OWNER'S MANUAL

Little GIANT

EN English

WRS-5 Wastewater Removal System Kits

Wastewater Removal System Kits are designed to pump wastewater from laundry trays, washing machines, sinks, or dehumidifiers. They are not designed to pump raw sewage, fluids other than water, or fluids with solids. An inlet screen will remove many solids over 1/8" diameter, but large amounts of solids can clog screen and result in pump failure.

Maximum fluid temperature is 125°F. The unit is designed to fit under most sinks, so in many cases it is not necessary to recess the unit into the floor. See pump manual for more information.

This product is covered by a Limited Warranty for a period of 12 months from the date of original purchase by the consumer. For complete warranty information, refer to www.LittleGiant.com.

Specifications

Model	Volts	HP	Hertz	Amps	Watts	Shut Off
WRS-5	115	1/6	60	5/6.4	380	21 ft (6.4 m)

SAFETY INSTRUCTIONS

Before Getting Started

This equipment should be installed and serviced by technically qualified personnel who are familiar with the correct selection and use of appropriate tools, equipment, and procedures. Failure to comply with national and local electrical and plumbing codes and within Little Giant recommendations may result in electrical shock or fire hazard, unsatisfactory performance, or equipment failure.

Know the product's application, limitations, and potential hazards. Read and follow instructions carefully to avoid injury and property damage. Do not disassemble or repair unit unless described in this manual.

Failure to follow installation or operation procedures and all applicable codes may result in the following hazards:

⚠ DANGER

Risk of death, personal injury, or property damage due to explosion, fire, or electric shock.

- Do not use to pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc.
- Do not use in explosive atmospheres or hazardous locations as classified by the NEC, ANSI/NFPA70.
- Do not handle a pump or pump motor with wet hands or when standing on a wet or damp surface, or in water.
- When a pump is in its application, do not touch the motor, pipes, or water until the unit is unplugged or electrically disconnected.
- If the power disconnect is out of sight, lock it in the open position and tag it to prevent unexpected application of power.
- If the disconnect panel is not accessible, contact the electric company to stop service.

⚠ WARNING

Risk of severe injury or death by electrical shock.

- To reduce risk of electrical shock, disconnect power before working on or around the system. More than one disconnect switch may be required to de-energize the equipment before servicing.
- Wire pump system for correct voltage.
- Be certain that this pump is connected to a circuit equipped with a ground fault circuit interrupter (GFCI) device if required by code.
- Some pumps are supplied with a grounding conductor and grounding-type attachment plug. To reduce risk of electric shock, be certain that it is connected only to a properly grounded grounding-type receptacle. Do not remove the third prong from the plug. The third prong is to ground the pump to help prevent possible electric shock hazard.
- The pump includes a grounding connector. To reduce risk of electric shock, be certain that it is properly connected to ground.
- Check local electrical and building codes before installation. The installation must be in accordance with their regulations as well as the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
- Do not use the power cord for lifting the pump.
- Do not use an extension cord.
- The pump should only be used with liquids compatible with pump component materials. If the pump is used with liquids incompatible with the pump components, the liquid can cause failure to the electrical insulation system resulting in electrical shock.

⚠ CAUTION

Risk of bodily injury, electric shock, or equipment damage.

- This equipment must not be used by children or persons with reduced physical, sensory or mental abilities, or lacking in experience and expertise, unless supervised or instructed. Children may not use the equipment, nor may they play with the unit or in the immediate vicinity.
- Equipment can start automatically. Lockout-Tagout before servicing equipment.
- An inoperative or malfunctioning pump could lead to flooding, resulting in personal injury or property damage.
- Operation of this equipment requires detailed installation and operation instructions provided in this manual. Read entire manual before starting installation and operation. End User should receive and retain manual for future use.
- Keep safety labels clean and in good condition.
- Keep work area clean, well-lit, and uncluttered.
- Wear safety glasses while installing or performing maintenance on the pump.

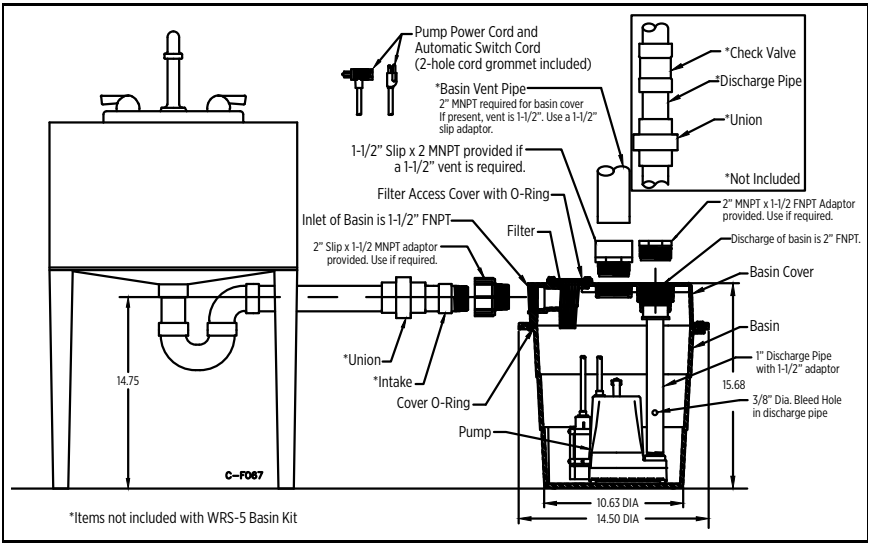
NOTICE

Risk of damage to pump or other equipment.

- Support pump and piping when assembling and when installed. Failure to do so may cause piping to break, pump to fail, motor bearing failures, etc.
- Do not install the pump in a manner that will subject it to splashing or spraying.
- Periodically inspect pump and system components. Regularly check hoses for weakness or wear, making certain that all connections are secure.
- Schedule and perform routine maintenance as required and in accordance with the Maintenance section of this manual.

INSTALLATION

Typical Installation



Pump Location

- Locate unit so that inlet is gravity-fed. Unit will not draw water up from a lower level.
- Surface must be level.
- Keep basin away from any item that could puncture it.
- Position selected should be convenient to inlet, discharge, and vent piping, and electrical supply.

Inlet Plumbing

1. Plumb inlet to basin cover fitting using 1-1/2" threaded pipe.
   - Do not reduce the sizing.
2. Install a P-trap and a union next to the basin.
3. Hand tighten plastic fittings.
4. Use pipe joint compound.

NOTE: A 1-1/2" MNPT x 2" slip pipe adapter is provided if a 2" inlet is required.

Discharge Plumbing

1. Plumb discharge to basin cover fitting using 2" threaded pipe.
2. Use a union and a swing check valve no more than 3" (7.6 cm) from top of basin cover.
3. Be sure check valve is installed in proper flow direction.
   - No water will flow out of unit if check valve is installed backwards.
4. Seal discharge piping with pipe joint compound.
5. Verify lift height of pump is not exceeded.
6. Hand tighten plastic fittings.

NOTE: A 2" MNPT x 1-1/2" FNPT reducer bushing is provided if a 1-1/2" discharge is required.

Vent Plumbing

The vent is essential for proper switch operation and must not be omitted or restricted. The basin must be vented in accordance with state and local codes.

1. Plumb vent to fitting in basin cover using 2" threaded pipe.
2. Hand tighten plastic fittings.
3. Use pipe joint compound.

NOTE: A 2" MNPT x 1-1/2" slip pipe adapter is provided if a 1-1/2" vent is required.

IMPORTANT: Do not use a mechanical vent with this product as it will cause improper operation of the automatic switch.

Electrical Connections

Connect the power cord to a constant source of power matching the pump nameplate voltage.

- The pump should be connected or wired to its own circuit, with no other electric receptacles or equipment in the circuit.
- The fuses or circuit breaker should be of ample capacity.
- Connect to a circuit equipped with a ground fault circuit interrupter (GFCI) if required by code.
- Under no circumstances should outlet box or receptacle be located where it may become flooded or submerged by water.
- If installed in basement, plug connection should be four feet or more above floor, especially if basement floods.

Some pumps are supplied with a 3-prong electrical plug. The third prong is to ground the pump to prevent possible electrical shock.

- Plug into a grounded receptacle with vent tube pointed down.
- Vent tube must remain unobstructed for proper pump operation.
- Secure power cord to piping with ties or tape.

IMPORTANT: Do not cut plug from the cord. If the plug is cut or the cord is shortened, then the warranty will be void.

Some cords are supplied with stripped lead wires. Power connections must be made within a junction box, and must comply with the National Electrical Code. Wires are color coded as follows:

- Green/yellow = Ground; Brown = Line; Blue/White and Brown/Black = Line

IMPORTANT: If the power cord is damaged, the whole unit must be replaced.

Operation Testing

1. Fill unit with water through inlet.
2. Verify that the pump starts the water reaches 6"– 7-3/4" (15.2 cm – 19.7 cm).
3. Verify that the pump stops when the water reaches 3/4"– 1-1/2" (1.9 cm - 3.8 cm).

MAINTENANCE

⚠ CAUTION

Risk of bodily injury, electric shock, or equipment damage.

- Before performing any maintenance, shut off water inlet and disconnect power cord from supply outlet.
- Pump may become hot during operation. Allow pump to cool before servicing.

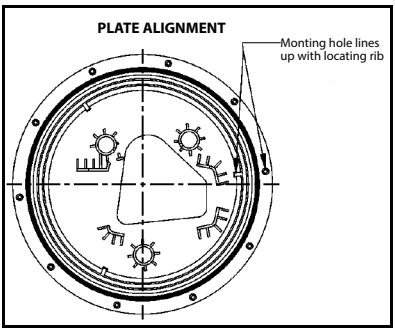
Refer to "Replacement Parts" on page 6 for names and relative location of all components to assist you while following these instructions. Consult the instruction sheet illustrations for proper assembly and disassembly of your Little Giant pump.

Cleaning the Basin Screen

1. Remove the four screen cover plate screws, plastic cover plate, seal ring, and screen.
2. Clean inlet screen using a mild detergent and water.
3. Examine O-ring. If deformed, replace.

Cleaning the Basin

1. Remove the screws from cover.
2. Remove the cord grommet. Loosen cords to allow slack.
3. Remove cover.
4. Remove pump.
5. Clean basin using a mild detergent and water.
6. Reassemble in reverse order.
   - Be sure the pump alignment plate's mounting holes are properly aligned with the locating rib on the inside of the basin.
   - Tighten cover screws to a torque of 18–20 in.-lbs.



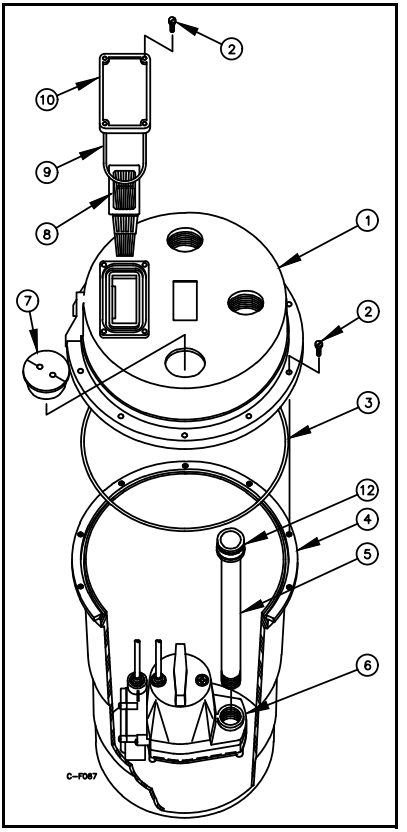
Cleaning the Pump

1. Remove pump
2. Pull off the pressed in screen.
3. Remove the six base screws.
4. Remove plastic pump base to clean around impeller and inside base.

   IMPORTANT: Do not remove the impeller.

5. Clean parts using a mild detergent and water.
6. Reinstall the base.
   - Be sure seal ring is seated properly in groove.
   - Tighten screws to a torque of 10–15 in.-lbs.
7. Reinstall the pump screen and pump.

Replacement Parts



Item	Description	Order Number
1	Basin Cover	113130
2	Screw, 1/4"-20 x 5/8" (Qty: 14)	901709
3	Seal Ring	924125
4	Basin	113129
5	Discharge Pipe	113023
6	Pump	505300
7	2 Hole Cord Grommet	925011
8	Intake Screen	113131
9	O-Ring; Buna-N, 2-339	924126
10	Cover Plate, Screen	113132
11	Alignment Plate	113145
12	O-Ring; Buna-N, 2-131	924047

Troubleshooting

Problem	Probable Causes	Corrective Action
Pump will not shut off	Diaphragm switch.	Replace switch.
	Weak or hardened rubber diaphragm.	Replace rubber diaphragm.
	Plugged vent tube.	Clear vent tube of any obstructions.
	Dirt or sediment lodged between retainer ring and rubber diaphragm causing contacts to remain closed.	Clean area around rubber diaphragm.
	Pump is air locked.	Shut power off for approximately 1 minute. Then restart. Repeat several times to clear air from pump. If system includes a check valve, a 3/16" hole should be drilled in discharge pipe approximately 2" above discharge connections.
	Liquid inflow matches pump capacity.	Larger pump required.
	Defective switch.	Disconnect switch. Check w/ohmmeter. Open-infinitive resistance, closed-zero.
	Loose connection in level control wiring.	Check control wiring.
Pump runs but does not discharge liquid.	Check valve installed backwards.	Check flow indicating arrow on check valve body to insure it is installed properly.
	Check valve stuck or plugged.	Remove check valve and inspect for proper operation.
	Lift too high for pump.	Check rating table
	Inlet to impeller plugged.	Pull pump and clean.
	Pump is air locked.	Shut power off for approximately 1 minute. Then restart. Repeat several times to clear air from pump. If system includes a check valve, a 3/16" hole should be drilled in discharge pipe approximately 2" above discharge connections.
Pump does not deliver rated capacity.	Lift too high for pump.	Check rated pump performance.
	Low voltage, speed too slow.	Check for proper supply voltage to make certain it corresponds to nameplate voltage.
	Impeller or discharge pipe is clogged.	Pull pump and clean. Check pipe for scale or corrosion.
	Impeller wear due to abrasives.	Replace worn impeller.