

Orion Motor Tech DAH-HU5K-12

Orion Motor Tech 12V 5kW Diesel Air Heater

Model: DAH-HU5K-12

Brand: Orion Motor Tech

1. INTRODUCTION

This instruction manual provides essential information for the safe and efficient operation, installation, and maintenance of your Orion Motor Tech 12V 5kW Diesel Air Heater. Please read this manual thoroughly before installation and use, and retain it for future reference. This heater is designed to provide auxiliary heating for various diesel-powered vehicles and equipment.

2. SAFETY INFORMATION

- Ensure proper ventilation during operation to prevent carbon monoxide buildup.
- Do not operate the heater in enclosed, unventilated spaces.
- Keep flammable materials away from the heater's exhaust and air outlets.
- Ensure the electrical connections are secure and match the specified 12V power supply. Insufficient voltage can lead to malfunctions and error codes.
- Never interrupt the heater's cool-down phase after shutdown. Premature power disconnection during this phase can cause damage to internal components.
- Installation should be performed by a qualified professional if you are unsure about any steps.
- Regularly inspect the exhaust system for leaks or blockages.
- This heater is designed for diesel fuel only. Do not use gasoline or other fuels.

SAFE OVERHEAT PROTECTION

Automatically Cuts Off Power at 250°C for Enhanced Safety



Figure 2.1: The heater features an automatic overheat protection system, which cuts off power at 250°C to enhance safety.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1 x Diesel Air Heater Unit
- 1 x Flexible Air Duct Tube
- 4 x Connection Tubes (for fuel lines, etc.)
- 1 x LCD Control Panel
- 1 x Remote Control

- 1 x Handle (for portable units, if applicable)
- 1 x User Manual (this document)

4. PRODUCT OVERVIEW

The Orion Motor Tech 12V 5kW Diesel Air Heater is a compact and efficient heating solution. Understanding its components is crucial for proper installation and maintenance.



Figure 4.1: Diagram illustrating the main components of the diesel air heater, including the cold air inlet, hot air vent, fuel feed, air inlet, exhaust outlet, buffer plate, heat exchanger, ignition plug, combustion chamber, combustion fan, and control board.

5. SPECIFICATIONS

Feature	Specification
Model Number	DAH-HU5K-12
Rated Voltage	12 V
Heating Power	5 kW
Fuel Type	Diesel
Fuel Consumption	0.1 - 0.25 L/h
Fuel Tank Capacity	10 L
Operating Temperature	-40 °C to 20 °C
Dimensions (L x W x H)	39 x 14 x 14 cm
Net Weight	7.26 kg
Certification	CE



Figure 5.1: Physical dimensions of the heater unit.

6. SETUP AND INSTALLATION

The heater is designed for versatile installation in various diesel vehicles. Proper installation is critical for safety and performance.

6.1. General Placement Considerations

- The heater can be installed in trucks, RVs, cars, boats, agricultural vehicles, and construction equipment.
- Choose a location that allows for adequate air intake and exhaust routing, away from flammable materials.

- Ensure the fuel pump is installed correctly to avoid excessive ticking noise. Sound dampening materials may be considered if noise is a concern.
- The exhaust hose provided may be short (approximately 60cm). Consider acquiring a longer, suitable exhaust hose if needed for your specific installation.

6.2. Electrical Connection

- Connect the heater to a stable 12V DC power source.
- Ensure all electrical connections are tight and properly insulated.
- The heater is sensitive to voltage fluctuations. An insufficient power supply can lead to operational issues and error messages.

6.3. Fuel System Connection

- Connect the fuel line from the heater to the provided 10L fuel tank or directly to the vehicle's diesel tank (if applicable and safe).
- Ensure all fuel line connections are leak-free.
- Only use diesel fuel.

ONE FOR ALL

Experience Easy Installation and Ultimate Convenience



Installation Location

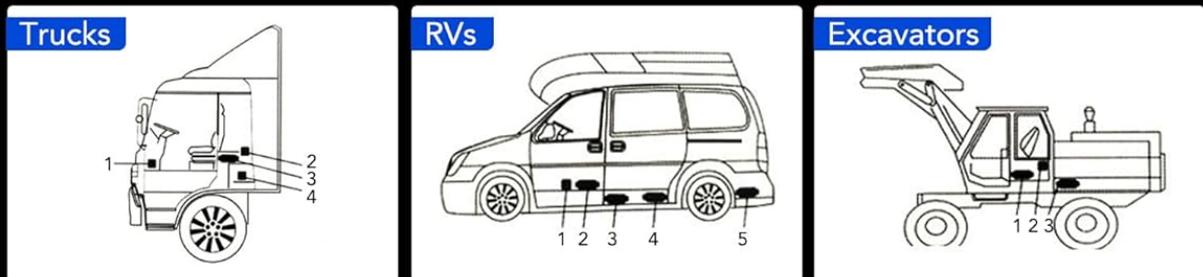


Figure 6.1: Examples of suitable installation locations for the diesel air heater across various vehicle types.

7. OPERATING INSTRUCTIONS

The heater can be controlled via the integrated LCD panel or the remote control.

7.1. LCD Control Panel

The LCD control panel allows for manual adjustment of heating levels, fan speed, and temperature settings. It also displays operational status and error codes.

- **Power Button:** Turns the heater ON/OFF.

- **Increase/Decrease Buttons:** Adjust temperature, fan speed, or other settings.
- **OK Button:** Confirms selections.
- **Menu/Settings Button:** Accesses advanced settings like timer or thermostat. Note that thermostat programming and remote pairing functionality may vary or be limited on some units.

7.2. Remote Control

The remote control provides convenient operation from a distance. Ensure the remote is paired with the heater according to the instructions provided with the remote itself. Basic ON/OFF and temperature adjustments are typically supported.

7.3. Start-up Procedure

1. Ensure the fuel tank has sufficient diesel.
2. Press the Power button on the control panel or remote.
3. The heater will initiate a self-check and pre-heating phase.
4. Once operational, adjust the desired temperature or heating level using the Increase/Decrease buttons.

7.4. Shutdown Procedure

1. Press the Power button to turn off the heater.
2. The heater will enter a cool-down phase. During this phase, the fan will continue to run to cool down internal components.
3. **IMPORTANT:** Do not disconnect power or interrupt the cool-down phase. Allow the heater to complete its cool-down cycle naturally. This prevents damage to the combustion chamber and other components.

12V DIESEL PARKING HEATER

Stay Warm and Cozy All Winter, Every Winter



Rainy



Sleety



Snowy



Figure 7.1: The LCD display and remote control allow for convenient preheating and temperature management.

8. MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your diesel air heater.

- **Fuel Filter:** Periodically check and clean or replace the fuel filter to ensure clean fuel delivery.
- **Air Filter:** Inspect and clean the air intake filter regularly to prevent dust and debris from entering the unit.
- **Exhaust System:** Check the exhaust pipe for any blockages, damage, or leaks. Ensure it is securely fastened.

- **Electrical Connections:** Verify that all electrical connections remain tight and free from corrosion.
- **General Cleaning:** Keep the exterior of the heater clean and free from obstructions.

9. TROUBLESHOOTING

This section addresses common issues you might encounter with your diesel air heater.

Problem	Possible Cause	Solution
Heater does not start	No power, low voltage, no fuel, clogged fuel line, faulty ignition plug.	Check power supply (ensure stable 12V), check fuel level, inspect fuel lines, check ignition plug.
Heater shuts off unexpectedly	Overheat protection activated, low voltage, fuel shortage, exhaust blockage.	Check for obstructions around air inlets/outlets, verify power supply, refill fuel, clear exhaust. Allow cool-down.
Insufficient heating	Low fan speed setting, clogged air filter, incorrect temperature setting.	Increase fan speed, clean air filter, adjust temperature setting.
Excessive smoke	Poor fuel quality, incorrect fuel-air mixture, clogged exhaust.	Use clean diesel, check air intake, clear exhaust.
Loud ticking noise from fuel pump	Normal operation, pump mounting.	This is often normal. Consider sound dampening materials or relocating the pump if noise is disruptive.
Remote control not working/pairing	Batteries dead, not paired, unit specific limitations.	Replace remote batteries, refer to remote pairing instructions (if available), note that some units may have limited remote functionality.

If problems persist after attempting these solutions, consult a qualified technician.

10. WARRANTY AND SUPPORT

Orion Motor Tech products are manufactured to high-quality standards. For warranty information, please refer to the documentation provided at the time of purchase or contact your retailer. For technical support or service inquiries, please reach out to Orion Motor Tech customer service through their official website or the contact information provided with your product.