



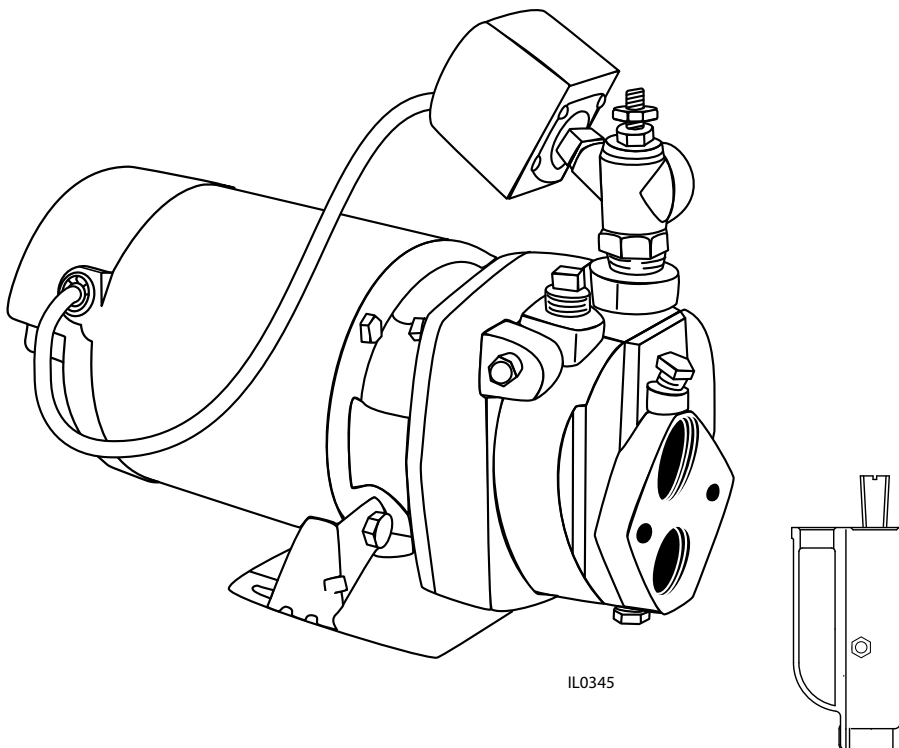
ZoellerAtHome.com

CAST IRON CONVERTIBLE JET PUMP

MODEL #1463-0006

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INSTRUCTIONS FOR DEEP WELL INSTALLATION (25-70 FT.)



ATTACH YOUR RECEIPT HERE

Serial Number _____ Purchase Date _____



Questions, problems, missing parts? Before returning to your retailer, call our customer service department at 1-800-584-8089, 7:30 a.m. - 5:00 p.m., EST, Monday - Friday.

PRODUCT SPECIFICATIONS

Power supply required.....	115 volts or 230 volts, 60 Hz
(Pump is set by the factory to run on 230 volts)	
Maximum water temperature.....	77°F (25°C)
Individual branch circuit required.....	15 Amp minimum
Discharge connection.....	1 in. NPT
Suction connection.....	1-1/4 in. NPT
Motor duty.....	Continuous duty with enforced air cooling and thermal overload protection
Pressure switch	Preset at 20 PSI “on” / 40 PSI “off”
Water depth rating - Deep Well	Maximum of 70 ft

ITEM #	HP	VOLTAGE	HZ	MAX AMPS	LOCKED ROTOR AMPS	PERFORMANCE AT 40 PSI - GPM				
						DEEP WELL				
						30 FT	40 FT	50 FT	60 FT	70 FT
1463-0006	1	115/230	60	14/7	52/26	10.6	7.9	7.3	5.7	4.6

SAFETY INFORMATION

Please read and understand this entire manual before attempting to assemble, operate, or install the product.

- NOTE:** Pumps with the “UL” Mark and pumps with the “US” mark are tested to UL Standard UL778. CSA certified pumps are certified to CSA Standard C22.2 No. 108. (CUS.)


DANGER

- ELECTRICAL SHOCK HAZARD.**
Always disconnect power source before performing any work on or near the motor or its connected load. If the power disconnect point is out-of-sight, lock it in the open position and tag it to prevent unexpected application of power. Failure to do so could result in fatal electrical shock.
- ELECTRICAL SHOCK HAZARD.**
Do not handle the pump with wet hands or when standing in water as fatal electrical shock could occur. Disconnect main power before handling unit for ANY REASON!
- RISK OF ELECTRIC SHOCK.**
These pumps have not been investigated for use in swimming pool areas.

WARNING

- ELECTRICAL SHOCK ALERT.**
Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
- ELECTRICAL SHOCK ALERT.**
Replace damaged or worn wiring cord immediately. Never use an extension cord.
- ELECTRICAL SHOCK ALERT.**
Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.
- ELECTRICAL SHOCK ALERT.**
Wire motor to correct supply voltage. This pump has a dual voltage motor and can run on 115 V or 230 V. It is factory pre-set to run on 230 V.
- ELECTRICAL SHOCK ALERT.**

Unit must be securely and adequately electrically grounded. This can be accomplished by wiring the unit to a ground metal-clad raceway system or by using a separate ground wire connected to the bare metal of the motor frame or other suitable means.

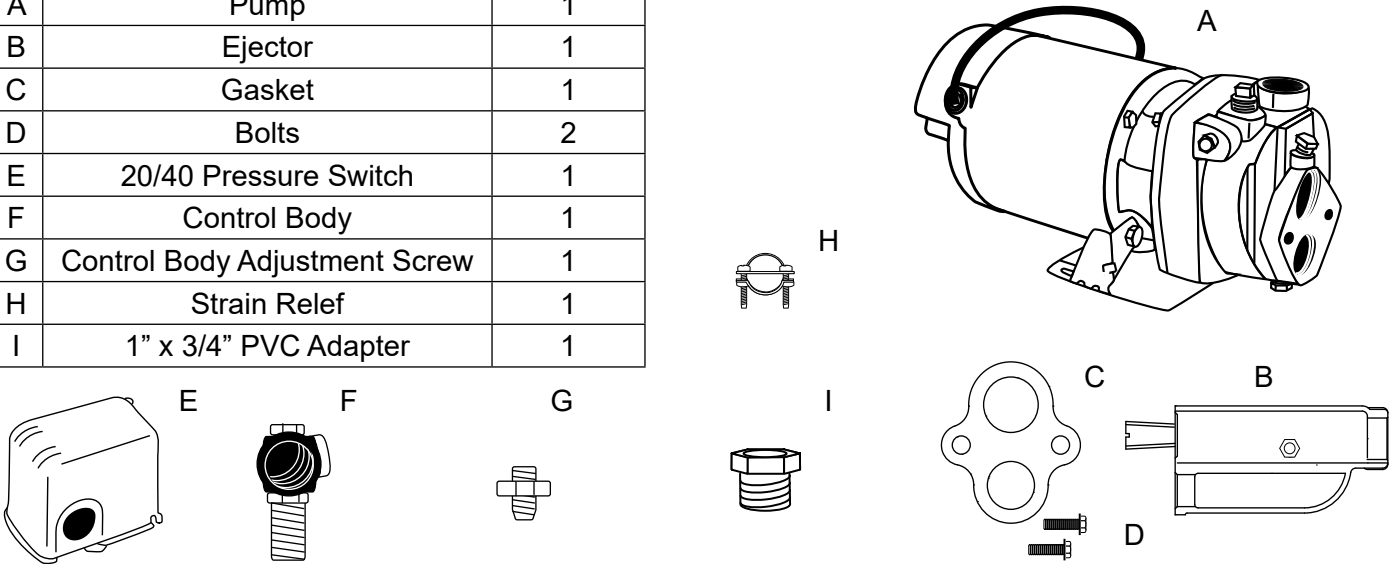
- ELECTRICAL SHOCK ALERT.**
Make certain the electrical power source is adequate for the requirements of the pump.
- ELECTRICAL SHOCK ALERT.**
Never use an extension cord with this pump.
- CHEMICAL ALERT.**
Prop65 Warning for California residents:
 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov
- HAZARDOUS PRESSURE ALERT.**
Install pressure relief valve in discharge pipe. Release all pressure on system before working on any component.
- EXPLOSION ALERT**
Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in flammable and/or explosive atmospheres.

CAUTION

- PRODUCT DAMAGE MAY RESULT**
This pump is not to be used for irrigation or water systems.
- PRODUCT DAMAGE MAY RESULT**
Protect the power cable from coming in contact with sharp objects.
- PRODUCT DAMAGE MAY RESULT**
Do not run pump dry.
- PRODUCT DAMAGE MAY RESULT**
Pump and plumbing must be full of water before startup.
- PRODUCT DAMAGE MAY RESULT**
Do not pump water which contains sand, mud, silt, or debris.
- INJURY MAY RESULT**
Be careful when touching the exterior of an operating motor. It may be hot enough to be painful or cause injury.

PACKAGE CONTENTS

Description		Quantity
A	Pump	1
B	Ejector	1
C	Gasket	1
D	Bolts	2
E	20/40 Pressure Switch	1
F	Control Body	1
G	Control Body Adjustment Screw	1
H	Strain Relief	1
I	1" x 3/4" PVC Adapter	1



PREPARATION

Before beginning installation of product, make sure all parts are present. If any part is missing or damaged, do not attempt to assemble the product. Compare parts to package contents list.

Estimated Installation Time: 2 hours.

Tools Required for New Installation (not included): pipe wrenches (2), wire strippers, needle-nose pliers, Phillips screwdriver, wire cutters, adjustable wrench, 2-step PVC glue system (primer and sealer), thread tape, tire gauge and tire pump

Parts Required for New Installation (not included): 1-1/4 In. union, 1-1/4 in. adapter, 1-1/4 in. elbow, 3/4 in. union, 1 in. adapter, 1 in. x 3/4 in. reducer bushing, 3/4 in. adapter, 1 in. elbow, 1-1/4 in. check valve, 3/4 in. tee (plastic), 3/4 in. tee (steel), 3/4 in. x 3 in. nipple (steel), 3/4 in. plug (steel), foot valve, electric cord strain relief, 100 psi pressure gauge (qty 2).

GENERAL PUMP INFORMATION

Ventilation - Ventilation and drainage must be provided to prevent damage to the motor from heat and moisture.

Freezing - Pump and all piping must be protected from freezing. If freezing weather is forecast, drain pump or remove completely from the system.

Water Supply - The water source must be able to supply enough water to satisfy the capacity of pump and water needs. See Performance Chart on page 2.

Suction Lift - Suction lift is the vertical distance from the lowest level of the water to the pump intake. See Performance Chart on page 2.

Horizontal Distance - The horizontal distance is the horizontal measurement between pump suction and the water source. This distance may affect the ability of pump to operate. If it is more than 100 ft., call the manufacturer for assistance: 1-800-584-8089.

Wire Size:

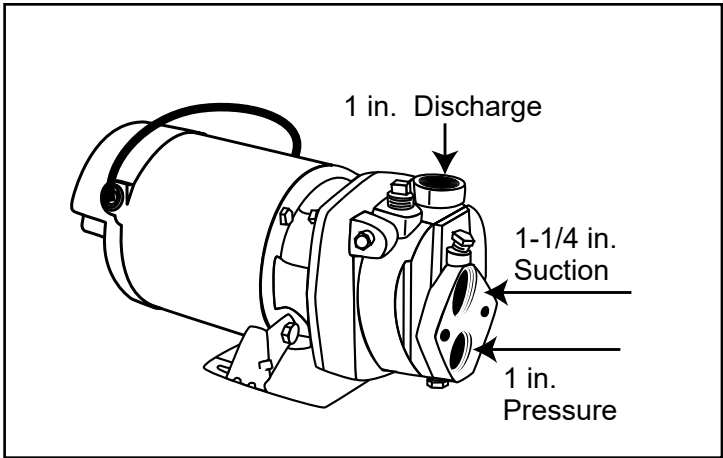
The wire size is determined by the distance from the power source to the pump motor and the horsepower rating of the motor. See the wire chart in ELECTRICAL CONNECTIONS for proper wire size.

Wire Size Chart		
Recommended Copper Wire and Fuse Sizes		
Distance from Motor to Meter	1 HP	
0-50'	115 V	10 GA
	230 V	14 GA
50-100'	115 V	10 GA
	230 V	14 GA
100-150'	115 V	10 GA
	230 V	12 GA
150-200'	115 V	8 GA
	230 V	12 GA
200-300'	115 V	6 GA
	230 V	10 GA
Fuse Size	Amps	
	115 V	30
	230 V	15

Pipe And Fittings

Use galvanized steel or NSF PW Schedule 40 PVC pipe and fittings. This material is designed for water pressure and will seal against air and water under pressure. Do Not Use: DWV fittings, as these are designed for drains without pressure and will not seal properly.

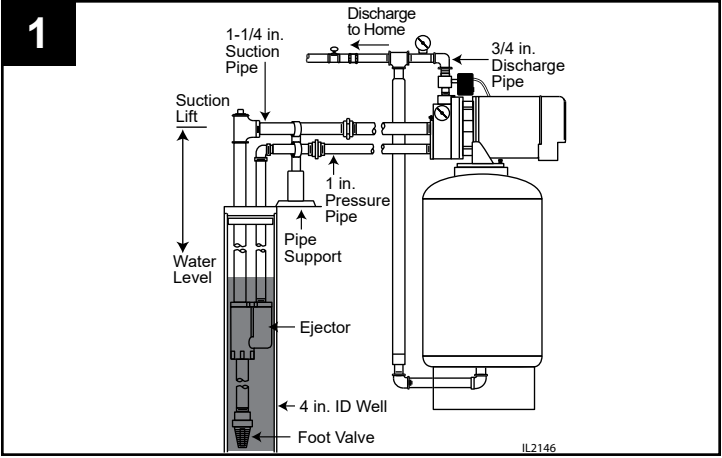
CAUTION: The entire system must be air and water tight for efficient operation and to maintain prime.



Typical Pump Setup

- 1. Deep wells (25 - 70 ft. lift) where well ID is 4” or more and a two pipe ejector is installed in the well.

(FOR WELL DEPTHS OF 0-25 FT., SEE INSTRUCTIONS 025409)



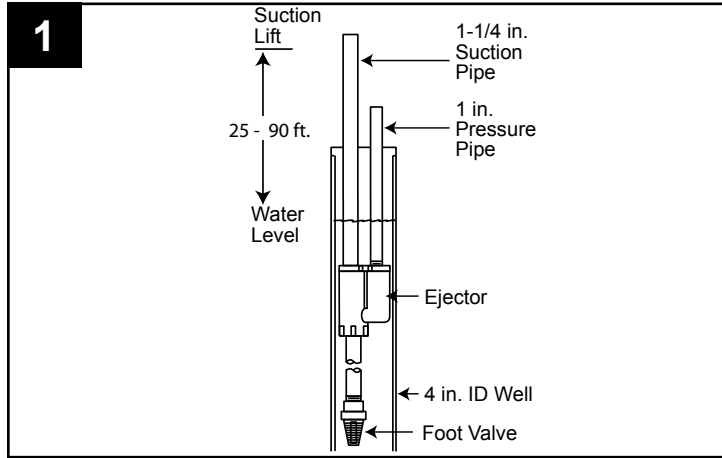
INSTALLING PIPING IN WELL - DEEP WELL

CAUTION: Dry-fit entire assembly to ensure proper fit before gluing or taping parts.

CAUTION: Follow all proper gluing procedures as specified by the glue manufacturer. Always glue in a vertical direction whenever possible to prevent glue from dripping inside pipe or fittings

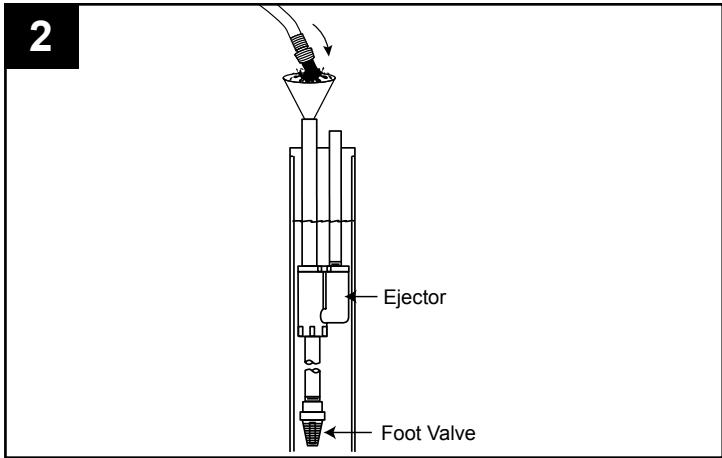
CAUTION: Use pipe tape and pipe paste compound on all male threads. Tighten with wrench to a snug
NOTE: REPLACE EJECTOR WHEN REPLACING PUMP.

- 1. Attach the foot valve to the ejector using a galvanized steel or plastic nipple. Add enough 1 in. pressure pipe and 1-1/4 in suction pipe to submerge ejector 10 to 15' below pumping water level, making certain foot valve is at least five (5) feet from bottom of well. If pressure pipe and suction pipe of the same diameter are used, be sure to identify them clearly so that they will be connected to the proper tappings of the pump. If a known well leak exists, replace nipple with 21 feet of 1-1/4 in. tail pipe between the ejector and the foot valve. This will provide a continuous source of water for the pumping system.



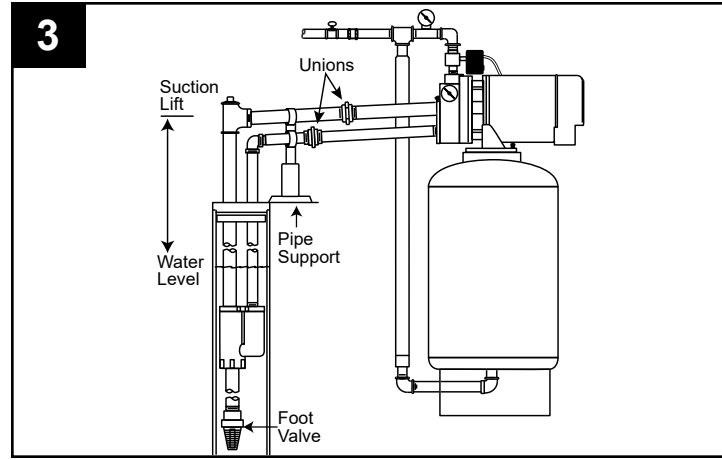
- 2. Check pipe and foot valve for leaks by filling pipes with water. A continuous loss of water indicates a leak in the piping, foot valve, or unions, and must be corrected.

If no leaks are found, proceed to **WELL TO PUMP CONNECTION (SUCTION PIPE).**



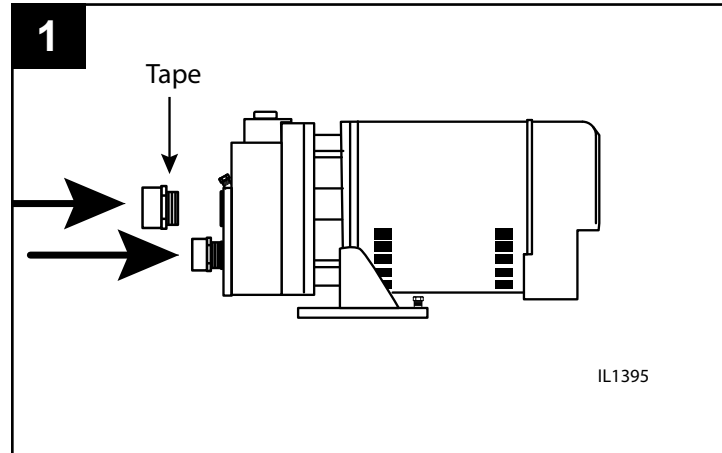
3. All piping from the well to the pump should slope slightly upward with no sagging. Support suction pipe between water source and pump. Unions in the suction line near the pump and well will aid in servicing. Be sure to leave enough room so that wrenches can be used easily.

Replace foot valve for best performance.



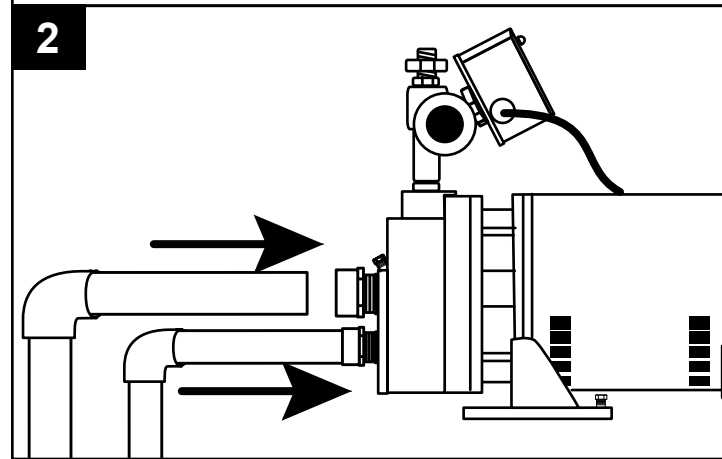
WELL TO PUMP CONNECTION (SUCTION PIPE) - DEEP WELL

1. Make the connection to your well. Wrap all threaded fittings with pipe tape 5 times or apply a pipe paste (pipe dope) to ensure an air tight connection.



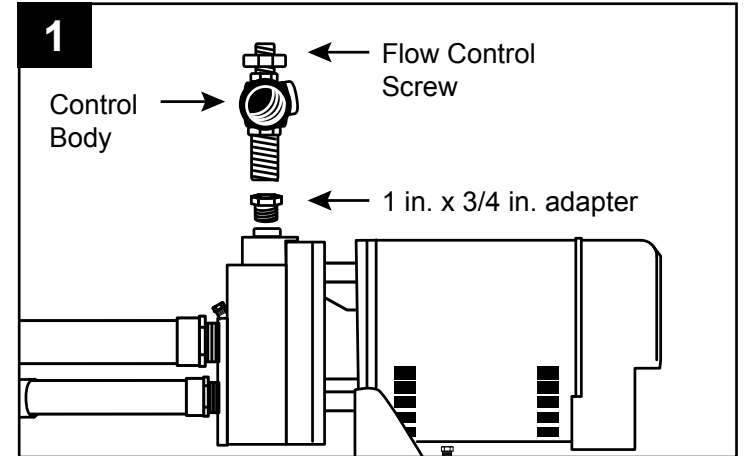
IL1395

2. Finish the connection to your well with additional pipe and fittings as needed.

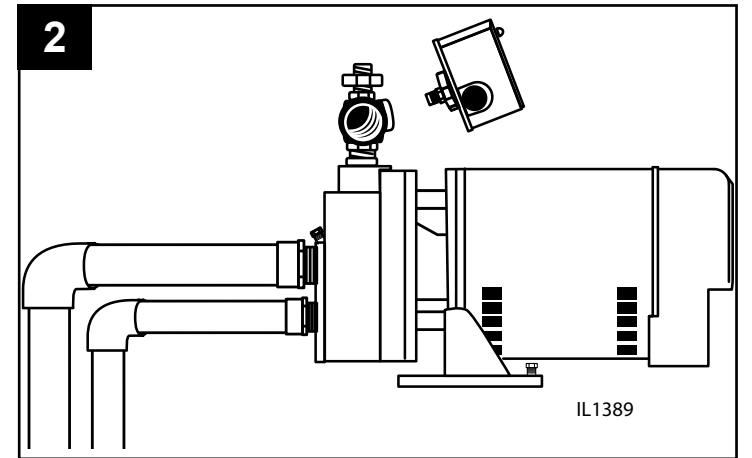


PUMP TO PRESSURE TANK CONNECTION (DISCHARGE PIPE) - DEEP WELL

1. To begin the connection to the pressure tank, install the 1 in x 3/4 in adapter (included) to pump discharge. Install flow control body to adapter. Using Teflon tape, position the discharge outlet of the control body facing right as you look directly into the face of the pump

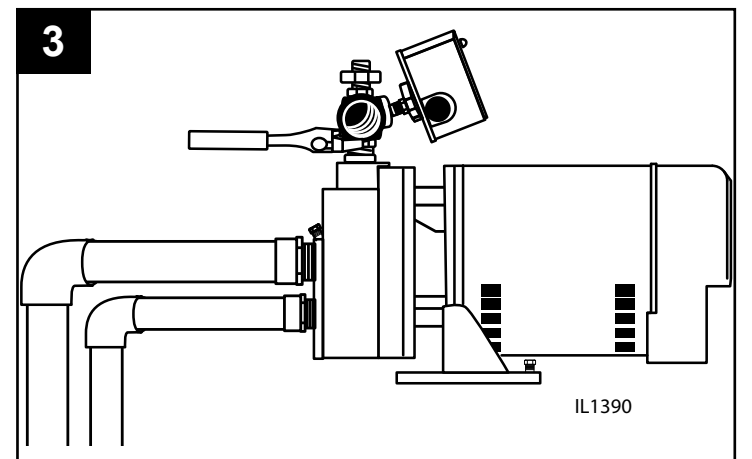


2. Assemble the pressure switch in the 1/4" tapping adjacent and to the right of the discharge outlet of the control valve. Refer to Pump Electrical Connection section for pressure switch wiring.



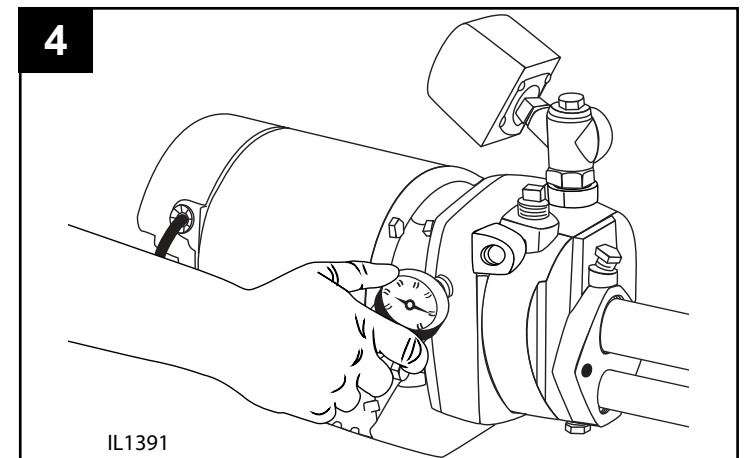
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3. Tighten flow control body.



IL1390

4. Install optional pressure gauge in 1/4" tapping on side of pump body. Face of gauge should be positioned so that dial can be read easily.

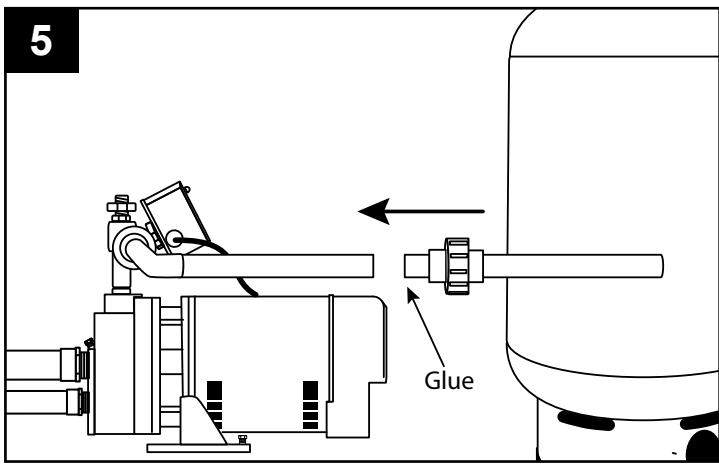


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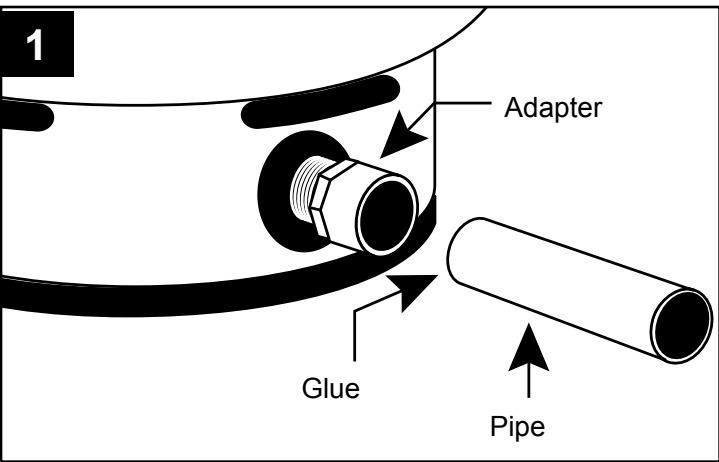
5. Continue with fittings and pipe to the pressure tank. A 3/4 in. union is optional but recommended for easy connection and disconnection.
- CAUTION:** Install a pressure relief valve on any installation where the pump pressure can exceed the maximum working pressure of the tank and plumbing.

TANK TO HOUSE CONNECTION

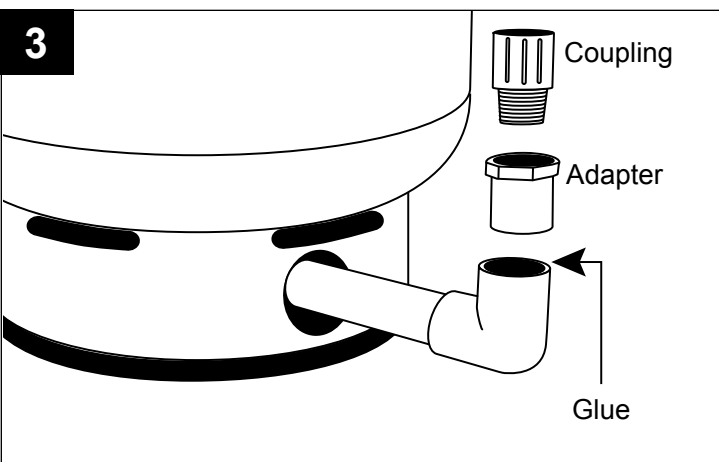
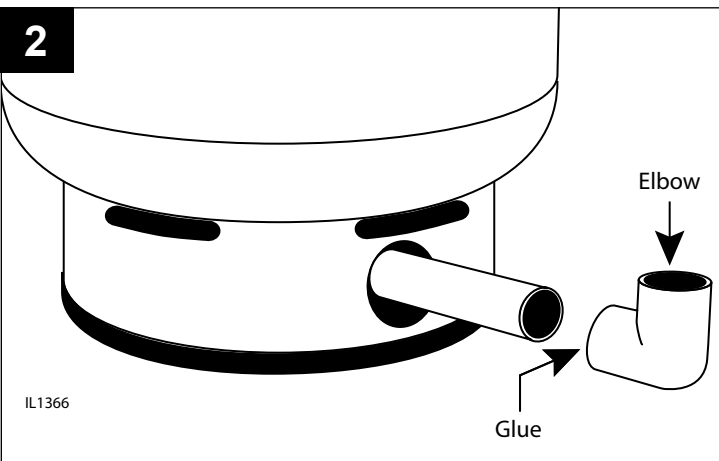
1. Most pressure tanks will have a 1 inch inlet elbow on the bottom. Connect to this elbow with a 1 in. MPT x 1 in. slip (glue) adapter and short piece of pipe.



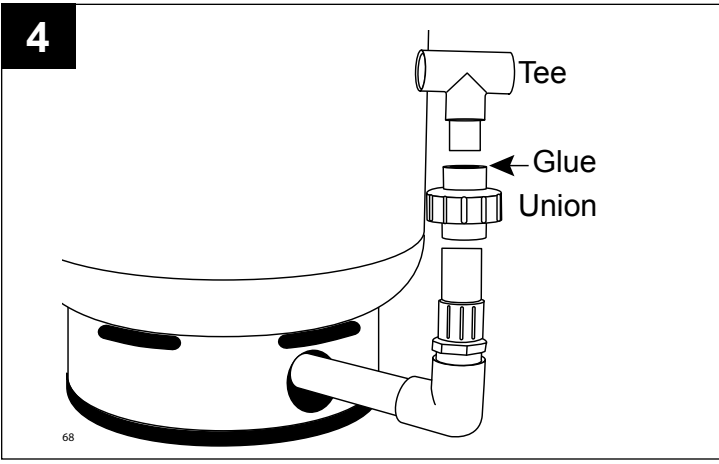
2. Install a 1 in. elbow.



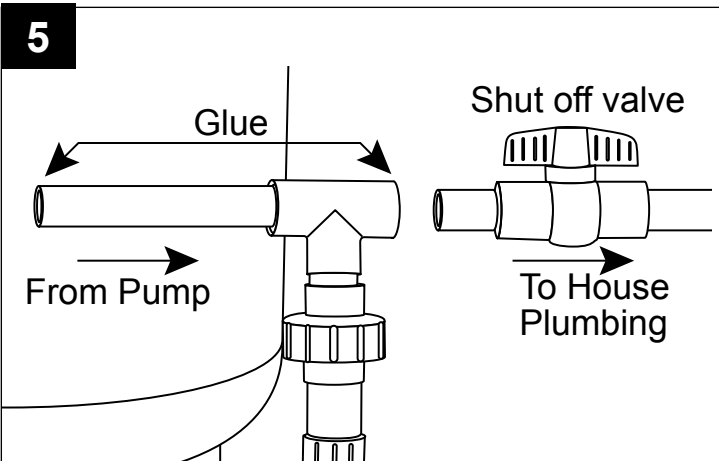
3. Attach a 1 in. slip (glue) x 3/4 in. FPT adapter and 3/4 in. MPT x 3/4 in. slip.



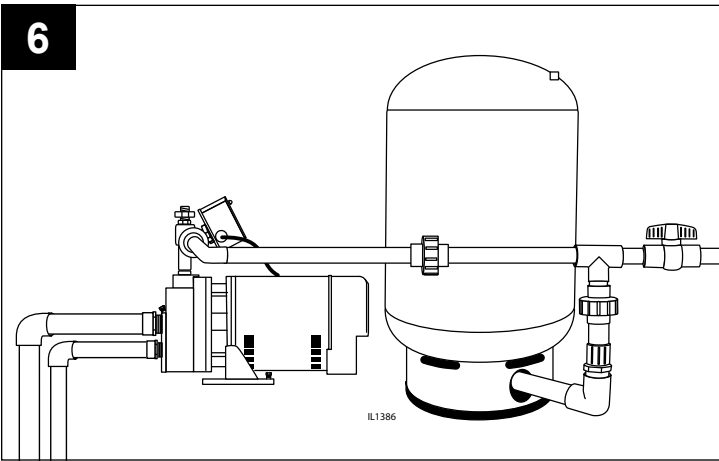
4. Install a 3/4 in. union (optional) and continue with pipe and 3/4 in. x 3/4 in. x 3/4 in. tee.



5. Make the connection to the house plumbing. From the tee, install pipe and shut off valve (optional).



6. Completed deep well installation with piping and tank is shown.



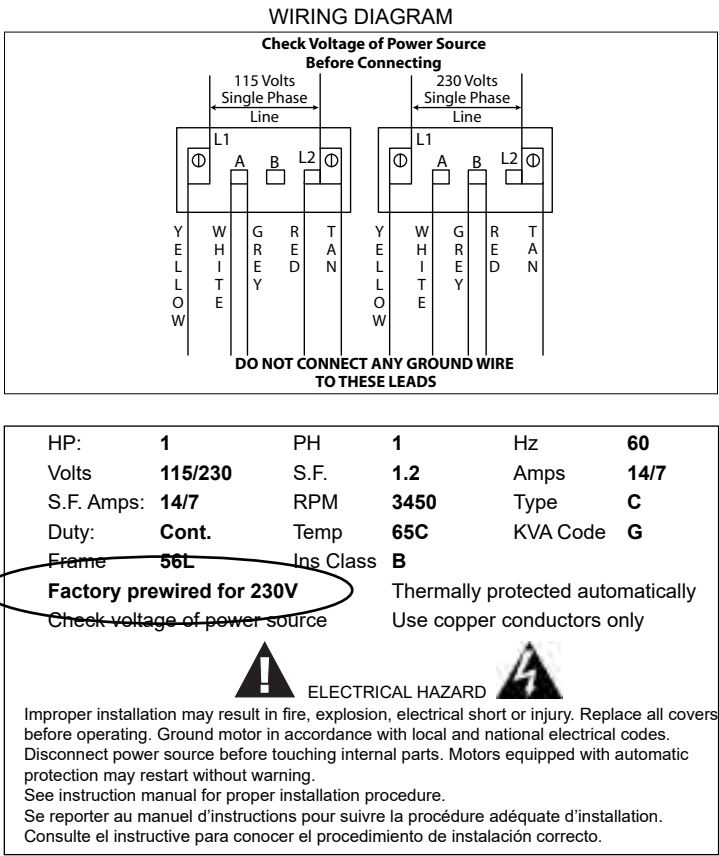
PUMP ELECTRICAL CONNECTIONS

⚠ WARNING:

- Always disconnect pump from electricity before performing any work on the motor.
- Under-sized wiring can cause motor failure and even fire. Use proper wire size specified in the Wire Size Chart.
- Replace damaged or worn wiring cord immediately.
- Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.
- The pump must be properly grounded using the proper wire cable with ground.

⚠ CAUTION:

- Protect the power cable from coming in contact with sharp objects.
- All wiring should be performed by a qualified electrician in accordance with the National Electric Code and local electric codes.
- Connect the pump to a separate electrical circuit with a dedicated circuit breaker. Refer to the Wire Size Chart for proper fuse size.

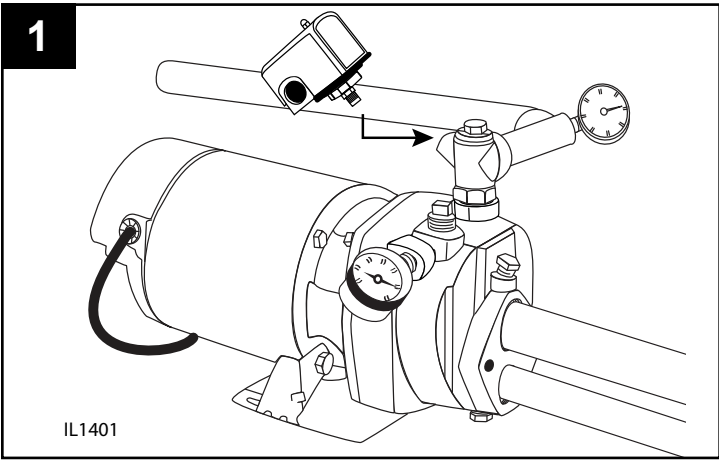


Wiring the Pressure Switch:

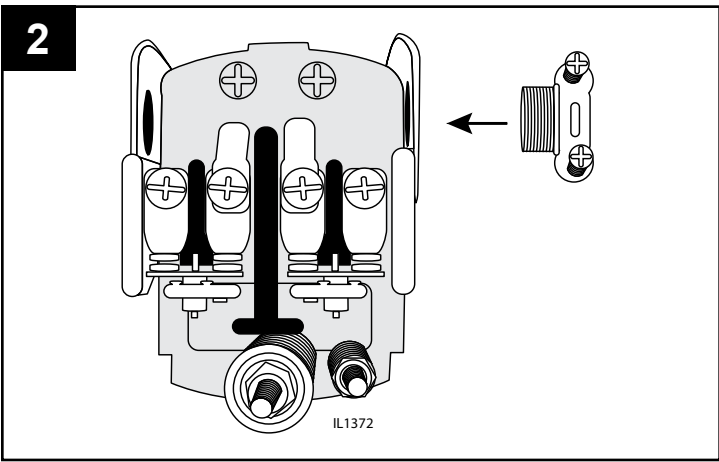
CAUTION: Make certain that the power source matches the pump requirements. This pump has a dual voltage motor and can run on 115 V or 230 V. This pump is pre-wired at the factory to run on 230 V.

NOTE: To change pump voltage, see wiring diagram on this page or instructions on page 13.

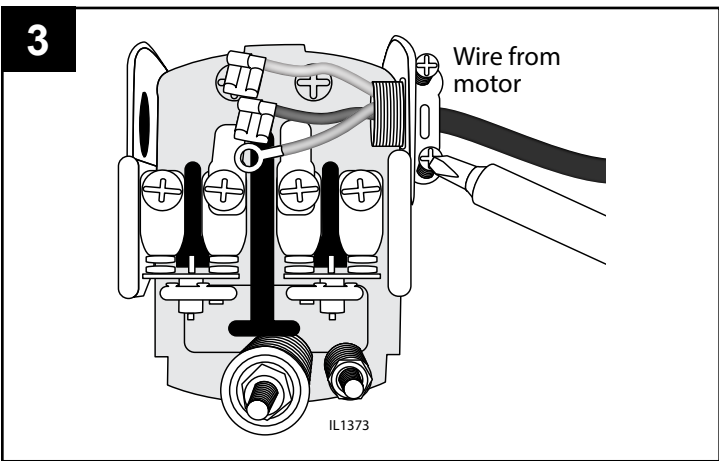
1. Screw the pressure switch into the 1/4 in. opening on the side of the flow control and remove the switch cover.



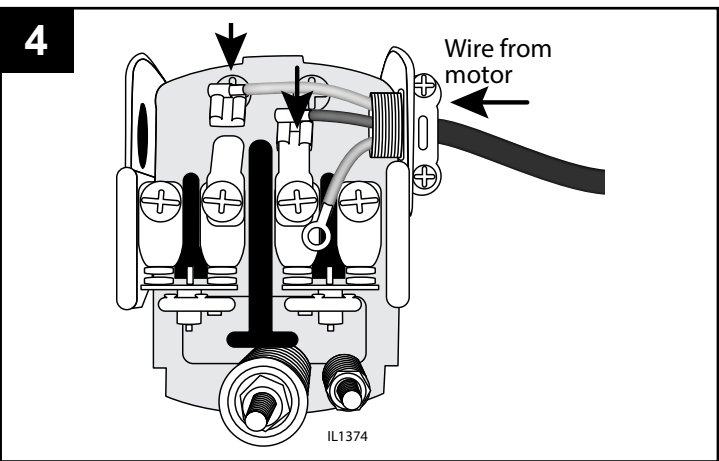
2. Insert an electrical wire strain relief into the opening in the side of the pressure switch closest to the motor.



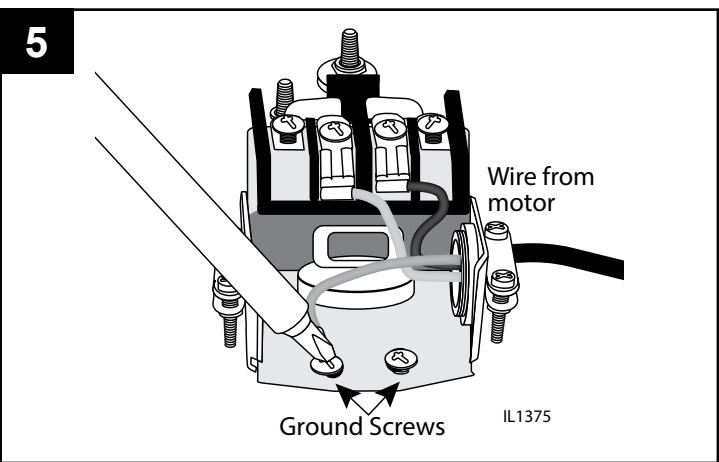
3. Thread the cable from the pump motor through the strain relief into the pressure switch cavity and tighten both screws on the strain relief. Do not crush wire.



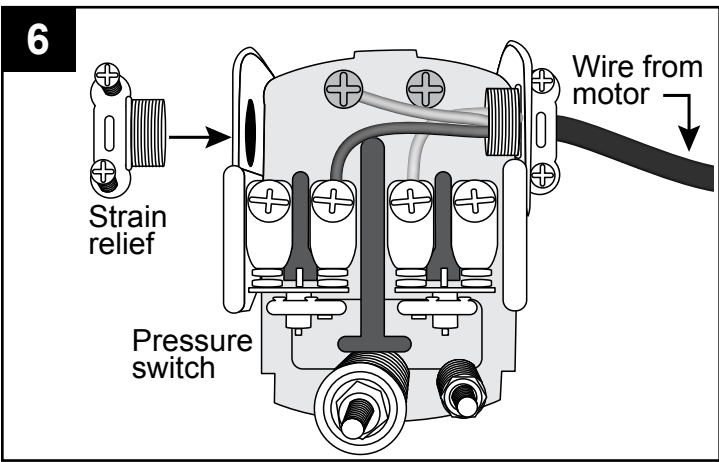
4. Connect the two motor wires of the motor cable to the two inside terminals on the pressure switch.



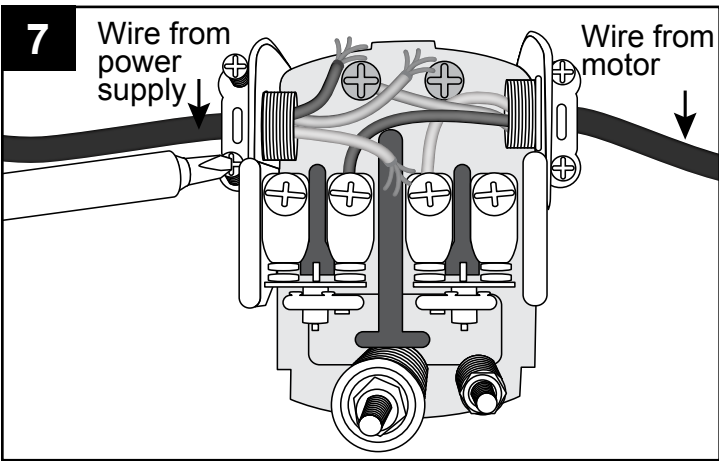
5. Connect the green ground wire from the motor cable to one of the green ground screws at the bottom of the pressure switch.



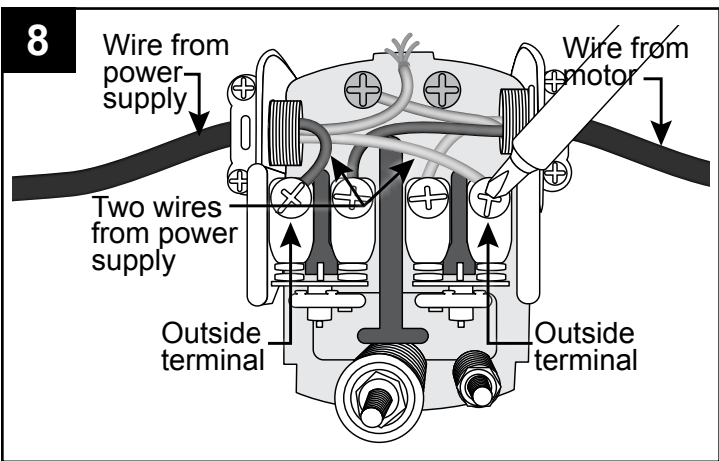
6. Insert an electrical wire strain relief into the opening in the opposite side of the pressure switch.



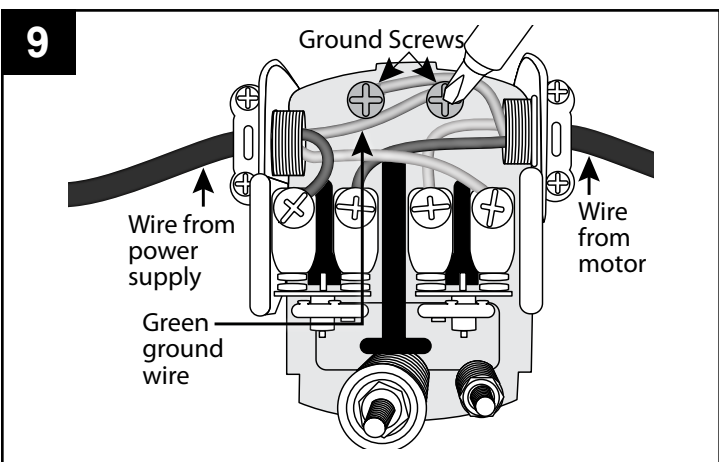
7. Thread the cable from the power supply through the strain relief and tighten both screws on the strain relief. Do not crush wire.



8. Connect the two wires from the power supply to the two outside terminals on the pressure switch.



9. Connect the green ground wire from the power supply to the remaining green ground screw in the pressure switch, and re-attach the pressure switch cover.



To change from 230 V to 115 V

1. The motor of this pump is dual voltage and can run on either 115 V or 230 V. In general, 230 V is more economical to run and requires a smaller wire size.

NOTE: This pump is pre-wired at the factory to run on 230 V.

2a. For 115 V service, change the following wires on the terminal board:

a. Using a pair of needle nose pliers, pull the gray wire with the female flag connector from the "B" terminal spade post. Place it to the left on the "A" terminal spade post.

b. Pull the red wire with the female flag connector from the "B" terminal. Place it to the right on the "L2" terminal spade post.

c. Reinstall the rear motor cover.

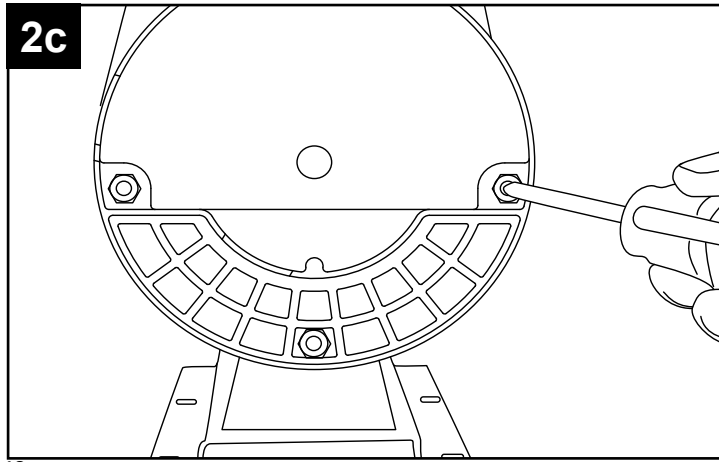
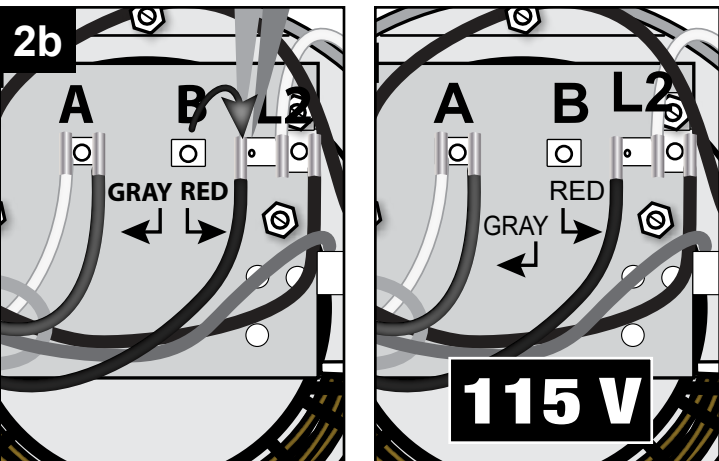
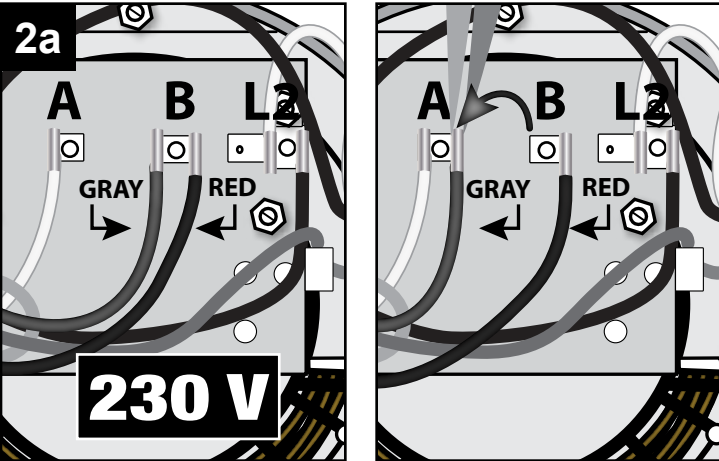
NOTE: To change voltage from 115 V to 230 V, simply reverse instructions above.

1

HP:	1	PH	1	Hz	60
Volts	115/230	S.F.	1.2	Amps	14/7
S.F. Amps:	14/7	RPM	3450	Type	C
Duty:	Cont.	Temp	65C	KVA Code	G
Frame	56L	Ins. Class	B	Thermally protected automatically	
Factory prewired for 230V				Use copper conductors only	
Check voltage of power source					

ELECTRICAL HAZARD

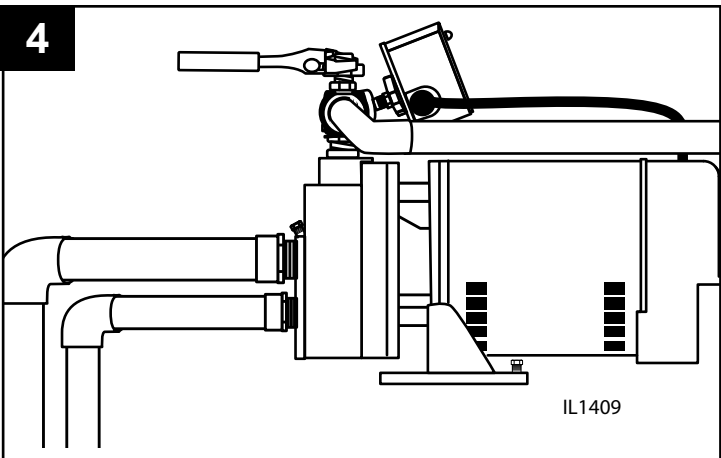
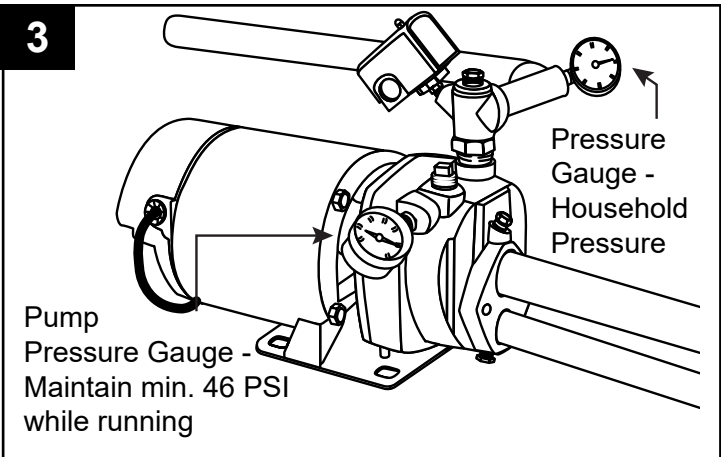
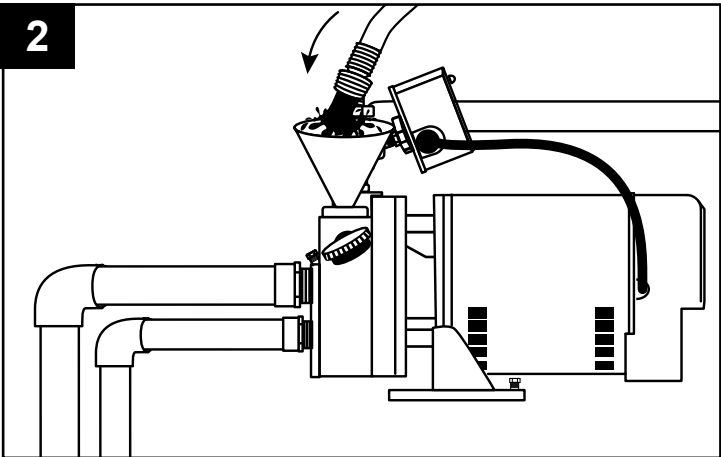
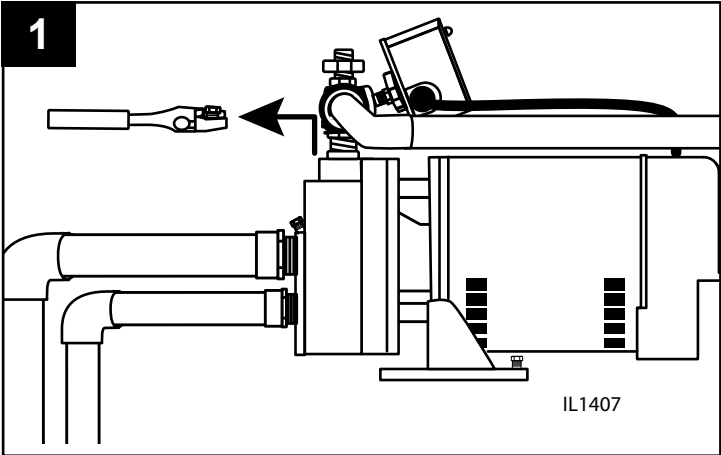
Improper installation may result in fire, explosion, electrical short or injury. Replace all covers before operating. Ground motor in accordance with local and national electrical codes. Disconnect power source before touching internal parts. Motors equipped with automatic protection may restart without warning. See instruction manual for proper installation procedure. Se reporter au manuel d'instructions pour suivre la procédure adéquate d'installation. Consulte el instructivo para conocer el procedimiento de instalación correcto.



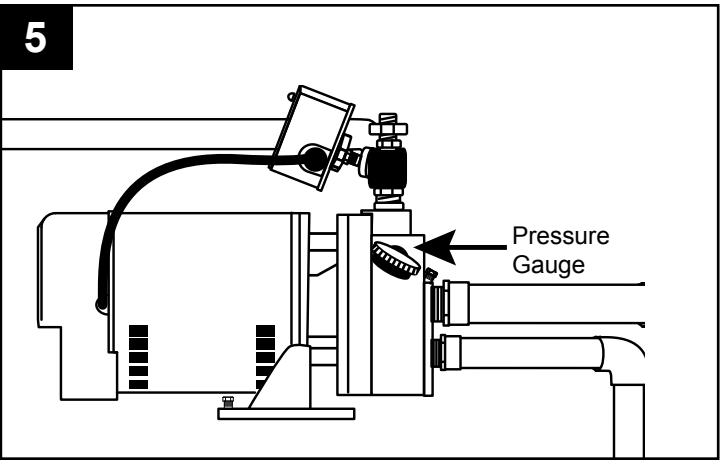
PUMP PRIMING & STARTUP - DEEP WELL

⚠ CAUTION: All pumps must be primed (filling the cavity with water) before they are first operated. This may take several gallons of water, as the suction line will be filled in addition to the pump cavity.

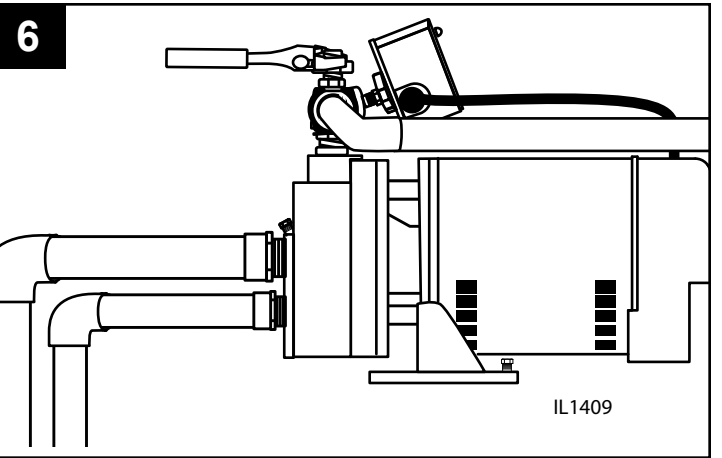
1. Remove the 1/2" priming plug.
2. Fill pump cavity with water until full and replace priming plug.
3. The flow control valve allows you to adjust the balance between pump body pressure and household pressure. Install a pressure gauge on the pump body and a second gauge in the discharge line. Follow the steps below to maximize pressure to your home while making sure you maintain a minimum of 46 PSI at the pump while the pump is running.
4. Tighten flow control screw completely by turning clockwise, then loosen two turns. Now start the pump.



5. If pump is correctly primed, pressure will quickly build and register on the gauge mounted on the pump body. If pressure does not build, repeat priming operation. All air must be vented from the drive and suction pipes, as well as the body before the pump will prime. The pump body may need to be filled several times in order to achieve the prime.



6. With pump operating at high pressure, open two or more faucets and slowly unscrew the flow control screw until maximum flow is obtained. The pressure gauge should read 46 PSI, which is the minimum operating pressure of the pump.

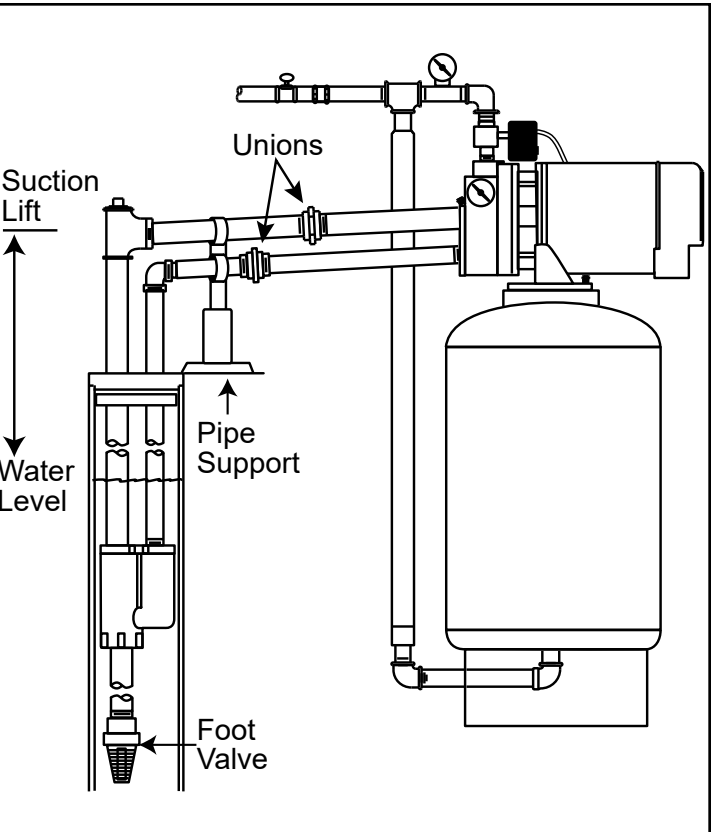


⚠ IMPORTANT: If the pump fails to prime within five minutes:

Turn power off at the breaker box and check all pipe connections for leaks. All connections must be water and air tight in order for pump to operate.

All piping from the well to the pump should slope slightly upward with no sagging. Support suction pipe between water source and pump. Unions in the suction line near the pump and well will aid in servicing. Be sure to leave enough room so that wrenches can be used easily.

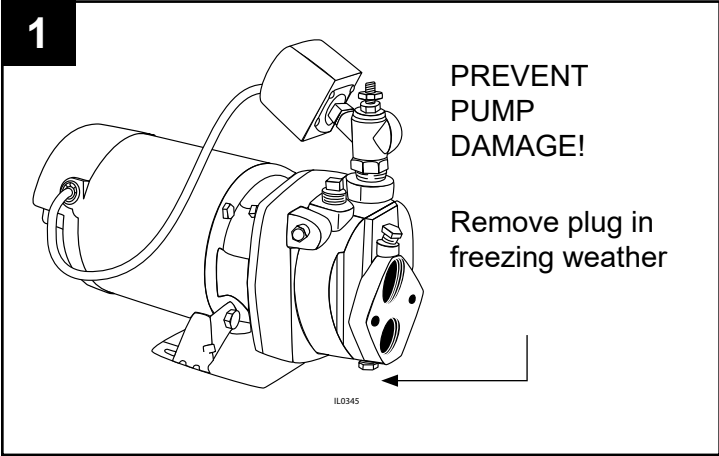
NOTE: Look for leaks or a milky color in the discharged water, which indicates an air leak. Re-prime if necessary, following steps 1 through 6 above. Reset breaker at the breaker box. All connections must be water and air tight in order for pump to operate.



CARE AND MAINTENANCE

Winterizing

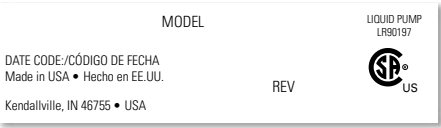
CAUTION: Drain the entire system if there is danger of freezing. A drain plug is provided at the bottom of the pump for this purpose.



QUICK TROUBLE-SHOOTING CHECKLIST

Please review the following troubleshooting questions before returning a pump as defective. If you have any questions, please call Customer Service at (800) 584-8089.

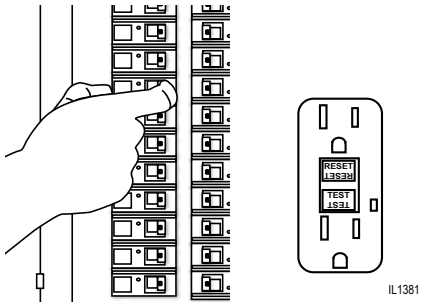
1. Check date code to make sure pump is within warranty period. Date code is the month and the year.
(Example: 0318 is March of 2018. Date Code is found on the top of the pump.)



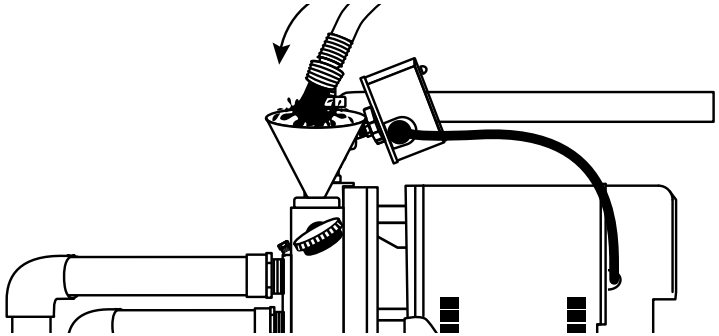
2. Make certain that the power source matches the pump requirements. This pump has a dual voltage motor and can run on 115 V or 230 V. This pump is pre-wired at the factory to run on 230 V.

HP:	1	PH	1	Hz	60
Volts	115/230	S.F.	1.2	Amps	14/7
S.F. Amps:	14/7	RPM	3450	Type	C
Duty:	Cont.	Temp	65C	KVA Code	G
Frame	56L	Ins Class	B		
Factory prewired for 230V				Thermally protected automatically	
Check voltage of power source				Use copper conductors only	

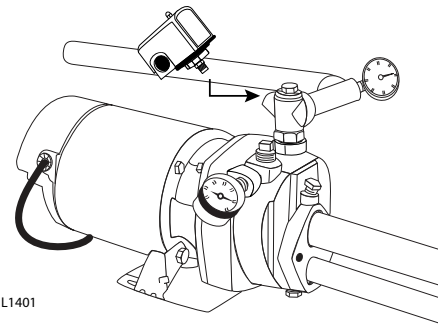
3. If pump does not run, check the GFI or breaker panel switch to make sure it is in full operation.



4. If the pump runs all the time, make sure the pump has been primed correctly. If pump is not holding the prime, inspect check valve, foot valve, and piping, then reprime.



5. If the pump runs but won't shut off, check pressure switch.



TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Little or no discharge	1. Casing not initially filled with water	1. Fill pump casing
	2. Suction lift too high, or too long	2. Move pump closer to water source
	3. Hole or air leak in suction line	3. Repair or replace. Use pipe tape and pipe sealing compound.
	4. Foot valve too small	4. Match foot valve to piping or install one size larger foot valve.
	5. Foot valve or suction line not submerged deep enough in water	5. Submerge lower in water
	6. Motor wired incorrectly	6. Check wiring diagram
	7. Casing gasket leaking	7. Replace
	8. Suction or discharge line valves closed	8. Open
Pump will not deliver water or develop pressure	1. No priming water in casing	1. Fill pump casing
	2. Leak in suction line	2. Repair or replace
	3. Discharge line is closed, and priming air has nowhere to go	3. Open ball valve
	4. Suction line (or valve) is closed	4. Open
	5. Foot valve is leaking	5. Replace foot valve
	6. Suction screen clogged	6. Clean or replace
Loss of suction	1. Air leak in suction line	1. Repair or replace
	2. Suction lift too high	2. Lower suction lift, install foot valve, and prime
	3. Insufficient inlet pressure or suction head	3. Increase inlet pressure by adding more water to tank or increasing back pressure
	4. Clogged foot valve or strainer	4. Unclog
Pump vibrates and/or makes excessive noise	1. Mounting plate or foundation not rigid enough	1. Reinforce
	2. Foreign material in pump	2. Disassemble pump and clean
	3. Impeller damaged	3. Replace
	4. Worn motor bearings	4. Replace
Pump will not start or run	1. Improperly wired	1. Check wiring diagram on motor
	2. Blown fuse or open circuit breaker	2. Replace fuse or close circuit breaker
	3. Loose or broken wiring	3. Tighten connections, replace broken wiring
	4. Stone or foreign object lodged in impeller	4. Disassemble pump and remove foreign object
	5. Motor shorted out	5. Replace
	6. Thermal overload has opened circuit	6. Allow unit to cool. Restart after reason for overload has been determined.

WARRANTY

This product is warranted for two years from the date of purchase. Subject to the conditions hereinafter set forth, the manufacturer will repair or replace to the original consumer any portion of the product which proves defective due to defective materials or workmanship. To obtain warranty service, contact the dealer from whom the product was purchased. The manufacturer retains the sole right and option to determine whether to repair or replace defective equipment, parts, or components. Damage due to conditions beyond the control of the manufacturer is not covered by this warranty.

THIS WARRANTY WILL NOT APPLY: (a) To defects or malfunctions resulting from failure to properly install, operate, or maintain the unit in accordance with printed instructions provided; (b) to failures resulting from abuse, accident, or negligence, or use of inappropriate chemicals or additives in the water; (c) to normal maintenance services and the parts used in connection with such service; (d) to units which are not installed in accordance with normal applicable local codes, ordinances, and good trade practices; and (e) if the unit is used for purposes other than for what it was designed and manufactured.

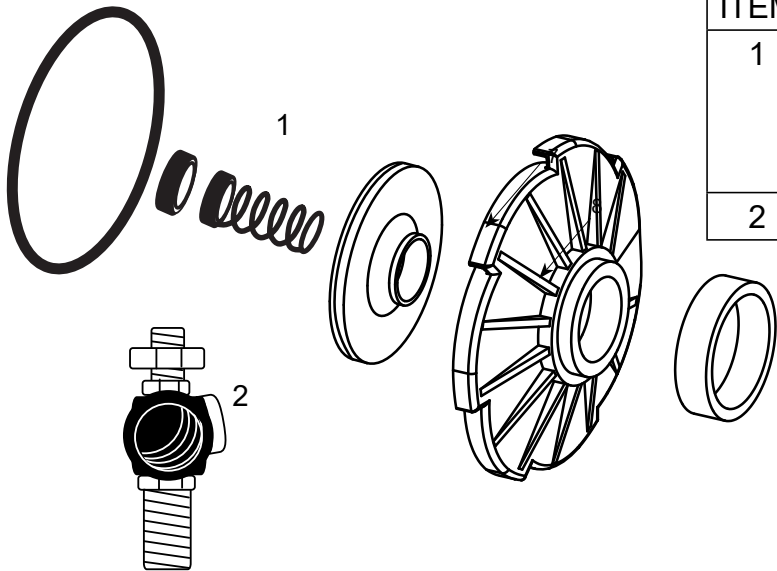
RETURN OF WARRANTED COMPONENTS: Any item to be repaired or replaced under this warranty must be returned to the manufacturer at Kendallville, Indiana or such other place as the manufacturer may designate, freight prepaid.

THE WARRANTY PROVIDED HEREIN IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND MAY NOT BE EXTENDED OR MODIFIED BY ANYONE. ANY IMPLIED WARRANTIES SHALL BE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY AND THEREAFTER ALL SUCH IMPLIED WARRANTIES ARE DISCLAIMED AND EXCLUDED. THE MANUFACTURER SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO DAMAGE TO, OR LOSS OF, OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS, INCONVENIENCE, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR NATURE. THE LIABILITY OF THE MANUFACTURER SHALL NOT EXCEED THE PRICE OF THE PRODUCT UPON WHICH SUCH LIABILITY IS BASED.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow limitations on duration of implied warranties or exclusion of incidental or consequential damages, so the above limitations may not apply to you.

In those instances where damages are incurred as a result of an alleged pump failure, the Homeowner must retain possession of the pump for investigation purposes.

REPAIR PARTS



ITEM	DESCRIPTION	PART NO.
1	Repair Kit includes impeller, diffuser, rotary seal, quadraseal, and diffuser rubber	148140
2	Flow Control Assembly	134349