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› [Standard Motor Products](#) /

› Standard Motor Products MR10 Fuel Pump Relay User Manual

Standard Motor Products MR10

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Model: MR10

INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Standard Motor Products MR10 Fuel Pump Relay. Please read this manual thoroughly before attempting any installation or service to ensure safe and correct usage.

What's in the Box

- 1 x Standard Motor Products MR10 Fuel Pump Relay

PRODUCT OVERVIEW



Image: A close-up view of the Standard Motor Products MR10 Fuel Pump Relay. The relay features a metallic casing with three screw terminals visible on one side, labeled "ALT.OUT", "BAT", and "IGN". A mounting bracket with a hole is visible at the top. The overall appearance is industrial and robust.

The MR10 Fuel Pump Relay is a critical component in a vehicle's electrical system, responsible for controlling the power supply to the fuel pump. It ensures the fuel pump operates only when required, typically when the engine is cranking or running, contributing to fuel efficiency and system safety.

SETUP AND INSTALLATION

Installation of the fuel pump relay should be performed by a qualified technician or an individual with experience in automotive electrical systems. Incorrect installation can lead to vehicle malfunction or damage.

Safety Precautions

- Always disconnect the vehicle's battery negative terminal before beginning any electrical work to prevent accidental short circuits or electrical shock.
- Ensure the ignition is off and the vehicle is in a safe, stable position.
- Wear appropriate personal protective equipment, such as safety glasses and gloves.
- Refer to your vehicle's specific service manual for the exact location and wiring diagram of the fuel pump relay.

Installation Steps

1. **Locate the Existing Relay:** Identify the current fuel pump relay in your vehicle. This is often found in the fuse box under the hood, in the passenger compartment, or near the fuel tank.
2. **Disconnect Wiring:** Carefully disconnect the electrical connector(s) from the old relay. Note the orientation and connection points if not clearly marked.
3. **Remove Old Relay:** Unmount the old relay from its bracket or socket.
4. **Install New Relay:** Mount the Standard Motor Products MR10 relay in the same location and connect the wiring. Ensure all connections are secure and correctly oriented. The MR10 features terminals labeled "ALT.OUT", "BAT", and "IGN" for specific connections.
5. **Reconnect Battery:** Once the new relay is securely installed and all connections are verified, reconnect the vehicle's battery negative terminal.
6. **Test System:** Turn the ignition to the "ON" position (without starting the engine) and listen for the fuel pump to prime (a brief hum from the fuel tank area). Then, attempt to start the engine to confirm proper operation.

OPERATING PRINCIPLES

The Standard Motor Products MR10 Fuel Pump Relay operates automatically as part of the vehicle's engine management system. Its primary function is to switch the high current required by the fuel pump using a low current signal from the engine control unit (ECU) or ignition system.

- When the ignition is turned to the "ON" position, the ECU typically sends a brief signal to the relay, causing it to energize and supply power to the fuel pump for a few seconds (priming cycle).
- Once the engine starts and the ECU detects engine rotation (e.g., from the crankshaft position sensor), the relay remains energized, continuously supplying power to the fuel pump.
- If the engine stalls or the ignition is turned off, the ECU removes the signal to the relay, de-energizing it and cutting power to the fuel pump, which is a safety feature to prevent fuel delivery in the event of an accident.

MAINTENANCE

Fuel pump relays are generally maintenance-free components. However, periodic inspection can help identify potential issues before they lead to failure.

- **Visual Inspection:** Periodically inspect the relay and its connections for signs of corrosion, melting, or damage.

Ensure the wiring harness connector is clean and securely seated.

- **Connection Integrity:** Verify that the screw terminals on the relay are tight and that the wires connected to them are not frayed or loose.
- **Environmental Factors:** Keep the relay area free from excessive moisture, dirt, and debris, which can contribute to premature failure.

TROUBLESHOOTING

If you experience issues with your vehicle's fuel system, the fuel pump relay could be a potential cause. Here are some common symptoms and basic troubleshooting steps:

- **Engine Cranks but Won't Start:**
 - Listen for the fuel pump priming sound when the ignition is turned on. If no sound is heard, the relay may not be energizing.
 - Check the fuse associated with the fuel pump relay in your vehicle's fuse box. A blown fuse will prevent the relay from receiving power.
 - Inspect the relay for any signs of physical damage or burning.
- **Intermittent Fuel Pump Operation:**
 - This could indicate a failing relay that is intermittently losing connection or failing to energize.
 - Check for loose or corroded connections at the relay terminals.
- **Fuel Pump Runs Continuously (even with ignition off):**
 - This is a rare but serious symptom, often indicating a "stuck" or shorted relay. Disconnect the battery immediately to prevent fuel pump damage or fire hazard. The relay will need to be replaced.

If troubleshooting steps do not resolve the issue, it is recommended to consult a professional automotive technician for diagnosis and repair.

SPECIFICATIONS

Attribute	Detail
Part Number	MR10
Brand	Standard Motor Products
Model	Fuel Pump Relay
Item Weight	0.353 ounces
Product Dimensions	2.44 x 2.44 x 2.38 inches
Operation Mode	Automatic
Number of Terminals	2
UPC	091769019662
Country Of Origin	China

WARRANTY AND SUPPORT

For specific warranty information regarding the Standard Motor Products MR10 Fuel Pump Relay, please refer to the documentation provided with your purchase or visit the official Standard Motor Products website. Warranty terms and conditions may vary.

For technical support, product inquiries, or assistance with troubleshooting beyond the scope of this manual, please contact Standard Motor Products customer service through their official channels.

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