



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 strong 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 available in handy kits.
- Routine lubrication checks are the only maintenance required on this precision built pump.

HORSEPOWER REQUIREMENTS

| Flow | | PRESSURE | | | MOTOR PULLEY SIZE | |
|------|-----|----------|------|------|--|-------------|
| | | PSI | PSI | PSI | Using 1725 RPM Motor & Std. Pump Pulley O.D. | |
| GPM | L/M | BAR | BAR | BAR | RPM | Pulley O.D. |
| | | 500 | 600 | 800 | | |
| | | 35 | 40 | 55 | | |
| 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 |

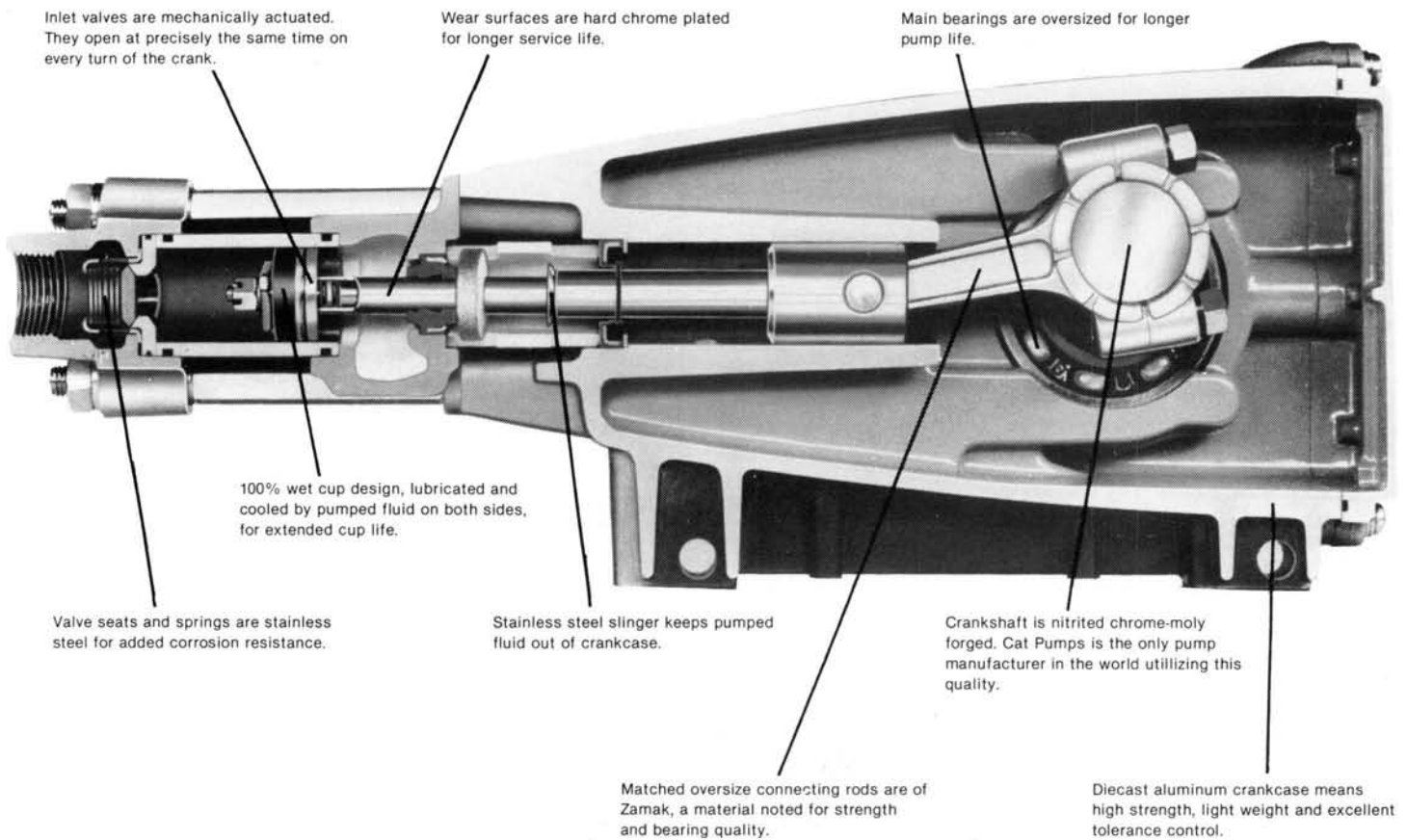
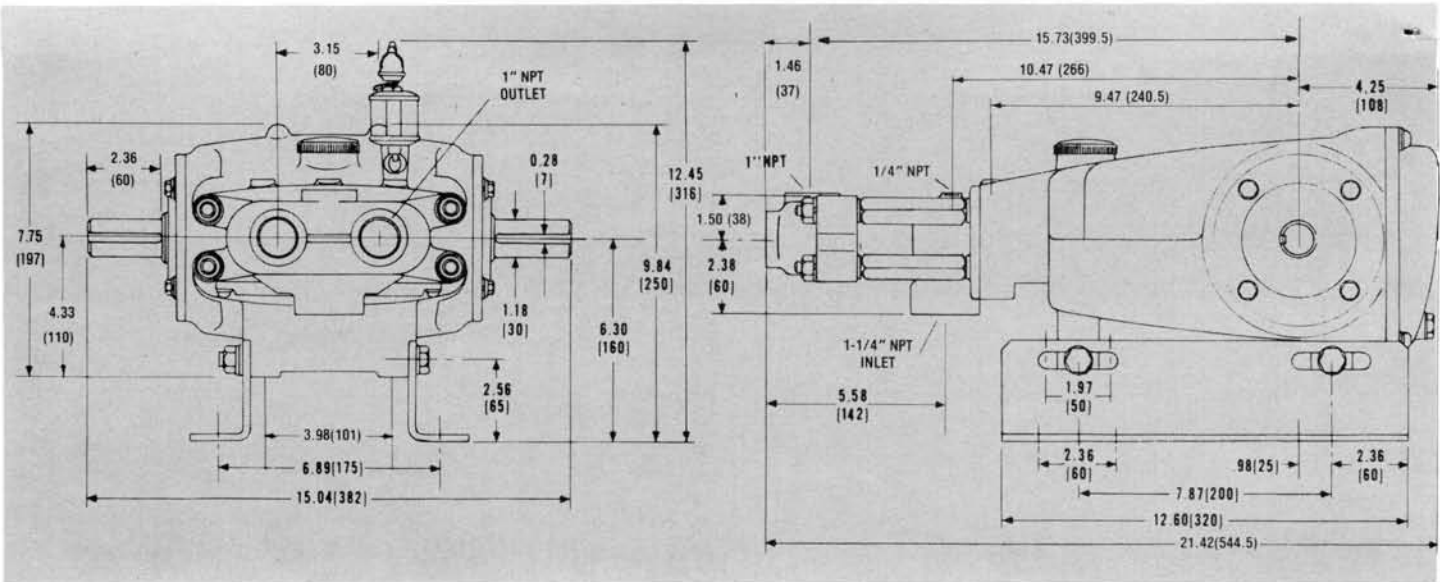
DETERMINING THE PUMP R.P.M. $\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}} = \frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$

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

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

WORLD LEADER IN TRIPLEX HIGH PRESSURE PUMPS



2527-S-689-60 5M



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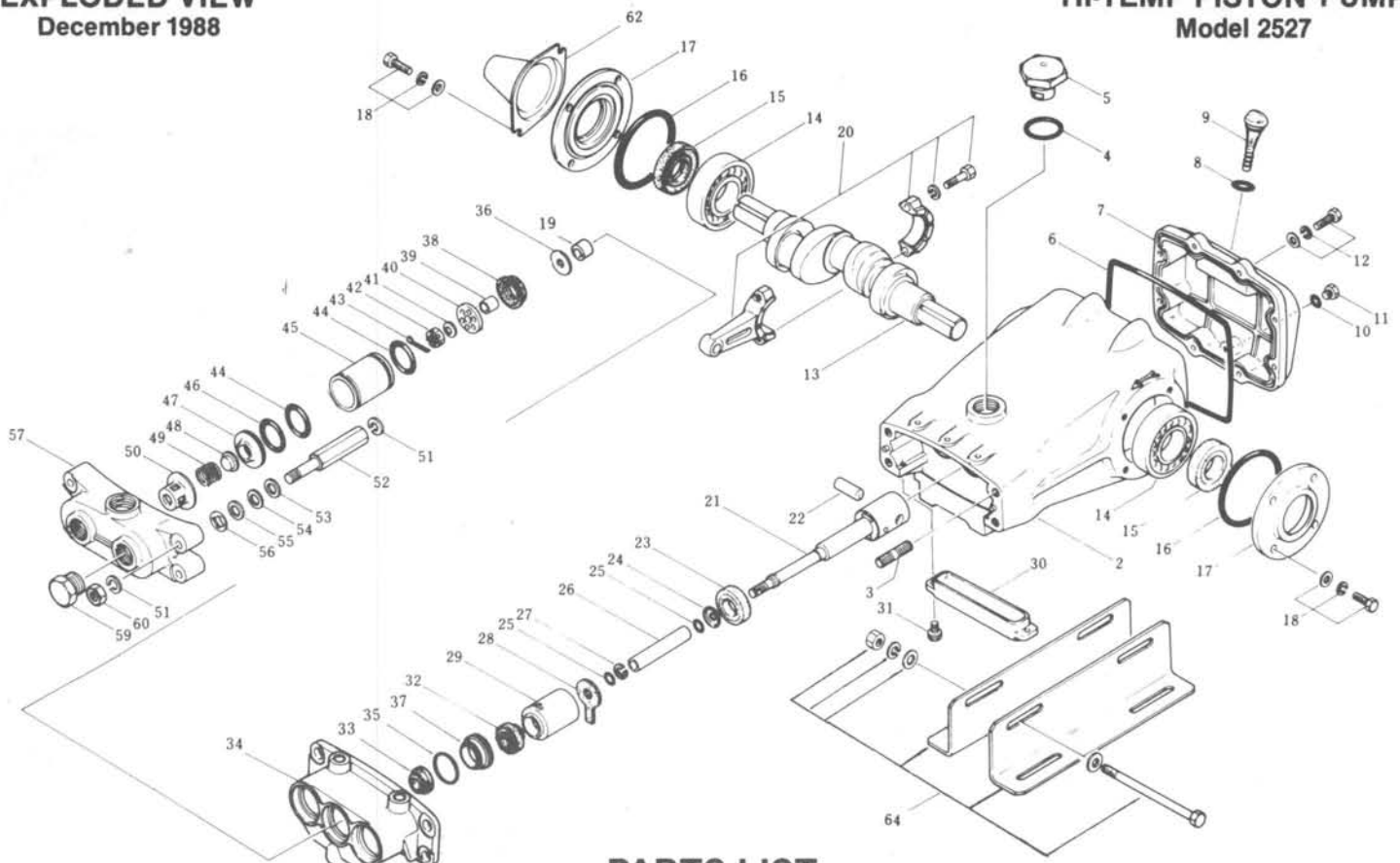
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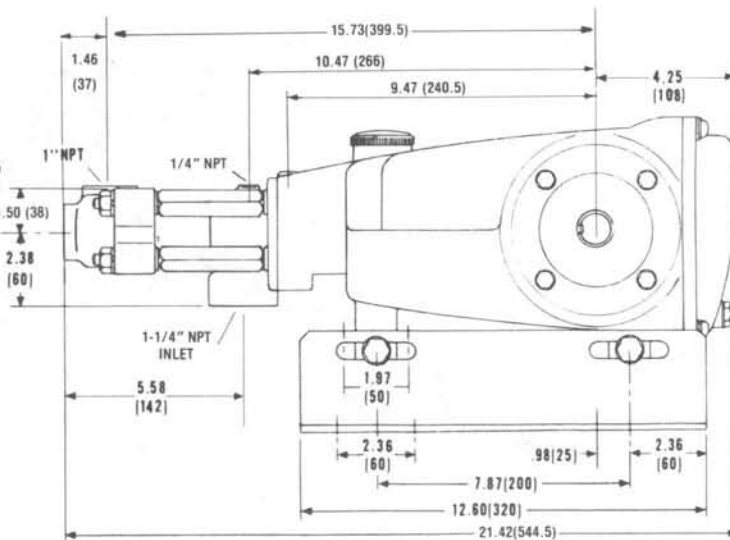
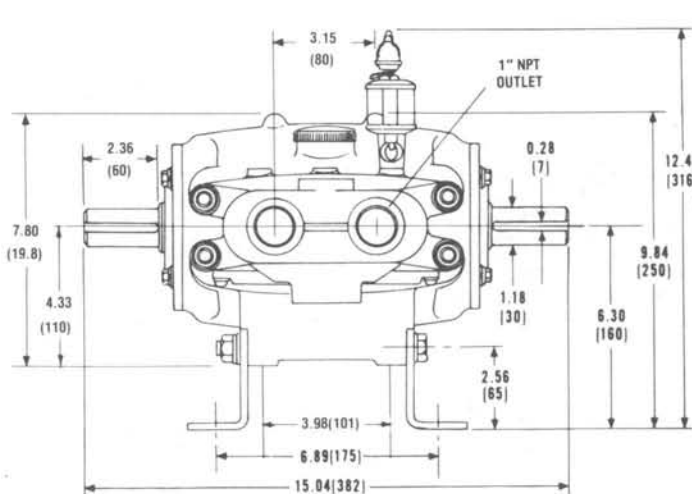


PARTS LIST

| ITEM | PART NO. | DESCRIPTION | QTY. | ITEM | PART NO. | DESCRIPTION | QTY. |
|-----------|--------------|--|----------|-----------|--------------|---------------------------------|----------|
| 2 | 27762 | Crankcase | 1 | 39 | 29231 | Piston Spacer (M8) | 3 |
| 3 | 14135 | Stud (M12x50) | 4 | 40 | 29239 | Piston Retainer (M8) | 3 |
| 4 | 14177 | O-ring, Cap (Buna-N) | 1 | 41 | 27871 | Conical Washer (S.S.) | 3 |
| 5 | 43211 | Oil Filler Cap | 1 | 42 | 27510 | Slotted Nut (S.S.) (M8) | 3 |
| 6 | 27767 | O-ring, Crankcase Cover (Buna-N) | 1 | 43 | 29589 | Cotter Pin (M8) | 3 |
| 7 | 27768 | Crankcase Cover | 1 | 44 | 11748 | O-Ring, Cylinder (Viton) | 6 |
| 8 | 11338 | O-ring, Dipstick (Buna-N) | 1 | 45 | 27844 | Cylinder | 3 |
| 9 | 27769 | Dip Stick | 1 | | 29049 | Cylinder (Unchromed) | 3 |
| 10 | 23170 | O-ring, Drain Plug (Buna-N) | 1 | 46 | 28769 | O-ring, D.V.S. (Viton) | 3 |
| 11 | 25625 | Drain Plug | 1 | 47 | 28396 | Discharge Valve Seat | 3 |
| 12 | 92508 | Sems Hex Head Screw (M8x25) | 8 | 48 | 43133 | Discharge Valve | 3 |
| 13 | 27770 | Crankshaft | 1 | 49 | 26548 | Valve Spring | 3 |
| 14 | 26512 | Bearing | 2 | 50 | 43134 | Valve Spring Retainer | 3 |
| 15 | 27771 | Oil Seal (Buna-N) | 2 | 51 | 30908 | Spring Washer-1/2" | 8 |
| 16 | 27772 | O-ring, Oil Seal Case (Buna-N) | 2 | 52 | 43277 | Cylinder Bolt | 2 |
| 17 | 27773 | Oil Seal Case | 2 | 53 | 27804 | Washer (12.5x1.0) | 4/8 |
| 18 | 92508 | Sems Hex Head Screw (M8x25) | 8 | 54 | 26553 | Washer (12.5x0.5) | 4/8 |
| 19 | 43273 | Spacer | 3 | 55 | 26554 | Washer (12.5x0.3) | 4/8 |
| 20 | 27776 | Connecting Rod | 3 | 56 | 27933 | Lock Washer (11.7x0.2) | 4 |
| 21 | 43266 | Piston Rod (M8) | 3 | 57 | 27805 | Discharge Manifold | 1 |
| 22 | 27784 | Piston Pin | 3 | 59 | 27807 | Plug (1/2" NPT) | 1 |
| 23 | 27785 | Oil Seal (Buna-N) | 3 | 60 | 81060 | Hex Nut (M12) | 2 |
| 24 | 27786 | Barrier Slinger | 3 | 62 | 26516 | Shaft Protector | 1 |
| 25 | 14198 | O-ring, Sleeve (Viton) | 6 | 64 | 30614 | Angle Rail Assembly | 1 |
| 26 | 43122 | Sleeve (M16) | 3 | | 27808 | Rail | 2 |
| | 43123 | Sleeve (Unchromed) | 3 | | 30902 | Hex Cap Screw (1/2x6-1/2) | 2 |
| 27 | 29246 | Back-up Ring, Sleeve (Teflon) | 3 | | 30930 | Flat Washer (1/2") | 4 |
| 28 | 43126 | Wick (M16) | 3 | | 81060 | Hex Nut (M12) | 2 |
| 29 | 27788 | Seal Retainer | 3 | | 30908 | Spring Washer | 2 |
| 30 | 27790 | Oil Pan | 1 | | 30285 | Hub and Key Assembly | 1 |
| 31 | 92519 | Sems Hex Screw (M6x16) | 2 | | 30207 | Hub with Screw | 1 |
| 32 | 43272 | Inlet Seal (with Grease Pocket) | 3 | | 50146 | Key (M7x7x40) | 1 |
| 33 | 43269 | Inlet Seal (with Lip) | 3 | | 30206 | Pulley, 9.75" A.B. | 1 |
| 34 | 43270 | Inlet Manifold | 1 | | 30278 | Oiler, 1 oz. | 3 |
| 35 | 14178 | O-ring, Seal Adapter (Buna-N) | 3 | | 30967 | Glass, oiler | 1 |
| 36 | 29240 | Inlet Valve (M8) | 3 | | 10069 | Gasket, oiler | 1 |
| 37 | 43268 | Seal Adapter | 3 | | | | |
| 38 | 30498 | Piston Assembly (Roulon) | 3 | | | | |

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.



SPECIFICATIONS

| | U.S. Measure | Metric Measure |
|---------------------------|--------------------|-----------------------|
| Volume | 25 GPM | (95 L/M) |
| Discharge Pressure | 800 PSI | (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) |
| Shaft Diameter | 1.181" | (30 mm) |
| Weight | 72 Lbs. | (32.5 Kg) |
| Dimensions | 21.4"x15.04"x7.75" | (544.5x382x198 mm) |

*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.

HORSEPOWER REQUIREMENTS

| Flow | | PRESSURE | | | MOTOR PULLEY SIZE | |
|--------------------------------------|-----|--|------|------|--|-------------|
| | | PSI | PSI | PSI | Using 1725 RPM Motor & Std. Pump Pulley O.D. | |
| GPM | L/M | BAR | BAR | BAR | RPM | Pulley O.D. |
| | | 35 | 40 | 55 | | |
| 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. = "Desired" G.P.M. | | | Rated R.P.M. = "Desired" R.P.M. | |
| DETERMINING THE REQUIRED H.P. | | GPM x PSI = Electric Brake H.P. Required | | | 1460 | |
| DETERMINING MOTOR PULLEY SIZE | | Motor Pulley O.D. = Pump Pulley O.D. | | | Motor R.P.M. | |

Note: Consult engine manufacturer when using gas or diesel engine

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.