

Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

21e



3/4 HP SUBMERSIBLE SEWAGE PUMP



**Do not return
pump to the store.
Call 1-844-416-9141**

58009

Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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⚠ WARNING

Read this material before using this product. Failure to do so can result in serious injury. **SAVE THIS MANUAL.**

Before start-up, note the following:


The pump must be connected to a GFCI protected plug which has been installed according to regulations. The plug must have a supply voltage of 120 VAC at 60 Hz.

CAUTION

This pump has been evaluated for use with water only.

⚠WARNING

IMPORTANT! For your own safety – before starting to run the pump, please have the following items checked by an expert:

1. Risk of electric shock – This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that it is connected only to a properly grounded, grounding-type receptacle.
2. Risk of electric shock – This pump has not been investigated for use in swimming pool areas.
3. The electrical connections must be protected from moisture.
4. If there is danger of flooding, the electrical connections must be taken to higher ground.
5. Circulation of caustic fluids, as well as the circulation of abrasive materials, must be avoided at all costs.
6. The pump must be protected from frost.
7. The pump must be protected from running dry.
8. Access by children should also be prevented with appropriate measures.
9.  **To prevent death from electric shock, pump must be connected only to a GFCI protected outlet.**
10. Do not use an extension cord with this item.
11. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
12. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

Fluid Type

The Pump is designed for use with water with a maximum temperature of 131° F (55°C). Do not use the pump for other fluids, especially not fuels, cleaning fluids, or other chemical products.

Specifications

Electrical Rating	115 VAC / 9.5A / 60Hz
Power Cord Length	10'
Maximum Flow @ 0'	8700 GPH
Maximum Head lift @ 0 Flow	20'
Discharge Port	2" NPT Thread

Installation


The submersible motor pump must be installed in a stationary position with either:

- a. A fixed pipeline or
- b. A flexible hose pipe.

Please note!

1. Do not install the pump by suspending it unsupported from its delivery pipe or power cord. The pump must be suspended from the handle or be placed on the bottom of the basin. To ensure that the pump works properly, keep the bottom of the basin free from sludge and dirt of all kinds.
2. If the water level sinks too low, any sludge in the basin will dry out and stop the pump from starting. To help ensure the pump will start as required, check the pump regularly with start-up tests.

Power Supply

1. The pump is equipped with a shock-proof plug according to regulations. The pump is designed to be connected to 120 VAC, 60 Hz GFCI protected socket.
2. Make sure that the socket is sufficiently secured and is in excellent condition.
3. When the plug is inserted into the socket, the pump will be on standby.
4.  **WARNING: To prevent death from electric shock, pump must be connected only to a GFCI protected outlet.**

WARNING! TO PREVENT SERIOUS INJURY:
If the power cord or plug is damaged, do not use the pump. The power cord or plug may only be repaired by a certified electrician.

Areas of use

1. This pump is designed to be used for:
Pumping domestic sewage, effluent, wastewater, groundwater and other nonexplosive, noncorrosive liquids with up to 2" diameter solids to gravity-fed sewage line.
2. This pump should NOT be used for:
Continuous run, fountain/pond water features.
Removing water from swimming pools or spas.



Installation Instructions

1. Construct a basin that is at least 30" deep and at least 18" in diameter.

Note: Area should be cleared of small stones or gravel.

2. Secure the pump on a level, solid base. Do not suspend the pump by the discharge pipe, hose, or power cord.
3. Position Pump on solid surface so that both hoses are free from kinks the Float Switch is away from the inlet pipe and at least 1" away from all obstructions throughout its movement. See Figure A.
4. Fit a sewage cover with a vent pipe, a hole for the output pipe and a hole for the power cords. Thread the Power Cords through their holes, but do not plug them in yet. Set the sewage cover aside for now. Place unused end of discharge hose the other end.

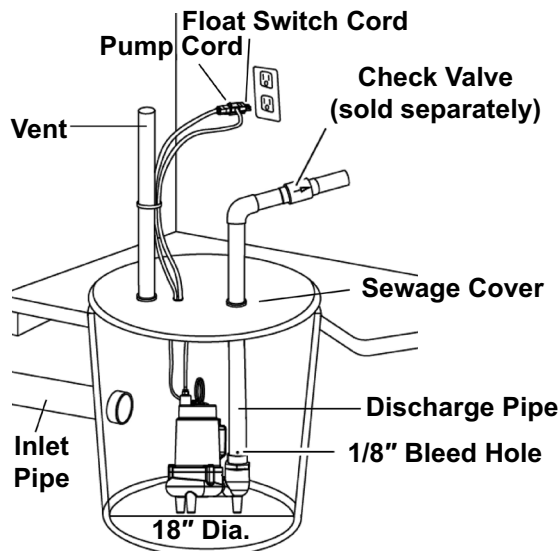


Figure A: Pump Setup

Note: The sewage cover must also be fitted with a vent pipe.

5. Attach a discharge pipe to the Pump Outlet.

Note: Wrap all threaded connections with PTFE thread seal tape.

6. Check Valve is sold separately. Install according to manufacturer instructions.
7. To prevent excessive cycling from backflow of water, install a check valve onto the discharge pipe. This prevents water from flowing back after the pump shuts off. Mount the check valve according to check valve label to avoid the valve flapper getting stuck.
8. Drill a 1/8" diameter air bleed hole through the Discharge Pipe just above the lower Base to prevent Pump "airlock". A small spray of water out of this hole is normal while the Pump is running.
9. Connect additional Discharge Pipe as needed to direct the discharge to the main waste line for the sewer or septic tank. The discharge should be kept as short as possible with a minimum number of turns.

IMPORTANT: Do not exceed the Maximum Head Lift @ 0 Flow of the Pump.



Operation

After reading these instructions, consider the following points before starting the pump:

Warning! Do not handle this pump, plug in, or unplug this pump with wet hands or while standing in water. Make sure all power has been turned off to the pump.

1. Make sure the pump is properly set up.
 - a. Verify that the pump rests on the floor of the basin.
 - b. Verify that the discharge pipe is properly connected.
 - c. Verify that the electrical connection is 120 VAC, 60 Hz.
 - d. Verify that the electrical socket is GFCI protected and in good condition. Test GFCI protected outlet before use.
 - e. Verify that water and moisture cannot get near the power supply socket.
2. Plug the Pump Cord into the Float Switch Cord. Then plug the Float Switch Cord into a GFCI protected outlet.
3. The pump will start operating when the float switch moves up over the pump top. Water will be pumped out.
4. When water lowers to a certain level, the float switch will turn the pump off.
5. Motor is equipped with an automatically resetting thermal overload protector. If motor gets too hot, the overload protector will shut off pump before it is damaged. When motor has cooled sufficiently, the overload protector will reset, and the motor will restart.
- f. Verify that the pump is installed so as to prevent running dry.

Maintenance

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Unplug the Pump from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.


If the pump is moved during operation, flush it out with clean water after every use.

Quarterly Maintenance

The below maintenance must be performed at least once every 3 months under optimal conditions. For frequent use, or dirty areas, more frequent maintenance is required.

1. Clean sludge and debris from the bottom of the basin.
2. Clean sludge/debris from inlet screen.
3. Make sure discharge pipe is free from leaks.
4. Make sure check valve is functioning properly.
5. Manually operate flow switch to determine that pump turns on/off as intended.

Troubleshooting

Problem	Possible Causes	Possible Solutions
Pump runs, but will not deliver any water.	Disconnect power cords immediately to prevent damage from running dry. 1. Pump "airlock". The impeller is trapped in an air bubble. 2. Shut off valve closed (if installed). 3. Impeller clogged. 4. Discharge Pipe frozen or blocked. 5. Low line voltage. 6. Check valve (sold separately) stuck or installed backwards.	Disconnect power cords immediately to prevent damage from running dry. 1. Drill a 1/8" diameter air bleed hole through the Discharge Pipe just above the lower Base. Make sure air bleed hole is clear. 2. Open valve. 3. Clean out dirt and debris from impeller. 4. Thaw pipe and/or remove debris. 5. Consult an electrician. 6. Remove and examine check valve.
Pump won't start or run.	1. Check power connections and circuits/fuses. 2. Float Switch failed. 3. Impeller clogged. 4. Defective motor.	1. Consult an electrician. 2. Replace Float Switch. 3. Clean out dirt and debris from impeller. 4. Have a qualified service technician repair or replace.
Excessive noise or vibration.	1. Worn bearings. 2. Debris in impeller. 3. Discharge pipe restricted.	1. Have a qualified service technician repair or replace. 2. Clean impeller. 3. Clean Pump and discharge pipe. Straighten flexible hose.
Pump starts and stops too frequently.	1. Water temperature too high. 2. Check valve (sold separately) stuck or installed backwards. 3. Back flow of water from discharge hose.	1. Do not exceed 131° F (55°C) water temperature. 2. Remove and examine check valve. 3. Install or inspect check valve (sold separately).
Pump does not shut off automatically	<p style="text-align: center;">DISCONNECT POWER CORDS FIRST TO PREVENT ACCIDENTAL STARTING.</p> 1. Float Switch stuck. 2. Check valve not installed properly or functioning. 3. Defective electrical switch.	<p style="text-align: center;">DISCONNECT POWER CORDS FIRST TO PREVENT ACCIDENTAL STARTING.</p> 1. Check for free movement of Float Switch. Clear debris away from beneath Float Switch. 2. Make sure check valve is properly installed and in working order. 3. Unplug Pump from its electrical outlet. Do not use until qualified technician checks Pump for damage.
 Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.		

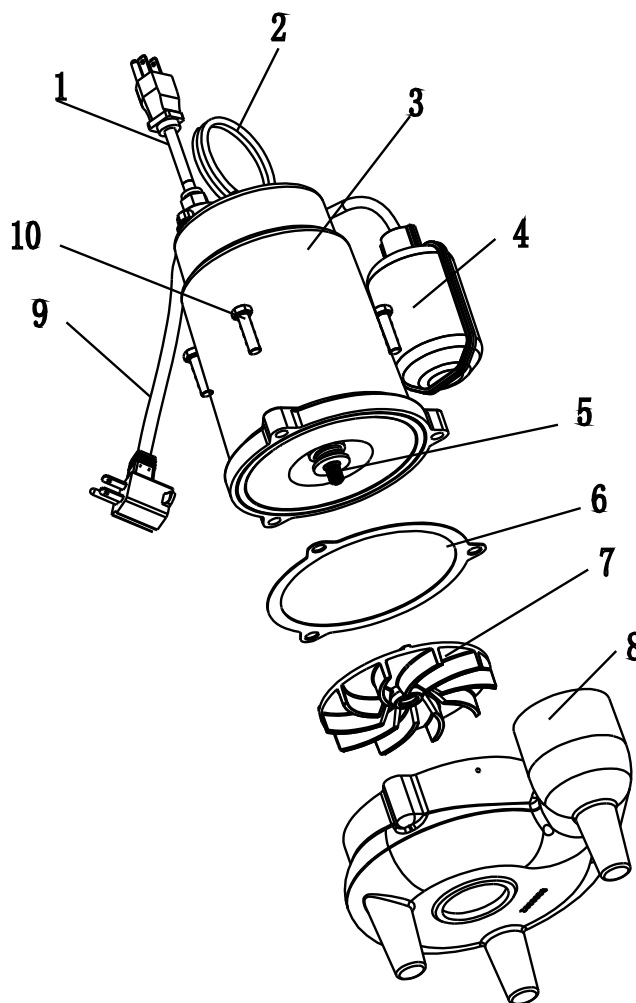
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Parts List

Part	Description	Qty.
1	Pump Cord	1
2	Handle	1
3	Motor	1
4	Float Switch	1
5	Shaft	1

Part	Description	Qty.
6	Gasket	1
7	Impeller	1
8	Pump Outlet	1
9	Float Switch Cord	1
10	Screw	3



Record Product's Serial Number Here: _____

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts. Specify UPC 193175430731 when ordering parts.

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

