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Little Giant LG12G05-2W1V

Little Giant LG12G05-2W1V Deep Well Submersible Pump Instruction Manual

Model: LG12G05-2W1V (Part Number: 558920)

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1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your Little Giant LG12G05-2W1V Deep Well Submersible Pump. This pump is designed for use in 4-inch diameter or larger driven wells, providing a reliable water supply for various applications. It features a 304 stainless steel shell and discharge for corrosion resistance, a built-in check valve, and a suction screen.



Image: Little Giant LG12G05-2W1V Deep Well Submersible Pump. This image shows the cylindrical stainless steel body of the submersible pump with its discharge port and electrical connection point.

Please read this manual thoroughly before attempting to install or operate the pump. Retain this manual for future reference.

2. IMPORTANT SAFETY INFORMATION

Failure to follow these instructions can result in serious injury, death, or property damage.

- **Professional Installation Recommended:** Installation of deep well submersible pumps requires above-average skill levels and electrical knowledge. It is strongly recommended to employ a licensed electrician or water systems contractor to ensure proper and safe installation.
- **Electrical Hazard:** Ensure all electrical connections are made by qualified personnel and comply with local electrical codes. Improper wiring can lead to electric shock, fire, or pump damage. Always disconnect power before servicing the pump.
- **Proper Wire Splicing:** If wires are not spliced together properly, death or severe injury could occur. Use appropriate waterproof splice kits and follow manufacturer instructions for all electrical connections.
- **Potable Water Use:** This pump is NSF/ANSI 372 certified for potable water, ensuring it is safe for drinking water applications.
- **Grounding:** Always ensure the pump and its electrical system are properly grounded to prevent electrical shock.
- **Read All Instructions:** Before installation or operation, read and understand all instructions and warnings in this manual.

3. SETUP AND INSTALLATION

3.1 Pre-Installation Checklist

- **Well Information:** Obtain your well driller's report to determine the well's flow rate, depth to water level, and total depth. If unavailable, consult a well pump contractor.
- **Existing Pump Data:** If replacing an existing pump, note its model number, horsepower, GPM, and voltage from its label (often on the control box or fuse box).
- **Power Supply:** Verify that the available power supply matches the pump's requirements (115 Volt, 2-Wire).
- **Pipe and Fittings:** Ensure you have appropriate diameter piping (1-1/4-inch FNPT discharge) and fittings for your well system.
- **Safety Equipment:** Have all necessary safety gear, including insulated gloves and eye protection.

3.2 Electrical Connections

The LG12G05-2W1V is a 2-wire pump (plus ground wire) and does not require an external control box. All electrical connections must be made in accordance with national and local electrical codes. It is critical that these connections are waterproof and properly insulated to prevent short circuits and electrical hazards.

- **Wire Splicing:** Use a high-quality, waterproof splice kit designed for submersible applications. Ensure all splices are clean, secure, and completely sealed.
- **Grounding:** Connect the pump's ground wire to the system's ground according to local codes.
- **Power Disconnection:** Always ensure the main power supply to the well system is disconnected before making any electrical connections.

3.3 Pump Placement

Carefully lower the pump into the well, ensuring it is suspended at the correct depth. The pump should be submerged below the dynamic water level but not rest on the bottom of the well to avoid drawing in sediment. Secure the pump with a safety rope or cable attached to the pump and the wellhead.

- **Discharge Pipe Connection:** Connect the discharge pipe to the pump's 1-1/4-inch FNPT discharge port. Ensure all connections are watertight.
- **Cable Management:** Secure the electrical cable to the discharge pipe at regular intervals to prevent chafing or damage during installation and operation.

4. OPERATING INSTRUCTIONS

4.1 Initial Start-up

- **Fill the System:** Before starting the pump, ensure the well has sufficient water and the piping system is filled to prevent dry running.
- **Restore Power:** Once all connections are secure and the pump is properly submerged, restore power to the system.
- **Check for Operation:** The pump should start and begin delivering water. Monitor for proper flow and pressure. Listen for any unusual noises.
- **Leak Detection:** Inspect all visible connections for leaks.

4.2 Normal Operation

The pump is designed for continuous operation within its specified limits. Monitor your water system's pressure and flow periodically to ensure optimal performance. The built-in check valve helps prevent rapid cycling of the pump, extending motor life.

5. MAINTENANCE

The Little Giant LG12G05-2W1V pump is designed for minimal maintenance. However, periodic checks can help ensure longevity and efficient operation.

5.1 Routine Checks

- **System Pressure and Flow:** Regularly check the system pressure and water flow. A decrease in either could indicate an issue with the pump or well.
- **Suction Screen:** The built-in suction screen helps prevent debris from entering the pump. If flow significantly decreases, the screen may be partially blocked. This would require pulling the pump for inspection and cleaning.
- **Check Valve:** The built-in check valve prevents backflow. If the pump cycles frequently when no water is being used, the check valve may be faulty or there might be a leak in the system.

5.2 Winterization

For wells that are not in continuous use during freezing temperatures, ensure that all exposed piping and pressure tanks are adequately insulated or drained to prevent freezing and damage. The submersible pump itself is protected by its depth in the well.

6. TROUBLESHOOTING GUIDE

Before attempting any troubleshooting, always disconnect power to the pump. If you are unsure about any step, contact a qualified professional.

Problem	Possible Cause	Solution
Pump does not start	No power; tripped breaker/fuse; faulty wiring; motor issue.	Check power supply, circuit breaker, and wiring connections. Consult an electrician for motor issues.
Low water pressure/flow	Low well water level; clogged suction screen; pipe obstruction; worn pump components.	Check well level. Pull pump to inspect/clean suction screen. Inspect piping. Professional service may be required for worn components.
Pump runs continuously or cycles frequently	Leaking check valve; leak in plumbing system; faulty pressure switch (if applicable).	Inspect check valve and plumbing for leaks. Check pressure switch settings and function.
No water delivered	Pump not submerged; dry well; clogged intake; discharge pipe blockage.	Verify pump is submerged. Check well water level. Inspect suction screen and discharge pipe for blockages.

7. TECHNICAL SPECIFICATIONS

Feature	Specification
Model	LG12G05-2W1V
Part Number	558920
Horsepower (HP)	1/2 HP
Voltage	115 Volts
Wire Configuration	2-Wire (plus ground)
Flow Rate	12 GPM (Gallons Per Minute)
Shut-off Head	212 feet
Discharge Size	1-1/4-inch FNPT
Pump Diameter	3.9 inches (fits 4-inch wells)
Material	304 Stainless Steel (shell and discharge)
Built-in Features	Check Valve, Suction Screen
Certifications	NSF/ANSI 372 (for potable water)
Item Weight	20 Pounds
Product Dimensions	22.49 x 3.9 x 3.9 inches

8. WARRANTY AND SUPPORT

Little Giant products are manufactured to high-quality standards. For specific warranty details, please refer to the warranty card included with your product or visit the official Little Giant website. Keep your purchase receipt as proof of purchase.

For technical assistance, troubleshooting beyond this guide, or to inquire about replacement parts, please contact Little Giant customer service. Provide your pump's model and part number when contacting support.

Little Giant Customer Service: Refer to your product packaging or the official Little Giant website for current contact information.