Aeromotive 16312

Aeromotive 16312 Dual Fuel Pump Wiring Kit Instruction Manual

Model: 16312

1. Introduction

This manual provides detailed instructions for the proper installation, operation, and maintenance of your Aeromotive 16312 Dual Fuel Pump Wiring Kit. This kit is designed to provide a reliable and efficient power supply for two high-performance fuel pumps in automotive applications. Adherence to these instructions is crucial for optimal performance and safety.

2. Safety Information

WARNING: Improper installation of electrical components can lead to serious injury, fire, or damage to your vehicle. Always follow safety precautions.

- Disconnect the vehicle's battery before beginning any electrical work.
- Ensure all connections are secure and properly insulated to prevent short circuits.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Do not operate the fuel system without proper ventilation. Fuel vapors are highly flammable.
- If you are not experienced with automotive electrical systems, it is highly recommended to seek professional installation.
- Verify all wiring against the vehicle's specific electrical diagrams and the kit's instructions.

3. Package Contents

The Aeromotive 16312 Dual Fuel Pump Wiring Kit typically includes the following components:

- Heavy-gauge power wire with battery terminal
- Ground wire
- Two (2) automotive relays
- Two (2) inline fuse holders with fuses
- Wiring harnesses for fuel pump connections
- Trigger wire for relay activation
- Assorted connectors and terminals



Image 1: Overview of the Aeromotive 16312 Dual Fuel Pump Wiring Kit components, showing various wires, relays, and fuse holders.

4. Setup and Installation

This section outlines the general steps for installing the Aeromotive 16312 Dual Fuel Pump Wiring Kit. Specific vehicle requirements may vary.

4.1 Pre-Installation Steps

1. **Disconnect Battery:** Always disconnect the negative terminal of the vehicle's battery before starting any electrical work.
2. **Gather Tools:** Ensure you have all necessary tools, including wire strippers, crimpers, electrical tape, heat shrink tubing, and mounting hardware.
3. **Plan Routing:** Determine the optimal routing for all wires, keeping them away from hot engine components, sharp edges, and moving parts.

4.2 Component Mounting

1. **Mount Relays:** Securely mount the two relays in a dry location, away from excessive heat and moisture. Ensure they are easily accessible for inspection.

2. **Mount Fuse Holders:** Install the inline fuse holders in an accessible location close to the battery for the main power feed.

4.3 Wiring Connections

1. **Battery Connection:** Connect the heavy-gauge power wire from the kit to the positive terminal of the vehicle's battery. Ensure the fuse holder is installed in this line.
2. **Ground Connection:** Connect the ground wire from the kit to a clean, unpainted chassis ground point. Ensure a solid electrical connection.
3. **Fuel Pump Connections:** Connect the dedicated power and ground wires from the kit's harness to each of your two fuel pumps. Ensure correct polarity.
4. **Trigger Wire:** Connect the trigger wire to a switched 12V ignition source that activates when the engine is running or when the fuel pump controller signals. This will activate the relays.
5. **Verify Connections:** Double-check all connections for tightness and proper insulation. Use electrical tape or heat shrink tubing where necessary.

4.4 Post-Installation

1. **Reconnect Battery:** Reconnect the negative terminal of the vehicle's battery.
2. **Test System:** Turn the ignition to the 'ON' position (without starting the engine) and listen for the fuel pumps to prime. Check for any unusual noises or smells.
3. **Inspect for Leaks:** After initial operation, carefully inspect all fuel lines and connections for any signs of leaks.

5. Operating Instructions

Once properly installed, the Aeromotive 16312 Dual Fuel Pump Wiring Kit operates automatically in conjunction with your vehicle's ignition system or fuel pump controller. When the ignition is turned on, the trigger wire activates the relays, supplying full battery voltage to both fuel pumps. This ensures consistent and reliable fuel delivery.

- Ensure the vehicle's electrical system is in good working order.
- Regularly check the fuses in the kit; replace only with fuses of the correct amperage rating.

6. Maintenance

The Aeromotive 16312 Dual Fuel Pump Wiring Kit is designed for durability and minimal maintenance. However, periodic inspection is recommended:

- **Visual Inspection:** Annually inspect all wiring for signs of wear, fraying, or damage. Check for corrosion on terminals and connections.
- **Connection Integrity:** Ensure all electrical connections remain tight and secure.
- **Fuse Check:** Periodically check the fuses for continuity. If a fuse blows, investigate the cause before replacing it.
- **Relay Function:** Listen for the audible click of the relays when the ignition is turned on.

7. Troubleshooting

If you experience issues with your dual fuel pump system, consider the following troubleshooting steps:

- **Pumps Not Activating:**
    - Check fuses in the kit and the vehicle's fuse box.
    - Verify the trigger wire is receiving 12V when the ignition is on.
    - Ensure all ground connections are secure and free of corrosion.
    - Test relays for proper function (e.g., by swapping with a known good relay if possible).
- **Intermittent Operation:**
    - Inspect all wiring for loose connections or damaged insulation.

- Check for signs of overheating in wires or relays.

- **Low Fuel Pressure:**
  - While not directly a wiring kit issue, ensure the pumps are receiving full voltage. Voltage drop can affect pump performance.
  - Verify the fuel pumps themselves are functioning correctly.

If troubleshooting does not resolve the issue, consult a qualified automotive technician.

8. Specifications

Brand	Aeromotive
Model	16312
Fit Type	Universal Fit
Item Weight	4.96 Pounds
UPC	684980014945
Manufacturer Part Number	16312

9. Warranty and Support

For warranty information, technical support, or further assistance, please refer to the official Aeromotive website or contact their customer service department. Keep your proof of purchase for warranty claims.
Aeromotive Official Website: www.aeromotiveinc.com

Ask a question about this manual

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Question

Example: How do I reset this device or fix this error?

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