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Standard Motor Products TH113

Standard Motor Products TH113 Throttle Position Sensor User Manual

Model: TH113 | Brand: Standard Motor Products

1. PRODUCT OVERVIEW

The Standard Motor Products TH113 is a high-quality throttle position sensor designed for automotive applications. This sensor plays a crucial role in your vehicle's engine management system by accurately monitoring the throttle plate's position and transmitting this data to the engine control unit (ECU). This precise measurement allows the ECU to adjust fuel delivery and ignition timing for optimal engine performance and efficiency.

Key features include:

- Designed for auto and truck maintenance.
- Contributes to improved overall vehicle performance.
- Vehicle-specific fit for accurate installation.



Image: Standard Motor Products TH113 Throttle Position Sensor. A black and grey throttle position sensor, featuring a metal lever arm and a multi-pin connector housing.

2. SETUP AND INSTALLATION

Installation of the TH113 Throttle Position Sensor should be performed by a qualified technician or an individual with experience in automotive repair. Always refer to your vehicle's specific service manual for detailed instructions and safety precautions before beginning any work.

General Installation Steps:

1. **Safety First:** Disconnect the vehicle's battery to prevent electrical hazards.
2. **Locate the Old Sensor:** Identify the existing throttle position sensor, typically mounted on the throttle body.
3. **Disconnect Wiring:** Carefully unplug the electrical connector from the old sensor.
4. **Remove Old Sensor:** Unbolt or unclip the old sensor from the throttle body. Note its orientation.
5. **Install New Sensor:** Position the new TH113 sensor in the same orientation as the old one. Ensure the flange

mount aligns correctly. Secure it with the appropriate fasteners.

6. **Reconnect Wiring:** Plug the electrical connector firmly into the new sensor.
7. **Reconnect Battery:** Reconnect the vehicle's battery.
8. **Test Functionality:** Start the vehicle and check for proper throttle response and the absence of any diagnostic trouble codes (DTCs). A diagnostic scan tool may be required to clear old codes or perform a throttle body relearn procedure, if applicable to your vehicle model.

Note: This sensor is designed for vehicle-specific fit. Ensure compatibility with your vehicle's make, model, and year before installation.

3. OPERATING PRINCIPLES

The Standard Motor Products TH113 Throttle Position Sensor operates on an analog output principle. As the throttle pedal is pressed, the throttle plate in the engine's intake system rotates. The sensor's internal mechanism, connected to the throttle shaft, rotates in conjunction with the throttle plate. This rotation changes the sensor's electrical resistance, which in turn alters the voltage signal sent to the vehicle's ECU.

The ECU interprets this varying voltage signal to determine the exact position of the throttle. This information is critical for:

- **Fuel Injection:** Adjusting the amount of fuel delivered to the engine.
- **Ignition Timing:** Optimizing spark plug timing.
- **Automatic Transmission Shifting:** Influencing shift points in automatic transmissions.
- **Idle Speed Control:** Maintaining stable engine idle.

A properly functioning TH113 sensor ensures smooth acceleration, consistent idle, and overall efficient engine operation.

4. MAINTENANCE

The Standard Motor Products TH113 Throttle Position Sensor is a sealed, maintenance-free component. It does not require lubrication, cleaning, or periodic adjustments under normal operating conditions.

However, it is advisable to:

- **Inspect Wiring:** Periodically check the electrical connector and wiring harness for any signs of damage, corrosion, or loose connections.
- **Keep Clean:** Ensure the area around the throttle body and sensor is free from excessive dirt, oil, or debris, which could potentially interfere with its operation or lead to premature wear of other components.

If the sensor is suspected of malfunction, replacement is typically the recommended course of action rather than repair.

5. TROUBLESHOOTING

Malfunctions of the throttle position sensor can lead to various drivability issues. If you experience any of the following symptoms, the TH113 sensor may need inspection or replacement:

- **Rough or Erratic Idle:** The engine idle speed may fluctuate or be unusually high or low.
- **Hesitation or Stalling:** The vehicle may hesitate during acceleration or stall when coming to a stop.
- **Poor Fuel Economy:** Incorrect fuel delivery due to faulty sensor readings can lead to increased fuel

consumption.

- **Check Engine Light (CEL):** The Malfunction Indicator Lamp (MIL) on your dashboard may illuminate, often accompanied by specific diagnostic trouble codes (DTCs) related to the TPS circuit.
- **Difficulty Shifting (Automatic Transmissions):** Erratic or harsh shifts may occur if the transmission relies on TPS data.

Recommended Action:

- Use an OBD-II scanner to retrieve any stored diagnostic trouble codes. Common TPS codes include P0120, P0121, P0122, P0123, P0124.
- Visually inspect the sensor and its wiring for any obvious damage or loose connections.
- Consult a professional automotive technician for accurate diagnosis and replacement if necessary.

6. SPECIFICATIONS

Detailed specifications for the Standard Motor Products TH113 Throttle Position Sensor:

Attribute	Value
Brand	Standard Motor Products
Model Number	TH113
Product Dimensions (L x W x H)	3 x 2 x 5 inches
Item Weight	1.44 ounces
Material	Metal
Style	Modern
Measurement Accuracy	±3.5%
Mounting Type	Flange Mount
Output Type	Analog
Specific Uses For Product	Automotive, Vehicle Specific
UPC	091769182724
Manufacturer	Standard Motor Products
Manufacturer Part Number	TH113

7. WARRANTY AND SUPPORT

For specific warranty information regarding the Standard Motor Products TH113 Throttle Position Sensor, please refer to the documentation included with your purchase or visit the official Standard Motor Products website. Warranty terms typically cover defects in materials and workmanship for a specified period from the date of purchase. For technical support, installation assistance, or warranty claims, please contact Standard Motor Products directly

through their official customer service channels. Providing your product model number (TH113) and purchase details will help expedite your inquiry.