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ECO-WORTHY 5.5GPM-70PS1-12V

ECO-WORTHY 42-Series Industrial Pressure Water Pump User Manual

Model: 5.5GPM-70PS1-12V

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ECO-WORTHY 42-Series Industrial Pressure Water Pump. Designed for various applications including RVs, marine use, camping, and garden irrigation, this 12V DC diaphragm pump delivers a strong and consistent water flow. Please read this manual thoroughly before use to ensure proper function and longevity of the product.



Figure 1: ECO-WORTHY 42-Series Industrial Pressure Water Pump with included accessories (strainer, barbed hose adapters, hex key, and PTFE tape).

2. Product Features

- **Upgrade Pressure Switch:** Designed for extended durability and reliable operation. Automatically supplies water when a faucet is opened and powers off when closed. Features 70 PSI pressure, adjustable to user needs.
- **12-Volt DC Operation:** Operates on 12V DC power, providing a strong output of up to 5.5 GPM (Gallons Per Minute) with a maximum current draw of 12.5A. Capable of self-priming up to 9.8 vertical feet and lifting water up to 131 feet.
- **Quieter & Safer Design:** Incorporates thermal overload protection, which automatically disconnects the circuit when the temperature exceeds 70°C (158°F) to protect the motor from overheating.
- **Versatile Application:** Suitable for various uses including kitchen and bathroom water supply in RVs, marine vessels, and camping setups. Also effective for garden sprinklers, agricultural irrigation, and general water transfer.
- **Durable Construction:** Features an upgraded pure copper motor for lower power consumption and longer

service life. The pump is designed for low noise and corrosion resistance.



Figure 2: Internal components and key features of the pump, including the upgraded pressure switch, pure copper motor, diaphragm, and thermal overload protection.

3. Specifications

Attribute	Value
Brand	ECO-WORTHY
Model Number	5.5GPM-70PS1-12V
Voltage	12V DC
Maximum Flow Rate	5.5 Gallons Per Minute (GPM)

Attribute	Value
Water Pressure	70 PSI (Adjustable)
Maximum Suction Lift	9.8 Feet (Vertical)
Maximum Lift Up	131 Feet
Maximum Current	12.5A
Material	Stainless Steel (internal components), Durable Plastic (housing)
Product Dimensions	11.9"L x 5.39"W x 5"H
Item Weight	6.45 pounds
Included Components	Water pump, strainer, barbed hose adapters



Figure 3: Key performance specifications of the ECO-WORTHY water pump.

4. Setup and Installation

4.1 Safety Precautions

- Ensure the power source is disconnected before installation or maintenance.
- Wear appropriate personal protective equipment (PPE) during installation.
- Verify that the voltage of the power supply matches the pump's specifications (12V DC).
- Install the pump in a dry, well-ventilated area, protected from direct weather exposure.

4.2 Installation Steps

1. **Mounting the Pump:** Securely mount the pump on a stable, flat surface using appropriate fasteners through the mounting holes on the pump base. Ensure the pump is positioned to allow for proper hose connections and ventilation.
2. **Connecting the Inlet:** Attach the included 50-mesh detachable strainer to the inlet side of the pump. Ensure it is firmly tightened to prevent leaks and to filter out debris.

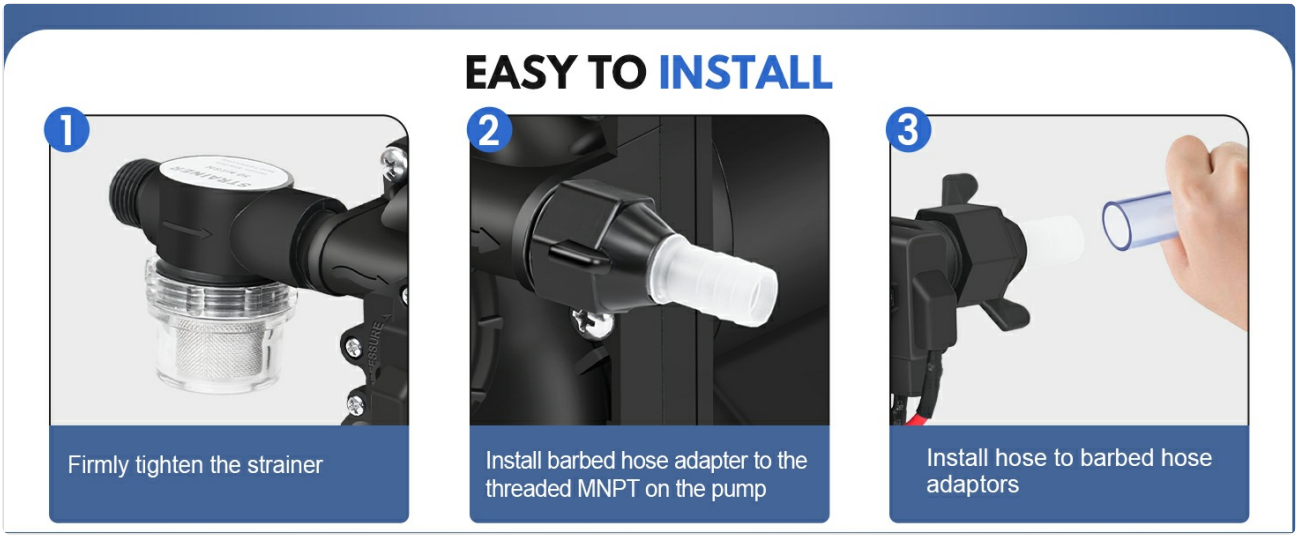


Figure 4: Attaching the 50-mesh detachable strainer to the pump inlet.

3. **Connecting Hoses:**
    a. Install the barbed hose adapters to the threaded MNPT ports on the pump.
    b. Connect your water supply hose to the inlet side (with strainer) and the output hose to the outlet side. Ensure all connections are tight to prevent leaks. Using PTFE tape on threaded connections is recommended.



Figure 5: Step-by-step guide for connecting the strainer and hoses to the pump.

4. **Electrical Connection:** Connect the pump's red wire to the positive (+) terminal of your 12V DC power source and the black wire to the negative (-) terminal. Ensure connections are secure and insulated. It is advisable to install an inline fuse (not included) appropriate for the pump's maximum current draw (12.5A) to protect the circuit.

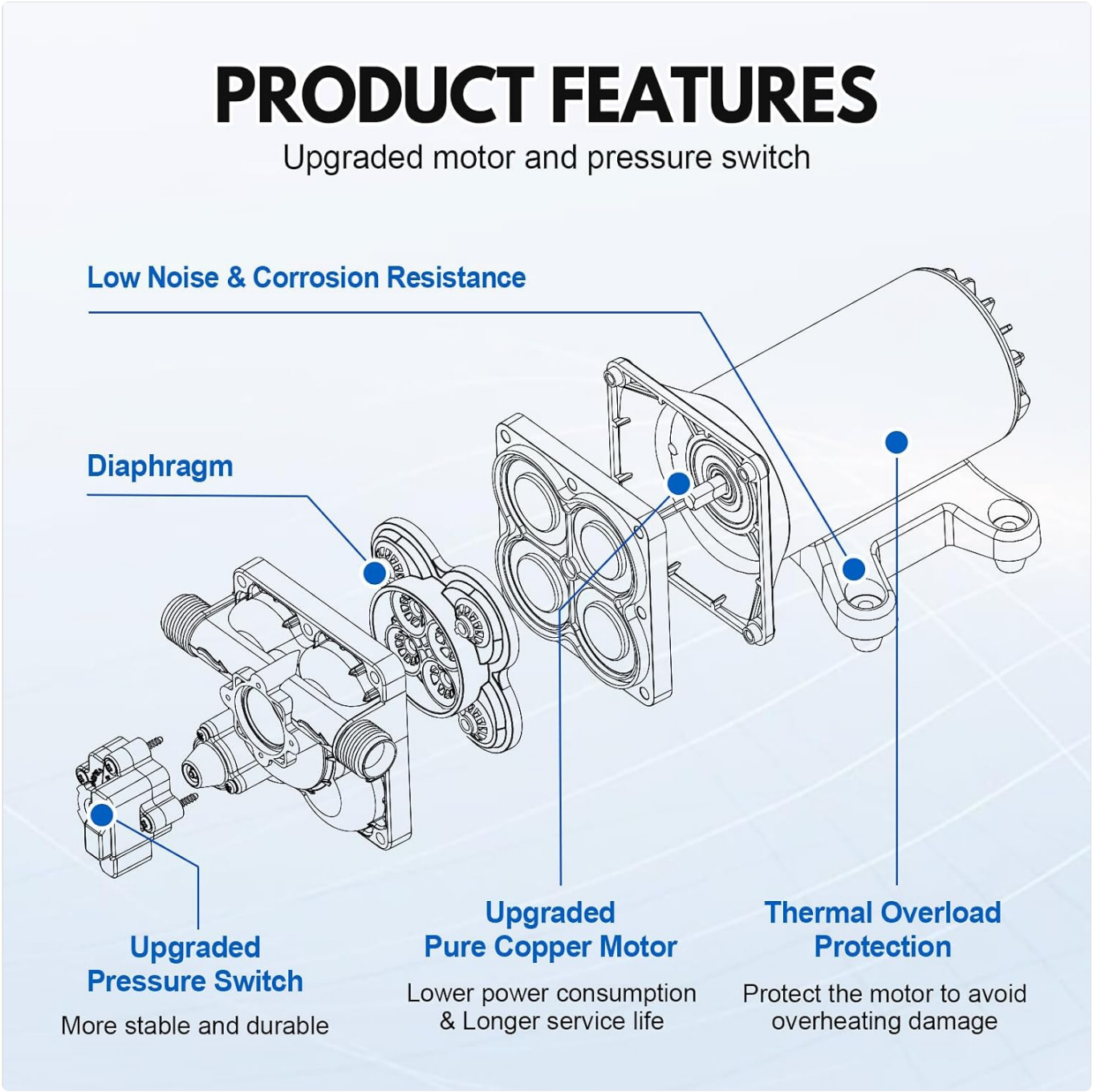


Figure 6: Example installation of the pump in an RV, demonstrating hose connections and overall setup.

5. Operation

5.1 Initial Start-up

Once all connections are secure and verified, turn on the 12V DC power supply to the pump. The pump is self-priming, but it may take a few moments for water to flow consistently as air is purged from the system. Open a faucet or outlet to allow water to flow and air to escape.

5.2 Automatic Operation

The ECO-WORTHY pump features an on-demand automatic pressure switch. When a water outlet (like a faucet) is opened, the pressure in the system drops, and the pump automatically turns on to supply water. When the outlet is closed, the pressure builds up, and the pump automatically shuts off.



Figure 7: The pump's automatic on/off functionality based on water demand.

5.3 Adjusting Pressure

The pump's pressure switch is adjustable, typically ranging from 40-100 PSI. To adjust the pressure:

1. Locate the pressure regulator needle on the pump.
2. Find the screw hole in the center of the switch.
3. Turn the screw clockwise to increase the pressure, and counter-clockwise to decrease the pressure. Make small adjustments and test the pressure after each adjustment.



Figure 8: Steps to adjust the pump's pressure setting.



Figure 9: Visual comparison of water pressure before and after pump operation, illustrating the 70 PSI output.

6. Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your pump.

- **Strainer Cleaning:** Periodically inspect and clean the 50-mesh detachable strainer. Debris accumulation can reduce flow and strain the pump. To clean, disconnect power, remove the strainer, rinse thoroughly, and reattach.
- **Leak Inspection:** Regularly check all hose connections and fittings for leaks. Tighten any loose connections. Use PTFE tape on threaded connections if necessary to ensure a watertight seal.
- **Winterization (for RV/Marine use):** If the pump will be exposed to freezing temperatures, it must be properly winterized to prevent damage. Drain all water from the pump and lines, or use an RV-specific antifreeze solution according to product instructions.
- **General Cleaning:** Keep the exterior of the pump clean and free of dirt or debris. Do not submerge the pump in water.

7. Troubleshooting

This section provides solutions to common issues you might encounter with your ECO-WORTHY water pump.

Problem	Possible Cause	Solution
Pump does not turn on.	No power, loose electrical connections, blown fuse, faulty pressure switch, motor overheating.	Check power supply. Verify all electrical connections are secure. Check and replace fuse if blown. Allow pump to cool if thermal protection activated. Contact support if pressure switch is suspected faulty.
Low flow or no water output.	Clogged strainer, air in system, kinked hose, low water supply, restricted outlet.	Clean the inlet strainer. Bleed air from the system by opening all faucets. Check hoses for kinks or blockages. Ensure adequate water supply to the pump. Check for obstructions in the outlet.
Pump runs continuously or cycles rapidly.	Leak in the system, faulty pressure switch, insufficient back pressure.	Inspect all plumbing for leaks and tighten connections. Adjust pressure switch setting (increase pressure). If problem persists, pressure switch may need replacement.
Excessive noise or vibration.	Loose mounting, air in system, debris in pump, worn components.	Ensure pump is securely mounted. Purge air from the system. Check strainer for debris. If noise persists, internal components may be worn; contact support.

8. Warranty and Support

ECO-WORTHY stands behind the quality of its products. For specific warranty details, including coverage period and terms, please refer to the warranty card included with your purchase or visit the official ECO-WORTHY website.
If you encounter any issues not covered in the troubleshooting section or require further assistance, please contact ECO-WORTHY customer support. Have your product model number (5.5GPM-70PS1-12V) and purchase information ready when contacting support.
You can visit the ECO-WORTHY Store for more information and contact options:ECO-WORTHY Store on Amazon

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For technical support, please refer to the contact information provided with your product or on the official website.

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Model number, symptoms, what you tried, or the section of the manual you are using.

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Answered questions about this manual

Where can I purchase a replacement pressure switch for my ECO-WORTHY 110V water pump (Model DPHC-F42-110v)?

To purchase a replacement pressure switch for your ECO-WORTHY 110V water pump (Model DPHC-F42-110v), you should follow these steps: Contact ECO-WORTHY Support: The manufacturer's documentation states that for any pressure switch problems, they provide...

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