

OWNER'S MANUAL

INSTALLATION AND OPERATION INSTRUCTIONS

1/2 HP CAST IRON CLEAR WATER PUMP



MODEL 107793

WARRANTY: PRODUCT DEFECTS COVERED 12 MONTHS FROM DATE OF PURCHASE. RECEIPT AND PRODUCT DATE CODE REQUIRED FOR WARRANTY CLAIM

THANK YOU FOR PURCHASING AN APP PUMP.

Take the time to read the instructions carefully before using this appliance. We strongly recommend that you keep this instruction manual in a safe place for future reference

This fine pump that you have just purchased is designed from the latest in material and workmanship. Please check the following point before installation and operation:

- Check with your local electrical and plumbing codes to ensure you comply with the regulations. These codes have been designed with your safety in mind. Be sure you comply with them.
- We recommend that a separate circuit be lead from the home electrical distribution panel properly protected with a fuse or a circuit breaker. We also recommend that a ground fault circuit be used. Consult a licensed electrician for all wiring.
- The ground terminal on the three prong plugs should never be removed. They are supplied and designed for your protection.
- Never make adjustments to any electrical appliance or product with the power connected. Do not only unscrew the fuse or trip the breaker, remove the power plug from the receptacle.

SPECIFICATIONS

MODEL	OUTPUT		DISCHARGE		RATED		MAXIMUM	
	HP	W	MM	INCH	Head (M)	Flow (LPM)	Head (FT)	Flow (LPM)
107793	1/2	400	25	1"	20	50	90	80

IMPORTANT INFORMATIONS

- The automatic thermal overload protection shuts the motor off when it overheats because of low voltage, trash in the pump or other problems. Normally, motor cools in 10 minutes and restarts automatically.
- If this pump is used for pumping mildly abrasive liquids like lake water, keep hose inlet above mud and sand. All severely abrasive liquids will wear the pump quickly and void warranty.
- This pump will handle water only at temperatures of -18°C to 50°C (0°F to 120°F). Thick liquids, fuels (gasoline etc) or other flammable liquids, solvents, thinners and strong acids are totally prohibited.
- Never operate the pump against a closed or clogged discharge.
- Use 1/2" (13mm) minimum pipe. Note that the best performance occurs when the suction line is as short and direct as possible. For any lines of 40' or longer, install a 3/4" (19mm) pipe size.
- After few months of inactivity, the impeller may get dry. If this happens, replace the impeller.
- The motor is drip-proof but not waterproof.
- Motor brushes should be replaced every 150 hours of use. Remove brush cap to replace brush only.
- Never add oil to motor or brushes.

INSTALLATION STEPS

Fill liquid inlet and outlet of pump with one (1) tablespoon of vegetable oil.

Install suction and discharge line

Plug cord into a separate receptacle.

Unplug pump when liquid supply is exhausted. The overheat due to dry running will damage impeller or weld it to the pump body.

ELECTRICAL

Risk of dangerous or fatal electric shock. Unplug pump before servicing it. Do not handle pump or attempt to work on pump with wet hands or while standing on wet or damp floor.

Pump is equipped with grounding wire or grounded cord and plug. Do not modify or remove plug. Plug in to properly grounded, grounding type outlet only. Make sure pump circuit meets National Electrical Code. To avoid dangerous electrical shock hazard, keep cord dry at all times.

LOCATION OF UNIT

Locate pump as near as possible (vertically) to water source, to keep suction lift (distance from water to pump) as low as possible. Place pump on level support. Protect against excess moisture and flooding.

PIPING

Both suction and discharge ports are tapped for 3/4" pipe. If using hoses, use hose to pipe thread adapter. To prevent suction line collapse, use pipe or reinforced hose only for suction line. Install strainer or puddle gulper on end of suction line. Inspect and clean strainer frequently. Plastic pipe can be used for all installations.

PRIMING/OPERATION

This unit will prime to 10 feet (3M) if you follow these instructions. Drop 1 tablespoon of vegetable oil into pump inlet and outlet before each use. Add water to suction pipe and install a foot valve to make easier priming.

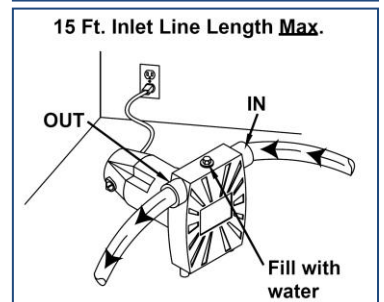
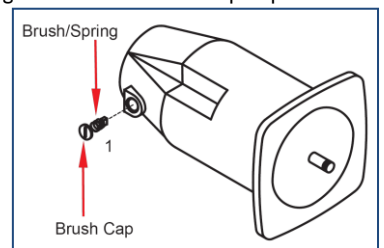
For a suction from 10' to 20' depth, a foot valve is mandatory and the suction line must be filled before pump start. If the pump does not prime within one (1) minute, unplug from receptacle and perform next steps:

- Air leaks in suction pipe. For a garden hose, be sure fittings are tight and rubber washers are in good condition. For other pipe types, use Teflon tape on all threads.
- verify foot valve action
- Verify for collapsed suction hose or plugged suction line
- Verify for liquid supply too far away or too far below pump (more than 20 feet(6M))
- Worn out or damaged impeller
- Severe abrasive wear of volute plate or pump body. Remove pump cover to access these parts. Proceed carefully to avoid damaging the "O" ring

MAINTENANCE

⚠ WARNING	Let pump cool for at least 20 minutes before attempting to service. Motor may be extremely hot. Personal injury may result.
⚠ DANGER	Always disconnect the electrical supply before attempting to install, service, or perform any maintenance. If the power source is out of sight, lock and tag in the open (off) position to prevent unexpected power applications. Disconnect electrical cord from power supply. Failure to do so could result in fatal electrical shock. Only qualified electricians should repair this unit. Improper repair could result in fatal electrical shock.

- The shaft motor seal is generally good for the life of the pump. When shaft seal leaks, it is because enough abrasives have been pumped to wear deep grooves in the shaft under the seal. In this situation, the purchase of a whole unit will cost less than repairs (motor and pump).
- Impeller replacement is also easy to do. Remove pump cover screws and cover. Remove worn impeller. Clean out inside of pump body and examine the volute plate. If worn, turn over. Wipe a small quantity of oil and install the replacement impeller by twisting in clockwise direction. This will blend the blades in place. Using screws, replace pump cover. Do not overtight.
- Brush replacement - Pumps with excess of 100 hours of operation may stop operating or fail to start. This could be due to worn brushes or carbon build-up. The brushes should be removed and carbon removed. Worn brushes are not covered under warranty.
 1. Disconnect electrical cord from power supply.
 2. Remove brush caps with screwdriver.
 3. Remove old brush assembly.
 4. Insert new brush assembly.
 5. Replace brush caps.
 For other problems, consult troubleshooting chart.



The following situations void the warranty

- Running pump dry
- Handling severe abrasive solution, fuels (gas etc.) or other flammable liquids, thinner, acid or other strong chemical solutions.
- Handling liquids hotter than 120°F (50°C).
- Normal wear.
- User abuse, including immersing pump
- Commercial or industrial use.
- Alterations to electric cord or plug.
- Wholly or partly disassembled motor.

TROUBLESHOOTING CHECKLIST

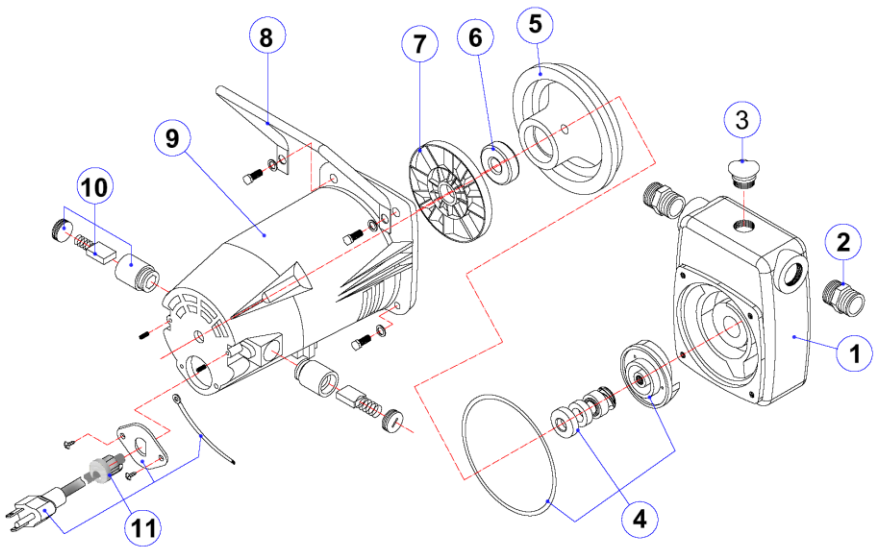
(CAUTION: SHUT OFF POWER TO PUMP)

TROUBLE	PROBABLE CAUSE	ACTION
A. Pump will not begin pumping or retain prime after operating, or stops pumping water	<ol style="list-style-type: none"> 1. Air leak in inlet line 2. Fittings not tight 3. Hose kinked or looped 4. Inlet hose out of water 5. Clogged inlet 6. Inlet lift too high 7. Impeller blocked 8. Worn seal 	<ol style="list-style-type: none"> 1. Repair or replace inlet line, make sure fittings are air tight, use Teflon tape if necessary 2. Tighten fittings air tight, use Teflon tape if necessary 3. Straighten hose 4. Submerge inlet hose end 5. Clean inlet 6. Lower pump 7. Remove blockage 8. Replace seal
B. Flow rate is too low	<ol style="list-style-type: none"> 1. Piping or hose is kinked or damaged 2. Low line voltage 3. Too much discharge hose friction 	<ol style="list-style-type: none"> 1. Clean or replace 2. Check wiring size 3. Shorten and/or increase diameter of hose.
C. Seal leaks	<ol style="list-style-type: none"> 1. Worn seal 2. Pump head loose on motor 	<ol style="list-style-type: none"> 1. Replace seal 2. Ensure proper assembly and no obstructions, tighten bolts

D. Pump will not start or run	<ol style="list-style-type: none"> Blown fuse Low line voltage Worn brushes Impeller blocked Defective motor 	<ol style="list-style-type: none"> If blown, replace with proper sized fuse or reset circuit breaker Check wiring size Replace brushes Remove blockage Replace pump
E. Motor does not run.	<ol style="list-style-type: none"> Switch is off position Blown fuse Tripped breaker Plug disconnected Corroded plug Low water level Thermal overcharge Defective switch/float Defective motor Improper float position 	<ol style="list-style-type: none"> Turn switch to on position Replace Reset Re-install Clean prongs Add water and verify Cool the motor Replace Replace/repair Check movement
F. Pump does not deliver to full capacity.	<ol style="list-style-type: none"> Jammed impeller Plugged check valve Blocked suction/inlet Discharge leak Blocked line/pipe Worn impeller Defective motor 	<ol style="list-style-type: none"> Clean Clean/replace Check for debris in pit and clean Repair Check for debris or ice Repair/replace Replace

CONSTRUCTION AND PARTS LIST

REF. NO	PART DESCRIPTION	QTY	PART NUMBER
1	PUMP BODY	1	107793RPK-01
2	HOSE FITTINGS <i>*Optional Copper</i>	2	107793RPK-02
3	FILL PLUG	1	107793RPK-03
4	OVERHAUL KIT • Impeller • Shaft Seal • O-Ring	1	107793RPK-04
5	SEAL PLATE	1	107793RPK-05
6	BEARING	1	107793RPK-06
7	FAN	1	107793RPK-07
8	HANDLE	1	107793RPK-08
9	MOTOR ASSEMBLY	1	107793RPK-09
10	BRUSH KIT • Brushes with springs • Retainer caps	1	107793RPK-10
11	POWER CORD SET • Cable • Cable plate • Grounding wire	1	107793RPK-11



LIMITED WARRANTY:

For one year from the date of purchase, IRONTON will repair or replace, at its option, for the original purchaser any part or parts of its Sump Pumps or Water Pumps ("Product") found upon examination by IRONTON to be defective in materials or workmanship. Please call IRONTON for instructions or see your dealer. Be prepared to provide the model number when exercising this warranty. All transportation charges on Products or parts submitted for repair or replacement must be paid by purchaser.

This Limited Warranty does not cover Products which have been damaged as a result of accident, abuse, misuse, neglect, improper installation, improper maintenance, or failure to operate in accordance with IRONTON's written instructions.

THERE IS NO OTHER EXPRESS WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF PURCHASE. THIS IS THE EXCLUSIVE REMEDY AND ANY LIABILITY FOR ANY AND ALL INDIRECT OR CONSEQUENTIAL DAMAGES OR EXPENSES WHATSOEVER IS EXCLUDED.

Some states do not allow limitations on how long an implied warranty lasts, or do not allow the exclusions or limitations of incidental or consequential damages, so the above limitations might not apply to you. This limited warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state. In no event, whether as a result of breach of contract warranty, tort (including negligence) or otherwise, shall IRONTON or its suppliers be liable for any special, consequential, incidental or penal damages including, but not limited to loss of profit or revenues, loss of use of the products or any associated equipment, damage to associated equipment, cost of capital, cost of substitute products, facilities, services or replacement power, downtime costs, or claims of buyer's customers for such damages.

You **MUST** retain your purchase receipt along with this form. In the event you need to exercise a warranty claim, you **MUST** send a **copy** of the purchase receipt along with the material or correspondence. Please call IRONTON for return authorization and instructions.