



2022

Vertical sump pumps Type LG and LGL2

INSTALLATION, OPERATION, AND MAINTANENCE



Read this entire book

before attempting to install, operate or repair this pump. Properly installed, your Peerless sump pump will give you satisfactory, dependable service. We urge that you read carefully these step-by-step instructions, to simplify any problems of installation, operation or repair.

Failure to read and comply with installation and operating instructions will void the responsibility of

the manufacturer and may also result in bodily injury as well as property damage.

This book is intended to be a permanent part of your pump installation and should be preserved in a convenient location for ready reference. If these instructions should become soiled, obtain a new copy from Peerless Pump. Include model, and/or serial number with your request.

WARRANTY

New equipment manufactured by Seller is warranted to be free from defects in material and workmanship under normal use and service for a period of one year from date of shipment; Seller's obligation under this warranty being limited to repairing or replacing at its option any part found to its satisfaction to be so defective provided that such part is, upon request, returned to Seller's factory from which it was shipped, transportation prepaid. This warranty does not cover parts damaged by decomposition from chemical action or wear caused by abrasive materials, nor does it cover damage resulting from misuse, accident, neglect, or from improper operation, maintenance, installation, modification or adjustment. This warranty does not cover parts repaired outside the Seller's factory without prior written approval. Seller makes no warranty as to starting equipment, electrical apparatus or other material not of its manufacture, since the same are usually covered by warranties of the respective manufacturers thereof.

In the event, notwithstanding the terms of this agreement, it is determined by a court of competent jurisdiction that an express warranty has been given by Seller to Purchaser with respect to the head, capacity or other like performance characteristics of said equipment, Seller's liability for breach of the same shall be limited to accepting return of such equipment F.O.B. plant of manufacture, refunding any amount paid thereon by Purchaser (less depreciation at the rate of 15% per year if Purchaser has used the equipment for more than thirty (30) days) and canceling any balance still owing on the equipment.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND SELLER SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



IMPORTANT SAFETY PRECAUTIONS

Pump parts, and the tools and lifting equipment used in installation are heavy and may easily cause personal injury if dropped or carelessly handled. The normal precautions and safety rules associated with the installation or repair of machinery, in regard to manual lifting, use of power equipment, and handling of tools, must be observed in the installation of this pump.

Petroleum-base cleaning solvents are flammable. Smoking by personnel, open flame, or other activity which could ignite vapors in the vicinity of these solvents is extremely hazardous and must not be permitted.

Do not work under a suspended object unless there is a positive support under it to stop its fall in event of sling or hoist failure. Disregard of this warning could result in grave personal injury.

Never attempt to lift, lower or raise the sump pump by the motor power cord. Always use a sling or wire rope, secured only to pedestal, and a hoist to lower or raise pump.

Before attempting hook-up, handling, or repair of electrical wiring, be certain that the electrical supply source is shut off. An electrical shock from contact with live wires or cords can be fatal.

Be sure the voltage and frequency indicated on motor nameplate are the same as service provided. If the motor has been wired at the factory, note the voltage caution card. If available service is other than that indicated, consult motor manufacturer's instructions for proper wiring changes.

Do not cut, splice, or damage the power cord. Do not carry or suspend the pump by the power cord. A live damaged or open power cord can deliver a fatal electrical shock.

Due to automatic switch operation of sump pumps, tie the main disconnect switch open or remove fuses from main lines before attempting lubrication, mechanical and electrical examinations, or repairs. Attach a card "DO NOT CLOSE SWITCH – PUMP REPAIR IN PROGRESS." Disregard of this warning may result in serious personal injury or death.

Never spin ball bearings. Spinning a dry ball bearing can cause damage. Spinning any ball bearing by an air blast can cause bearing to fly apart resulting in possible fatal injury.

Refer motor to a repair shop authorized by the motor manufacturer for repairs. It is not recommended that user attempt to make repairs on this type motor under any circumstances. Attempt to repair motor by unauthorized personnel voids manufacturer's warranty.

WARNING

The pumps described in this bulletin must not be installed in any manner except as specified herein, and must be operated at intermittent duty service of usual sump or bilge nature within corrosion limits of standard materials of construction. Maximum temperature of fluid handled must not exceed 90 d F [32dC]. Pumping element must be submerged at all times. The pumps described in this bulletin are also subject to limitations and notes attached to the following Pump Data table. Violation of this warning will void the warranty and may result in serious property damage or grave personal injury.

PUMP DATA

Pump Type	Basin Depth (1)		Discharge Connection Vertical Pipe above Floor Plate In. NPT	Maximum Speed RPM	Minimum Basin Dia-Inches	
	Min Ft.-In.	Max Ft.-In.			Simplex	Duplex
LGA	1-6	3-0	1- 1/4	1750	15	30
LGB	2-0 3-3 5-3	3-0 5-0 7-0	1- 1/4 1- 1/4 1- 1/4	1750	12	36
LGL 2	2 thru 9 ft, 6-inch increments		2	1750	18	36

- NOTES: (1) LGA furnished in 3-foot nominal pump length only, adjustable to the minimum basin depth shown. LGB furnished in 3, 5 and 7-foot nominal pump lengths, each suitable down to the minimum basin depths shown by adjusting floor plate.
- (2) Gastight floor plates are required by some local plumbing codes or whenever the prevention of objectionable odors entering the pump room is required. Available only on LGB and LGL2 models.
- (3) NEMA 1 simplex standard float switches are motor pedestal mounted. NEMA 4 and 7 standard simplex, and NEMA 1, 4 and 7 duplex alternating float switches are floor plate mounted.

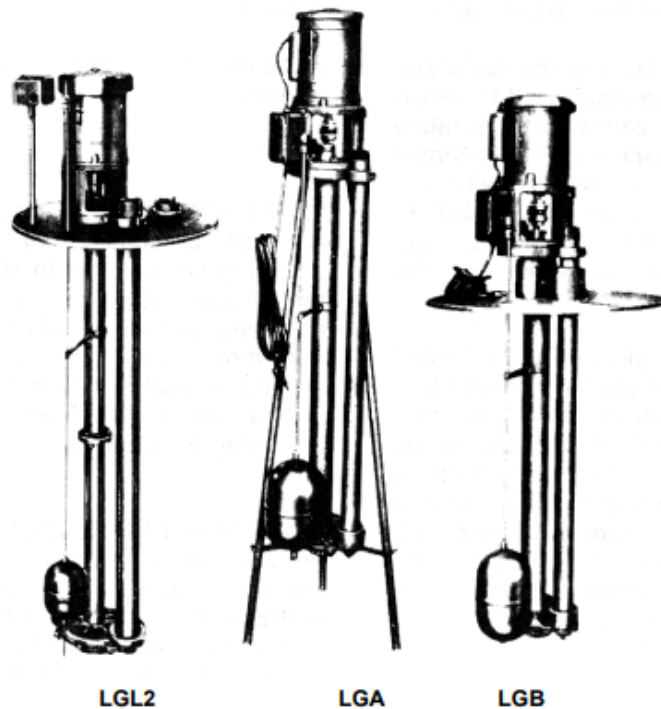


Figure 1. Vertical Sump Pumps

INTRODUCTION

UPON RECEIPT OF PUMP EQUIPMENT: Check carefully to see that all of the equipment has been received. Report immediately any shortages or damages to the transportation company handling the shipment, noting the extent of the damage or shortage on the freight bill and bill of lading.

Do not leave the unit exposed to weather or construction hazards. The pump may become mechanically damaged. This pump is a well designed

and carefully manufactured unit. It should be given the same attention accorded to any precision machine.

The satisfactory operation of a pump depends to a large extent upon proper installation. These instructions cannot answer every question that may arise as each installation will be different. The installer and the operator of this equipment must use good judgment to adapt these procedures to the installation.

INSTALLATION

LOCATION: The pump basin should be so located that the motor and pedestal (8, figure 2) are above the floor level and are situated in a clean, drained, well ventilated place, readily accessible for installation, inspection, and care of equipment. Overhead room must allow for removal of the unit from the basin for cleaning or repairs.

BASIN: The basin should be constructed as tightly as possible of a material such as steel plate, cast iron, sewer tile, sewer crock, or concrete, depending upon local requirements and personal preference. Never discharge hot water or boiler blow-off into the pump basin without first chilling. There must be at least a 4-inch clearance below the strainer, the total basin depth depending upon drainage requirements.

WARNING Pump parts, and the tools and lifting equipment used in installation are heavy and may easily cause personal injury if dropped or carelessly handled. The normal precautions and safety rules associated with the installation or repair of machinery, in regard to manual lifting, use of power equipment, and handling of tools, must be observed in the installation of this pump.

FLOOR PLATE: The split floor plate on the LG units is adjustable and clamps firmly onto the hanger pipe and discharge pipe at any level desired. The LGL2 bolts firmly to the motor pedestal and should be firmly fixed over the basin using expansion bolts in concrete or cap screws into an angle iron curbing or basin cover. Three bolt-holes are provided in the floor plate to insure a firm setting. Where a gas-tight unit is provided, use a gasket ring under the floor plate and vent the basin to the atmosphere, using the vent opening provided in the floor plate.

Mounting the Floor Plate: The floor plate is fixed in location on LGA and LGL2 models. On the LGB units the floor plate is furnished in two pieces marked "left" and "right" which are held together by a bolt and nut.

1. Before mounting the plate on the unit, loosen the float rod buttons (18, figure 2) and remove the float-rod assembly (16 and 17) from the unit by lowering it out of the switch arm and float rod guide (21).

2. Clamp the floor plate loosely to the hanger pipe (10) and discharge pipe (12) at about the center of the top hanger pipe, using the bolt and nut provided. Make sure the half marked "right" is placed on the float side of the unit.

3. Slip the plate up into place (check length desired), line up the halves, and draw the nut up tight clamping the plate firmly to the hanger pipe and discharge pipe.

4. Replace the float rod and buttons to their original positions.

FLOAT SWITCH ADJUSTMENT: The unit may be adjusted by raising or lowering the float rod adjusting buttons (18) to start and stop the pump at the desired levels of water in the basin. The adjusting buttons should usually be set so that the float drops to several inches above the pump casing (6) and in rising closes the float switch 10 to 18 inches above this level; naturally this is varied according to conditions.

MOUNTING TRIPOD LEGS: On LGA units the legs are mounted separately. Insert the leg pipe (30) into the hole provided on the bottom of the bearing pedestal (45). Set the leg flush with top of the boss, then insert and tighten the set screw (34). Slip a leg clamp (31) onto the leg and up into position. Using the outer nut (32) present on the adjacent casing bolt fasten the clamp to the casing. The procedure is the same for all three legs. Adjust the leg lengths to make the pump stand vertically even though it may be set on a sloping floor.

CAUTION Before installing the pump, the drainage system served should be flushed out and the pump basin thoroughly cleaned of any foreign matter [such as chunks of wood, stones, wire, sludge, and rags] that is liable to affect pump operation, damage the unit, or clog the strainer. Also check the float rod guide [21] to see that the rod alignment is correct so that the float rod mechanism is able to move freely.

WARNING Do not work under a suspended object unless there is a positive support under it to stop its fall in event of sling or hoist failure. Disregard of this warning could result in grave personal injury.

CAUTION Never attempt to lift, lower or raise the sump pump with the motor power cord. Always use a sling or wire rope, secured only to pedestal, and a hoist to lower or raise pump.

SETTING THE UNIT: If the pump is of the floor plate type, check pump length (from bottom of floor plate to bottom of strainer) and compare with basin depth; be sure of minimum 4-inches clearance. Set the unit carefully into the basin, taking precautions not to crush or damage the float. Face the discharge pipe as desired and bolt the unit firmly into place.

PIPING: The discharge pipe should include a union, a horizontal swing check valve, and a gate valve all near the pump, and should be run to a point above the sewer level so as to drop into the sewer from above. This facilitates easy removal of the unit for repairs or cleaning and helps prevent backing-up of sewer water in the event of high water conditions.

The size of the discharge pipe should not be smaller than that of the discharge connection on the pump, and where runs are long should be at least a size or two larger.

It is important that the pipe connections to the unit be made so that there is no pipe strain upon the unit. Where quiet operation is important a small section of rubber hose can be included in the discharge line to prevent transmission of vibration noise.

CONTROLS: With standard single phase LG pumps, no controls or wiring are necessary. These units are

WARNING Due to automatic switch operation of sump pumps, tie the main disconnect switch open or remove fuses from main lines before attempting lubrication,

self contained, have the switch already mounted and wired, and are provided with cords and standard plugs for connection to any socket. But the line used must have the proper electrical characteristics and be provided with the proper fuse. In the event that this line is used for other appliances or for lighting, a special fuse serving only the sump pump should be incorporated in the line.

WARNING Before attempting hook-up, handling, or repair of electrical wiring, be certain that the electrical supply source is shut off. An electrical shock from contact with live wires or cords can be fatal.

The single phase LGL2 pumps must be wired to the service provided. Always provide a fused, manual, motor disconnect switch in the main line. If a fused motor disconnect switch is not provided in the motor circuit, there will be danger to life when necessary to work on the circuit, or there may be danger of fire if the motor is overloaded and overheats.

All three phase motors must be wired to the service through a magnetic starter. The float switch provided must only be used to pilot the magnetic starter in three phase installations.

CAUTION Be sure the voltage and frequency indicated on motor nameplate are the same as service provided. If the motor has been wired at the factory, note the voltage caution card. If available service is other than that indicated, consult motor manufacturer's instructions for proper wiring changes.

WIRING: Connect the electric service to the controls and make inter-control electrical connections when necessary according to wiring instructions accompanying the switches, using conduit and wire sizes as required by local and national electrical codes. It is best to include a short section of flexible conduit adjacent to the motor for convenience in pump or motor repair.

FUSES: It is recommended that Fusetron (dual element) fuses be used if not other thermal or motor protecting device is used. The Fusetron provides for motor protection against burn-out. Care must be taken in selecting the proper size Fusetron. When a fuse blows it indicates that something is wrong either in the motor, pump, switch, fuse rating or service. Do not replace a fuse until you find and remove the cause of the blow-out.

LUBRICATION

mechanical and electrical examinations, or repairs. attach a card "DO NOT CLOSE SWITCH – PUMP REPAIR IN PROGRESS." Disregard of this warning may result in serious personal injury or death.



PUMP LUBRICATION: This unit is provided with a lifetime charge of lubricant for lower sleeve bearings reservoired in the hanger pipe sections. The ball thrust bearing and upper bronze guide bearing are lubricated by the grease cup provided on the floor of the motor pedestal. The is grease-filled at the factory and should be given a half turn before starting the pump. Keep this cup filled with a good

grade of a No. 2 or 3 grease, and turn the cup down two or three turns approximately every week or two, frequency depending upon severity of pump service.

MOTOR LUBRICATION: Lubricate the motor according to directions given by the motor instruction label, but avoid over-lubrication especially of the top bearing which may overflow into the windings.

OPERATION

Check the following items before starting unit.

WARNING Due to automatic switch operation of sump pumps, tie the main disconnect switch open or remove fuses from main lines before attempting lubrication, mechanical and electrical examinations, or repairs. Attach a card "DO NOT CLOSE SWITCH - PUMP REPAIR IN PROGRESS". Disregard of this warning may result in serious personal injury or death.

1. Be sure the unit is lubricated as directed under Lubrication.
2. Turn the shaft by hand to see that it rotates freely. Failure of the shaft to turn freely may be caused by pump bearings being too tight, dirt clogging pump or jamming motor armature, or impeller rubbing in pump casing due to improper thrust adjustment.
3. See that voltage and frequency on motor nameplate are the same as service provided.
4. See that wires are connected according to motor manufacturer's instructions for voltage and phase used.
5. See that the proper fuses are installed.
6. See that the piping connections have been made as directed under installation.
7. Check the float-switch mechanism for regulation.

WARNING Due to automatic switch operation of sump pumps, tie the main disconnect switch open or remove fuses from main lines before attempting lubrication, mechanical and electrical examinations, or repairs. Attach a card "DO NOT CLOSE SWITCH - PUMP REPAIR IN PROGRESS". Disregard of this warning may result in serious personal injury or death.

INSPECTION: To insure the best operation of the unit make a systematic inspection at least once a week. Watch the following:

8. Be sure the basin is clean and system flushed as directed.

9. See that the unit is firmly anchored and in a vertical position.

STARTING PUMP: IF the unit is of the cord and plug type, insert the plug into the outlet provided. Otherwise, close the manual disconnect switch. Remember, the pump will operate only when the float switch is closed (basin is filled).

AFTER STARTING NOTE THE FOLLOWING:

1. Note operation of the float switch. Observe a complete start-stop cycle for freedom of float rod and location of buttons. See that float switch closes and opens properly as basin fills and is emptied by the pump. The operation of this unit should be absolutely automatic.
2. See that all pipe connections are tight.
3. See that bearings of motor do not overheat.
4. See that pump and motor rotate in a clockwise direction looking down on the motor.
5. Observe operation of pump closely for the first day and at regular intervals for ten days. A new machine is frequently stiff and tight, and therefore the unit should be watched to note performance. (Refer to Inspection under Maintenance.)

MAINTENANCE

Sticking: See that the pump does not stand idle for very long periods. If necessary start pump manually to see that the shaft is free.

Automatic equipment: Check frequency of starts and stops to see that unit is properly regulated. Check contacts of switches, cleaning them and applying Vaseline if they show signs of burning. If contacts are badly burnt, replace the switch before serious consequences result.

Motor: See that the motor comes up to speed quickly and maintains constant rotation rate.

ROUTINE CARE:

General cleaning: Keep the interior and exterior of motor and automatic apparatus free from moisture, oil and dirt.

Basin cleaning: Occasionally run the pump until the basin is drained of water, open the electric circuit, disconnect the discharge pipe at the union, (also, if pump is of floor plate type, remove the anchor bolts) and pull the pump out of the basin. Clean out sludge or foreign matter accumulated in the basin and on the strainer before returning the pump to service.

Lubricating: At regular intervals lubricate motor and pump as directed under Lubrication.

WARNING Before attempting examination or repairs to pump open the disconnect switch to electric motor. This prevents accidental running of pump motor. Starting motor during examination or repair activities could damage pump and may cause personal injury.

IF PUMP FAILS TO OPERATE:

1. Check fuses or thermal units, see if blown, thrown, or loose. Before replacing or resetting be sure the cause for the open circuit is determined and corrected.
2. See if shaft rotates freely, try turning by hand.
3. See that switch contacts are not corroded, shorted, or electrical service broken anywhere in the circuit.
4. Check power supply and compare with motor nameplate data.
5. Have motor windings ground tested for short.

IF PUMP IS NOISY:

1. If motor is noisy, check motor bearings for wear or lack of lubrication.
2. If pump is noisy, check basin for presence of foreign material, inspect bearings for wear, see if strainer is clogged.
3. If the flexible coupling connection is noisy, see that coupling is not binding and that motor alignment is correct.
4. Rotate pump by hand to see if impeller is rubbing.

IF PUMP OPERATES AT BLOW OR VARIABLE SPEED:

1. See that switch contacts are not arcing.
2. Test for loose connections.
3. If motor is three phase, see that all phases are "live."
4. Be sure the shaft rotates, freely, try turning by hand.
5. Test motor, see if partially grounded.
6. Test service for low voltage.
7. Be sure motor is wired for the voltage used.

IF PUMP OPERATES BUT FAILS TO EMPTY SUMP:

1. See if strainer is clogged and basin dirty.
2. Check rotation of pump.
3. See if check valve in discharge line is stuck.
4. Check discharge head, see if beyond pump rating.
5. Check basin; see if inflow is excessive.
6. See if shaft is intact and if the impeller rotates. Check the flexible coupling connection.
7. Check to see if pump is air bound.

DISASSEMBLY: Disassemble the sump pump in the following manner (see figure 2):

WARNING Tie the disconnect switch open or remove fuses from lines before attempting to remove pump from the basin. Attach a card "DO NOT CLOSE SWITCH - PUMP REPAIR IN PROGRESS." Disregard of this warning may result in fatal electrical shock.

1. Break the electric service and remove the motor, disengaging the coupling (22) by gently prying the buffer disc (24) off the pins so that the disc comes off with the motor.

WARNING Do not work under a suspended object unless there is a positive support under it to stop its fall in event of sling or hoist failure.

2. Disconnect the pump discharge at the union, remove floor plate bolts, and push the pump out of the sump basin.
3. Remove the assembly.

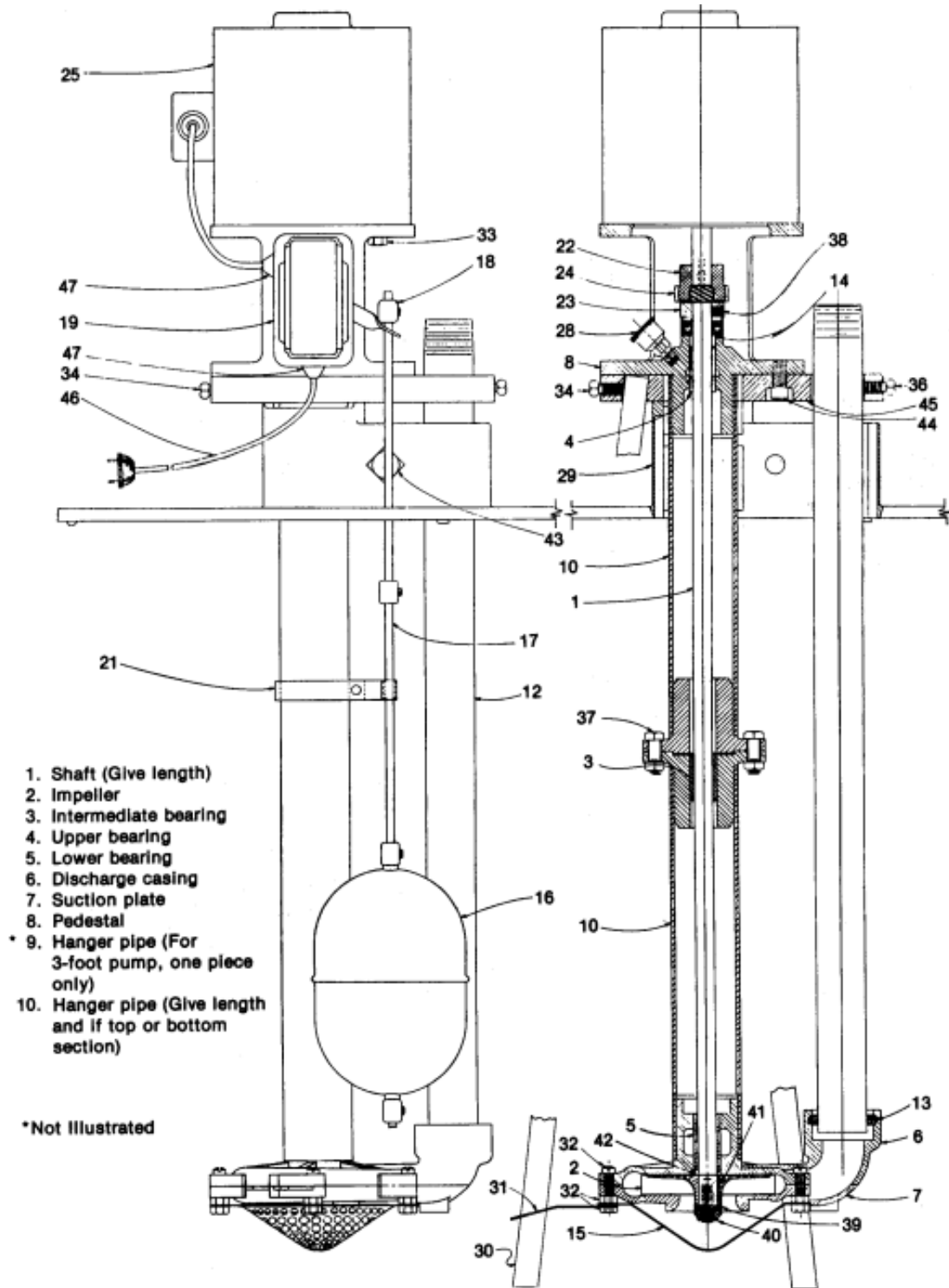


Figure 2. Type LG Vertical Sump Pump

- *11. Hanger pipe (Middle section, give length)
- 12. Discharge pipe (Give length)
- 13. Packing ring
- 14. Ball bearing
- 15. Strainer (State if cast or stamped)
- 16. Float
- 17. Float rod
- 18. Float rod adjusting buttons
- 19. Float switch
- 21. Float rod guide
- 22. Motor coupling (State motor frame size)

- 23. Pump coupling
- 24. Coupling buffer disc
- 25. Motor (State electrical characteristics)
- 28. Grease cup
- 29. Floor plate (State whether standard or gas-tight for LG or LGL2)
- 30. Tripod leg (Give length)
- 31. Leg clamp
- 32. Casing bolt and nuts
- 33. Motor screws
- 34. Tripod leg set screw
- 36. Discharge pipe set screw
- 37. Hanger pipe bolts and nuts
- 38. Pump coupling set screw
- 39. Washer
- 40. Impeller nut
- 41. Impeller key
- 42. Snap ring
- 43. Floor plate clamping bolt
- 44. Socket head cap screws
- 45. Bearing pedestal flange
- 46. Cord and plug
- 47. Grommets

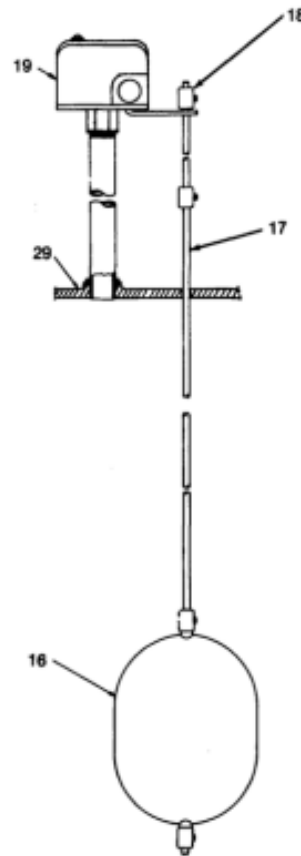
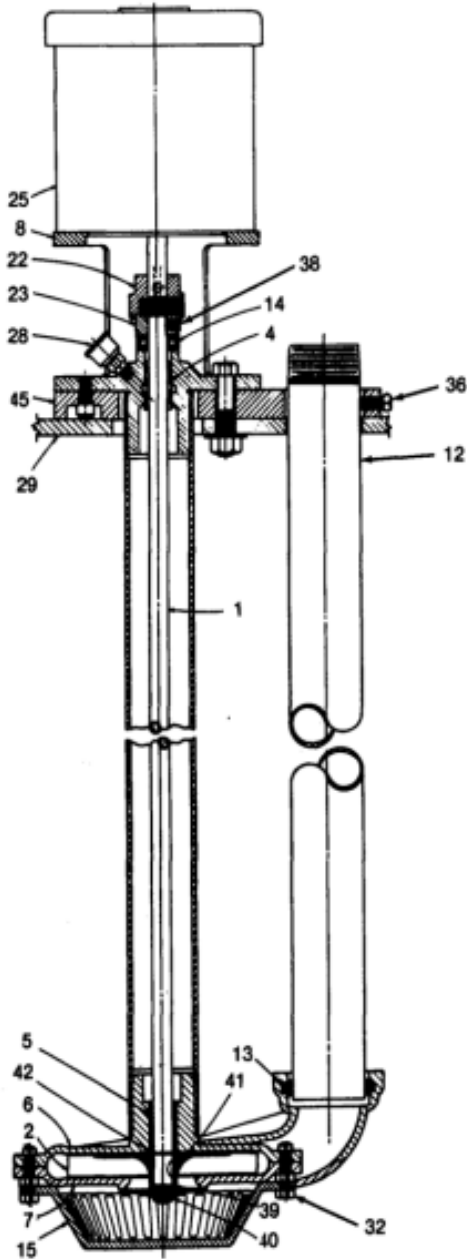


Figure 2. Type LGL2 Vertical Sump Pump



4. Using an Allen wrench, loosen the pump coupling (23) set screw (38) and remove the coupling, thrust collars and ball bearings (14).

5. Remove pump strainer (15) and suction plate (7).

CAUTION Use care when withdrawing shaft to prevent bending or damage. Use proper support and two men for removal of long, heavy shaft.

6. Pull out impeller and shaft assembly (1 and 2) from impeller end of pump.

7. Unscrew impeller nut (40) and remove washer (39).

8. Remove the discharge pipe set screw (36), and pull the discharge pipe (12) up out of the pump discharge casing (6). The bottom end of the discharge pipe is not fastened in any way; it has a flexible connection sealed by a rubber packing ring (13).

9. If pump has intermediate bearings (3) which need replacing, separate the hanger pipes (10).

CLEANING:

Pump parts may be cleaned with petroleum base solvent if desired. Metal parts (except motor) may be soaked in solvent if necessary. Use a bristle brush (not metal or wire) to remove tightly adhering deposits. Wipe the exterior of motor housing with a solvent-dampened cloth. Blow parts dry with clean, dry, compressed air. Clean ball bearings in the following manner:

WARNING Petroleum base cleaning solvents are flammable. Open flame or smoking by personnel in the vicinity of these solvents is extremely hazardous and must not be permitted. Disregard of this Warning can result in serious bodily harm and could be fatal.

1. Place bearings in wire basket – so there is space for cleaner to reach all parts.

2. Immerse in Stoddard solvent. Agitate basket until old grease is thoroughly loosened and can be flushed out.

3. Place bearing on a screened surface.

4. Using a spray gun with air filter and clean Stoddard solvent, flush each bearing until all grease and sludge is removed.

WARNING Never spin ball bearings. Spinning a dry ball bearing can cause damage. Spinning any ball bearing by an air blast can cause bearing to fly apart resulting in possible fatal injury.

5. Blow solvent out of bearing with dry, filtered air.

6. Lubricate bearings immediately after cleansing with light spindle oil and place them in a covered container.

INSPECTION: Inspect pump parts for cracks, dents, nicks, scratches or other damage affecting serviceability or sealing.

Test cleaned and oiled bearings by rotating slowly with the hands. If worn, rough, noisy, loose or flatted, replace with new. Do not unwrap new bearings until ready to be installed.

REPAIR: Remove burrs, nicks or scratches from non-critical surfaces with a fine stone or crocus cloth.

Replace all parts that show wear.

When ordering replacement parts always furnish data stamped on nameplate attached to the pump. Give the figure number, index number and part name as shown on figure 2.

TO REPLACE GUIDE BEARINGS [3, 4, and 5]: All guide bearing are originally pressed in at the factory, being held in place by the tight fit. To remove the worn bearings they may either be sawed in half with a steel hack saw blade and collapsed, or threaded with a 3/4 inch tap and removed with a 3/4 inch bolt shouldered over a pipe sleeve.

New guide bearings should be pressed or lightly tapped in place using a block of wood as a buffer.

When installing the bottom bearing (5) in pump discharge casing, be sure that the end of bearing nearer the impeller is approximately 1/8 inch within the housing so that the snap ring (42) on the shaft will not come in contact with the bearing.

CAUTION Refer motor to a repair shop authorized by the motor manufacturer for repairs. It is not recommended that user attempt to make repairs on this type motor under any circumstances. Attempt to repair motor by unauthorized personnel voids manufacturer's warranty.

ASSEMBLY: To assemble the pump, reverse the disassembly procedure but observe the following precautions:

1. Be sure not metal filings or cuttings are left in the hanger pipe. Flush out well with solvent before inserting shaft.

2. Before reinstalling, clean the radial thrust bearing collars thoroughly in solvent. Be sure the collars are placed above and below the ball bearing.

3. Wipe off the shaft and oil it before inserting in the pump. Use care not to bend shaft when inserting thru bearings.

4. To adjust impeller, lay pump in a horizontal position and push impeller toward the pump coupling until it hits the discharge casing. With the impeller in this position, loosen pump coupling set screw (38). Using a 0.005 inch feeler gauge, set clearance between bottom of ball bearing (14) and pump pedestal (8). When clearance has been adjusted, tighten pump coupling set screw (38). Place pump in

a vertical position and rotate shaft by hand. If impeller rubs recheck clearance setting as outlined above.

5. The float is adjusted as described previously under installation.

NOTICE: Materials of construction, specifications, dimensions, design features, and application information, where shown in this bulletin, are subject to change and/or modification without notice by Peerless Pump at their option.



