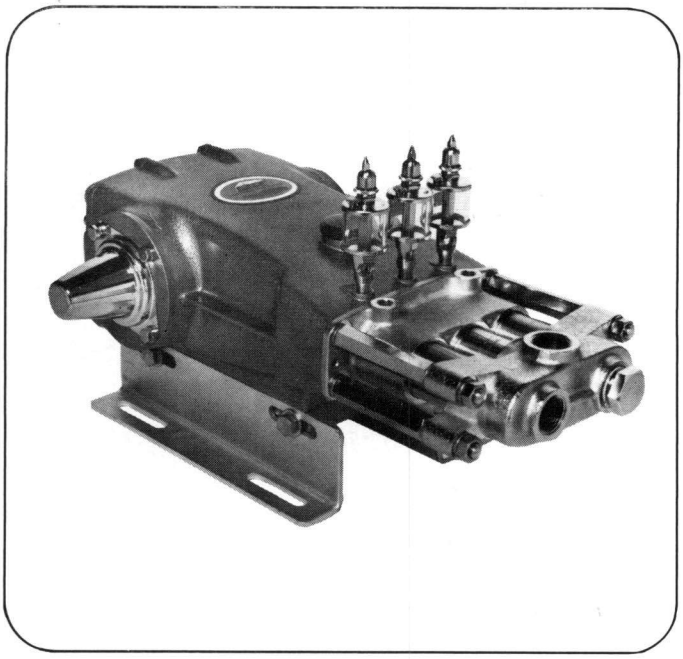
CAT® PUMPS



Hi-Temp Piston Pump Model 2527

SPECIFICATIONS

	U.S. Measure	Metric Measure
Volume	25 G.P.M.	(95 L/M)
Discharge Pressure	800 P.S.I.	(55 BAR)
Max. Inlet Pressure	★ **Flooded** to + 40 PSI	(**Flooded** to + 2.8 BAR)
RPM	772 RPM	(772 RPM)
Bore	1.490″	(38 mm)
Stroke	1.417″	(36 mm)
Crankcase Capacity	84 oz.	(2.5 L)
Maximum Fluid Temperature	210°F	(98°C)
Inlet Ports (1)	1-1/4″ NPT	(1-1/4″ NPT)
Circulating Ports (2)	1/4″ NPT	(1/4″ NPT)
Discharge Ports (3)	1″ NPT	(1″ NPT)
Cooling Fluid Ports	1/4″ NPT	(1/4″ NPT)
Cooling Fluid Capacity	1.6 Qts.	(1.5 L/M)
Pulley Mounting	Either Side	(Either Side)
Shaft Diameter	1.181″	(30 mm)
Weight	72 Lbs.	(32.5 Kg)
Dimensions	21.42 x 15.04 x 7.75	(544.5 x 382 x 197 mm)

★ **NOTE: Pressurized inlet is essential with high temperatures. See Tech Bulletin #2 for details.**

FEATURES

SUPERIOR DESIGN

- Triplex piston design gives smoother fluid flow.
- Special teflon piston assemblies handle high temperatures.
- Circulating fluid cools dual inlet manifold seals.
- All stainless steel discharge valves.
- Oil bath crankcase assures proper lubrication.
- Lubricated inlet seal prevents leakage and prolongs life.

QUALITY MATERIALS

- Wear surfaces of pumping section are hard chrome plated stainless steel for maximum durability and abrasion resistance.
- Chrome plated, brass manifold is stong and corrosion resistant.
- Stepped stainless steel piston rod and slinger allows chromed sleeve to be replaced from front of pump.
- Heavy duty connecting rods are made of high quality Zamak bearing material for strength.
- Forged, nitrited chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity mean longer bearing life.

EASY MAINTENANCE

- All wet end wear surfaces are easily serviced without entering crankcase, requiring less time and effort.
- Wear parts are availabe in handy kits.
- Routine lubrication checks are the only maintenance required on this precision built pump.

HORSEPOWER REQUIREMENTS

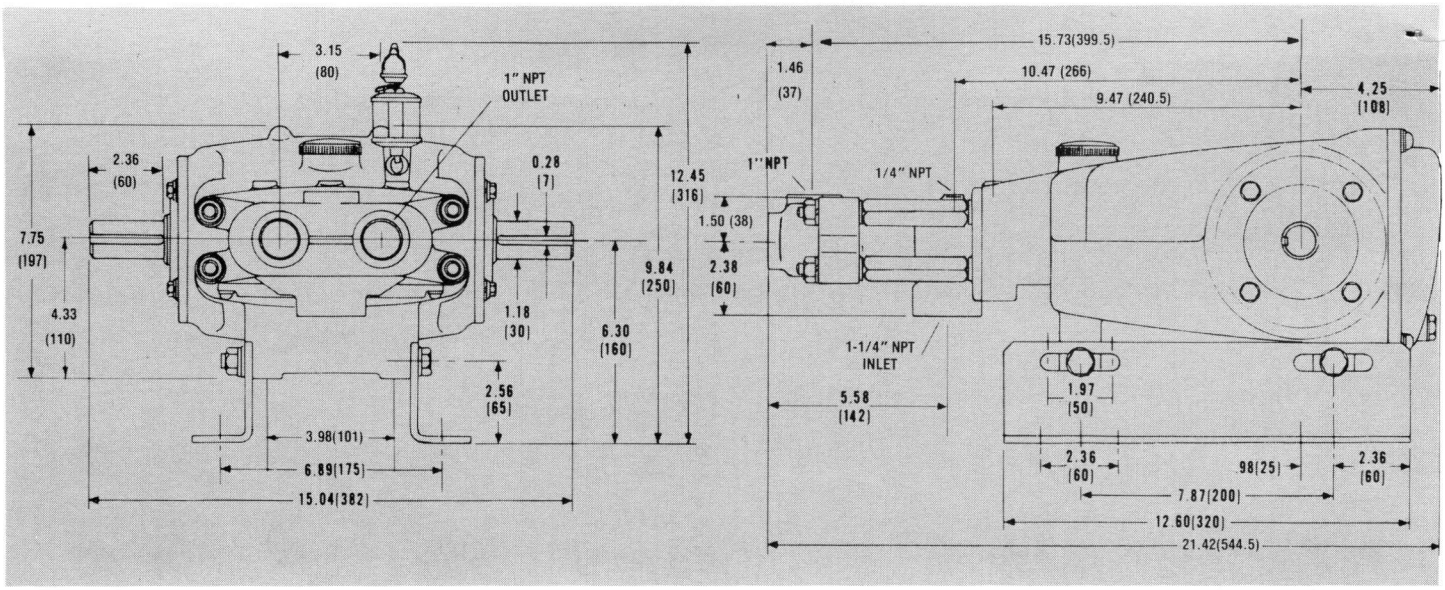
Flow		PRESSURE PSI 500	PSI 600	PSI 800	MOTOR PULLEY SIZE Using 1725 RPM Motor & Std. Pump Pulley O.D.	
GPM	L/M	BAR 35	BAR 40	BAR 55	RPM	Pulley O.D.
25.0	95	8.6	10.3	13.7	772	4.4
20.0	76	6.9	8.3	11.0	620	3.5
15.0	57	5.2	6.2	8.3	465	2.7

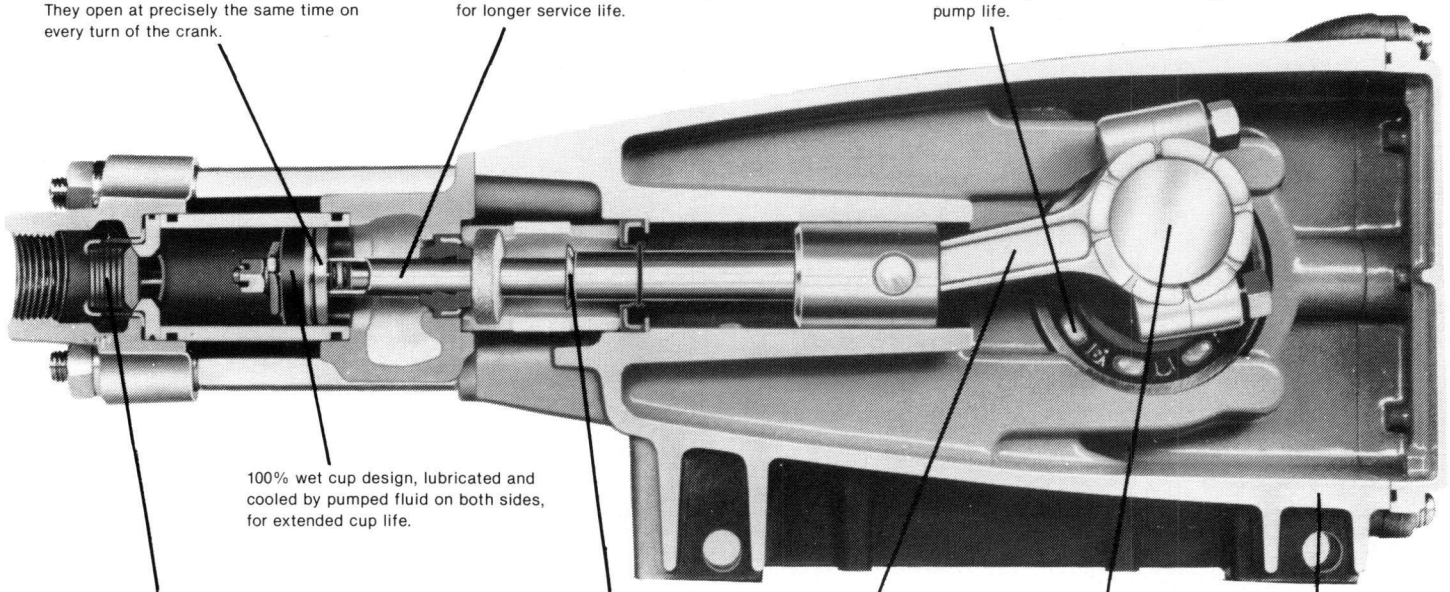
DETERMINING THE PUMP R.P.M. — Rated G.P.M. / Rated R.P.M. = "Desired" G.P.M. / "Desired" R.P.M.

DETERMINING THE REQUIRED H.P. — GPM × PSI / 1460 = Electric Brake H.P. Required

DETERMINING MOTOR PULLEY SIZE — Motor Pulley O.D. / Pump R.P.M. = Pump Pulley O.D. / Motor R.P.M.

Note: Consult engine manufacturer when using gas or diesel engine





Inlet valves are mechanically actuated. They open at precisely the same time on every turn of the crank.

Wear surfaces are hard chrome plated for longer service life.

Main bearings are oversized for longer pump life.

100% wet cup design, lubricated and cooled by pumped fluid on both sides, for extended cup life.

Valve seats and springs are stainless steel for added corrosion resistance.

Stainless steel slinger keeps pumped fluid out of crankcase.

Crankshaft is nitrited chrome-moly forged. Cat Pumps is the only pump manufacturer in the world utillizing this quality.

Matched oversize connecting rods are of Zamak, a material noted for strength and bearing quality.

Diecast aluminum crankcase means high strength, light weight and excellent tolerance control.

2527-S-689-60 5M

CAT PUMPS CORPORATION

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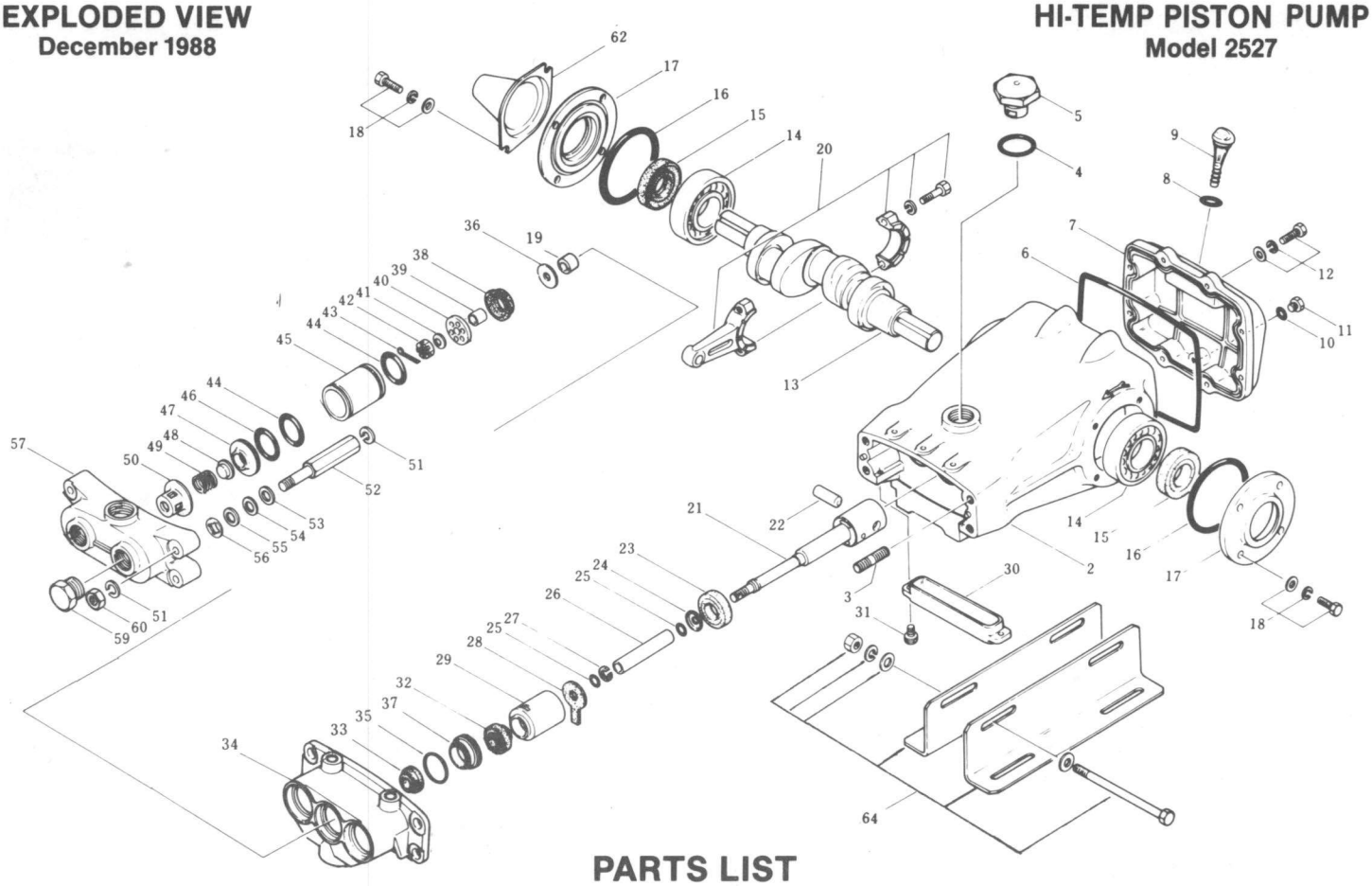
December 1988

HI-TEMP PISTON PUMP
Model 2527



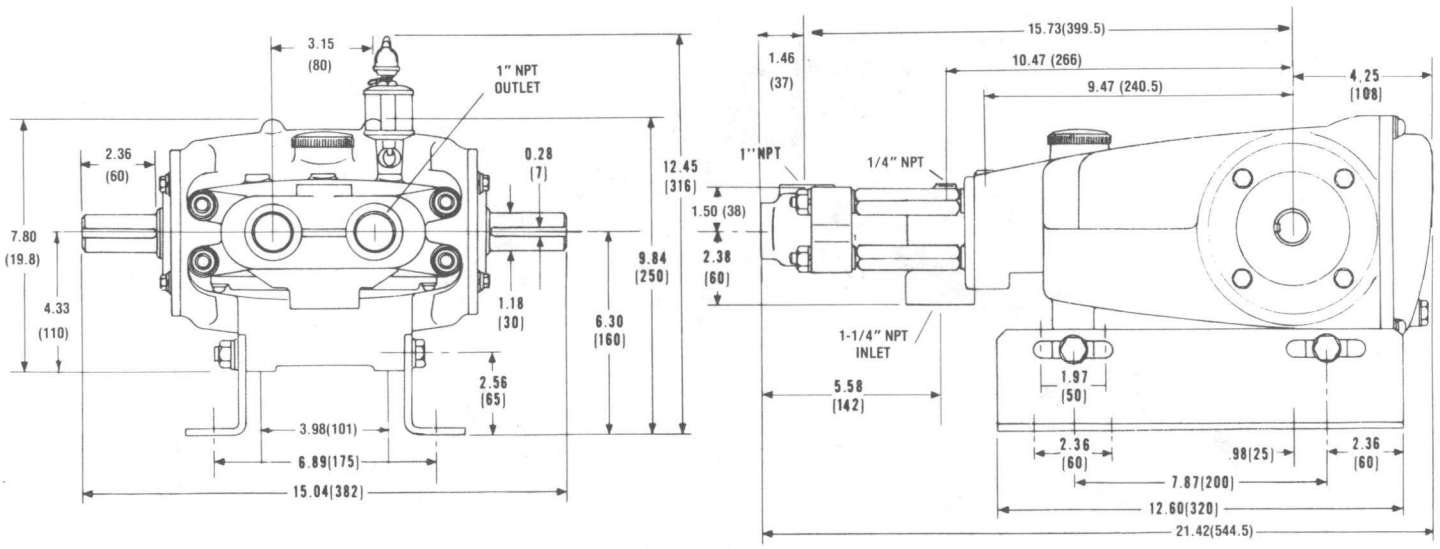
PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.
2	27762	Crankcase	1
3	14135	Stud (M12x50)	4
4	14177	O-ring, Cap (Buna-N)	1
5	43211	Oil Filler Cap	1
6	27767	O-ring, Crankcase Cover (Buna-N)	1
7	27768	Crankcase Cover	1
8	11338	O-ring, Dipstick (Buna-N)	1
9	27769	Dip Stick	1
10	23170	O-ring, Drain Plug (Buna-N)	1
11	25625	Drain Plug	1
12	92508	Sems Hex Head Screw (M8x25)	8
13	27770	Crankshaft	1
14	26512	Bearing	2
15	27771	Oil Seal (Buna-N)	2
16	27772	O-ring, Oil Seal Case (Buna-N)	2
17	27773	Oil Seal Case	2
18	92508	Sems Hex Head Screw (M8x25)	8
19	**43273**	**Spacer**	**3**
20	27776	Connecting Rod	3
21	**43266**	**Piston Rod (M8)**	**3**
22	27784	Piston Pin	3
23	27785	Oil Seal (Buna-N)	3
24	27786	Barrier Slinger	3
25	**14198**	**O-ring, Sleeve (Viton)**	**6**
26	43122	Sleeve (M16)	3
	43123	Sleeve (Unchromed)	3
27	29246	Back-up Ring, Sleeve (Teflon)	3
28	43126	Wick (M16)	3
29	27788	Seal Retainer	3
30	27790	Oil Pan	1
31	92519	Sems Hex Screw (M6x16)	2
32	**43272**	**Inlet Seal (with Grease Pocket)**	**3**
33	**43269**	**Inlet Seal (with Lip)**	**3**
34	**43270**	**Inlet Manifold**	**1**
35	**14178**	**O-ring, Seal Adapter (Buna-N)**	**3**
36	29240	Inlet Valve (M8)	3
37	**43268**	**Seal Adapter**	**3**
38	**30498**	**Piston Assembly (Roulon)**	**3**

ITEM	PART NO.	DESCRIPTION	QTY.
39	29231	Piston Spacer (M8)	3
40	29239	Piston Retainer (M8)	3
41	27871	Conical Washer (S.S.)	3
42	27510	Slotted Nut (S.S.) (M8)	3
43	29589	Cotter Pin (M8)	3
44	**11748**	**O-Ring, Cylinder (Viton)**	**6**
45	27844	Cylinder	3
	29049	Cylinder (Unchromed)	3
46	**28769**	**O-ring, D.V.S. (Viton)**	**3**
47	28396	Discharge Valve Seat	3
48	43133	Discharge Valve	3
49	26548	Valve Spring	3
50	43134	Valve Spring Retainer	3
51	30908	Spring Washer-1/2"	8
52	**43277**	**Cylinder Bolt**	**2**
53	27804	Washer (12.5x1.0)	4/8
54	26553	Washer (12.5x0.5)	4/8
55	26554	Washer (12.5x0.3)	4/8
56	27933	Lock Washer (11.7x0.2)	4
57	27805	Discharge Manifold	1
59	27807	Plug (1/2" NPT)	1
60	81060	Hex Nut (M12)	2
62	26516	Shaft Protector	1
64	30614	Angle Rail Assembly	1
	27808	Rail	2
	30902	Hex Cap Screw (1/2x6-1/2)	2
	30930	Flat Washer (1/2")	4
	81060	Hex Nut (M12)	2
	30908	Spring Washer	2
	30285	Hub and Key Assembly	
	30207	Hub with Screw	1
	50146	Key (M7x7x40)	1
	30206	Pulley, 9.75" A.B.	1
—	30278	Oiler, 1 oz.	3
—	30967	Glass, oiler	1
—	10069	Gasket, oiler	1

All bold type parts are exclusive to Model 2527.
Other items are interchangeable with standard Model 2520.

Before you begin servicing your pump, **Please carefully read OPERATOR'S MANUAL and separate SERVICE MANUAL** for special lubrication, disassembly and reassembly information.



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***NOTE: Pressurized inlet is essential with high temperatures. See Tech Bulletin #2 for details.**

LUBRICATION — Before starting pump, fill crankcase per specification with **Cat Pump Crankcase Oil, 10W40 multi-viscosity petroleum-based HYDRAULIC lubrication** with antiwear and rust inhibitor additives. Change initial fill after 50 hours running period. Change oil every 3 months or at 500 hour intervals thereafter. Oiler setting at three drops per hole, twice per month is sufficient for normal operation Oiler adjustment is vertical to start feed, horizontal to stop feed. 45° to drain reservoir. Additional lubrication may be required with increased hours of operation and temperature.

OPERATION:

The Model 2527 is a conversion from the 2520 pump. It is capable of handling fluid temperatures up to 210°F because of a specially designed inlet manifold and dual inlet seals. The specially ported inlet manifold allows cool water to be circulated around the inner lips of the seals, thereby diminishing the effect on the seals caused by high temperature pumped fluids. Plumb the cool water into the first top inlet manifold port and drain from the second top port.

The cool water may be supplied by a small circulating pump, or standard city water line, either using a 1/4" supply line. A control valve should be installed to regulate the amount of water being circulated through the manifold. Regulate amount of cooling water so that **discharge water is no more than 120°F.** Allow this cool circulating water to drain to the floor. Do not recirculate this water. NOTE: After pump shuts down, allow cool water to continue circulating around seals up to approximately 5 minutes.

Because of the high temperature of the pumped fluid and the inevitable temperature increase which results whenever by-pass fluid is recirculated back to the inlet of the pump, it is **NOT RECOMMENDED to return the by-pass fluid** of your regulating device to the inlet. Allow this by-pass fluid to drain to the floor or to a properly sized baffled reservoir.

SERVICING:

The standard PISTON PUMP SERVICE procedure may be followed for the Model 2527, Hi-Temp pump with the addition of the following steps:

SERVICING THE PUMPING SECTION:

Reassembly: Before installing the inlet valve in the Model 2527, **be certain the spacer is installed first,** then proceed with standard inlet valve, Roulon piston assembly, piston spacer, piston retainer, washer, nut and cotterpin.

SERVICING THE SLEEVES AND SEALS:

Reassembly: On Model 2527, the seal with the lip, the adapter, and the seal with grease pocket can be driven out as an assembly.

To install a new seal assembly, place manifold on working surface with **crankcase side up.** Install seal with lip in chamber with **garter spring down.** Next examine o-ring on adapter and replace either o-ring or adapter if worn. Lubricate outer surface of adapter and install new o-ring. Press adapter into chamber, smaller diameter end first. Next install grease pocket seal with **garter spring down.** Then proceed with standard reassembly of pump.