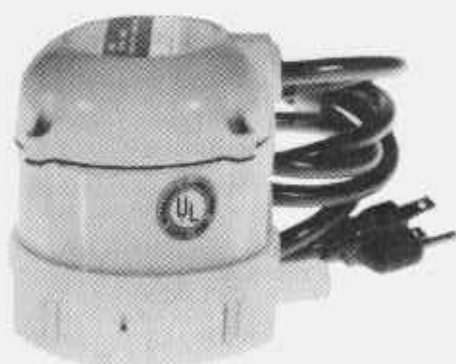
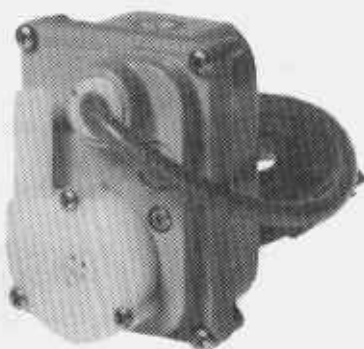




SMALL SUBMERSIBLE PUMPS MODELS

#1	#1-42A	#1-MA
#1-42	#1-42AT	#1-MAT
#1-T	#1-M42A	#1-AT
#1-A	#1-AA-18	#1-AAT
#1-AA	#1-18	



- INSTALLATION
- OPERATION

- MAINTENANCE
- REPAIR PARTS

INTRODUCTION

This instruction sheet will provide you with information required to safely own and operate Little Giant small submersible pumps, models #1 series and #1-MA series. The pump you have purchased is a submersible pump (some models are for inline use). The housing is constructed of durable die cast aluminum material. The housing provides a case for the motor and the special dielectric oil which is used as a heat transfer and life-time lubricant to the bearings of the motor. Under no circumstances should you open the case to expose the motor or drain the oil. If the case is opened, then the warranty expressed in this pamphlet will be void.

This instruction sheet primarily covers the standard models in this pump series. This form is applicable to other models in this series not listed by catalog number in the replacement parts list section of this pamphlet. If the catalog number of your pump is not listed in the replacement parts list section, then caution should be exercised when ordering replacement parts. Always give the catalog number of your pump when ordering replacement parts.

The Little Giant unit you have purchased is of the highest quality workmanship and material. It has been engineered to give you long and trouble-free service.

The Little Giant pumps are carefully packaged, inspected and tested to insure safe operation and delivery. When you receive your pump, examine it carefully to determine that there are no broken or damaged parts that may have occurred during shipment. If damage has occurred, make notation and notify the firm that you purchased the pump from. They will assist you in replacement or repair, if required.

READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THE LITTLE GIANT PUMP. KNOW THE PUMP APPLICATION, LIMITATIONS, AND POTENTIAL HAZARDS. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE! RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

SAFETY GUIDELINES



1. DO NOT USE TO PUMP FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES. PUMP SHOULD ONLY BE USED WITH LIQUIDS COMPATIBLE WITH PUMP COMPONENT MATERIALS.
2. DO NOT HANDLE PUMP WITH WET HANDS OR WHEN STANDING ON A WET OR DAMP SURFACE, OR IN WATER.
3. DO NOT PULL THE PUMP OUT OF THE WATER BY THE POWER CORD WHEN THE PUMP IS OPERATING OR CONNECTED TO POWER SOURCE.
4. THIS PUMP IS SUPPLIED WITH A GROUNDING CONDUCTOR AND/OR GROUNDING TYPE ATTACHMENT PLUG. TO REDUCE THE RISK OF ELECTRIC SHOCK, BE CERTAIN THAT IT IS CONNECTED TO A PROPERLY GROUNDED GROUNDING TYPE RECEPTACLE.
5. THE NATIONAL ELECTRIC CODE REQUIRES A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) BE INSTALLED IN THE BRANCH CIRCUIT SUPPLYING FOUNTAIN EQUIPMENT, POOLS, ETC.
6. IN ANY INSTALLATIONS WHERE PROPERTY DAMAGE AND/OR PERSONAL INJURY MIGHT RESULT FROM AN INOPERATIVE OR LEAKING PUMP DUE TO POWER OUTAGES, DISCHARGE LINE BLOCKAGE, OR ANY OTHER REASON, A BACKUP SYSTEM(S) AND/OR ALARM SHOULD BE USED.
7. 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.
8. THIS PUMP'S MOTOR HOUSING IS FILLED WITH A DIELECTRIC OIL FOR MOTOR HEAT TRANSFER AND LIFE-TIME LUBRICATION OF THE BEARINGS. THIS OIL IS NON-TOXIC TO AQUATIC LIFE. HOWEVER, SUFFOCATION CAN OCCUR IF OIL IS LEFT ON THE WATER SURFACE. IF OIL ESCAPES THE MOTOR HOUSING, IT CAN BE REMOVED FROM THE SURFACE QUICKLY BY PLACING NEWSPAPERS ON THE WATER SURFACE TO SOAK UP THE OIL.

ELECTRICAL CONNECTIONS



1. Check the pump label for proper voltage required. Do not connect to voltage other than that shown.
2. If pump is supplied with a 3-prong electrical plug, the third prong is to ground the pump to prevent possible electrical shock hazard. DO NOT REMOVE the third prong from the plug. A separate branch circuit is recommended. Do not use an extension cord. Do not cut plug from the cord. If the plug is cut or the cord is shortened, then this action will void the warranty.
3. If the cord is equipped with stripped lead wires, such as on 230v models, be sure that the lead wires are connected to a power source correctly. The green/yellow wire is the ground, the other two are live.

OPERATION

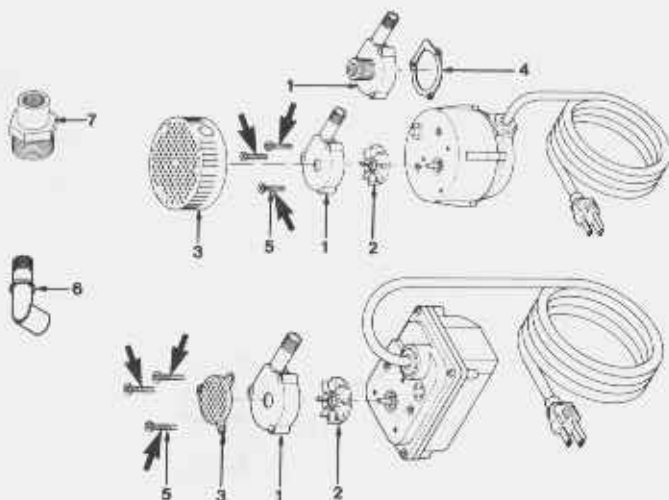
1. The #1 style pump must be run submerged. The pump should be placed with the screen as a base. The volute should always be in a flooded condition. If the surface is sandy or muddy, provide a smooth surface for the pump to be placed on.
2. The 1-42 style pumps are designed to be run inline or submerged. They can be positioned in any attitude, but preferably the volute should be located to the side. This will allow the motor to be completely covered with the lubricating oil.
3. The 1-MA pumps should be operated completely submerged and should be placed in an upright position with the volute on the side of the pump.
4. Do not attempt to restrict the intake side of these pumps. Restricting the intake may cause damage to the seal and may starve the pump. If you require reduced flow rates, then place a valve on the discharge side of the pump or if flexible vinyl tubing is used, a clamp can be used on the tubing to restrict the flow.
5. Do not let the unit operate dry. It is designed to be cooled by pumping fluid. You may damage the seal and the motor may fail if the pump is allowed to run dry.
6. If the unit is going to be idle for a period of time, follow the cleaning instructions outlined in the next section. Do not let the unit freeze in the wintertime. This may cause cracking or distortion that may destroy the unit.

SERVICE INSTRUCTIONS



MAKE CERTAIN THAT THE UNIT IS DISCONNECTED FROM THE POWER SOURCE BEFORE ATTEMPTING TO SERVICE OR REMOVE ANY COMPONENT!

1. This unit is permanently lubricated. Oiling is not required. Do not, in any case, open the sealed portion of the unit or remove housing screws.
2. Periodic cleaning of the pump parts will prolong the LIFE and EFFICIENCY of the pump. Refer to the drawing below for the assembly and disassembly of the pumping head.
3. First remove the screen from the pump. Then remove the 3 screws as indicated by the arrows. (Do NOT remove other screws which may be exposed)
4. Lightly clean any corrosion or debris which may clog the impeller. Use a brush and penetrating oil and lightly scrape to remove encrusted material.
5. Turn the impeller by hand to make sure it turns freely. Set pump down so you are not touching pump and impeller is not touching anything. Plug the unit into GFCI circuit for 10 seconds to see if the impeller turns; a) If it is rotating and GFCI did not trip, unplug unit and install parts in reverse order in which they were removed; b) If it does not rotate, if pump is tripping circuit breakers, or not operating properly after cleaning, return to Little Giant or its authorized service center. DO NOT attempt repairs yourself.
6. Be certain power cord is in good condition and contains no nicks or cuts.



ITEM No.	L.G. P/N	DESCRIPTION	QTY.	CATALOG NUMBER												
				501003 #1	501203 #1-42	501006 #1-T	500203 #1-A	500000 #1-AN	500303 #1-42A	500306 #1-42A1	500296 #1-AT	500500 #1-AA-10	521203 #1-MA	521296 #1-MA1	500053 #1-AAT	521303 #1-M42A
1	101350	Volute, Polypropylene	1	*		*	*	*		*	*	*	*	*	*	*
1	101330	Volute, Nylon	1		*					*	*	*	*	*	*	*
2	101441	Impeller, Press-On	1	*		*	*	*		*	*	*	*	*	*	*
2	101442	Impeller, Press-On	1		*					*	*	*	*	*	*	*
3	101901	Screen, Intake	1	*		*	*	*		*	*	*	*	*	*	*
3	122903	Screen, Intake	1		*					*	*	*	*	*	*	*
4	101601	Gasket	1							*	*	*	*	*	*	*
5	902411	Screw #8-18 x 3/4"	3	*	*	*	*	*	*	*	*	*	*	*	*	*
5	902417	Screw #8-18 x 1"	3							*	*	*	*	*	*	*
6	943070	Elbow	1	*	*	*	*	*		*	*	*	*	*	*	*
7	941013	Adaptor	1							*	*	*	*	*	*	*

**LIMITED
WARRANTY****LITTLE GIANT WARRANTY STATEMENT****LIMITED
WARRANTY**

Your Little Giant product is guaranteed to be in perfect condition when it leaves our Factory. It is warranted against defective materials and workmanship for a period of 12 months (90 day warranty on Models 1-AA-OM, GKPK, PP-1, PPS-1, PP-12, PPS-12 and PP-230) from date of purchase by the user. No warranty on brush wear in Model 35-OM and impeller or cam in Models PP-1, PP-12, PPS-12 and PP-230. Any product that should fail for either of the above two reasons and is still within the warranty period, will be repaired or replaced if returned prepaid to our Factory. All defective products returned under warranty will be fully inspected to determine "CAUSE OF FAILURE" before any warranty is approved. Little Giant will honor the warranty within the warranty time period specified on satisfactory written proof of purchase.

DISCLAIMER: Any oral statements about the product made by the seller, the manufacturer, the representatives or any other parties, do not constitute warranties, shall not be relied upon by the user, and are not part of the contract for sale. Seller's and manufacturer's only obligation, and buyer's only remedy, shall be the replacement and/or repair by the manufacturer of the product as described above. Neither seller nor the manufacturer shall be liable for any injury, loss or damage, direct, incidental or consequential (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss), arising out of the use or the inability to use the product, and the user agrees that no other remedy shall be available to it. Before using, the user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith. **The warranty and remedy described in this limited warranty is an EXCLUSIVE warranty and remedy and is IN LIEU OF any other warranty or remedy, expressed or implied, which other warranties and remedies are hereby expressly EXCLUDED,** including, but not limited to any implied warranty of **MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Warranty will be VOID if any of the following conditions are found:

1. Sealed motor housing opened.
2. Product connected to voltage other than indicated on name plate.
3. Cord cut off to a length less than three feet.
4. Pump allowed to operate dry (fluid supply cut off).
5. Pump used to circulate anything other than fresh water, light oils, or other mild liquids at approximately room temperature. All other applications must be approved in advance by Little Giant Pump Company.
6. Product abuse by customer.

The National Electric Code requires a Ground Fault Circuit Interrupter (GFCI) be installed in the branch circuit supplying fountain equipment rated above 15 volts. See your local electrical supply dealer for various brands of GFCI.



LITTLE GIANT PUMP COMPANY
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