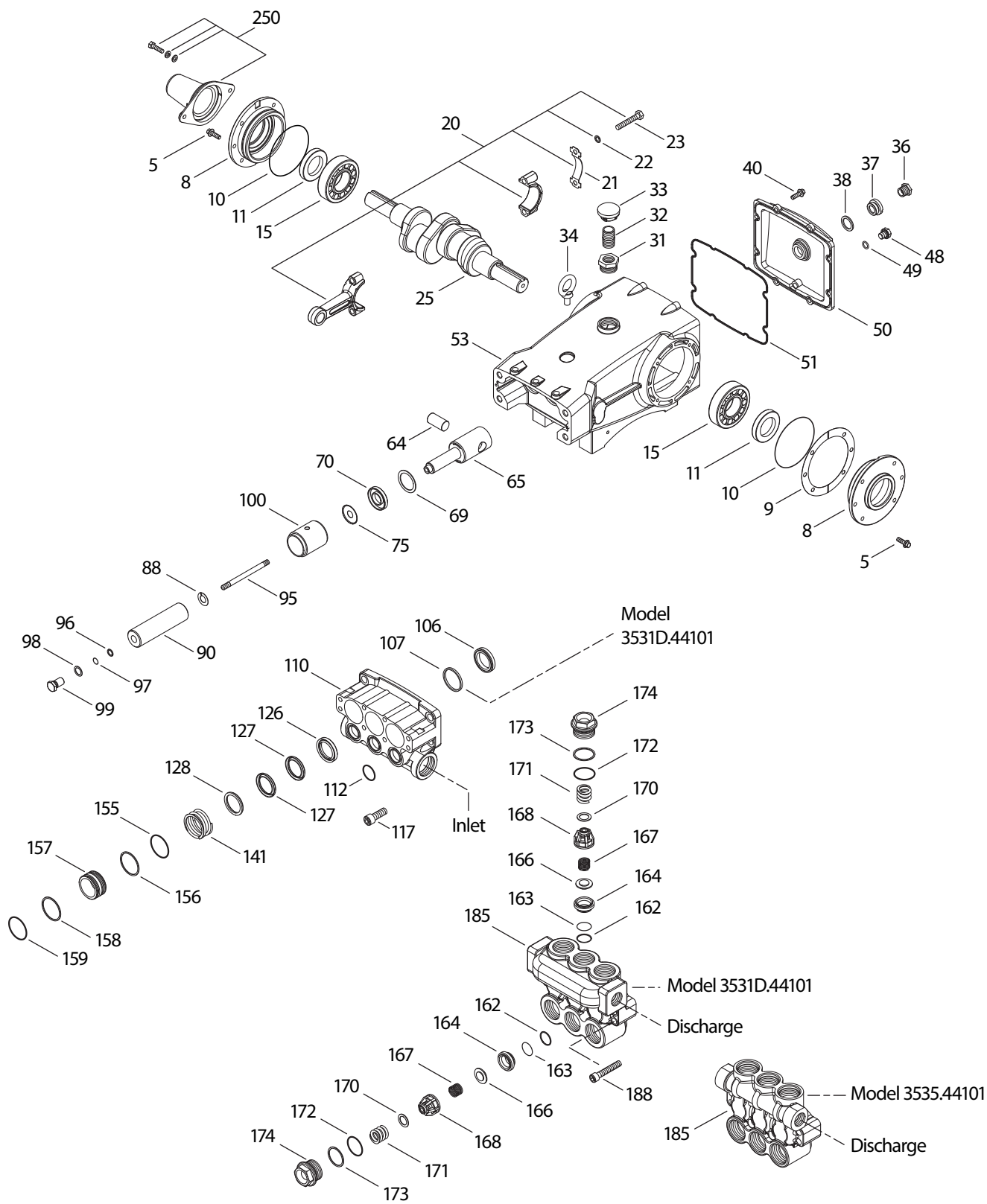
MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic CM=Chrome-Moly FBB=Forged/Brass FBR=Fiber

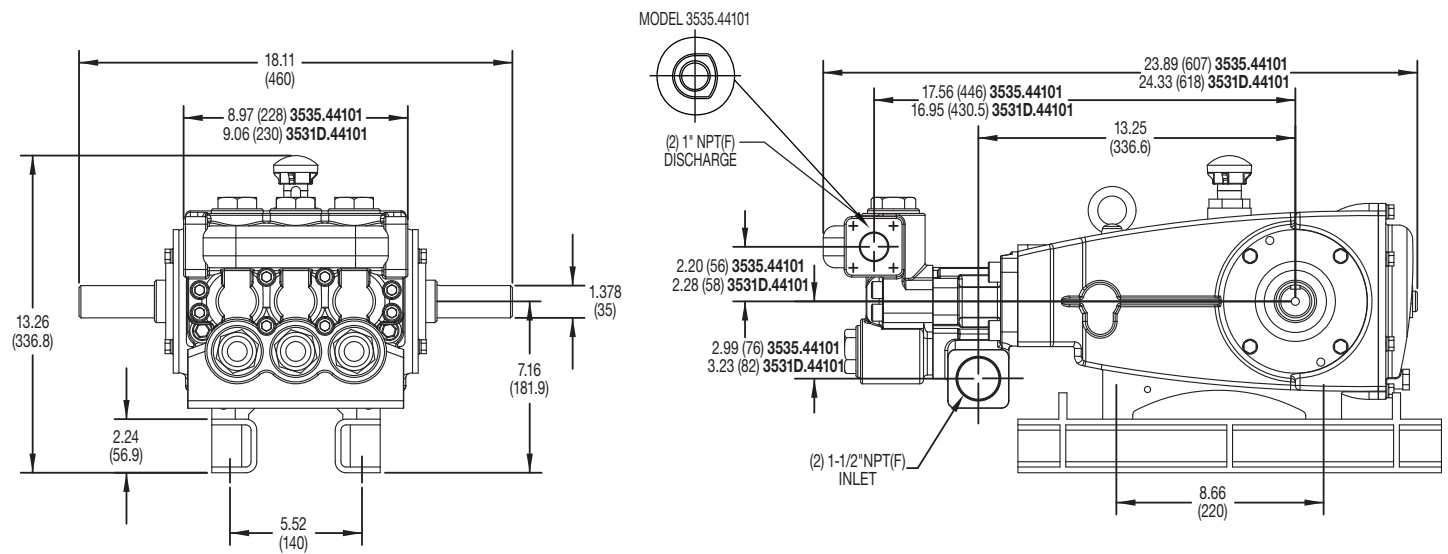
FCM=Forged Chrome-moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride

S=304SS SFTB=Special Blend PTFE Black SS=316SS SSD=Duplex Stainless Steel STL=Steel ST4=Special PTFE4 STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated

SSZZ=316SS/Zamak TNM=Special High Strength

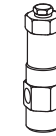
## EXPLODED VIEW



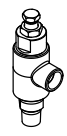


## REPAIR KITS AND PARTS

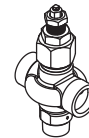
| PART NUMBER         | DESCRIPTION                                                                | QTY |
|---------------------|----------------------------------------------------------------------------|-----|
| 76276 (3531D.44101) | Kit, Seal (Includes Items 97, 106, 112, 127, 155, 156, 158 and 159)        | 1   |
| 76269 (3535.44101)  |                                                                            |     |
| 77029 (3531D.44101) | Kit, Valve (Includes Items 162, 163, 164, 166, 167, 168, 170, 172 and 173) | 2   |
| 76263 (3535.44101)  |                                                                            |     |
| 6107                | Oil, Bottle (21 oz.) ISO 68 Hydraulic                                      | 6-7 |
| 34021               | Key (M10x8x70)                                                             | 1   |
| 6119                | Lubricant, Anti seize (2 oz.) (Model 3531D.44101)                          | 1   |



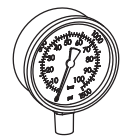
7032, 7032.100



890711



890710



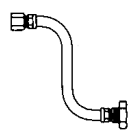
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## OPTIONAL PARTS AND ACCESSORIES

| PART NUMBER    | DESCRIPTION                                               | QTY |
|----------------|-----------------------------------------------------------|-----|
| 7032, 7032.100 | Regulator (Primary Pressure Control)                      | 1   |
| 890702         | Relief Valve (Secondary Pressure Control)                 | 1   |
| 890711         | Pop-Off Valve (Secondary Pressure Control)                | 1   |
| 6073           | Pressure Gauge                                            | 1   |
| 6013           | Accumulator                                               | 1   |
| 92674          | Mounting Rail Assembly                                    | 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   |



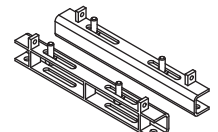
6013



34334



6107



92674

### ⚠ 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).