

Standard Motor Products PC58

Standard Motor Products PC58 Crankshaft Position Sensor Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Standard Motor Products PC58 Crankshaft Position Sensor. Please read these instructions carefully before proceeding with any installation or service to ensure safe and effective use.

2. PRODUCT OVERVIEW

The Standard Motor Products PC58 is a Crankshaft Position Sensor designed to monitor the rotational speed and position of the engine's crankshaft. This data is crucial for the Engine Control Unit (ECU) to accurately determine ignition timing and fuel injection. A properly functioning crankshaft position sensor is vital for engine performance and efficiency.



Figure 1: Standard Motor Products PC58 Crankshaft Position Sensor. This image displays the sensor's main body, its integrated electrical connector, and the mounting bracket, all connected by a protective corrugated wire conduit.

3. SAFETY INFORMATION

Always observe the following safety precautions when working on your vehicle:

- Disconnect the vehicle's battery before beginning any electrical work to prevent accidental short circuits or electrical shock.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the vehicle is securely supported on jack stands if working underneath it.
- Allow the engine to cool down completely before working on engine components to avoid burns.
- Refer to your vehicle's specific service manual for detailed safety procedures and component locations.

4. INSTALLATION

The installation of a crankshaft position sensor typically involves the following general steps. **Always consult your vehicle's specific service manual for precise instructions, torque specifications, and component locations.**

1. **Preparation:** Park the vehicle on a level surface, engage the parking brake, and disconnect the negative terminal of the battery. Allow the engine to cool.
2. **Locate the Sensor:** Identify the location of the existing crankshaft position sensor. This can vary significantly by vehicle make and model (e.g., near the crankshaft pulley, on the engine block, or near the transmission bell housing).
3. **Disconnect Electrical Connector:** Carefully disconnect the electrical connector from the old sensor.
4. **Remove Old Sensor:** Using appropriate tools, unbolt and remove the old crankshaft position sensor. Be prepared for a small amount of oil to leak if the sensor is submerged in oil.
5. **Install New Sensor:** Insert the new Standard Motor Products PC58 sensor into its mounting location. Ensure it seats properly.
6. **Secure Sensor:** Install the mounting bolt(s) and tighten them to the vehicle manufacturer's specified torque. Overtightening can damage the sensor or engine components.
7. **Connect Electrical Connector:** Reconnect the electrical connector to the new sensor, ensuring a secure and positive connection.
8. **Final Steps:** Reconnect the negative battery terminal. Start the vehicle and check for proper operation and any diagnostic trouble codes (DTCs).

Tools typically required: Basic socket set, wrenches, torque wrench, and potentially a diagnostic scan tool.

5. OPERATING PRINCIPLES

The Standard Motor Products PC58 Crankshaft Position Sensor operates by detecting the rotation of the crankshaft. Most crankshaft position sensors use either a magnetic pickup or a Hall effect sensor. As a reluctor wheel (a toothed wheel) attached to the crankshaft rotates past the sensor, it generates a series of electrical pulses. These pulses are sent to the ECU, which interprets them to determine the exact position and speed of the crankshaft. This information is critical for the ECU to synchronize ignition timing, fuel injection, and other engine functions, ensuring smooth and efficient engine operation.

6. MAINTENANCE

Crankshaft position sensors are generally maintenance-free components. However, periodic inspection during other engine service can help identify potential issues:

- **Visual Inspection:** Check the sensor and its wiring for any signs of physical damage, corrosion, or fraying.
- **Connection Integrity:** Ensure the electrical connector is securely attached and free from dirt or moisture.
- **Cleanliness:** While not typically required, if the sensor tip is accessible and appears excessively dirty, gently clean it with a non-abrasive cleaner suitable for electronics. Avoid harsh chemicals.

If any damage is observed, replacement of the sensor is recommended.

7. TROUBLESHOOTING

A faulty crankshaft position sensor can cause various engine problems. Common symptoms include:

- Engine cranking but not starting.

- Rough idle or stalling.
- Intermittent engine misfires.
- Check Engine Light (CEL) illuminated with specific diagnostic trouble codes (DTCs) related to the crankshaft position sensor (e.g., P0335).
- Reduced fuel economy or engine performance.

Basic Troubleshooting Steps:

1. **Check Connections:** Ensure the sensor's electrical connector is clean, secure, and free from corrosion.
2. **Inspect Wiring:** Look for any visible damage to the sensor's wiring harness.
3. **Scan for DTCs:** Use an OBD-II scanner to retrieve any stored diagnostic trouble codes. These codes can help pinpoint the exact nature of the problem.
4. **Professional Diagnosis:** If symptoms persist or you are unsure about diagnosis, it is recommended to consult a qualified automotive technician. Specialized tools and knowledge are often required for accurate sensor testing.

8. SPECIFICATIONS

Attribute	Value
Brand	Standard Motor Products
Model Number	PC58
Item Weight	1 Pounds
Product Dimensions (L x W x H)	5.2 x 2.5 x 5.2 inches
UPC	091769219819
Product Type	ELECTRONIC SENSOR

9. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the official Standard Motor Products website or the documentation included with your purchase. For technical support or further assistance, please contact Standard Motor Products customer service directly.