

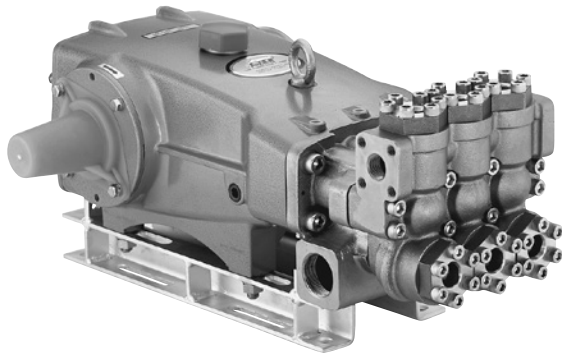
DATA SHEET

35 FRAME PLUNGER PUMPS



**Nickel Aluminum
Bronze Models: 3507, 3517**

Flushed Models: 3507C, 3517C



Model 3507 Shown
(Shaft protector included, mounting rails sold separately)

FEATURES

- Triplex design delivers high efficiency and low pulsation.
- Durable dual V-Packings are lubricated and cooled by pumped liquid.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Standard NBR seals with alternative options for temperature and chemical compatibility
 - FPM – .0110
 - EPDM – .0220
 - IPFE– .0770
 - High Temp, 190°F – .3000
 - High Temp, 200°F – .3400 (Intermittent Run-Dry)

COMMON SPECIFICATIONS

| | U.S. | Metric |
|--|-----------------------|--------------------|
| Inlet Pressure Range | Flooded to 70 psi | Flooded to 4.8 bar |
| Max. Liquid Temperature | 160° F | 71° C |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. | | |
| Stroke | 1.890" | 48 mm |
| Crankcase Capacity | 4.2 Qts. | 4 l |
| Inlet Ports (2) | 1 1/2" NPT(F) | 1 1/2" NPT(F) |
| Flushing Ports (2) (3507C, 3517C) | 1/4" NPT(F) | 1/4" NPT(F) |
| Pulley Mounting | Either Side | Either Side |
| Shaft Diameter | 1.378" | 35 mm |
| Weight | 152 lbs. | 69 kg |
| Dimensions | 24.51 x 18.11 x 9.72" | 623 x 460 x 247 mm |

*Pump minimum is 100 RPM.

SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|--------------------------|-----------------|----------------|
| Model 3507, 3507C | | |
| Flow | 10 gpm | 38 lpm |
| Pressure Range | 100 to 5000 psi | 6.9 to 345 bar |
| Pump RPM* | 915 rpm | 915 rpm |
| Bore | 0.787" | 20 mm |
| Discharge Ports (2) | 3/4" NPT(F) | 3/4" NPT(F) |
| Model 3517, 3517C | | |
| Flow | 14 gpm | 53 lpm |
| Pressure Range | 100 to 3000 psi | 6.9 to 207 bar |
| Pump RPM* | 800 rpm | 800 rpm |
| Bore | 0.984" | 25 mm |
| Discharge Ports (2) | 1" NPT(F) | 1" NPT(F) |

*Pump minimum is 100 RPM.

ELECTRIC HORSEPOWER REQUIREMENTS

| MODELS | FLOW | | PRESSURE | | | | | | RPM |
|--------------------|-------------|------|-------------|-------------|-------------|-------------|-------------|-------------|-----|
| | | | psi 2000 | psi 2500 | psi 3000 | psi 4000 | psi 4500 | psi 5000 | |
| | U.S. gpm | lpm | bar 138 | bar 172 | bar 207 | bar 275 | bar 310 | bar 345 | |
| 3507, 3507C | 10.0 | 38.0 | N/A | N/A | N/A | 27.4 | 30.8 | 34.2 | 915 |
| | 9.0 | 34.0 | N/A | N/A | N/A | 24.7 | 27.8 | 30.8 | 824 |
| | 8.0 | 30.0 | N/A | N/A | N/A | 22.0 | 24.7 | 27.4 | 711 |
| 3517, 3517C | 14.0 | 53.0 | 19.2 | 24.0 | 28.8 | N/A | N/A | N/A | 800 |
| | 12.0 | 45.0 | 16.5 | 20.6 | 24.7 | N/A | N/A | N/A | 685 |
| | 10.0 | 38.0 | 13.7 | 17.2 | 20.6 | N/A | N/A | N/A | 571 |

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.

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

DETERMINING MOTOR PULLEY SIZE

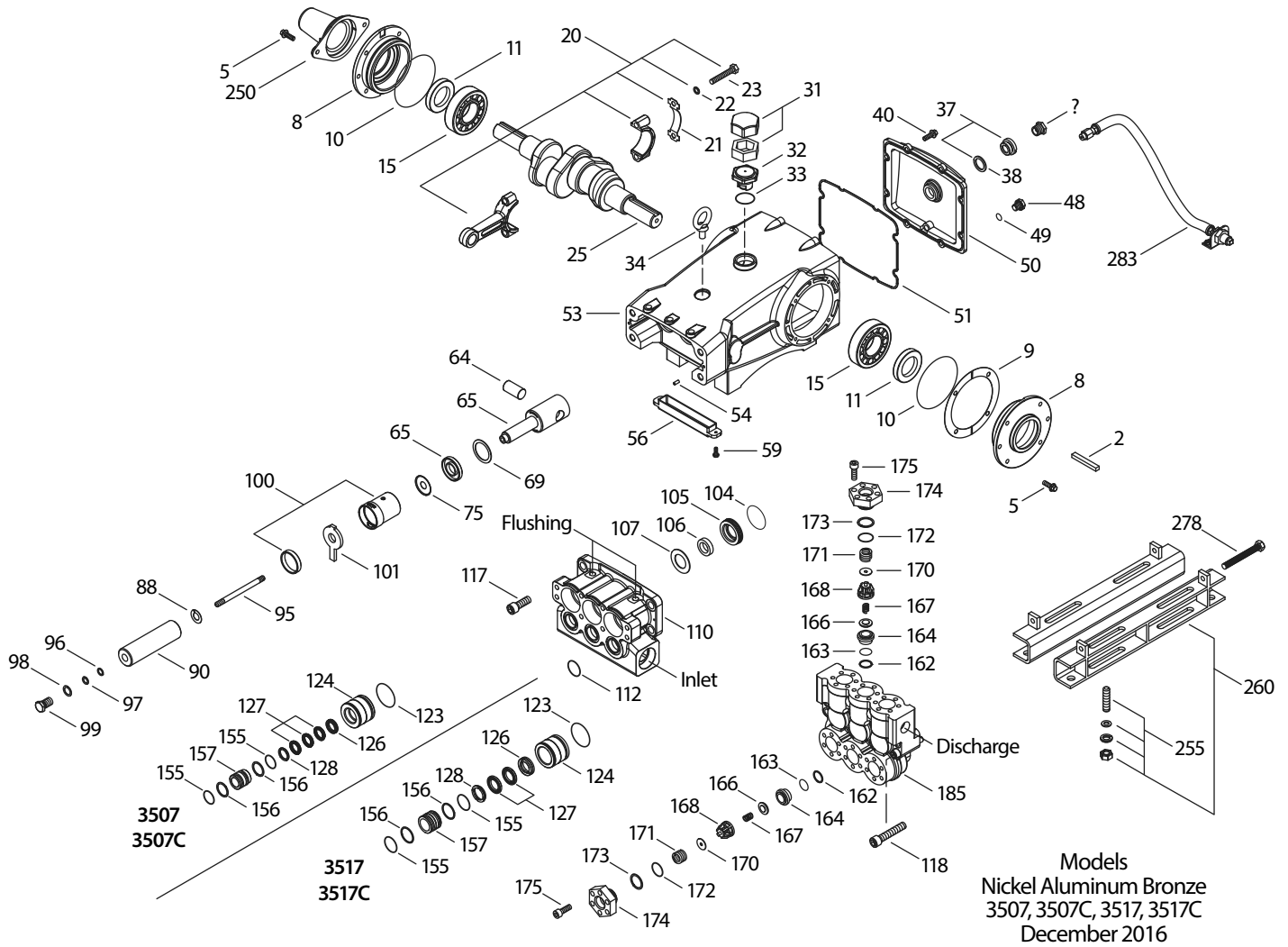
$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

See complete Drive Packages [Includes: pulleys, belts, hubs, key] Tech Bulletin 003.
Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

| ITEM | PART NUMBER | MATL | PART NUMBER | MATL | DESCRIPTION | QTY |
|------|-----------------|-------------|-----------------|-------------|---|-----|
| | 3507/C | | 3517/C | | | |
| 2 | 34021 | STL | 34021 | STL | Key (M10x8x70) | 1 |
| 5 | 125753 | S | 125753 | S | Screw, HH Sems (M8x25) | 8 |
| 8 | 44542 | AL | 44542 | AL | Cover, Bearing (See Tech Bulletin 118) | 2 |
| 9 | 815279 | FBR | 815279 | FBR | Shim, Split, 2 pc | 2 |
| 10 | 12398 | NBR | 12398 | NBR | O-Ring, Bearing Cover - 70D | 2 |
| 11 | 13296 | NBR | 13296 | NBR | Seal, Oil, Crankshaft | 2 |
| 15 | 29326 | STL | 29326 | STL | Bearing, Roller | 2 |
| 20 | 121467 | TNM | 121467 | TNM | Rod, Connecting Assy (Incls: 21, 22, 23) [10/00] | 3 |
| 21 | 126749 | STCP R | 126749 | STCP R | Washer, Locking (M10) | 3 |
| 22 | 126593 | STCP R | 126593 | STCP R | Washer, Flat (M10) | 6 |
| 23 | 122045 | STZP | 122045 | STZP | Screw, HH (M10x55) | 6 |
| 25 | 29325 | FCM | 29325 | FCM | Crankshaft, Dual End (M48) | 1 |
| 31 | 828710 | PE | 828710 | PE | Protector, Oil Cap w/Foam Gasket | 1 |
| 32 | 43211 | ABS | 43211 | ABS | Cap, Oil Filler | 1 |
| 33 | 14177 | NBR | 14177 | NBR | O-Ring, Oil Filler Cap - 70D | 1 |
| 34 | 126743 | STCP R | 126743 | STCP R | Bolt, Eye (M12x1.75) (For Lifting Pump Only) | 1 |
| 37 | 92241 | — | 92241 | — | Gauge, Bubble Oil w/Gasket - 80D | 1 |
| 38 | 44428 | NBR | 44428 | NBR | Gasket, Flat Oil Gauge - 80D | 1 |
| 40 | 125753 | S | 125753 | S | Screw, HH Sems (M8x25) | 8 |
| 48 | 25625 | STCP | 25625 | STCP | Plug, Drain (1/4"x19BSP) | 1 |
| 49 | 23170 | NBR | 23170 | NBR | O-Ring, Drain Plug - 70D | 1 |
| 50 | 45936 | AL | 45936 | AL | Cover, Rear (See Tech Bulletin 118) | 1 |
| 51 | 16612 | NBR | 16612 | NBR | O-Ring, Cover - 70D | 1 |
| 53 | 44487 | AL | 44487 | AL | Crankcase Assy (Incls: 34, 54) (See Tech Bulletin 118) | 1 |
| 54 | 27488 | S | 27488 | S | Pin, Guide | 2 |
| 56 | 27790 | POP | 27790 | POP | Pan, Oil | 1 |
| 59 | 92538 | S | 92538 | S | Screw, HHC Sems (M6x16) | 2 |
| 64 | 43864 | CM | 43864 | CM | Pin, Crosshead | 3 |
| 65 | 45118 | SSZZ | 45116 | SSZZ | Rod, Plunger | 3 |
| 69 | 126587 | STCP R | 126587 | STCP R | Washer, Oil Seal | 3 |
| 70 | 100488 | NBRS | 100488 | NBRS | Seal, Oil, Crankcase | 3 |
| | 44739 | FPM | 44739 | FPM | <i>Seal, Oil, Crankcase</i> | 3 |
| 75 | 43506 | S | 43865 | S | Slinger, Barrier | 3 |
| 88 | 45675 | S | 45676 | S | Washer, Keyhole | 3 |
| 90 | 43945 | CC | 43866 | CC | Plunger (M20x145) Model 3507, Plunger (M25x145) Model 3517 | 3 |
| 95 | 89779 | S | 89778 | SS | Stud, Retainer (M7x123) Model 3507, Stud, Retainer (M10x135) Model 3517 | 3 |
| 96 | 20184 | PTFE | 20189 | PTFE | Back-up-Ring, Plunger Retainer | 3 |
| 97 | 14190 | NBR | 11345 | NBR | O-Ring, Plunger Retainer - 70D | 3 |
| | 14161 | FPM | 11375 | FPM | <i>O-Ring, Plunger Retainer</i> | 3 |
| | ◆ 48239 | EPDM | ◆ 701490 | EPDM | <i>O-Ring, Plunger Retainer</i> | 3 |
| 98 | 44069 | SS | 44085 | SS | Gasket, Plunger Retainer (M7) Model 3507, Gasket, Plunger Retainer (M10) Model 3517 | 3 |
| 99 | 44068 | SS | 44084 | SS | Retainer, Plunger (M7) Model 3507, Retainer, Plunger (M10) Model 3517 | 3 |
| 100 | 814279 | PVDF | 814279 | PVDF | Retainer, Seal [See Tech Bulletin 105] | 3 |
| 101 | 44095 | — | 44096 | — | Wick | 3 |
| 104 | 43875 | NBR | 43875 | NBR | O-Ring, Adapter - 70D | 3 |
| | 44826 | FPM | 44826 | FPM | <i>O-Ring, Adapter - 70D</i> | 3 |
| | ◆ 701656 | EPDM | ◆ 701656 | EPDM | <i>O-Ring, Adapter - 70D</i> | 3 |
| 105 | 44073 | NAB | 44088 | NAB | Adapter, LPS | 3 |
| 106 | 44071 | NBR | 44086 | NBR | Seal, LPS w/SS-Spg | 3 |
| | 44381 | FPM | 45846 | FPM | <i>Seal, LPS w/SS-Spg</i> | 3 |
| | 701974 | SFTB | 701944 | SFTA | <i>Seal, LPS w/SS-Spg</i> | 3 |
| 107 | 44074 | SS | 44089 | SS | Washer, LPS | 3 |
| 110 | 44206 | NAB | 44206 | NAB | Manifold, Inlet | 1 |
| | 125970 | NAB | 125970 | NAB | <i>Manifold, Inlet, Flushed (1/4" Inlet Port) 3507C, 3517C</i> | 1 |
| 112 | 11379 | NBR | 11379 | NBR | O-Ring, Inlet Manifold - 70D | 3 |
| | 14183 | FPM | 14183 | FPM | <i>O-Ring, Inlet Manifold</i> | 3 |
| | ◆ 701491 | EPDM | ◆ 701491 | EPDM | <i>O-Ring, Inlet Manifold - 70D</i> | 3 |
| 117 | 44585 | S | 44585 | S | Screw, HSH (M14x40) | 4 |
| 123 | 12391 | NBR | 12391 | NBR | O-Ring, V-Packing Cylinder - 70D | 3 |
| | 13266 | FPM | 13266 | FPM | <i>O-Ring, V-Packing Cylinder - 70D</i> | 3 |
| | ◆ 701657 | EPDM | ◆ 701657 | EPDM | <i>O-Ring, V-Packing Cylinder - 70D</i> | 3 |
| 124 | 44075 | NAB | 44090 | NAB | Cylinder, V-Packing | 3 |
| 126 | 44076 | NAB | 44091 | NAB | Adapter, Female | 3 |
| 127 | 44607 | STG | 44610 | STG | V-Packing Model 3507, V-Packing Model 3517 | 9/6 |
| 128 | 44077 | NAB | 44092 | NAB | Adapter, Male | 3 |
| 155 | 17622 | NBR | 11379 | NBR | O-Ring, V-Packing Spacer | 6 |
| | 11719 | FPM | 14183 | FPM | <i>O-Ring, V-Packing Spacer</i> | 6 |
| | ◆ 701654 | EPDM | ◆ 701491 | EPDM | <i>O-Ring, V-Packing Spacer - 70D</i> | 6 |
| 156 | 28675 | PTFE | 28243 | PTFE | Back-up-Ring, V-Packing Spacer | 6 |
| 157 | 46668 | SS | 44093 | NAB | Spacer, V-Packing | 3 |
| 162 | 21985 | PTFE | 21985 | PTFE | Back-up-Ring, Seat | 6 |
| 163 | 26089 | NBR | 26089 | NBR | O-Ring, Seat - 80D | 6 |
| | 11377 | FPM | 11377 | FPM | <i>O-Ring, Seat - 80D</i> | 6 |
| | ◆ 46647 | EPDM | ◆ 46647 | EPDM | <i>O-Ring, Seat - 80D</i> | 6 |
| 164 | 44080 | SS | 44080 | SS | Seat | 6 |
| 166 | 44081 | SS | 44081 | SS | Valve | 6 |
| 167 | 44082 | SS | 44082 | SS | Spring | 6 |
| 168 | 44735 | PVDF | 44735 | PVDF | Retainer, Spring | 6 |
| 170 | 44794 | SS | 44794 | SS | Washer, Spring Retainer | 6 |
| 171 | 44793 | SS | 44793 | SS | Spring, Coil, Valve Plug | 6 |
| 172 | 15853 | NBR | 15853 | NBR | O-Ring, Valve Plug - 70D | 6 |

EXPLODED VIEW



Models
Nickel Aluminum Bronze
3507, 3507C, 3517, 3517C
December 2016

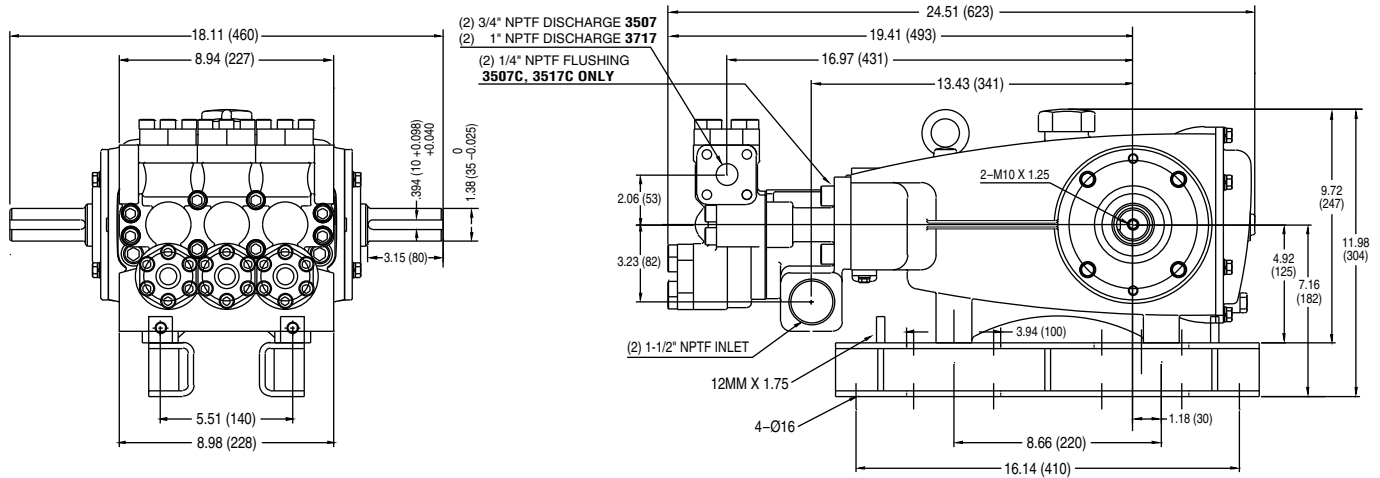
| ITEM | PART NUMBER | MATL | PART NUMBER | MATL | DESCRIPTION | QTY |
|------|---------------|-------|----------------|-------|--|-----|
| | 3507/C | | 3517/C | | | |
| | 11720 | FPM | 11720 | FPM | O-Ring, Valve Plug - 70D | 6 |
| | ◆ 701481 | EPDM | ◆ 701481 | EPDM | O-Ring, Valve Plug - 70D | 6 |
| 173 | 20224 | PTFE | 20224 | PTFE | Back-up-Ring, Valve Plug | 6 |
| 174 | 44795 | NAB | 44795 | NAB | Plug, Valve | 6 |
| | 76795 | NAB | 76795 | NAB | Plug, Valve with 1/4" NPT(F) Port | 1 |
| 175 | 87951 | S | 87951 | S | Screw, HSH (M10x30) | 36 |
| 185 | 46561 | NAB | 46565 | NAB | Manifold, Discharge [10/99] | 1 |
| 188 | 89981 | S | 89981 | S | Screw, HSH (M12x70) | 8 |
| 250 | 44516 | NY | 44516 | NY | Protector, Shaft, w/2 Screws, Lockwashers and Washers (Included with Pump) | 1 |
| 255 | 34018 | STZPR | 34018 | STZPR | Assy, Direct Mount | 1 |
| — | 34039 | SS | 34039 | SS | Assy, Direct Mount | 1 |
| 260 | 92674 | STZPR | 92674 | STZPR | Mounting, Rail, Assy (Incls: 34018) | 1 |
| 275 | 990013 | STL | 990013 | STL | Hub, 'B' 35mm w/Keyway [See Tech Bulletin 003] | 1 |
| 278 | 80540 | ZP | 80540 | ZP | Screw, HH (M12x100) (Rail Adjusting Screw) | 1 |
| 279 | 30278 | STZP | 30278 | STZP | Oiler (1 oz.) (Not Shown) | 3 |
| 283 | 34314 | — | 34314 | — | Kit, Oil Drain (3/8" x 48") | 1 |
| 290 | 6124 | — | 6124 | — | Gasket, Liquid (3 oz.) | 1 |
| 299 | 816755 | NAB | 816750 | NAB | Head, Complete w/NBR Seals and O-Rings (Models 3507 and 3517 only) | 1 |
| 300 | 31037 | NBR* | 31038 | NBR* | Kit, Seal (Incls: 97,104,106,112,123,127,155,156) | 1 |
| | 33265 | FPM* | 31266 | FPM* | Kit, Seal (Incls: 97,104,106,112,123,127,155,156) | 1 |
| | 76579 | EPDM* | ◆ 76138 | EPDM | Kit, Seal (Incls: 97,104,106,112,123,127,155,156) | 1 |
| 310 | 34151 | NBR | 34151 | NBR | Kit, Valve (Incls: 162,163,164,166,167,168,170,172,173) | 2 |
| | 701798 | FPM | 701798 | FPM | Kit, Valve (Incls: 162,163,164,166,167,168,170,172,173) | 2 |
| | ◆ 701799 | EPDM | ◆ 701799 | EPDM | Kit, Valve (Incls: 162,163,164,166,167,168,170,172,173) | 2 |
| — | 819000 | F | 819000 | F | Assembly, Crankcase, Cast Iron Conversion | 1 |
| — | 6100 | — | 6100 | — | Oil, Case (12 Bottles) ISO 68 Hydraulic (Fill to specified crankcase capacity prior to start-up) | 1 |

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

◆ Silicone Oil/Grease Required R Components comply with RoHS Directive. *Review material codes for individual items (STG generally may be used as alternate).

See Tech Bulletins 002, 003, 024, 035, 036, 041, 043, 052, 053, 068, 069, 074, 080, 083, 105 and 118 for additional information.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum CC=Ceramic CM=Chrome-Moly EPDM=Ethylene Propylene Diene Monomer F=Cast Iron FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N) NBR5=Buna, Silicone Free NY=Nylon PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SFTA=Special Blend PTFE Tan SFTB=Special Blend PTFE Black SS=316SS STG=Special Blend PTFE White SSZZ=316SS/Zamak STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated TNM=Special High Strength ZP=Zinc Plated



Models 3507, 3507C, 3517, 3517C

⚠ 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 or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.

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|---|--|
|  | <p>CAT PUMPS 1681 - 94TH LANE N.E. MINNEAPOLIS, MN 55449-4324 PHONE (763) 780-5440 — FAX (763) 780-2958 e-mail: techsupport@catpumps.com www.catpumps.com</p> |
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