

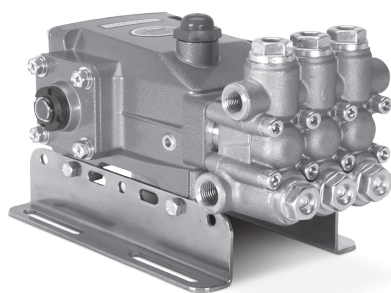
# DATA SHEET

## 5CP PLUNGER PUMPS



**Brass Models:** **5CP5140, 5CP5140CSS**

**Brass Gearbox Models:** **5CP5140CSSG1, 5CP5140CSSG118**



Model 5CP5140CSS Shown  
(Rails Sold Separately)

### FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Belt-driven option provides precise flow setting.
- Direct-drive option offers a compact foot print for electric motors with a NEMA or IEC frame, or SAE hydraulic motors with a bell housing/flexible coupler assembly.
- Gearbox model available with 1" or 1½" hollow shaft to fit a wide variety of engines.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

| COMMON SPECIFICATIONS                                                  | U.S.                  | Metric             |
|------------------------------------------------------------------------|-----------------------|--------------------|
| Inlet Pressure Range up to 5.5 gpm                                     | -2.5–60 psi           | -0.2–4.1 bar       |
| Inlet Pressure Range above 5.5 gpm                                     | 10–60 psi             | 0.7–4.1 bar        |
| Maximum Liquid Temperature (NBR)                                       | 160° F                | 71° C              |
| <b>Alternative seals available for higher temperature up to 190° F</b> |                       |                    |
| Bore                                                                   | 0.709"                | 18 mm              |
| Crankcase Capacity                                                     | 17 oz                 | 0.50 l             |
| Inlet Ports (2)                                                        | ½" NPT(F)             | ½" NPT (F)         |
| Discharge Ports (2)                                                    | ⅜" NPT (F)            | ⅜" NPT (F)         |
| Shaft Diameter                                                         | 0.787"                | 20 mm              |
| Dimensions (5CP5140)                                                   | 10.90 x 10.0 x 5.79"  | 277 x 254 x 147 mm |
| Dimensions (5CP5140CSS)                                                | 10.90 x 8.58 x 5.79"  | 277 x 218 x 147 mm |
| Dimensions (with Gearbox)                                              | 11.18 x 11.46 x 6.42" | 284 x 291 x 163 mm |

| SPECIFICATIONS                                      | U.S. Measure | Metric Measure |
|-----------------------------------------------------|--------------|----------------|
| <b>5CP5140, 5CP5140CSS</b>                          |              |                |
| Flow                                                | 5.5 gpm      | 21 lpm         |
| Pressure Range                                      | 100–3500 psi | 6.9–241 bar    |
| Pump RPM*                                           | 1500 rpm     | 1500 rpm       |
| Stroke                                              | 0.787"       | 20 mm          |
| Weight                                              | 19.9 lbs     | 9 kg           |
| <b>5CP5140, 5CP5140CSS Alternate Specifications</b> |              |                |
| Flow                                                | 6.4 gpm      | 24.3 lpm       |
| Pressure Range                                      | 100–3000 psi | 6.9–207 bar    |
| Pump RPM*                                           | 1750 rpm     | 1750 rpm       |
| <b>5CP5140CSSG1, 5CP5140CSSG118</b>                 |              |                |
| Flow                                                | 6.2 gpm      | 23.5 lpm       |
| Pressure Range                                      | 100–3000 psi | 6.9–207 bar    |
| Engine RPM                                          | 3450 rpm     | 3450 rpm       |
| Stroke                                              | 0.787"       | 20 mm          |
| Weight                                              | 26.5 lbs     | 12 kg          |

\*Pump minimum is 100 RPM.

### ALTERNATIVE SEAL CONFIGURATION

| MATERIAL | SUFFIX CODE | MAXIMUM TEMPERATURE |
|----------|-------------|---------------------|
| NBR      | —           | 160° F (71° C)      |
| FPM      | .0110       | 180° F (82° C)      |
| EPDM     | .0220       | 160° F (71° C)      |
| HT       | .3000       | 180° F (82° C)      |
| STHT     | .3400       | 190° F (88° C)      |

See **Tech Bulletin 002** for inlet conditions and RPM at high temperature.

|                                      |                             |   |                             |
|--------------------------------------|-----------------------------|---|-----------------------------|
| <b>DETERMINING THE PUMP RPM</b>      | Rated gpm                   | = | Desired gpm                 |
|                                      | Rated rpm                   | = | Desired rpm                 |
| <b>DETERMINING THE REQUIRED HP</b>   | Hp<br>(Electric Brake)      | = | gpm x psi<br>1460           |
| <b>DETERMINING MOTOR PULLEY SIZE</b> | Motor Pulley OD<br>Pump rpm | = | Pump Pulley OD<br>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>5CP5140</b><br><b>5CP5140CSS</b> |        | <b>5CP5140CSSG1</b><br><b>5CP5140CSSG118</b> |        |                                                                         |       |
| 5    | 126542                              | STCP R | 126542                                       | STCP R | Screw, HHC, Sems (M8 x 16) (See Tech Bulletin 074)                      | 8–4   |
| 8    | 46910                               | AL     | 46910                                        | AL     | Cover, Bearing                                                          | 2–1–0 |
| 10   | 14028                               | NBR    | 14028                                        | NBR    | O-Ring, Bearing Cover–70D                                               | 2–1   |
| 11   | 43222                               | NBR    | 43222                                        | NBR    | Seal, Oil, Crankshaft                                                   | 2–1–0 |
| 15   | 14480                               | STL    | 14480                                        | STL    | Bearing, Ball                                                           | 2     |
| 20   | 48742                               | TNM    | 48742                                        | TNM    | Rod, Connecting Assembly (See Tech Bulletin 074)                        | 3     |
| 25   | <b>48646</b>                        | FCM    | —                                            | —      | Crankshaft, Dual End End (M20) – 5CP5140                                | 1     |
|      | <b>49773</b>                        | FCM    | <b>49773</b>                                 | FCM    | Crankshaft, Single End (M20) – 5CP5140CSS, 5CP5140CSSG1, 5CP5140CSSG118 | 1     |
| 30   | 49776                               | AL     | 49776                                        | AL     | Cover, Bearing                                                          | 0–1   |
| 32   | 46798                               | —      | 46798                                        | —      | Cap, Oil Filler, Domed                                                  | 1     |
| 33   | 14179                               | NBR    | 14179                                        | NBR    | O-Ring, Oil Filler Cap–70D                                              | 1     |
| 37   | 92241                               | PC     | 92241                                        | PC     | Gauge, Oil, Bubble with Gasket–80D (See Tech Bulletin 074)              | 1–2   |
| 38   | 44428                               | NBR    | 44428                                        | NBR    | Gasket, Flat, Oil Gauge–80D                                             | 1–2   |
| 40   | 125824                              | STCP R | 125824                                       | STCP R | Screw, HHC, Sems (M6 x 16) (See Tech Bulletin 074)                      | 4     |
| 48   | 25625                               | STCP   | 25625                                        | STCP   | Plug, Drain (1/4" x 19 BSP)                                             | 1     |
| 49   | 23170                               | NBR    | 23170                                        | NBR    | O-Ring, Drain Plug–70D                                                  | 1     |
| 50   | 46940                               | AL     | 46940                                        | AL     | Cover, Rear                                                             | 1     |
| 51   | 14044                               | NBR    | 14044                                        | NBR    | O-Ring, Rear Cover                                                      | 1     |
| 53   | 48617                               | AL     | 48617                                        | AL     | Crankcase                                                               | 1     |
| 64   | 46746                               | CM     | 46746                                        | CM     | Pin, Crosshead                                                          | 3     |
| 65   | 48458                               | BBNP   | 48458                                        | BBNP   | Rod, Plunger                                                            | 3     |
| 70   | 46838                               | NBR    | 46838                                        | NBR    | Seal, Oil, Crankcase                                                    | 3     |
| 75   | 43328                               | S      | 43328                                        | S      | Slinger, Barrier                                                        | 3     |
| 88   | 45697                               | S      | 45697                                        | S      | Washer, Keyhole (M18 x 10)                                              | 3     |
| 90   | 49655                               | CC     | 49655                                        | CC     | Plunger (M18 x 50)                                                      | 3     |
| 98   | 46730                               | NBR    | 46730                                        | NBR    | Washer, Seal–90D                                                        | 3     |
| 99   | † 48201                             | SS     | † 48201                                      | SS     | Retainer, Plunger with Stud (M6) (See Tech Bulletin 074)                | 3     |
| 100  | 46749                               | PVDF   | 46749                                        | PVDF   | Retainer, Seal                                                          | 3     |
| 106  | 43243                               | NBR    | 43243                                        | NBR    | Seal, Low-Pressure with S–Spring                                        | 3     |
| 120  | 49657                               | BB     | 49657                                        | BB     | Case, Seal                                                              | 3     |
| 121  | 13978                               | NBR    | 13978                                        | NBR    | O-Ring, Seal Case–70D                                                   | 3     |
| 127  | 44549                               | SNG    | 44549                                        | SNG    | V-Packing                                                               | 6     |
| 128  | 44548                               | NY     | 44548                                        | NY     | Adapter, Male                                                           | 3     |
| 163  | 17547                               | NBR    | 17547                                        | NBR    | O-Ring, Seat–85D                                                        | 6     |
| 164  | 45790                               | S      | 45790                                        | S      | Seat                                                                    | 6     |
| 166  | 46429                               | S      | 46429                                        | S      | Valve                                                                   | 6     |
| 167  | 43750                               | S      | 43750                                        | S      | Spring                                                                  | 6     |
| 168  | † 44565                             | PVDF   | † 44565                                      | PVDF   | Retainer, Spring                                                        | 6     |
| 172  | 17549                               | NBR    | 17549                                        | NBR    | O-Ring, Valve Plug–70D                                                  | 6     |
| 173  | 48365                               | D      | 48365                                        | D      | Backup Ring, Valve Plug                                                 | 6     |
| 174  | 45900                               | BB     | 45900                                        | BB     | Plug, Valve (See Tech Bulletin 074)                                     | 6     |
| 185  | 46895                               | FBB    | 46895                                        | FBB    | Manifold, Head                                                          | 1     |
| 188  | 126513                              | STCP R | 126513                                       | STCP R | Screw, HSH (M8 x 70) (See Tech Bulletin 074)                            | 8     |
| 500  | —                                   | —      | <b>8076</b>                                  | —      | Gearbox, 1" (See Individual Data Sheet)                                 | 1     |
|      | —                                   | —      | <b>8077</b>                                  | —      | Gearbox, 1½" (See Individual Data Sheet)                                | 1     |

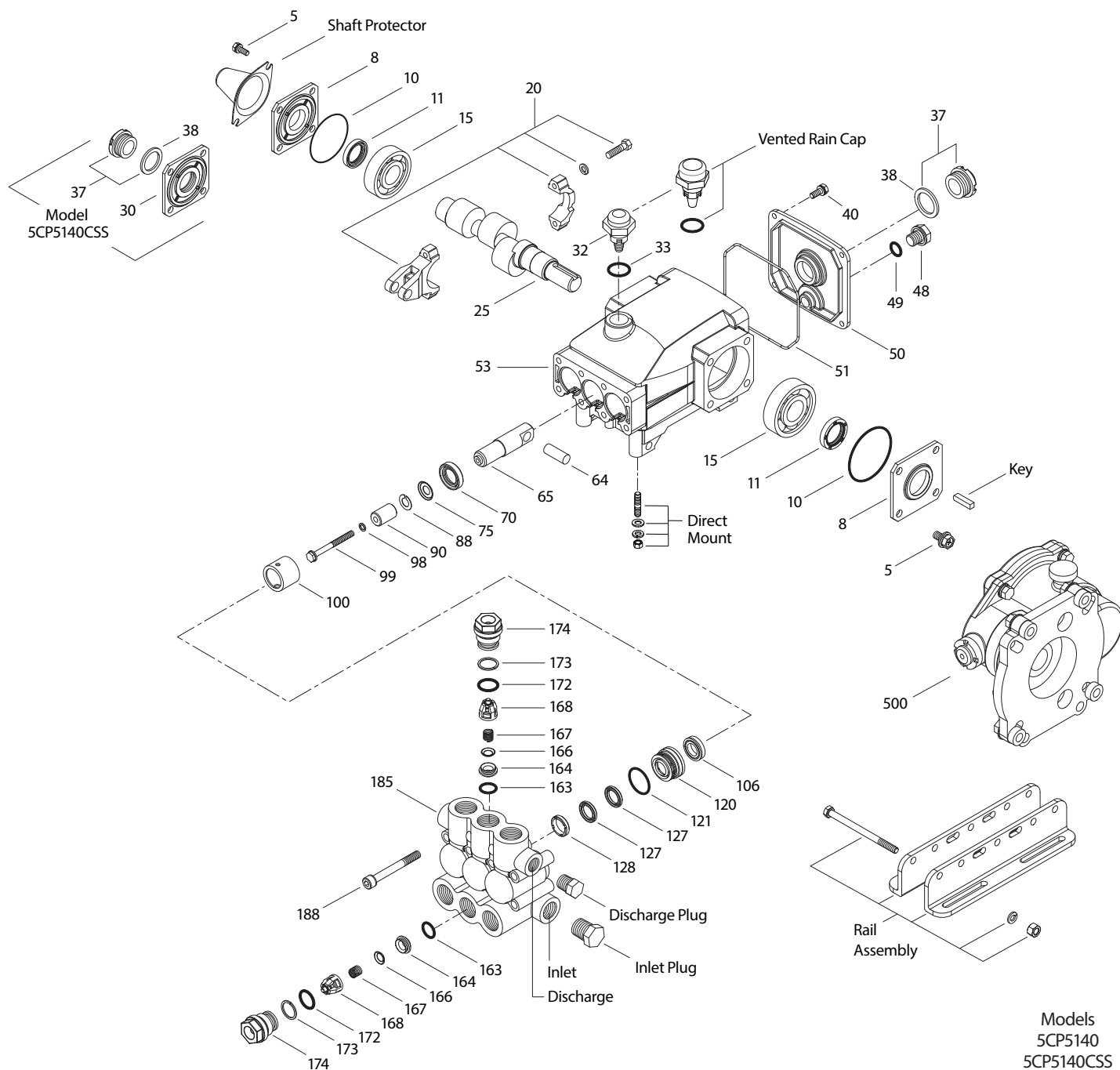
**Bold print part numbers are unique to a particular pump model. Italics are optional items.**

◆ Silicone oil/grease required. † Production parts are different than repair parts. R Components comply with RoHS Directive.

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 BB=Brass BBCP=Brass/Chrome Plated BBNP=Brass/Nickel Plated CC=Ceramic  
CM=Chrome-moly D=Acetal EPDM=Ethylene Propylene Diene Monomer FBB=Forged Brass FCM=Forged Chrome-moly FPM=Fluorocarbon  
HT=Hi-Temp (EPDM Alternative) NBR=Medium Nitrile (Buna-N) Ny=Nylon PC=Polycarbonate PVDF=Polyvinylidene Fluoride S=304SS SS=316SS  
SNG=Special Blend (Buna) SFG=Special Blend (FPM) STG= Special Blend PTFE White ST2=Special Blend PTFE Grey STL=Steel  
STCP=Steel/Chrome Plated STHT=Special PTFE High Temp TNM=Special High Strength

## EXPLODED VIEW



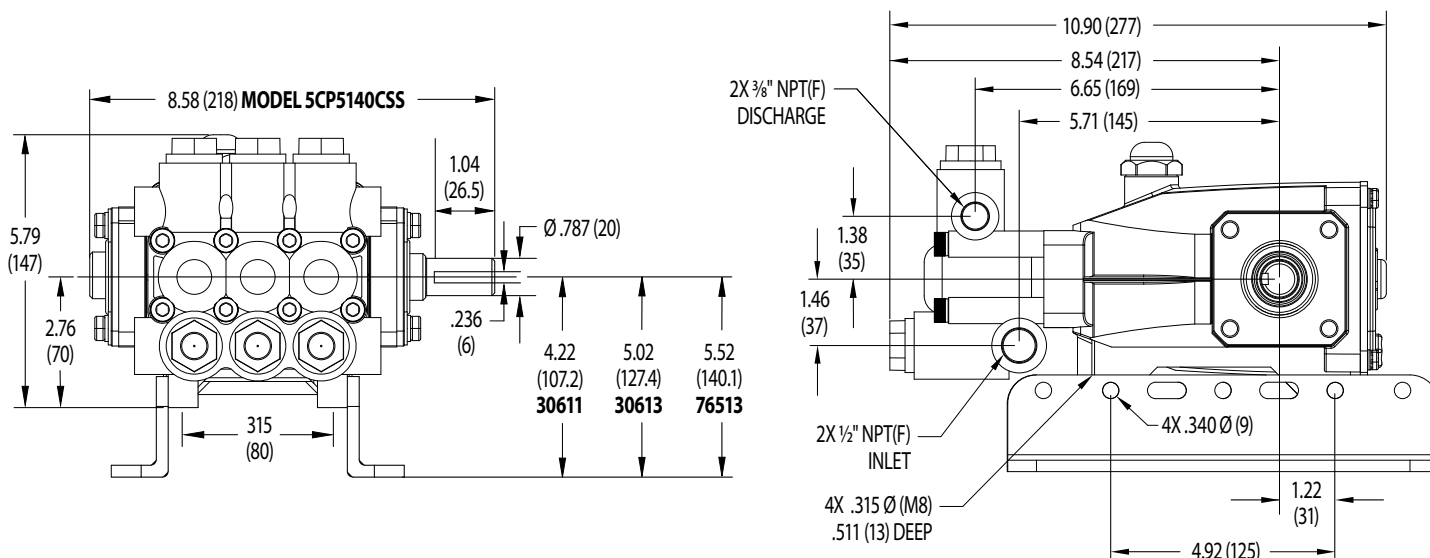
Models  
5CP5140  
5CP5140CSS  
5CP5140CSSG1  
5CP5140CSSG118  
July 2023

### OPTIONAL PARTS AND ACCESSORIES

| PART   | DESCRIPTION                                              | QTY |
|--------|----------------------------------------------------------|-----|
| 30057  | Key (M6 x 6 x 25)                                        | 1   |
| 30611  | Assembly, Rail (4.22" – See Dimensional Drawing)         | 1   |
| 30613  | Assembly, Rail (5.02" – See Dimensional Drawing)         | 1   |
| 76513  | Assembly, Rail (5.52" – See Dimensional Drawing)         | 1   |
| 30637  | Mount, Rail Assembly (Retro Fit - See Tech Bulletin 078) | 1   |
| 30243  | Mount, Direct                                            | 1   |
| 118672 | Protector, Shaft (Model 5CP5140)                         | 1   |
| 127409 | Cap, Vented with O-Ring (Rain Cap)                       | 1   |
| 22179  | Plug, Inlet (½" NPT[M])                                  | 1   |
| 22187  | Plug, Discharge (¾" NPT[M])                              | 1   |
| 34334  | Kit, Oil Drain (¾" x 24") (Not Shown)                    | 1   |

### SERVICE PARTS

| PART         | DESCRIPTION                                                                            | QTY |
|--------------|----------------------------------------------------------------------------------------|-----|
| <b>33630</b> | Seal Kit – Standard NBR                                                                | 1   |
| <b>33060</b> | Valve Kit – Standard NBR                                                               | 2   |
| 6107         | Oil, Bottle (21 oz bottle)<br>(Fill to Specified Crankcase Capacity Prior to Start-up) | 1   |
| 6124         | Gasket, Liquid (3 oz)                                                                  | 1   |
| 814844       | Head, Complete – with NBR Seals and O-Rings                                            | 1   |



Model 5CP5140CSS

## SEAL KITS

One (1) seal kit required per pump

| PUMP MODELS                                          | NBR (STD)    | FPM (.0110)  | EPDM (.0220) ♦ | HT (.3000)   | STHT (.3400)               | STHT (.3400)                |
|------------------------------------------------------|--------------|--------------|----------------|--------------|----------------------------|-----------------------------|
| 5CP5140, 5CP5140CSS,<br>5CP5140CSSG1, 5CP5140CSSG118 | <b>33630</b> | <b>31350</b> | <b>76630</b>   | <b>76645</b> | <b>76960</b><br>After 2/09 | <b>76546</b><br>Before 2/09 |

| ITEM (Included in Seal Kits) |       |       |       |       |       |       | DESCRIPTION                       | QTY |
|------------------------------|-------|-------|-------|-------|-------|-------|-----------------------------------|-----|
| 98                           | 46730 | 48394 | 48432 | 46730 | 46730 | 46730 | O-Ring, Plunger Retainer          | 3   |
| 106                          | 43243 | —     | —     | 43243 | 76243 | 76243 | Seal, Low-Pressure with S-Spring  | 3   |
|                              | —     | 44926 | 46651 | —     | —     | —     | Seal, Low-Pressure with SS-Spring | 3   |
| 120                          | —     | —     | —     | —     | —     | 49657 | Case, Seal                        | 3   |
| 121                          | 13978 | 14329 | 48904 | 13978 | 13978 | 13978 | O-Ring, Seal Case                 | 3   |
| 127                          | 44549 | 45617 | 48300 | 48300 | 48300 | 48300 | V-Packing                         | 6   |

♦ Silicone Oil/Grease required

## VALVE KITS

Two (2) valve kits required per pump

| PUMP MODELS                                          | NBR (STD)    | FPM (.0110)  | EPDM (.0220) ♦ | HT (.3000)   | STHT (.3400) |
|------------------------------------------------------|--------------|--------------|----------------|--------------|--------------|
| 5CP5140, 5CP5140CSS,<br>5CP5140CSSG1, 5CP5140CSSG118 | <b>33060</b> | <b>31345</b> | <b>31735</b>   | <b>33060</b> | <b>33060</b> |

| ITEM (Included in Valve Kits) |       |       |       |       |       | DESCRIPTION             | QTY |
|-------------------------------|-------|-------|-------|-------|-------|-------------------------|-----|
| 163                           | 17547 | 11685 | 46648 | 17547 | 17547 | O-Ring, Seat            | 3   |
| 164                           | 45790 | 45790 | 45790 | 45790 | 45790 | Seat                    | 3   |
| 166                           | 46429 | 46429 | 46429 | 46429 | 46429 | Valve                   | 3   |
| 167                           | 43750 | 43750 | 43750 | 43750 | 43750 | Spring                  | 3   |
| 168                           | 44565 | 44565 | 44565 | 44565 | 44565 | Retainer, Spring        | 3   |
| 172                           | 17549 | 26996 | 49133 | 17549 | 17549 | O-Ring, Valve Plug      | 3   |
| 173                           | 48365 | 48365 | 48365 | 48365 | 48365 | Backup Ring, Valve Plug | 3   |

♦ Silicone Oil/Grease required

### ⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. 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/dynamic-literature/cautions-and-warnings](http://www.catpumps.com/dynamic-literature/cautions-and-warnings) or can be requested directly from Cat Pumps.

### WARRANTY

View the Limited Warranty online at [www.catpumps.com/literature/cat-pumps-limited-warranty](http://www.catpumps.com/literature/cat-pumps-limited-warranty)