

Oil Pump

Models L 5016, L 5116 and L 5132

Owner's Manual



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GENERAL INFORMATION

The purpose of this manual is to assist you in installing, operating and maintaining your Oil Pump. This pump is a positive displacement, direct drive pump.



Both the 12-volt DC and the 115-volt AC pump are compatible with motor oil, gear oil, hydraulic oil, antifreeze (not to exceed 50% water), ATF and waste oil. Do not use this pump for dispensing any fluids other than those for which it was designed. To do so may damage pump components and will void the warranty.

Do not use the Oil pump with water, acids, brake fluid or windshield washer fluid.

If in doubt about compatibility of a specific fluid, contact the supplier of the fluid to check for chemical compatibility with:

- Aluminum
- Brass
- Nitrile Rubber
- Stainless Steel
- Steel
- Zinc Plated Steel

Do not leave the system running without fluids. "Dry running" can damage the pump.

Do not pump the tank completely dry, as contaminants from the bottom of the tank may enter the pump.

Observe all safety precautions concerning safe handling of petroleum fluids. Do not use pump with low flash point fluids (100°F or less).

To ensure safe operation, this pump must be properly grounded. Care should be taken to ensure proper grounding during initial installation and after any service or repair procedures. For your safety, please take a moment to review the warnings below.

Observe precautions against electrical shock when operating the system. Serious or fatal shock can result from operating electrical equipment in damp or wet locations.

On 12-volt pumps, inspect external pump wiring regularly to make sure it is correctly attached to the battery. To avoid electrical shock, use extra care when connecting the pump to power.

Avoid prolonged skin contact with petroleum fluids. Use protective goggles, gloves and aprons in case of splashing or spills. Change saturated clothing and wash skin promptly with soap and water.

Observe precautions against electrical shock when servicing the pump. **Always** disconnect power before repairing or servicing. **Never** apply electrical power to the system when any of the coverplates are removed.

If using solvent to clean pump components or tank, observe the solvent manufacturer's recommendations for safe use and disposal.

The 115-volt AC pump motors are equipped with thermal overload protection. If overheated, the pump will shut itself off. Turn off the pump if this occurs. See Motor Protector Section for details.

Worn and damaged hoses or nozzles are potential safety hazards and should be replaced.

SAFETY INSTRUCTIONS



The following safety alert symbols are used in this manual.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

It is your responsibility to:

- know and follow applicable national, state, and local safety codes pertaining to installing and operating electrical equipment for use with petroleum fluids.
- insure that all equipment operators have access to adequate instructions concerning safe operating and maintenance procedures.

INSTALLATION

Make sure all threaded connections are wrapped with three to four turns of oil resistant thread tape or pipe thread sealant.

Make sure drums are properly secured to prevent tip over when full or empty. All tanks must be properly vented.

Installing Pump to a Tank

The pumps have a 2 in. NPT connection that can be mounted directly to a 2 in. female pipe thread on the tank.

1. Clean the tank interior of all dirt and foreign material.
2. Glue sections of suction pipe together and cut it to the proper length that is required. Suction pipe should extend 2 to 3 inches above bottom of tank.
3. Screw suction pipe into inlet threads of pump base.
4. Insert the suction pipe through the tank bung. Screw pump into tank bung to secure the pump to the tank. (Figure 1)

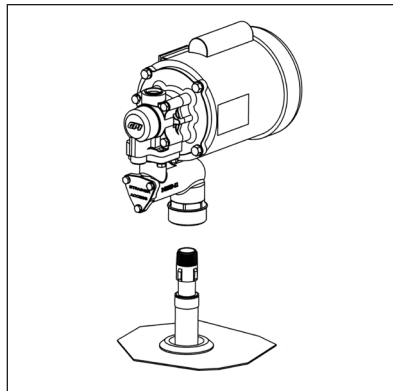


Figure 1

- To prevent pressure buildup and possible leaks through the ball valve, make sure the tank is vented.

Installing Discharge Plumbing on Pump Outlet

- Install a 90 degree elbow to the pump outlet using oil resistant pipe sealant.
- Install the hose and ball valve using oil resistant pipe sealant on the threads. Tighten securely.

Electrical Installation

⚠ WARNING

Electrical wiring must be done by a licensed electrician. Shut off all power before connecting wires to motor. Failure to follow these wiring instructions may result in death or serious injury from shock, fire or explosion.

115-volt AC Powered Pumps (Models L 5116 & L 5132):

This Oil Pump is factory wired for 115-volt AC. Power to the unit should be supplied from a dedicated circuit breaker.

If AC extension cords are used, they must be capable of safely carrying the rated motor current. Use only heavy duty, 3-wire, grounded extension cords.

NOTE: Many building codes require Ground Fault Circuit interrupt (GFCI) protection.

Motor Ratings (FLA):

115-volt AC:

- 1/2 HP, 1725 RPM – 7.5 amps
- 1 HP, 3450 RPM – 13 amps

12-volt DC:

- 1/2 HP, 1800 RPM – 40 amps

12-volt DC Powered Pumps (Model L 5016):

This Oil Pump is factory wired for 12-volt DC. Circuit must be protected with a 50 amp automotive-type fuse (not supplied).

The power cord is not supplied with the pump. We recommends a minimum power cord of 10/3 AWG. Do not exceed 15 feet of cord.

OPERATION

⚠ CAUTION

Do not operate pump dry. Damage to pump could occur.

Before first usage, pour oil into pump outlet port to coat pumping element.

- Place ball valve into the receiving tank to be filled.
- Turn on the motor.
- Open the ball valve and fill the container to the desired level. If flow does not occur with 15 seconds, shut off motor and refer to the priming information in the Troubleshooting Section.
- Shut off the nozzle.
- Turn off the motor.

Motor Protector

The AC pumps contain thermal motor protection. If the pump overheats the unit will shutoff.

If the motor shuts off, follow these instructions:

Model L 5132: Turn off the switch. Allow the motor to cool before restarting.

Model L 5116: Turn off the switch. Allow the motor to cool. Push the button to manually reset the protector.

Model L 5016: The 12-volt model is protected by inline fuse (not supplied). If the motor shuts off, check the fuse.

MAINTENANCE

Disconnect power and relieve pressure in the system by opening the nozzle before servicing the pump.

This pump is designed for minimum maintenance. Motor bearings are sealed and require no lubrication. Inspect the pump and components regularly for leaks and make sure the hose, ball valve and components are in good condition.

Use of the pump with unauthorized fluids will void the warranty.

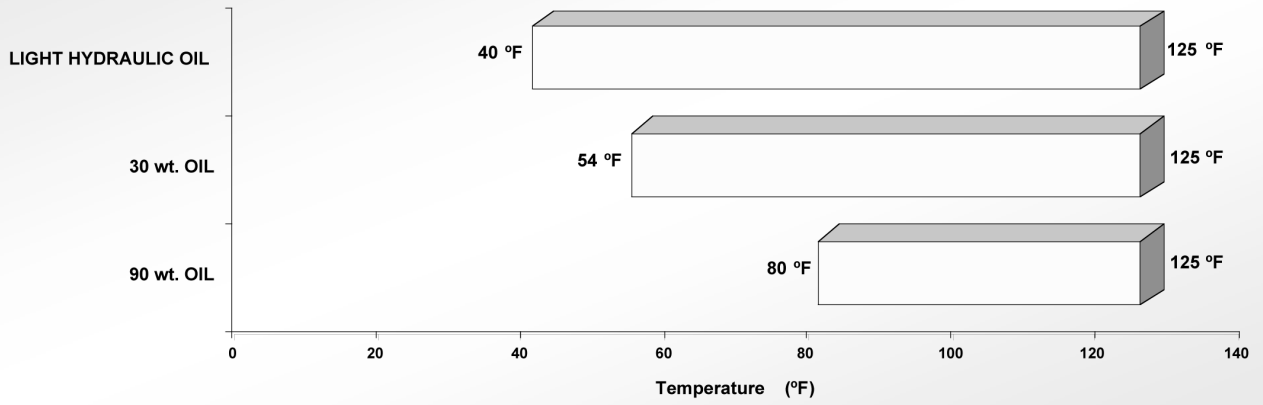
Remove and clean the strainer if low flow is noticed. To clean the strainer, remove the three screws on the strainer cover. Remove cover and pull out screen. Clean screen and reinstall. Care should be taken not to damage the O-ring.

TROUBLESHOOTING

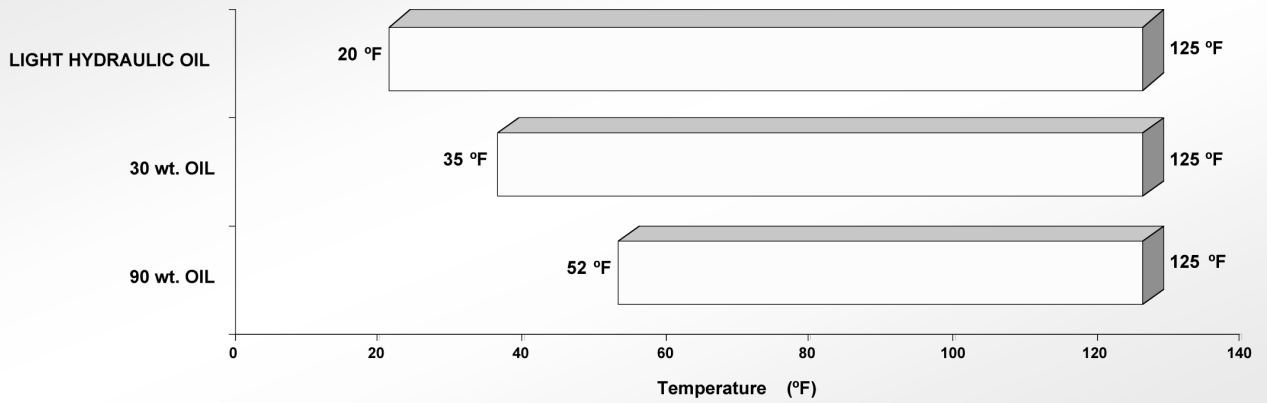
SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
A. PUMP WON'T PRIME	<ol style="list-style-type: none"> 1. Dirty strainer screen 2. Suction line problem 3. Pump outlet is blocked or valve is shutoff 4. Fluid level below suction pipe 5. Fluid viscosity exceeds pumps rated capability 6. Gerotor is locked 7. Excessive gerotor wear 8. Bypass valve not seating 	<p>Remove and clean strainer.</p> <p>Check for leaks in suction line.</p> <p>Check pump outlet system for blockage.</p> <p>Refill tank or add longer suction pipe.</p> <p>Refer to the Viscosity Charts for viscosity limits.</p> <p>Inspect gerotor for smooth rotation. Remove any debris.</p> <p>Inspect gerotor. Replace if worn.</p> <p>Remove / inspect bypass valve. Clean if necessary.</p>
B. LOW FLOWRATE	<ol style="list-style-type: none"> 1. Dirty strainer screen 2. Suction line problem 3. Fluid viscosity exceeds pumps rated capability 4. Nozzle or meter pressure exceeds product specifications 5. Bypass valve not seating 6. Excessive gerotor wear 7. Low voltage to motor 	<p>Remove and clean strainer.</p> <p>Check for leaks in suction line.</p> <p>Refer to the Viscosity Charts for viscosity limits.</p> <p>Replace meter or nozzle.</p> <p>Remove / inspect bypass valve. Clean if necessary.</p> <p>Inspect gerotor. Replace if worn.</p> <p>Ensure power at motor is at proper voltage.</p>
C. MOTOR STALLS WHEN VALVE/NOZZLE IS CLOSED	<ol style="list-style-type: none"> 1. Bypass valve is sticking 	<p>Remove / inspect bypass valve. Clean if necessary.</p>
D. MOTOR STALLS WHEN PUMP FIRST STARTS	<ol style="list-style-type: none"> 1. Fluid viscosity exceeds pumps rated capability 2. Gerotor is locked 	<p>Refer to the Viscosity Charts for viscosity limits.</p> <p>Inspect gerotor for smooth rotation. Remove any debris.</p>
E. MOTOR OVERHEATS	<ol style="list-style-type: none"> 1. Fluid viscosity exceeds pumps rated capability 2. Gerotor is not rotating smoothly 3. Incorrect voltage 	<p>Refer to the Viscosity Charts for viscosity limits.</p> <p>Inspect gerotor for smooth rotation. Remove any debris.</p> <p>Ensure power at motor is at proper voltage.</p>
F. MOTOR WILL NOT TURN ON	<ol style="list-style-type: none"> 1. No power to motor 2. Switch failure 3. Motor has tripped internal motor protection 	<p>Check circuit breakers and electrical connections.</p> <p>Replace switch.</p> <p>Allow motor to cool for at least 30 minutes.</p>
G. PUMPS LEAK	<ol style="list-style-type: none"> 1. Missing or damaged seals 2. Shaft seal damage 3. Incompatible fluid pumped 	<p>Inspect affected areas for proper O-ring sealing.</p> <p>Inspect and replace shaft seal if needed.</p> <p>Check if fluid is compatible with aluminum, brass, nitrile rubber, stainless steel, steel and zinc plated steel.</p>

VISCOSITY CHARTS

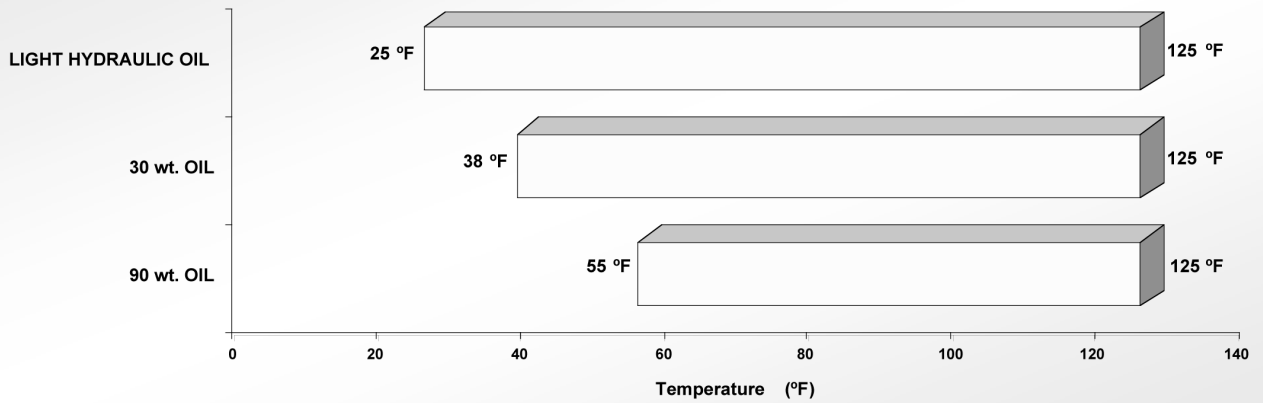
MODEL L 5016 PUMP OPERATING TEMPERATURE RANGE



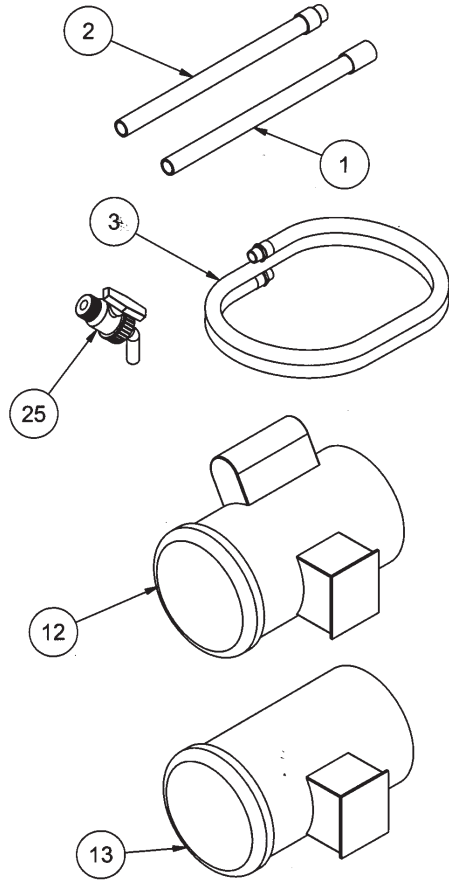
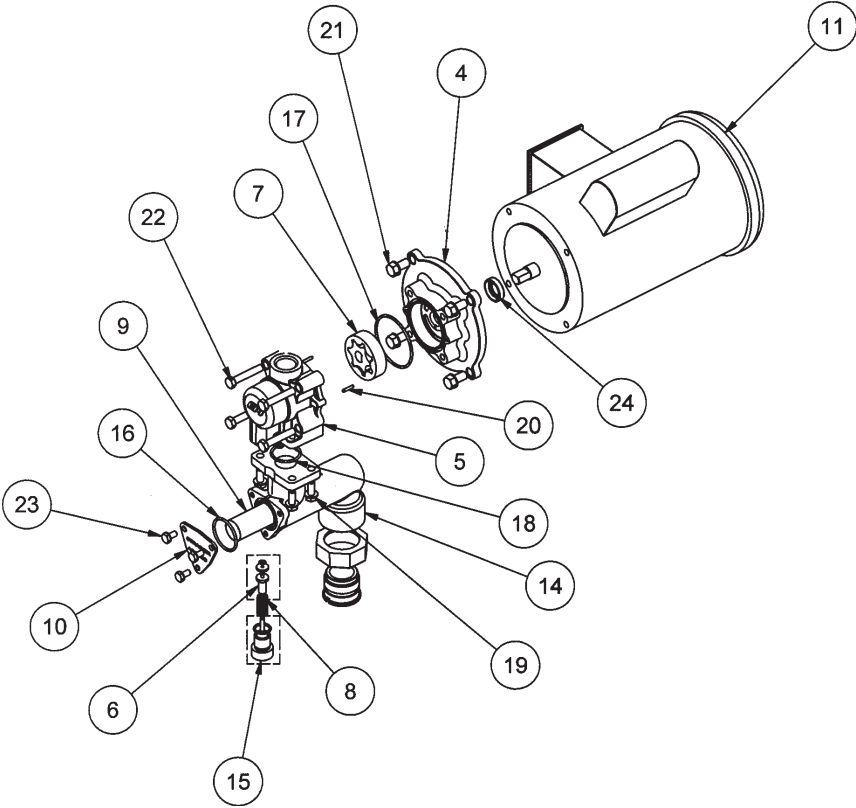
MODEL L 5116 PUMP OPERATING TEMPERATURE RANGE



MODEL L 5132 PUMP OPERATING TEMPERATURE RANGE



ILLUSTRATED PARTS DRAWING



Item No.	Part No.	Description	No. Req'd.
1	110264-1	Suction Pipe Assembly.....	1
2	110264-2	Suction Pipe Assembly.....	1
3	110187-09	Hose Assembly.....	1
4	142001-01	Gerotor Housing Adapter.....	1
5	142002-01	Pump Body.....	1
6	142021-01	Poppet Assembly.....	1
7	142004-01	Gerotor Element.....	1
8	142005-01	Bypass Spring.....	1
9	142008-01	Inlet Screen.....	1
10	142009-01	Base Cover.....	1
11	142014-01	Motor, 115 VAC, 1/2 HP, 1725 RPM.....	1
12	142015-01	Motor, 115 VAC, 1 HP, 3450 RPM.....	1
13	142016-01	Motor, 12 VDC, 1/2 HP, 1800 RPM.....	1
14	142022-01	Inlet Base Assembly.....	1
15	142023-01	Poppet Plug Assembly.....	1
16	90100389	O-Ring.....	1
17	90100387	O-Ring, Nitrile.....	1
18	90100388	O-Ring, Nitrile.....	1
19	904002-24	Sems Screw & Washer Assembly.....	4
20	904005-59	Spring Pin.....	2
21	90400792	Sems Hex Head, 3/8"-16 x 3/4".....	4
22	90400793	Hex Head Screw, 5/16"-18 x 1-3/4".....	4
23	90400794	Sems Hex Head, 1/4"-20 x 1/2".....	3
24	90400795	Radial Lip Seal.....	1
25	90600658	Ball Valve with 45° Spout.....	1

SPECIFICATIONS

	Model: L 5016 12-volt DC Pump	Model: L 5116 115-volt AC 1/2 HP	Model: L 5132 115-volt AC 1 HP
Pump Housing:	Aluminum	Aluminum	Aluminum
Performance:			
Pump Rate:	16 QPM (15 LPM)	16 QPM (15 LPM)	32 QPM (30 LPM)
Duty Cycle:	30 min. ON, 30 min. OFF	30 min. ON, 30 min. OFF	30 min. ON, 30 min. OFF
Max. Viscosity Pumped:	390 CPS	1160 CPS	970 CPS
Operating Temperature:	Maximum temperature is +140°F (+60°C) (See Viscosity Chart for minimum temperature.)		
Electrical Specifications:			
Input:	12-volt DC	115-volt AC	115-volt AC
Current Draw:	40 amps	7.5 amps	13 amps
Motor:	1800 RPM	1725 RPM	3450 RPM
Motor Approval:	UL Recognized Component, CSA Certified	UL Recognized Component, CSA Certified	UL Recognized Component, CSA Certified
Motor Protection:	Inline Fuse (not supplied)	Thermal Protection	Thermal Protection
Cord:	Min. 10/3 x 15 ft. (not supplied)	36" with Grounded NEMA Plug	36" with Grounded NEMA Plug
Mechanical Connections:			
Bung:	2 in. NPT	2 in. NPT	2 in. NPT
Inlet:	1 in. NPT	1 in. NPT	1 in. NPT
Outlet:	3/4 in. NPT	3/4 in. NPT	3/4 in. NPT
Weight:	33.5 lbs.	25 lbs.	35 lbs.

SAVE THESE INSTRUCTIONS