



Model 56 Shown  
(Rails Sold Separately)

## FEATURES

- Triplex design delivers high efficiency and low pulsation.
- Durable dual V-Packings are lubricated and cooled by pumped liquid.
- Pre-Set Lo-Pressure Seals provide secondary protection against external leaks and require no packing adjustment.
- Optional HT, FPM elastomers for compatibility with many liquids and temperatures up to 200°F.

## COMMON SPECIFICATIONS

|  |  |                    |
|--|--|--------------------|
| Bore .....   | 0.708"                                   | (18 mm)            |
| Inlet Pressure Range.....  | Flooded to 60 psi                        | (Flooded to 4 bar) |
| Crankcase Capacity.....  | 25 oz.                                   | (0.75 l)           |
| Standard Liquid Temperature .....  | 160°F                                    | (71°C)             |
| Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations. |  |                    |
| Inlet Ports (2).....   | 1/2" NPTF                                | (1/2" NPTF)        |
| Discharge Ports (2).....   | 3/8" NPTF                                | (3/8" NPTF)        |
| Shaft Diameter .....   | 0.945"                                   | (24 mm)            |
| Weight.....  | 29.25 lbs.                               | (13.3 kg)          |
| Weight w/Gearbox.....  | 36.8 lbs.                                | (16.7 kg)          |
| Dimensions.....  | 13.93 x 8.2 x 6.41" (354 x 208 x 163 mm) |                    |

### ⚠ 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).

## 7 Frame Plunger Pump

Standard  
Models

**56, 57, 60**

Gearbox  
Models

**56G1, 60G1**

## SPECIFICATIONS

|                        | U.S.<br>Measure                | Metric<br>Measure | U.S.<br>Measure                | Metric<br>Measure |
|------------------------|--------------------------------|-------------------|--------------------------------|-------------------|
| <b>STANDARD MODELS</b> | <b>56</b>                      |                   | <b>56 Alternate</b>            |                   |
| Flow .....             | 5.5 gpm                        | (21 lpm)          | 8 gpm                          | (30 lpm)          |
| Pressure Range.....    | 100 to 3500 psi (7 to 245 bar) |                   | 100 to 1800 psi (7 to 125 bar) |                   |
| Pump RPM .....         | 1210 rpm                       | (1210 rpm)        | 1760 rpm                       | (1760 rpm)        |
| Stroke.....            | 0.945"                         | (24 mm)           | 0.945"                         | (24 mm)           |

## STANDARD MODELS

**57**

**60**

|                     |                                |            |                                |            |
|---------------------|--------------------------------|------------|--------------------------------|------------|
| Flow .....          | 4.5 gpm                        | (17.0 lpm) | 4.7 gpm                        | (17.8 lpm) |
| Pressure Range..... | 100 to 4000 psi (7 to 275 bar) |            | 100 to 4000 psi (7 to 275 bar) |            |
| Pump RPM .....      | 1285 rpm                       | (1285 rpm) | 1750 rpm                       | (1750 rpm) |
| Stroke.....         | 0.728"                         | (18.5 mm)  | 0.591"                         | (15 mm)    |

## GEARBOX MODELS

**56G1**

**60G1**

|                     |                                |            |                                |            |
|---------------------|--------------------------------|------------|--------------------------------|------------|
| Flow .....          | 8.0 gpm                        | (30 lpm)   | 4.2 gpm                        | (15.9 lpm) |
| Pressure Range..... | 100 to 1800 psi (7 to 125 bar) |            | 100 to 4000 psi (7 to 275 bar) |            |
| Pump RPM .....      | 1760 rpm                       | (1760 rpm) | 1570 rpm                       | (1570 rpm) |
| Engine RPM .....    | 3600 rpm                       | (3600 rpm) | 3200 rpm                       | (3200 rpm) |
| Stroke.....         | 0.945"                         | (24 mm)    | 0.591"                         | (15 mm)    |

## ELECTRIC HORSEPOWER REQUIREMENTS

| MODEL          | FLOW     |      | PRESSURE    |             |             |             |             | MOTOR PULLEY SIZE                       |              |
|----------------|----------|------|-------------|-------------|-------------|-------------|-------------|---|--------------|
|                |          |      | psi<br>1800 | psi<br>2500 | psi<br>3000 | psi<br>3500 | psi<br>4000 | Using 1725 RPM Motor & Std. Pump Pulley |              |
|                |          |      |             |             |             |             |             | rpm                                     | Pulley O.D.  |
| <b>56</b>      | U.S. gpm | lpm  | bar<br>125  | bar<br>175  | bar<br>210  | bar<br>245  | bar<br>275  | rpm                                     | Pulley O.D.  |
| <b>56</b>      | 5.5      | 21   | 6.8         | 9.4         | 11.3        | 13.2        | N/A         | 1210                                    | 6.9          |
| <b>56 ALT.</b> | 8.0      | 30   | 9.9         | N/A         | N/A         | N/A         | N/A         | 1760                                    | Direct Drive |
| <b>56G1</b>    | 8.0      | 30   | 9.9         | N/A         | N/A         | N/A         | N/A         | 1760                                    | Gearbox      |
| <b>57</b>      | 4.5      | 17   | 5.6         | 7.7         | 9.3         | 10.8        | 12.3        | 1285                                    | 7.3          |
| <b>60</b>      | 4.7      | 17.8 | 5.8         | 8.0         | 9.7         | 11.3        | 12.9        | 1750                                    | Direct Drive |
| <b>60G1</b>    | 4.2      | 15.9 | 5.2         | 7.2         | 8.6         | 10.1        | 11.5        | 1570                                    | Gearbox      |

**DETERMINING  
THE PUMP R.P.M.**

Rated gpm  
Rated rpm

= "Desired" gpm  
"Desired" rpm

**DETERMINING  
THE REQUIRED H.P.**

gpm x psi  
1460

= Electric Brake  
H. P. Required

**DETERMINING  
MOTOR PULLEY SIZE**

Motor Pulley O.D.  
Pump rpm

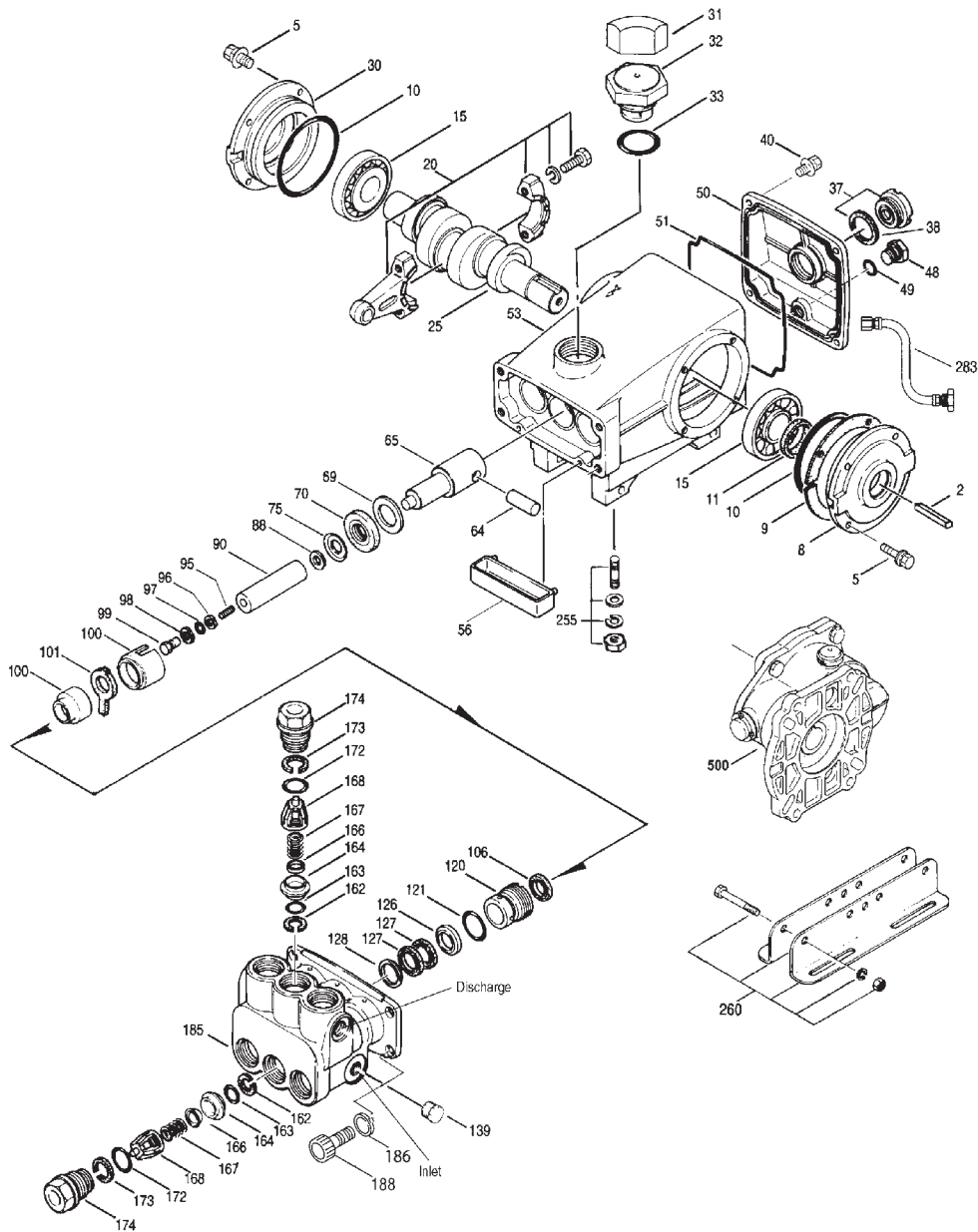
= Pump Pulley O.D.  
Motor rpm

See complete Drive Packages [Inclds: Pulleys, Belts, Hubs, Key] Tech Bulletin 003.  
Refer to pump **Service Manual** for repair procedure and additional technical information.

# PARTS LIST

| ITEM | PART NUMBER   |            | PART NUMBER   |            | PART NUMBER   |            | DESCRIPTION                                     | QTY |
|------|---------------|------------|---------------|------------|---------------|------------|---|-----|
|      | 56            | MATL       | 57            | MATL       | 60            | MATL       |   |     |
| 2    | 30067         | STL        | 30067         | STL        | 30067         | STL        | Key (M8x7.5x25)                                 | 1   |
| 5    | 92519         | STZP       | 92519         | STZP       | 92519         | STZP       | Screw, HHC Sems (M6x16)                         | 4/8 |
|      | 125824        | STCP R     | 125824        | STCP R     | 125824        | STCP R     | Screw, HHC Sems (M6x16)                         | 4/8 |
| 8    | 43223         | AL         | 43223         | AL         | 43223         | AL         | Cover, Bearing [03/10]                          | 1   |
| 9    | 815280        | FBR        | 815280        | FBR        | 815280        | FBR        | Shim, Split, 2-Pc                               | 1   |
| 10   | 12393         | NBR        | 12393         | NBR        | 12393         | NBR        | O-Ring, Bearing Cover                           | 2   |
| 11   | 43222         | NBR        | 43222         | NBR        | 43222         | NBR        | Seal, Oil Crankshaft                            | 1   |
| 15   | 43221         | STL        | 43221         | STL        | 43221         | STL        | Bearing, Roller                                 | 2   |
| 20   | 48863         | TNM        | 48863         | TNM        | 48863         | TNM        | Rod, Connecting [6/02]                          | 3   |
| 25   | <b>43464</b>  | <b>FCM</b> | <b>44947</b>  | <b>FCM</b> | <b>44591</b>  | <b>FCM</b> | Crankshaft, Single End                          | 1   |
| 30   | 44948         | AL         | 44948         | AL         | 44948         | AL         | Cover, Bearing, Blind [03/10]                   | 1   |
| 31   | 828710        | PE         | 828710        | PE         | 828710        | PE         | Protector, Oil Cap w/Foam Gasket                | 1   |
| 32   | 44666         | RTP        | 44666         | RTP        | 44666         | RTP        | Cap, Oil Filler, Domed-Gearbox Models           | 1   |
| 33   | 14177         | NBR        | 14177         | NBR        | 14177         | NBR        | O-Ring, Oil Filler Cap - 70D                    | 1   |
| 37   | 92241         | —          | 92241         | —          | 92241         | —          | Gauge, Oil Bubble w/Gasket - 80D                | 1   |
| 38   | 44428         | NBR        | 44428         | NBR        | 44428         | NBR        | Gasket, Flat Flex, Oil Gauge - 80D              | 1   |
| 40   | 92520         | STZP       | 92520         | STZP       | 92520         | STZP       | Screw, HHC Sems (M6x20)                         | 4   |
|      | 126541        | STCP R     | 126541        | STCP R     | 126541        | STCP R     | Screw, HHC Sems (M6x20) (See Tech Bulletin 106) | 4   |
| 48   | 25625         | STCP       | 25625         | STCP       | 25625         | STCP       | Plug, Drain (1/4"x19BSP)                        | 1   |
| 49   | 23170         | NBR        | 23170         | NBR        | 23170         | NBR        | O-Ring, Drain Plug - 70D                        | 1   |
| 50   | 127701        | AL         | 127701        | AL         | 127701        | AL         | Cover, Rear [03/10]                             | 1   |
| 51   | 14047         | NBR        | 14047         | NBR        | 14047         | NBR        | O-Ring, Rear Cover (See Tech Bulletin 106)      | 1   |
| 53   | <b>127698</b> | <b>AL</b>  | <b>127698</b> | <b>AL</b>  | <b>129812</b> | <b>AL</b>  | Crankcase (M10) [03/10]                         | 1   |
| 56   | 43240         | POP        | 43240         | POP        | 43240         | POP        | Pan, Oil  | 1   |
| 64   | 43237         | CM         | 43237         | CM         | 43237         | CM         | Pin, Crosshead                                  | 3   |
| 65   | 48913         | SHS        | 48913         | SHS        | 48913         | SHS        | Rod, Plunger, Short [5/02]                      | 3   |
| 69   | 126589        | STCP R     | 126589        | STCP R     | 126589        | STCP R     | Washer, Oil Seal                                | 3   |
| 70   | 43228         | NBR        | 43228         | NBR        | 43228         | NBR        | Seal, Oil, Crankcase                            | 3   |
| 75   | 43328         | S          | 43328         | S          | 43328         | S          | Slinger, Barrier                                | 3   |
| 88   | 45697         | S          | 45697         | S          | 45697         | S          | Washer, Keyhole (M18 x M10)                     | 3   |
| 90   | 43232         | CC         | 43232         | CC         | 43232         | CC         | Plunger (M18x77)                                | 3   |
| 95   | 126559        | STCP R     | 126559        | STCP R     | 126559        | STCP R     | Stud, Plunger Retainer (M6x70)                  | 3   |
| 96   | 43235         | PTFE       | 43235         | PTFE       | 43235         | PTFE       | Back-up-Ring, Plunger Retainer                  | 3   |
| 97   | 17399         | NBR        | 17399         | NBR        | 17399         | NBR        | O-Ring, Plunger Retainer - 80D                  | 3   |
|      | 14160         | FPM        | 14160         | FPM        | 14160         | FPM        | O-Ring, Plunger Retainer - 80D                  | 3   |
| 98   | 45891         | CU         | 45891         | CU         | 45891         | CU         | Gasket, Plunger Retainer                        | 3   |
| 99   | 46504         | S          | 46504         | S          | 46504         | S          | Retainer, Plunger (M6)                          | 3   |
| 100  | 45689         | PVDF       | 45689         | PVDF       | 45689         | PVDF       | Retainer, Seal, 2pc (See Tech Bulletin 105)     | 3   |
| 101  | 43239         | FBR        | 43239         | FBR        | 43239         | FBR        | Wick, Long Tab                                  | 3   |
| 106  | 43243         | NBR        | 43243         | NBR        | 43243         | NBR        | Seal, LPS w/S-Spg                               | 3   |
|      | 44926         | FPM        | 44926         | FPM        | 44926         | FPM        | Seal, LPS w/SS-Spg                              | 3   |
| 120  | 45685         | BB         | 45685         | BB         | 45685         | BB         | Case, Seal                                      | 3   |
| 121  | 20285         | NBR        | 20285         | NBR        | 20285         | NBR        | O-Ring, Seal Case - 70D                         | 3   |
|      | 11693         | FPM        | 11693         | FPM        | 11693         | FPM        | O-Ring, Seal Case                               | 3   |
| 126  | 44550         | BB         | 44550         | BB         | 44550         | BB         | Adapter, Female                                 | 3   |
| 127  | 44549         | SNG        | 44549         | SNG        | 44549         | SNG        | V-Packing                                       | 6   |
|      | 45617         | SFG        | 45617         | SFG        | 45617         | SFG        | V-Packing                                       | 6   |
|      | 48300         | STG        | 48300         | STG        | 48300         | STG        | V-Packing                                       | 6   |
| 128  | 45618         | BB         | 45618         | BB         | 45618         | BB         | Adapter, Male                                   | 3   |
| 139  | 43448         | BB         | 43448         | BB         | 43448         | BB         | Plug, Inlet, (1/2" NPT)                         | 1   |
| 162  | 43248         | PTFE       | 43248         | PTFE       | 43248         | PTFE       | Back-up-Ring, Seat                              | 6   |
| 163  | 43249         | NBR        | 43249         | NBR        | 43249         | NBR        | O-Ring, Seat - 80D                              | 6   |
|      | 44383         | FPM        | 44383         | FPM        | 44383         | FPM        | O-Ring, Seat - 70D                              | 6   |
| 164  | 43722         | S          | 43722         | S          | 43722         | S          | Seat  | 6   |
| 166  | 43721         | S          | 43721         | S          | 43721         | S          | Valve   | 6   |
| 167  | 43751         | S          | 43751         | S          | 43751         | S          | Spring  | 6   |
| 168  | 44564         | PVDF       | 44564         | PVDF       | 44564         | PVDF       | Retainer, Spring                                | 6   |
| 172  | 14179         | NBR        | 14179         | NBR        | 14179         | NBR        | O-Ring, Valve Plug - 70D                        | 6   |
|      | 15855         | FPM        | 15855         | FPM        | 15855         | FPM        | O-Ring, Valve Plug - 70D                        | 6   |
| 173  | 20213         | PTFE       | 20213         | PTFE       | 20213         | PTFE       | Back-up-Ring, Valve Plug                        | 6   |
| 174  | 45939         | BB         | 45939         | BB         | 45939         | BB         | Plug, Valve, Extended                           | 6   |
| 185  | 45937         | FBB        | 45937         | FBB        | 45937         | FBB        | Head, Manifold, (M10)                           | 1   |
| 186  | 49680         | S          | 49680         | S          | 49680         | S          | Washer, Spring (M10)                            | 4   |
| 188  | 49679         | S          | 49679         | S          | 49679         | S          | Screw, HSH (M10x35)                             | 4   |
| 255  | 30243         | STZP       | 30243         | STZP       | 30243         | STZP       | Kit, Direct Mount                               | 1   |
| 260  | 30611         | STZP R     | 30611         | STZP R     | 30611         | STZP R     | Assy, Angle Rail, B (2.09" x 9.45")             | 1   |
|      | 30645         | STZP R     | 30645         | STZP R     | 30645         | STZP R     | Assy, Angle Rail, A (2.95" x 11.81")            | 1   |

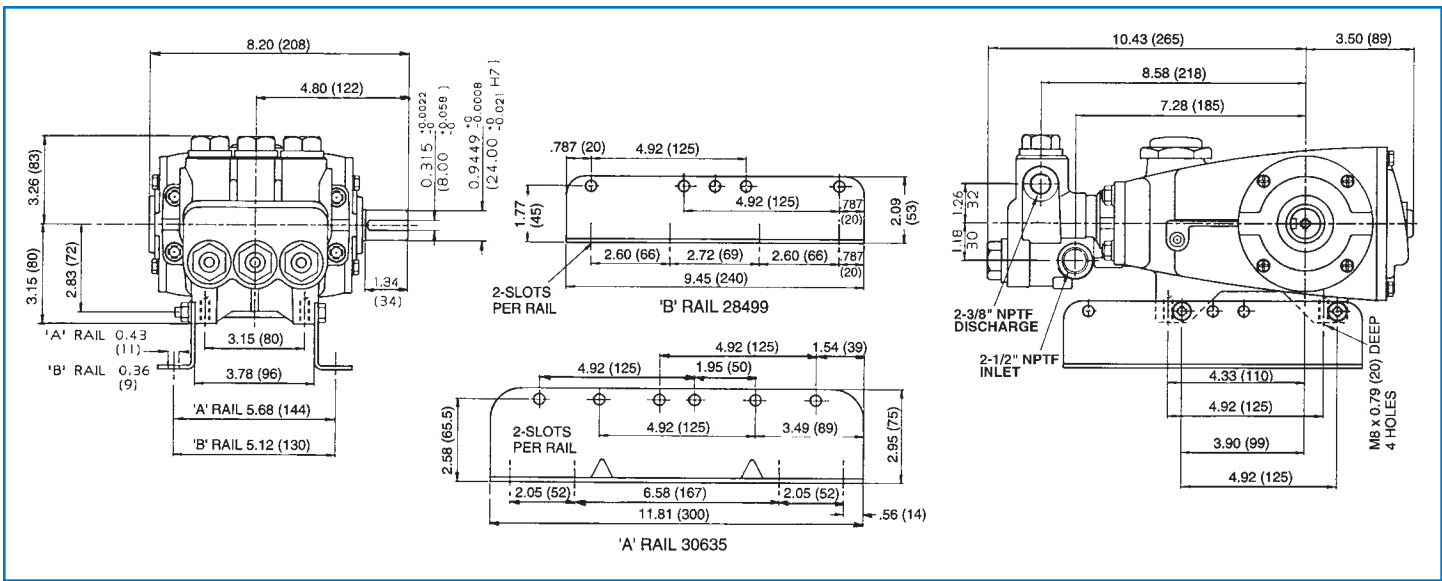
# EXPLODED VIEW



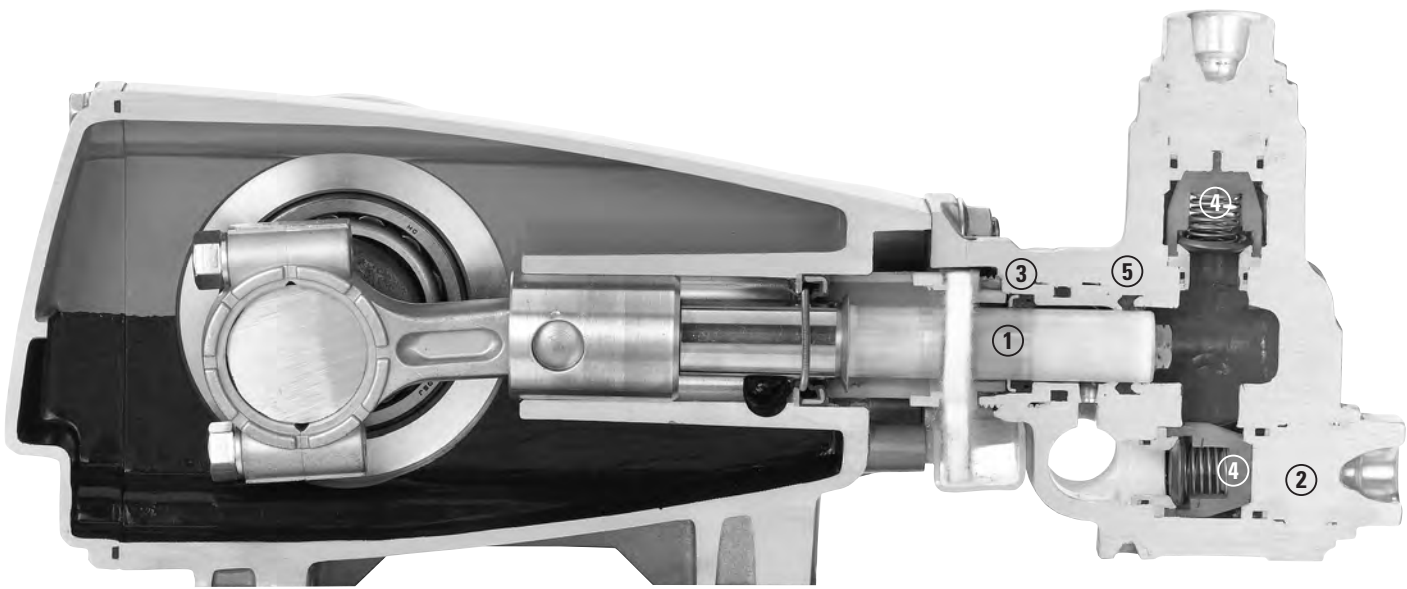
Models  
56, 57, 60  
56G1, 60G1  
April 2013

|     | <b>56</b> | <b>MATL</b> | <b>57</b> | <b>MATL</b> | <b>60</b> | <b>MATL</b> |   |     |
|-----|-----------|-------------|-----------|-------------|-----------|-------------|---|-----|
| 269 | 30206     | F           | 30206     | F           | 30206     | F           | Pulley, (10") AB (See Tech Bulletin 003)  | 1   |
| 274 | 33000     | STL         | 33000     | STL         | 33000     | STL         | Hub (M24), H Series (See Tech Bulletin 003)   | 1   |
| 283 | 34334     | —           | 34334     | —           | 34334     | —           | Kit, Oil Drain  | 1   |
| 299 | 814618    | FBB         | 814618    | FBB         | 814618    | FBB         | Head, Complete  | 1   |
| 300 | 30799     | NBR         | 30799     | NBR         | 30799     | NBR         | Kit, Seal (Incls: 97,101,106,121,127) <b>56, 57, 60</b>   | 1   |
|     | 34237     | FPM         | 34237     | FPM         | 34237     | FPM         | Kit, Seal (Incls: 97,101,106,121,127) <b>56.0110, 57.0110</b>                                     | 1   |
|     | 76799     | HT          | 76799     | HT          | 76799     | HT          | Kit, Seal, "High Temp" (Incls: 97,101,106,121,127) <b>56.3000</b>                                 | 1   |
| 310 | 33820     | NBR         | 33820     | NBR         | 33820     | NBR         | Kit, Valve (Incls: 162-168,172,173) <b>56, 57, 60</b>   | 2   |
|     | 34238     | FPM         | 34238     | FPM         | 34238     | FPM         | Kit, Valve (Incls: 162-168,172,173) <b>56.0110, 57.0110</b>                                       | 2   |
| 350 | 30696     | STZP        | 30696     | STZP        | 30696     | STZP        | Plier, Reverse  | 1   |
| 351 | 43257     | STZP        | 43257     | STZP        | 43257     | STZP        | Tool, Seal Case Removal   | 1   |
|     | 33005     | STZP        | 33005     | STZP        | 33005     | STZP        | Socket, Seal Case, 1/2" Drive   | 1   |
| 352 | 44050     | STZP        | 44050     | STZP        | 44050     | STZP        | Tool, Oil Gauge Removal   | 1   |
| 500 | 8071      | —           | —         | —           | 8071      | —           | Gearbox-1" (See individual Data Sheet)  | 1   |
| —   | 6107      | —           | 6107      | —           | 6107      | —           | Oil, Bottle (21 oz.) ISO 68 Hydraulic<br>(Fill to specified crankcase capacity prior to start-up) | 1-2 |

**Bold print part numbers are unique to a particular pump model. Italics are optional items.** [ ] Date of latest production change. R Components comply with RoHS Directive. View Tech Bulletins 002, 003, 024, 027, 035, 036, 043, 051, 054, 058, 067, 074, 077, 083, 105 and 106 for additional information.  
MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass CC=Ceramic CM=Chrome-Moly CU=Copper F=Cast Iron FBB=Forged Brass  
FBR=Fiber FCM=Forged Chrome-Moly FPM=Fluorocarbon NBR=Medium Nitrile (Buna-N) PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene  
PVDF=Polyvinylidene Fluoride RTP=Reinforced Composite S=304SS SFG=Special Blend FPM SHS=304SS/High Strength SNG=Special Blend (Buna)  
STCP=Steel/Chrome Plated STG=Special Blend PTFE White STL=Steel STZP=Steel/Zinc Plated TNM=Special High Strength



Models 56, 57, 60, 56G1, 60G1



- 1 Special concentric, high-density, polished, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 2 **Manifolds** are a high tensile strength forged brass for long term, continuous duty.
- 3 100% wet **seal** design adds to service life by allowing pumped liquids to cool and lubricate on both sides.
- 4 Stainless steel **valves, seats and springs** provide corrosion-resistance, ultimate seating and extended life.
- 5 Specially formulated, Cat Pump exclusive, **V-Packings** offer unmatched performance and seal life.



**CAT PUMPS**

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