

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.
- Pre-set Lo-Pressure seals provide secondary protection against external leaks and require no packing adjustments.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Specially formulated Seals and V-Packings offer unmatched performance and extended life.
- Interchangeable inlet and discharge valves for easy servicing.
- Wet-end easily serviced without entering crankcase.

### ⚠ 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).

## 35 Frame Plunger Pump

Nickel Aluminum Bronze

Standard Models

**3507, 3517**

Flushed Models

**3507C, 3517C**

### SPECIFICATIONS

U.S. Measure

Metric Measure

#### MODEL 3507, 3507C

Flow .....	10 gpm	(38 lpm)
Pressure Range.....	100 to 5000 psi	(7 to 345 bar)
RPM.....	915 rpm	(915 rpm)
Bore .....	0.787"	(20 mm)
Discharge Ports (2).....	3/4" NPTF	(3/4" NPTF)

#### MODEL 3517, 3517C

Flow .....	14 gpm	(53 lpm)
Pressure Range.....	100 to 3000 psi	(7 to 210 bar)
RPM.....	800 rpm	(800 rpm)
Bore .....	0.984"	(25 mm)
Discharge Ports (2).....	1" NPTF	(1" NPTF)

#### COMMON SPECIFICATIONS

Inlet Pressure Range.....	Flooded to 70 psi	(Flooded to 4.9 bar)
Stroke.....	1.890"	(48 mm)
Crankcase Capacity.....	4.2 Qts.	(4 l)
Maximum Liquid Temperature.....	160°F	(71°C)
Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.		
Inlet Ports (2).....	1-1/2" NPTF	(1-1/2" NPTF)
Flushing Ports (2) (3507C, 3517C).....	1/4" NPTF	(1/4" NPTF)
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)

### ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE						RPM
			psi	psi	psi	psi	psi	psi	
			2000	2500	3000	4000	4500	5000	
	U.S. gpm	lpm	bar	bar	bar	bar	bar	bar	
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.**

$$\frac{\text{gpm} \times \text{psi}}{1460} = \text{Electric Brake H. P. Required}$$

**DETERMINING MOTOR PULLEY SIZE**

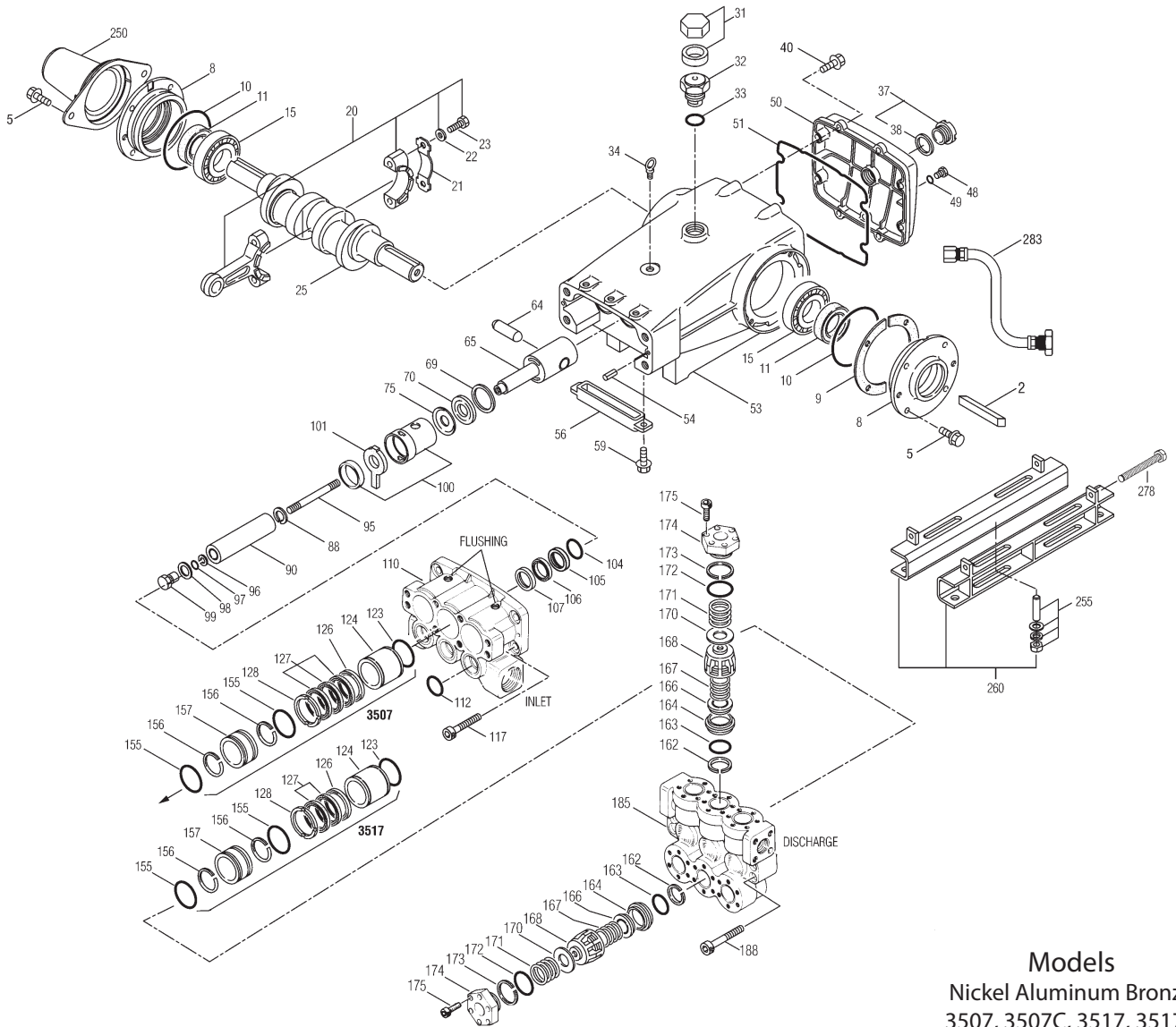
$$\frac{\text{Motor Pulley O.D.}}{\text{Pump rpm}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor rpm}}$$

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

# PARTS LIST

ITEM	PART NUMBER		DESCRIPTION		QTY	
	3507/C	MATL	3517/C	MATL		
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	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	
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	1
51	16612	NBR	16612	NBR	O-Ring, Cover - 70D	1
53	44487	AL	44487	AL	Crankcase Assy (Incls: 34, 54)	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	45118	SSZZ	Rod, Plunger	3
69	126587	STCP R	126587	STCP R	Washer, Oil Seal	3
70	100488	NBR	100488	NBR	Seal, Oil, Crankcase	3
	44739	FPM	44739	FPM	Seal, Oil, Crankcase	3
75	43506	S	43865	S	Slinger, Barrier	3
88	45675	S	45676	S	Washer, Keyhole	3
90	43945	CC	—	—	Plunger (M20x145)	3
	—	—	43866	CC	Plunger (M25x145)	3
95	89779	S	—	—	Stud, Retainer (M7x123)	3
	—	—	89778	SS	Stud, Retainer (M10x135)	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	O-Ring, Plunger Retainer	3
	48239	EPDM	48239	EPDM	O-Ring, Plunger Retainer	3
98	44069	SS	—	—	Gasket, Plunger Retainer (M7)	3
	—	—	44085	SS	Gasket, Plunger Retainer (M10)	3
99	44068	SS	—	—	Retainer, Plunger (M7)	3
	—	—	44084	SS	Retainer, Plunger (M10)	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	O-Ring, Adapter - 70D	3
	701656	EPDM	701656	EPDM	O-Ring, Adapter - 70D	3
105	44073	NAB	44088	NAB	Adapter, LPS	3
106	44071	NBR	44086	NBR	Seal, LPS w/SS-Spg	3
	44381	FPM	45846	FPM	Seal, LPS w/SS-Spg	3
	701974	SFTA*	701944	SFTA*	Seal, LPS w/SS-Spg	3
107	44074	SS	44089	SS	Washer, LPS	3
110	44206	NAB	44206	NAB	Manifold, Inlet	1
	125970	NAB	125970	NAB	Manifold, Inlet, Flushed (1/4" Inlet Port) 3507C, 3517C	1
112	11379	NBR	11379	NBR	O-Ring, Inlet Manifold - 70D	3
	14183	FPM	14183	FPM	O-Ring, Inlet Manifold	3
	701491	EPDM	701491	EPDM	O-Ring, Inlet Manifold - 70D	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	O-Ring, V-Packing Cylinder - 70D	3
	701657	EPDM	701657	EPDM	O-Ring, V-Packing Cylinder - 70D	3
124	44075	NAB	44090	NAB	Cylinder, V-Packing	3
126	44076	NAB	44091	NAB	Adapter, Female	3
127	44607	STG*	—	—	V-Packing	9
	—	—	44610	STG*	V-Packing	6
128	44077	NAB	44092	NAB	Adapter, Male	3
155	17622	NBR	11379	NBR	O-Ring, V-Packing Spacer	6
	11719	FPM	14183	FPM	O-Ring, V-Packing Spacer	6
	701654	EPDM	701491	EPDM	O-Ring, V-Packing Spacer - 70D	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	O-Ring, Seat - 80D	6
	46647	EPDM	46647	EPDM	O-Ring, Seat - 80D	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
	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
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

# EXPLODED VIEW



Models  
 Nickel Aluminum Bronze  
 3507, 3507C, 3517, 3517C  
 May 2013

	<b>3507/C</b>	<b>MATL</b>	<b>3517/C</b>	<b>MATL</b>		
255	34018	STZP R	34018	STZP R	Assy, Direct Mount	1
—	34039	SS	34039	SS	Assy, Direct Mount	1
260	92674	STZP R	92674	STZP R	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
281	30967	—	30967	—	Glass, Oiler (Not Shown)	3
282	10069	NBR	10069	NBR	Gasket, Oiler (Not Shown)	3
283	34314	—	34314	—	Kit, Oil Drain (3/8" x 48")	1
290	6124	—	6124	—	Gasket, Liquid (3 oz.)	1
299	<b>816755</b>	<b>NAB</b>	<b>816750</b>	<b>NAB</b>	Head, Complete	1
300	<b>31037</b>	<b>NBR*</b>	<b>31038</b>	<b>NBR*</b>	Kit, Seal (Incls: 97, 104, 106, 112, 123, 127, 155, 156)	1
—	<b>33265</b>	<b>FPM*</b>	<b>31266</b>	<b>FPM*</b>	Kit, Seal (Incls: 97, 104, 106, 112, 123, 127, 155, 156)	1
—	—	—	<b>76138</b>	<b>EPDM</b>	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
—	<b>701799</b>	<b>EPDM</b>	<b>701799</b>	<b>EPDM</b>	Kit, Valve (Incls: 162, 163, 164, 166, 167, 168, 170, 172, 173)	2
390	711500	SS	711500	SS	C.A.T. (Inlet pressure stabilizer for RO and boosted inlet applications)	1
391	711506	SS	711506	SS	Adapter (2 per C.A.T.) (See Data Sheet for complete selection)	2
392	701828	SS	701828	SS	Elbow assembly used with adapter assembly	1
—	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, 077, 080, 083 and 105 for additional information.

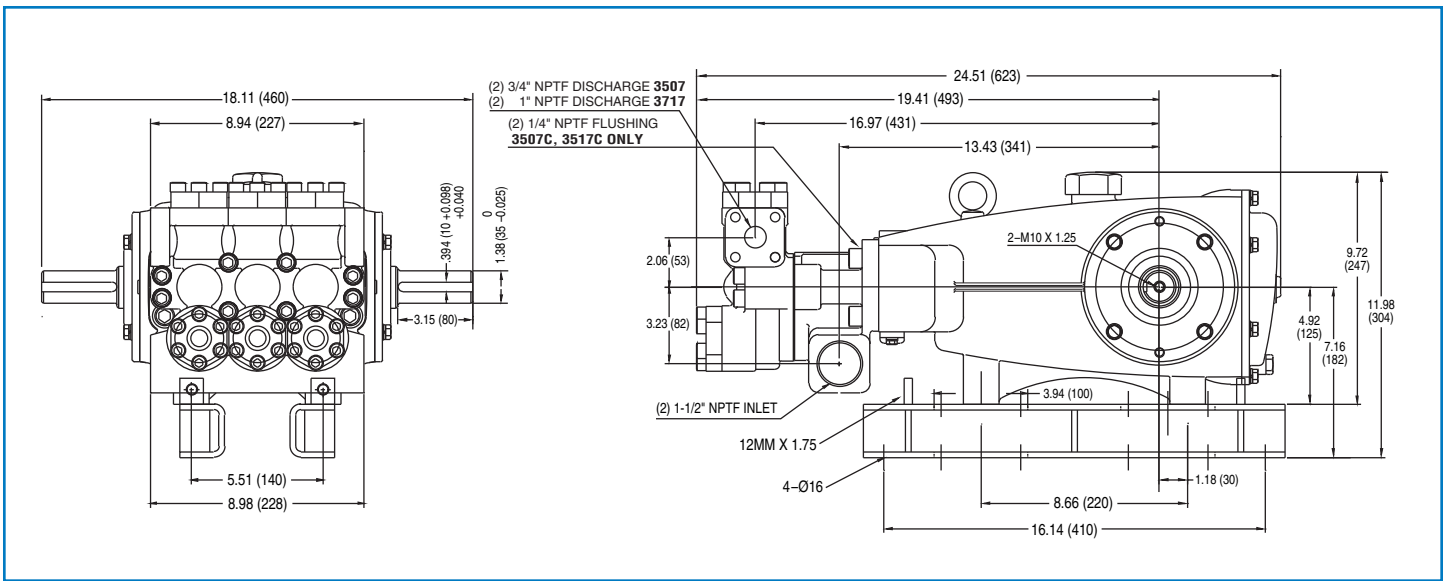
MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum CC=Ceramic CM=Chrome-Moly F=Cast Iron

FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N)

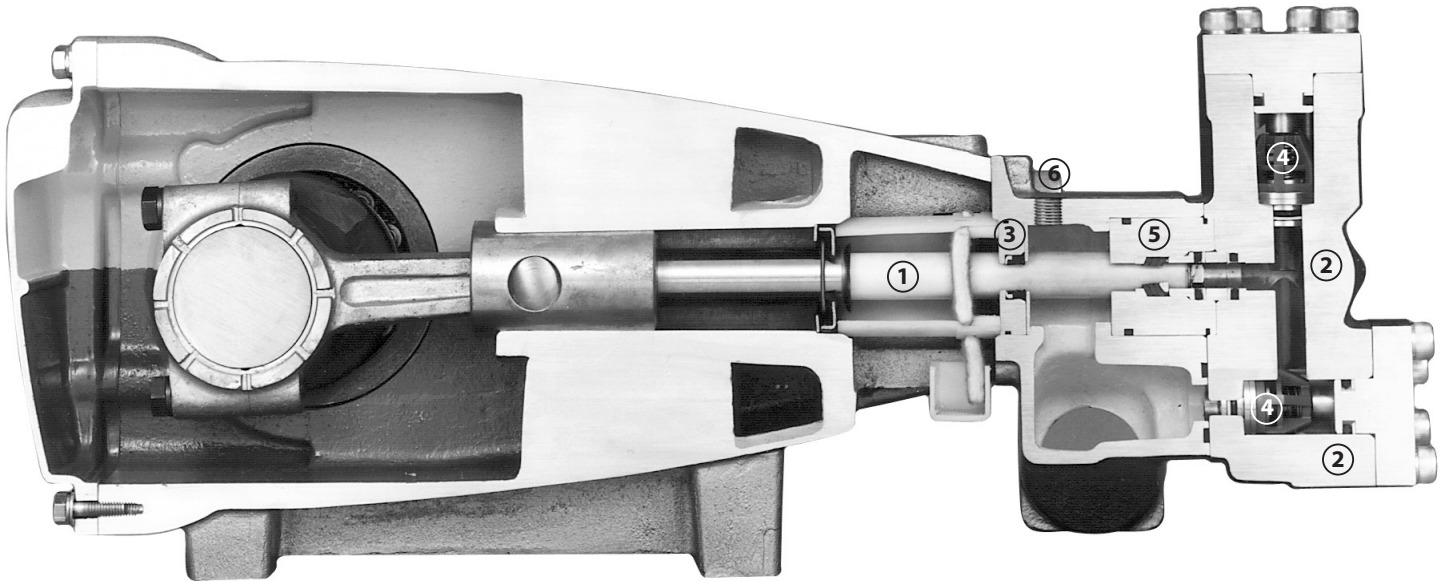
NBRs=Buna, Silicone Free NY=Nylon PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride

S=304SS SS=316SSSTG=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



- 1 Special concentric, high-density, polished, solid ceramic **plungers** provide a true wear surface and extended seal life.
- 2 **Manifolds** are high tensile strength nickel aluminum bronze 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.
- 6 Optional special **Flushed Inlet Manifold** permits external flush for added cooling with high temperature liquids and lubrication with low lubricity liquids.



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