

## Installation Manual

7327000G

### Model 331

### 1/2 hp Portable Transfer Pump



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Bergen, NY 14416  
ph: 1-800-543-2550  
fax: 1-585-494-1839  
www.LibertyPumps.com

#### NOTICE

Installer: Manual must remain with owner/operator.

Keep this manual handy for future reference.

For replacement manual, visit LibertyPumps.com, or contact Liberty Pumps at 1-800-543-2550.

Retain dated sales receipt for warranty.

Record information from pump nameplate:

Model: \_\_\_\_\_

Serial: \_\_\_\_\_

Mfg Date: \_\_\_\_\_

Install Date: \_\_\_\_\_

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## Safety Guidelines

	This safety alert symbol is used in the manual and on the pump to alert of potential risk for serious injury or death.
	This safety alert symbol identifies <b>risk of electric shock</b> . It is accompanied with an instruction intended to minimize potential risk of electric shock.
	This safety alert symbol identifies <b>risk of fire</b> . It is accompanied with an instruction intended to minimize potential risk of fire.
	This safety alert symbol identifies <b>risk of serious injury or death</b> . It is accompanied with an instruction intended to minimize potential risk of injury or death.
<b>DANGER</b>	Warns of hazards which if not avoided <b>will</b> result in serious injury or death.
<b>WARNING</b>	Warns of hazards which if not avoided <b>could</b> result in serious injury or death.
<b>CAUTION</b>	Warns of hazards which if not avoided <b>could</b> result in minor or moderate injury.
<b>NOTICE</b>	Signals an important instruction related to the pump. Failure to follow these instructions could result in pump failure or property damage.

**WARNING** Read every supplied manual before using pump system. Follow all the safety instructions in manual(s) and on the pump. Failure to do so could result in serious injury or death.

## Safety Precautions

### **WARNING** RISK OF ELECTRIC SHOCK

- Always disconnect the pump from power source before attempting to service the pump. Fatal electrical shock could occur.
- The pump shall be plugged into a properly fused electrical outlet with a ground fault circuit interrupter (GFCI) that conforms to current National Electric Code (NEC) and all applicable local codes. All wiring must be performed by qualified personnel.
- Pump shall be properly grounded using its supplied grounding conductor. Do not bypass grounding wires or remove ground prong from attachment plugs. Failure to properly ground the pump system can cause all metal portions of the pump and its surroundings to become energized.
- Do not handle or unplug pump with wet hands, when standing on a wet/damp surface, or in water. Fatal electrical shock could occur.
- Do not lift or carry the pump by its power cord. This will damage the power cord, and could expose the electrically live wires inside the power cord.
- Do not submerge motor or allow motor to be exposed to water. Pump is intended for dry locations only. Serious injury or death could result.
- This pump has been fitted with a 20 ft power cord. To avoid the risk of electric shock, do not use an extension cord unless absolutely necessary. Follow the Extension Cord Length Table for proper gauge of a 3-wire, grounding type extension cord.

### **WARNING** RISK OF FIRE

- Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmosphere. Sparks could ignite flammable liquids.

### **WARNING** RISK OF SERIOUS INJURY OR DEATH

- Do not modify the pump/pump system in any way. Modifications may affect seals, change the electrical loading of the pump, or damage the pump and its components.
- Do not allow children to play with the pump.
- Do not remove any tags or labels from the pump or its cord.
- Keep clear of suction and discharge openings. To prevent injury, never insert fingers into pump while it is connected to a power source.
- Secure the discharge line before starting the pump. An unsecured discharge line under pressure may whip. Serious injury or death could result.
- Disconnect power, drain all liquids, and release all pressure within the system before servicing any component.
- This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

## NOTICE

- ◆ Do not run pump dry.
- ◆ Do not block air vents.
- ◆ Do not over-tighten prime plug (hand-tighten only).
- ◆ Suction hose must not be longer than 15 ft.
- ◆ Line could take up to 2 minutes to prime.
- ◆ Do not submerge motor or allow motor to be exposed to water.
- ◆ Ambient temperature must not exceed 104°F (40°C).
- ◆ Water temperature must not exceed 135°F (57°C).
- ◆ Not for use with potable water or food products.
- ◆ Pump retains water after use. In areas that are prone to freezing temperatures, be sure to drain the pump before storing it.
- ◆ When used to transfer materials other than clear water (such as glycol or vinegar), the pump must be flushed with water and drained before storage to prevent potential pump damage. Some chemicals used in hydronic systems can result in corrosion of the aluminum pump housing.

## General Information

This manual contains valuable information on the use of the Liberty Pumps Model 331 Portable Transfer Pump. This information is provided for safety and to prevent equipment problems.

Before use, read the following instructions carefully. Each pump is individually factory tested to ensure proper performance. Closely following these instructions will eliminate potential operating problems, providing years of trouble-free service.

This portable transfer pump is designed for such applications as emptying water heaters, swimming pool covers, livestock tanks, boats, etc. It can also be used for an intermittent pressure boost for applications such as washing cars, cleaning driveways, etc.

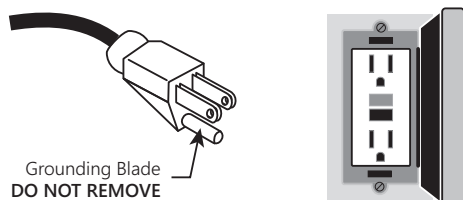
When used for charging or servicing hydronic systems, the pump must be flushed with clear water afterwards to prevent corrosion.

Periodically inspect the pump and system components, checking for weak and/or worn hoses. Be sure all connections are secure.

Protect the electrical cord from sharp objects, hot surfaces, oil, and chemicals. Avoid kinking the power cord.

## NOTICE

- ◆ Never remove the grounding blade from the power cord. Cutting the power cord or plug will void the warranty and make the pump inoperable.



## Preparation

Adapters are furnished with the pump. The inlet and discharge are threaded with 3/4" NPT. Standard water pipe can be threaded directly into the casting. If a garden or other hose is to be used, the brass fittings must be installed. Use thread seal tape (4 wraps max) or sealant on threaded fittings to ensure proper seal. Liberty Pumps recommends that the swivel fitting be installed on the front of the pump.

To reduce the possibility of hose collapse, **use a high quality hose**, such as PEX or washing machine supply hose, on the suction line (an ordinary garden hose may collapse under suction pressure and should not be used).

A strainer is furnished and should be used if pumping from a creek, pond, or source where foreign objects may be sucked into the pump. The strainer helps prevent solids from entering the inlet line.

The pump must be filled with water before operating. **Do not run pump dry.** Running the pump dry will cause damage to the shaft seal.

This unit is not waterproof or weatherproof and should not be used in showers, saunas, or other potentially wet locations. The motor is designed for use in a clean, dry location.

The pump draws fresh air in from the back and blows warm air out the sides; **do not block air vents.** Ambient temperatures around the motor should not exceed 104°F (40°C) in order to adequately cool the motor. The motor is equipped with a thermal protector. If the motor temperature rises, the unit will automatically turn off. To reset the thermal switch, simply unplug the unit or turn the power switch from on to off and allow the unit to cool. The switch must be in the off position in order for it to cool down. The water temperature should not exceed 135°F (57°C).

The Model 331 pump has been fitted with a 20 ft power cord. To avoid the risk of electric shock, do not use an extension cord unless absolutely necessary. Refer to Table 1 for proper wire gauge for a 3-wire, grounding-type extension cord.

Table 1. Extension Cord Length

Length	Wire Size
25 ft	16 AWG
50 ft	16 AWG
100 ft	14 AWG

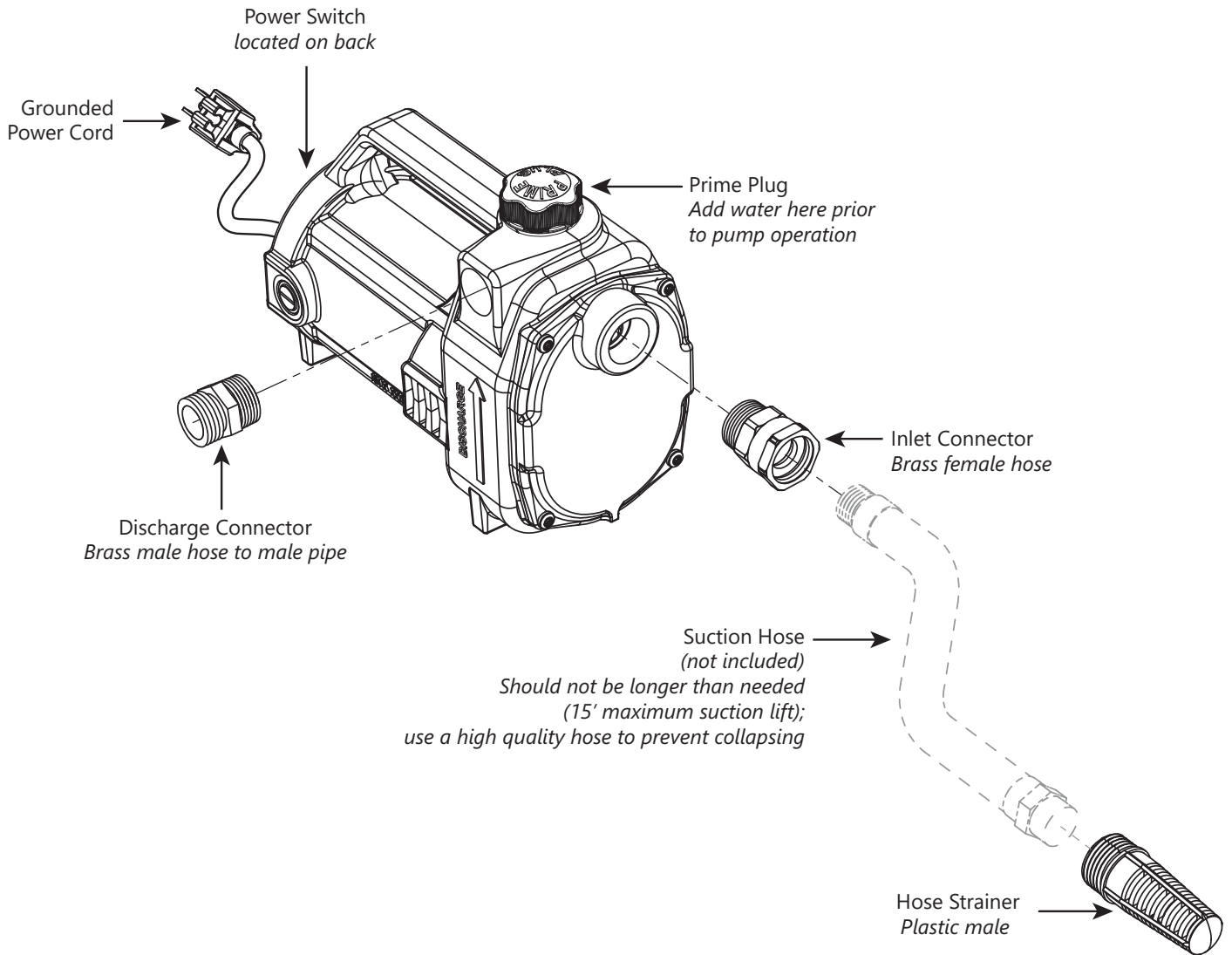


Figure 1. Transfer Pump Components

## Operation

### NOTICE

- ◆ Pump retains water after use. In areas that are prone to freezing temperatures, be sure to drain the pump before storing it.
- ◆ When used to transfer materials other than clear water (such as glycol or vinegar), the pump must be flushed with water and drained before storage to prevent potential pump damage. Some chemicals used in hydronic systems can result in corrosion of the aluminum pump housing.

**IMPORTANT: Pump must be primed before operating** to prevent shaft seal failure. To do this, remove the prime plug (refer to Figure 1) and fill the housing with water (approx. 2 cups). Replace the prime plug (hand-tighten only).

Connect hoses, making sure each connection is tight. A pin hole leak in the suction hose will prevent the unit from priming. If using a garden hose (*not recommended*), be sure to use a new rubber gasket.

Plug the power cord into a properly fused and grounded GFCI electrical outlet. Turn the power switch to the "ON" position. The amount of time it takes the pump to prime depends on the suction hose length and height. A maximum vertical suction lift of 15 ft through a  $\frac{3}{4}$ " diameter garden hose could take up to 2 minutes to prime.

A check valve installed near the bottom of the suction hose (*not included*) is recommended for suction lifts of more than 10 ft. This will reduce the amount of time required to draw water.

# Maintenance and Troubleshooting

## **⚠️ WARNING** ⚡ RISK OF ELECTRIC SHOCK

- Always disconnect the pump from power source before attempting to service the pump. Fatal electrical shock could occur.

### Maintenance

Replacement parts for this product are available at <https://www.libertypumps.com/Services/Replacement-Parts>.

#### Brush Replacement

The Model 331 operates with a brush-type air-cooled motor. To remove brushes for replacement or cleaning, disconnect the power cord from electrical supply. Remove the brush caps (one on each side) by turning them with a screwdriver counterclockwise. The brushes are attached to coil springs, which pull outward from the pump. If used brushes are to be reinserted, mark the location of each brush (left or right) and reinstall on the same side, in the same orientation. Brush replacement should be scheduled after approximately every 300 hours of use.

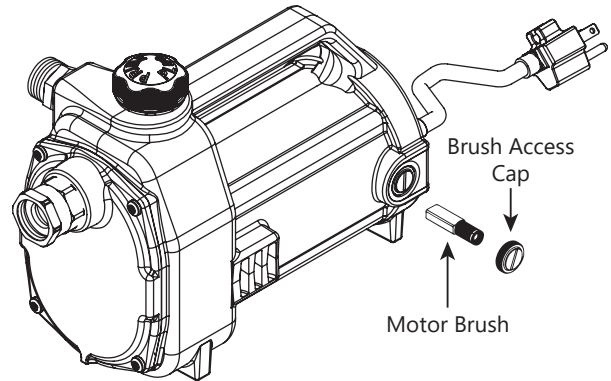


Figure 2. Motor Brush (only one side shown)

### Troubleshooting

Refer to Table 2 for troubleshooting guidance.

No repair work shall be carried out during the warranty period without prior factory approval. To do so may void the warranty.

Liberty Pumps, Inc. assumes no responsibility for damage or injury due to disassembly in the field. Disassembly, other than an authorized service centers, automatically voids warranty. All electrical work shall be done by a qualified electrician.

Table 2. Troubleshooting Matrix

Problem	Possible Cause	Corrective Action
Pump will not run.	Tripped circuit breaker, tripped GFCI, blown fuse, or other interruption of power.	Reset tripped circuit breaker, reset GFCI, replace blown fuse with properly sized fuse, check that the unit is securely plugged in, investigate power interruption.
	Improper voltage.	If voltage is under 108V, check wiring size.
		Remove extension cord, if connected, or use one of a heavier gauge.
	Worn motor brushes.	Replace brushes.
	Blocked impeller.	Remove blockage – remove the 4 screws that retain the impeller plate or remove the cap located at the back of the unit and turn the shaft with a flat screwdriver.
Defective motor or switch.	Replace motor or switch – contact factory.	
Flow rate is too low.	Clogged or damaged hose/piping.	Replace hose; check hose for kinks.
	Narrow piping or hose diameter.	Replace hose with 3/4" reinforced hose.
	Low line voltage.	Check voltage. If under 108V, check wiring size.
		Remove extension cord or use one with a heavier gauge.

Table 2. Troubleshooting Matrix (continued)

Problem	Possible Cause	Corrective Action
Pump will not prime or retain prime after operating.	Air leak in suction line.	Replace suction line.
	Blocked impeller.	Remove front plate and clean impeller area.
	Broken or worn impeller.	Replace impeller – contact factory.
	Suction lift too high.	Lower pump or use a check valve near the bottom of the suction line (maximum suction lift 15 ft).
	Kinked, looped, or collapsed hose.	Straighten hose; replace with heavier, reinforced hose.
	Loose fittings.	Tighten fittings; use new rubber hose gaskets.
	Suction hose out of water.	Submerge suction hose and re-prime.
	Clogged inlet.	Clean inlet or suction screen at hose end.

## Warranty

### Liberty Pumps Wholesale Products Limited Warranty

Liberty Pumps, Inc. warrants that Liberty Pumps wholesale products are free from all factory defects in material and workmanship for a period of three (3) years from the date of purchase (excluding\* batteries and "Commercial Series" models). The date of purchase shall be determined by a dated sales receipt noting the model and serial number of the pump. The dated sales receipt must accompany the returned pump if the date of return is more than three years from the date of manufacture noted on the pump nameplate.

The manufacturer's sole obligation under this Warranty shall be limited to the repair or replacement of any parts found by the manufacturer to be defective, provided the part or assembly is returned freight prepaid to the manufacturer or its authorized service center, and provided that none of the following warranty-voiding characteristics are evident:

The manufacturer shall not be liable under this Warranty if the product has not been properly installed, operated, or maintained per manufacturer instructions; if it has been disassembled, modified, abused, or tampered with; if the electrical cord has been cut, damaged, or spliced; if the pump discharge has been reduced in size; if the pump has been used in water temperatures above the advertised rating; if the pump has been used in water containing sand, lime, cement, gravel, or other abrasives; if the product has been used to pump chemicals, grease, or hydrocarbons; if a non-submersible motor has been subjected to moisture; or if the label bearing the model and serial number has been removed.

Liberty Pumps, Inc. shall not be liable for any loss, damage, or expenses resulting from installation or use of its products, or for indirect, incidental, and consequential damages, including costs of removal, reinstallation or transportation.

**There is no other express warranty. All implied warranties, including those of merchantability and fitness for a particular purpose, are limited to three years from the date of purchase. This Warranty contains the exclusive remedy of the purchaser, and, where permitted, liability for consequential or incidental damages under any and all warranties are excluded.**

\*Liberty Pumps, Inc. warrants StormCell® batteries for 1 year from date of purchase, and warrants that pumps of its Commercial Series are free from all factory defects in material and workmanship for a period of 18 months from the date of installation or 24 months from the date of manufacture, whichever occurs first, and provided that such products are used in compliance with their intended applications as set forth in the technical specifications and manuals.



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