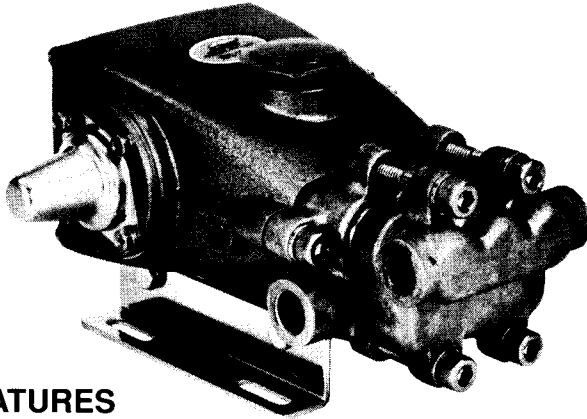




FEATURES

Superior Design

- Triplex plunger design gives smoother fluid flow.
- High pressure seals are completely lubricated and cooled by the fluid being pumped.
- Inlet and discharge valve assemblies interchange for easier maintenance.
- Lubricated low pressure seal provides double protection against external leakage.
- Oil bath crankcase assures optimum lubrication.
- Close tolerance concentricity of the ceramic plunger maximizes seal life.
- Optional Belt Drive, Motorized or Gearbox versions offer system flexibility.

Quality Materials

- All stainless steel valves are heat treated and seats are roller burnished for a positive seal and extended valve life.
- Brass manifold is strong and corrosion resistant.
- Special hardened, polished surface of solid ceramic plunger is abrasion resistant and results in extended seal life.
- Specially formulated, CAT PUMP exclusive, Hi-Pressure Seals offer unmatched performance and seal life.
- Diecast aluminum crankcase provides high strength, minimum weight and precision tolerance control.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater capacity mean longer bearing life.

Easy Maintenance

- Wet end is easily serviced without entering crankcase, requiring less time and effort.
- Valve assemblies are accessible without disturbing piping, for quick service.
- Preset packings mean no packing gland adjustment is necessary, reducing maintenance costs.

DETERMINING THE PUMP R.P.M. $\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}} = \frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$

DETERMINING THE REQUIRED H.P. $\frac{\text{GPM} \times \text{PSI}}{1460} = \frac{\text{Electric Brake H. P. Required}}{\text{H. P. Required}}$

DETERMINING MOTOR PULLEY SIZE $\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}} = \frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

Note: Consult engine manufacturer when using gas or diesel engine.
Refer to pump Service Manual for important Inlet Condition Check-List, Start-up Procedure, Tech Bulletins and Pump Maintenance information.

3 Frame Plunger Pump

Models

**230
240, 270**

SPECIFICATIONS

	U.S. Measure	Metric Measure
MODEL 230		
Volume	2.3 GPM	(9 L/M)
Discharge Pressure	100 to 1500 PSI	(7 to 105 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke	0.276"	(7 mm)

MODEL 240		
Volume	3.6 GPM	(13 L/M)
Discharge Pressure	100 to 1200 PSI	(7 to 85 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke	0.433"	(11 mm)

MODEL 270 Standard		
Volume	3.5 GPM	(13 L/M)
Discharge Pressure	100 to 1500 PSI	(7 to 105 BAR)
RPM	1420 RPM	(1420 RPM)
Stroke	0.512"	(13 mm)

MODEL 270 Alternate		
Volume	★ 4.2 GPM	(16 L/M)
Discharge Pressure	100 to 1000 PSI	(7 to 70 BAR)
RPM	1725 RPM	(1725 RPM)
Stroke	0.512"	(13 mm)

★ This specification for intermittent, freshwater duty.

COMMON SPECIFICATIONS

Bore	0.709"	(18 mm)
Max. Inlet Pressure	Flooded to 60 PSI	(Flooded to 4 BAR)
Crankcase Capacity	10 oz.	(3 L)
Maximum Fluid Temperature	160°F	(71°C)
Inlet Ports (2)	1/2" NPT	(1/2" NPT)
Discharge Ports (2)	3/8" NPT	(3/8" NPT)
Pulley Mounting	Either Side	(Either Side)
Shaft Diameter	0.650"	(16.5 mm)
Weight	14.4 lbs.	(6.5 kg)
Dimensions	10.24" x 8.79" x 5.35"	(260 x 223 x 136 mm)

HORSEPOWER REQUIREMENTS

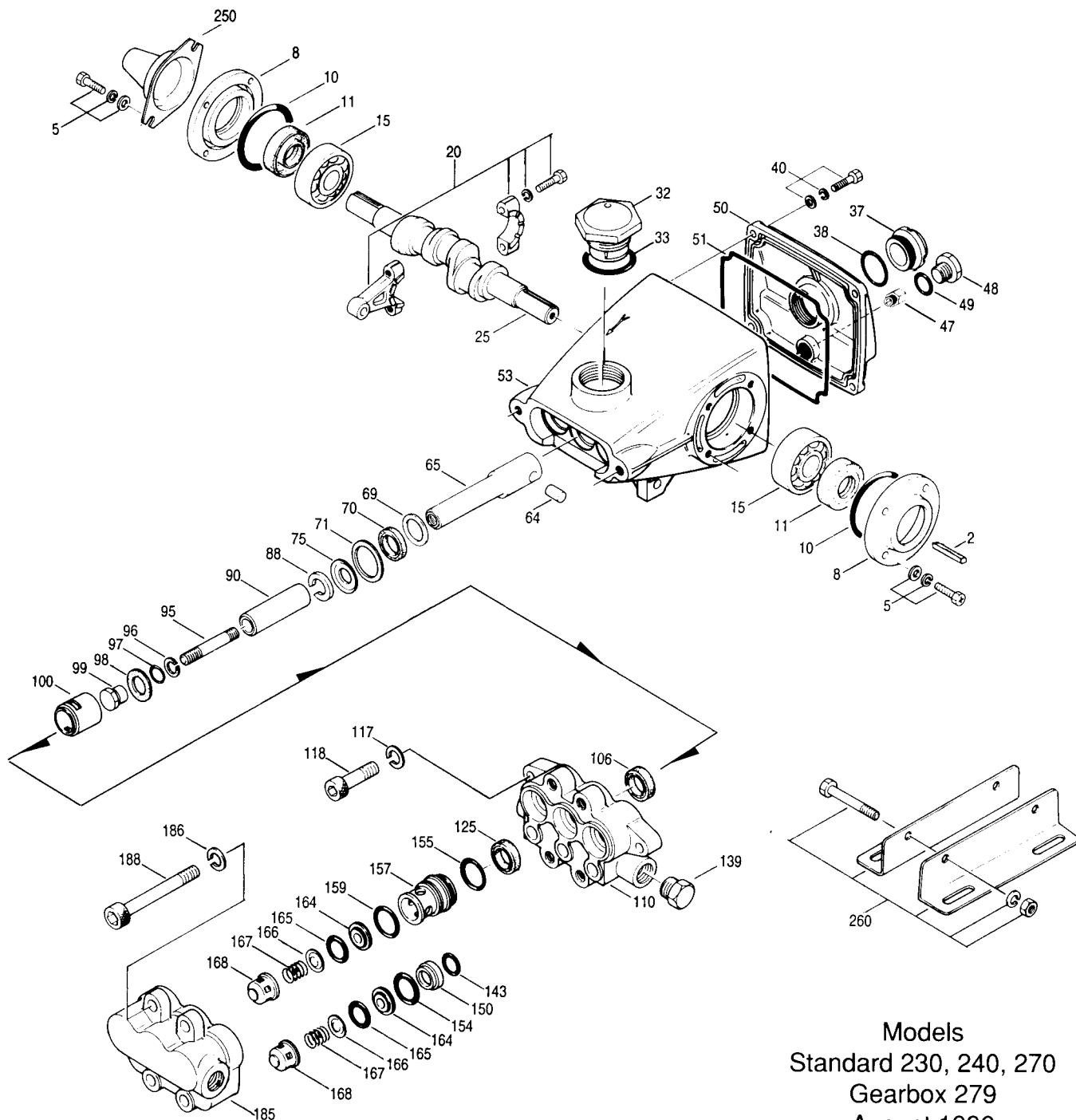
MODEL	FLOW		PRESSURE			MOTOR PULLEY SIZE	
			PSI 1000	PSI 1200	PSI 1500	Using 1725 RPM Motor & Std. 5.0" Pump Pulley O.D.	
	U.S. GPM	L/M	BAR 70	BAR 85	BAR 105	RPM	Pulley O.D.
270	4.0	15	2.8	N/A	N/A	1625	4.7
	3.5	13	2.4	2.9	3.6	1420	4.1
	3.0	11	2.1	2.5	3.1	1217	3.5
230	2.3	9	1.6	1.9	2.4	1725	Direct Drive
240	3.6	15	2.5	3.0	N/A	1725	Direct Drive

"Customer confidence is our greatest asset"

PARTS LIST

ITEM	PART NUMBER				DESCRIPTION	QTY
	Model 230	Model 240	Model 270	Model 279		
2	30047	30047	30047	30047	Key (M5)	1
5	92519 A	92519 A	92519 A	92519 A	Screw, Sems Comb. Head (M6x16)	8
8	27950 A	27950 A	27950 A	27950 A	Bearing Case	2
	—	—	—	44972	Blind Bearing Shaft Cover	1
10	26536 B	26536 B	26536 B	26536 B	O-Ring, Oil Seal Case	2
11	24159 B	24159 B	24159 B	24159 B	Oil Seal - (270, 230, 240-2) (279-1)	1-2
15	14487	14487	14487	14487	Bearing	2
20	101799 ZZ	101799 ZZ	101799 ZZ	101799 ZZ	Connecting Rod Assy	3
25	44917	44193	43897	—	Crankshaft - Dual End	1
	—	—	—	44973	Crankshaft - Single End	1
32	43211	43211	43211	43211	Oil Filler Cap	1
33	14177 B	14177 B	14177 B	14177 B	O-Ring, Oil Filler Cap	1
37	43987	43987	43987	43987	Oil Gauge, Bubble	1
38	44428 B	44428 B	44428 B	44428 B	Gasket, Flat - Oil Gauge	1
40	92520 Z	92520 Z	92520 Z	92520 Z	Screw, Sems Comb. Head (M6x20)	6
47	25144 Z	25144 Z	25144 Z	25144 Z	Adapter, Drain Plug (1/4" NPT) (For Optional Drain Hose)	1
48	25625	25625	25625	25625	Drain Plug	1
49	23170 B	23170 B	23170 B	23170 B	O-Ring, Drain Plug	1
50	43339 A	43339 A	43339 A	43339 A	Crankcase Cover	1
51	43340 B	43340 B	43340 B	43340 B	O-Ring, Crankcase Cover	1
53	44657 A	44657 A	44657 A	44657 A	Crankcase (4 Screw, Large Cap)	1
64	16948 S	16948 S	16948 S	16948 S	Pin, Plunger Rod	3
65	45114 SS	45114 SS	45114 SS	45114 SS	Plunger Rod	3
69	20017 S	20017 S	20017 S	20017 S	Washer, Oil Seal	3
70	25301 B	25301 B	25301 B	25301 B	Oil Seal	3
71	26854 S	26854 S	26854 S	26854 S	Washer, Oil Seal	3
75	43900 S	43900 S	43900 S	43900 S	Barrier Slinger	3
88	45697 SS	45697 SS	45697 SS	45697 SS	Washer, Keyhole (M18)	3
90	43901 CC	43901 CC	43901 CC	43901 CC	Plunger (M43)	3
95	89652 SS	89652 SS	89652 SS	89652 SS	Stud, Plunger Retainer (M6x40)	3
96	43235 T	43235 T	43235 T	43235 T	Back-up Ring, Plunger Retainer	3
97	17399 B	17399 B	17399 B	17399 B	O-Ring, Plunger Retainer	3
	14160 V	14160 V	14160 V	14160 V	O-Ring, Plunger Retainer	3
	46204 E	46204 E	46204 E	46204 E	O-Ring, Plunger Retainer	3
98	45891 CU	45891 CU	45891 CU	45891 CU	Gasket (M12.5)	3
99	43234 BB	43234 BB	43234 BB	43234 BB	Plunger Retainer	3
100	28597 P	28597 P	28597 P	28597 P	Seal Retainer	3
106	43243 BS	43243 BS	43243 BS	43243 BS	Lo-Pressure Seal	3
	44926 VS	44926 VS	44926 VS	44926 VS	Lo-Pressure Seal	3
	46651 E	46651 E	46651 E	46651 E	Lo-Pressure Seal	3
110	43902 BB	43902 BB	43902 BB	43902 BB	Manifold, Inlet	1
117	12503 Z	12503 Z	12503 Z	12503 Z	Washer, Split (M10)	2
118	87931 Z	87931 Z	87931 Z	87931 Z	Bolt, Socket Head (M10x35)	2
125	43245 BTS	43245 BTS	43245 BTS	43245 BTS	Hi-Pressure Seal	3
	44925 VS	44925 VS	44925 VS	44925 VS	Hi-Pressure Seal	3
	46652 HE	46652 HE	46652 HE	46652 HE	Hi-Pressure Seal - Hi-Temp	3
139	22179 CBB	22179 CBB	22179 CBB	22179 CBB	Plug, Inlet - 1/2"	1
143	17547 B	17547 B	17547 B	17547 B	O-Ring, Adapter (inner)	3
	11685 V	11685 V	11685 V	11685 V	O-Ring, Adapter (inner)	3
	46648 E	46648 E	46648 E	46648 E	O-Ring, Adapter (inner)	3
150	43904 BB	43904 BB	43904 BB	43904 BB	Inlet Valve Adapter	3
154	43893 B	43893 B	43893 B	43893 B	O-Ring, Adapter (outer)	3
	44927 V	44927 V	44927 V	44927 V	O-Ring, Adapter (outer)	3
	46649 E	46649 E	46649 E	46649 E	O-Ring, Adapter (outer)	3
155	26089 B	26089 B	26089 B	26089 B	O-Ring, Spacer	3
	11377 V	11377 V	11377 V	11377 V	O-Ring, Spacer	3
	46647 E	46647 E	46647 E	46647 E	O-Ring, Spacer	3
157	43905 BB	43905 BB	43905 BB	43905 BB	Discharge Valve Spacer	3
159	26089 B	26089 B	26089 B	26089 B	O-Ring, Spacer	3
	11377 V	11377 V	11377 V	11377 V	O-Ring, Spacer	3
	46647 E	46647 E	46647 E	46647 E	O-Ring, Spacer	3
164	44002 S	44002 S	44002 S	44002 S	Valve Seat	6
165	44001 B	44001 B	44001 B	44001 B	O-Ring, Valve Seat,	6
	44928 V	44928 V	44928 V	44928 V	O-Ring, Valve Seat	6
	46650 E	46650 E	46650 E	46650 E	O-Ring, Valve Seat	6
166	43723 S	43723 S	43723 S	43723 S	Valve	6
167	43750 S	43750 S	43750 S	43750 S	Valve Spring	6
168	43907 P	43907 P	43907 P	43907 P	Retainer, Spring	6
185	43903 BB	43903 BB	43903 BB	43903 BB	Manifold, Discharge	1
186	12503 Z	12503 Z	12503 Z	12503 Z	Washer, Split Lock	3/3
188	87933 Z	87933 Z	87933 Z	87933 Z	Bolt, Socket Head (M10x55)	4

EXPLODED VIEW



Models
Standard 230, 240, 270
Gearbox 279
August 1996

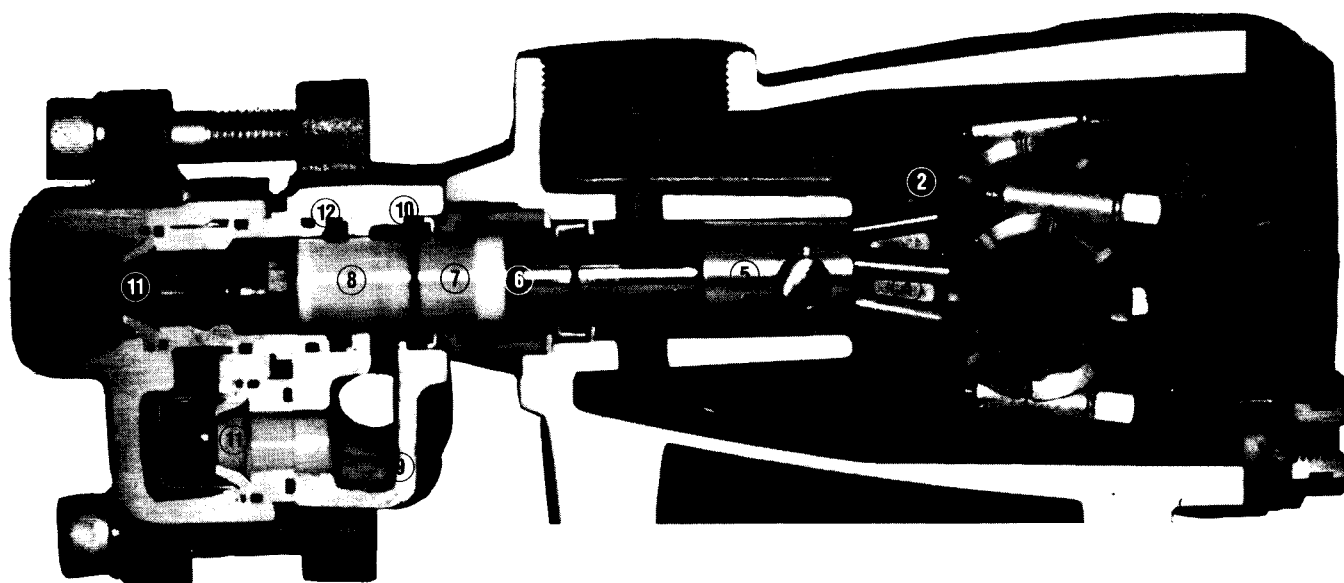
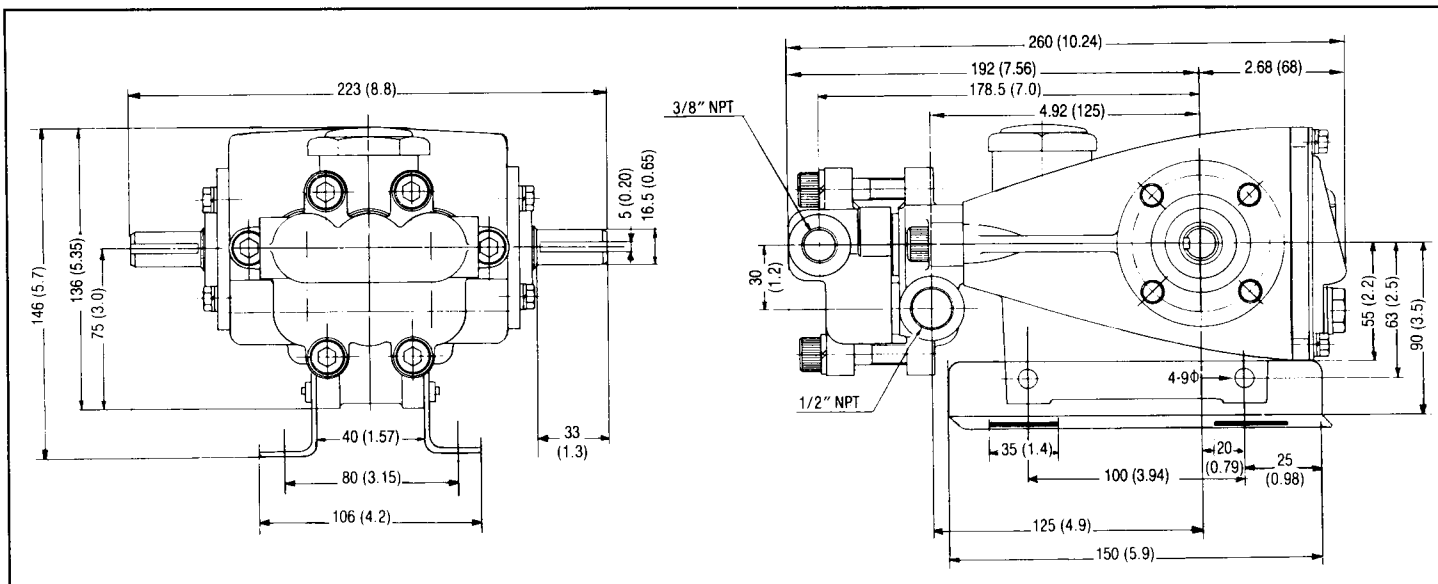
250	25130	25130	25130	25130	Shaft Protector	1
260	30612	30612	30612	30612	Angle Rail Assy (Incls: 26246,30901,30910,30920)	1
265	30651	30651	30651	30651	Complete Mounting Kit (30612,30032,30047,25130)	1
270	30246	30246	30246	30246	Pulley & Key Assy (Incls: 30032,30047)	1
277	34121	34121	34121	—	Bell Housing Assy (56C-145FR, 1.5 HP)	1
	34126	34126	34126	—	Bell Housing Assy (182TC-1284TC, 3.0 HP)	1
278	30632	30632	30632	—	Flexible Coupling Assy (M16.5 to 5/8")	1
	34032	34032	34032	—	Flexible Coupling Assy (M16.5 to 1-1/8")	1
306	30914 B	30914 B	30914 B	30914 B	Seal Kit (Incls: 97,106,125,143,154,155,159,165)	1
	33915 H	33915 H	33915 H	33915 H	Seal Kit (Incls: 97,106,125,143,154,155,159,165) Hi-Temp	1
	33914 E	33914 E	33914 E	33914 E	Seal Kit (Incls: 97,106,125,143,154,155,159,165)	1
310	30915	30915	30915	30915	Valve Kit (Incls: 143,154,155,164,165,166,167,168)	1
350	30696	30696	30696	30696	Valve Seat Removal Tool	1
351	43257	43257	43257	43257	Seal Case Removal Tool	1

Bold printed part numbers are standard and unique to a particular pump model. Italics are optional items.

See Tech Bulletins 33, 43, 47 and 52 for additional information. See 8010, 8011 data sheet for Gearbox servicing.

MATERIAL CODES (Not Part of Part Number) A=Aluminum B=Buna-N BB=Brass

C=Chrome CC=Ceramic CU=Copper E=EPDM H=Hi-Temp P=PVDF S=304SS SS=316SS T=Teflon V=Viton Z=Zinc Plated ZZ=Zamak



- 1 Diecast aluminum **crankcase** means high strength, light weight, and excellent tolerance control.
- 2 Oversized crankshaft **bearings** provide extended bearing life and pump performance.
- 3 Chrome-moly **crankshaft** provides unmatched strength and surface hardness for long life.
- 4 Matched oversized **connecting rods** are made of Zamak, a material noted for strength and superior bearing quality.
- 5 The **plunger rods** are high tensile strength stainless steel with zamak crossheads.
- 6 The stainless steel **slinger** provides back-up protection for the crankcase seal, keeping pumped fluids out of the crankcase.
- 7 Precision-polished solid ceramic **plungers** provide maximum resistance to corrosion and abrasion.
- 8 The close tolerance concentricity of the ceramic **plunger** maximizes seal life.
- 9 **Manifolds** are a high tensile strength forged brass for long term, continuous duty.
- 10 100% wet **seal** design adds to service life by allowing pumped fluids to cool and lubricate on both sides.
- 11 Stainless steel **valves, seats and springs** provide corrosion-resistance, positive seating and long life.
- 12 Specially formulated, CAT PUMP exclusive, **Hi-Pressure Seals** offer unmatched performance and seal life.

Aug 1996 7643



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