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› Standard Motor Products PC527 Camshaft Sensor User Manual

Standard Motor Products PC527

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Model: PC527

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Standard Motor Products PC527 Camshaft Sensor. This sensor is a critical component in your vehicle's engine management system, responsible for monitoring the rotational speed and position of the camshaft, which is vital for precise fuel injection and ignition timing.

Please read this manual thoroughly before attempting any installation or service to ensure safe and effective use of the product.

2. PRODUCT OVERVIEW



Figure 2.1: Standard Motor Products PC527 Camshaft Sensor. This image shows the black plastic housing of the sensor with its electrical connector and two mounting holes with brass inserts.

The PC527 Camshaft Sensor is designed for durability and precise performance. It features a robust construction suitable for automotive environments.

Key Features:

- High-quality materials for extended service life.
- Engineered to meet or exceed OEM specifications.
- Ensures accurate camshaft position readings for optimal engine performance.

3. INSTALLATION GUIDE

Safety First: Always disconnect the vehicle's battery before beginning any electrical work. Wear appropriate personal protective equipment (PPE) such as gloves and eye protection.

1. **Locate the Old Sensor:** Refer to your vehicle's service manual for the exact location of the camshaft position sensor. It is typically located near the camshaft or cylinder head.
2. **Disconnect Electrical Connector:** Carefully unclip and disconnect the electrical connector from the old sensor. Avoid pulling on the wires.
3. **Remove Mounting Bolts:** Use the appropriate wrench or socket to remove the bolts securing the old sensor in place.
4. **Remove Old Sensor:** Gently pull the old sensor out of its mounting bore. Some resistance may be felt due to O-

rings.

5. **Inspect Mounting Area:** Clean any debris or old gasket material from the mounting surface. Ensure the bore is clear.
6. **Install New Sensor:** Apply a small amount of clean engine oil to the O-ring of the new PC527 sensor. Carefully insert the new sensor into the mounting bore, ensuring it seats properly.
7. **Secure Mounting Bolts:** Reinstall the mounting bolts and tighten them to the vehicle manufacturer's specified torque. Do not overtighten.
8. **Reconnect Electrical Connector:** Firmly connect the electrical connector to the new sensor until it clicks into place.
9. **Reconnect Battery:** Reconnect the vehicle's battery.
10. **Test Operation:** Start the vehicle and check for any diagnostic trouble codes (DTCs) using an OBD-II scanner. Clear any old codes. Perform a test drive to confirm proper operation.

Note: Professional installation is recommended if you are unfamiliar with automotive repair procedures.

4. OPERATION

The Standard Motor Products PC527 Camshaft Sensor operates by detecting the position and speed of the camshaft. It sends this information as an electrical signal to the Engine Control Unit (ECU). The ECU uses this data, along with crankshaft position data, to precisely control ignition timing and fuel injection, optimizing engine performance and efficiency.

Once installed correctly, the sensor operates automatically as part of the vehicle's engine management system. No user intervention is required for its operation.

5. MAINTENANCE

The PC527 Camshaft Sensor is designed to be a maintenance-free component. Regular maintenance is generally not required for the sensor itself. However, it is good practice to:

- **Inspect Wiring:** Periodically check the sensor's electrical connector and wiring for signs of damage, corrosion, or loose connections.
- **Keep Area Clean:** Ensure the area around the sensor is free from excessive dirt, oil, or debris, which could potentially interfere with its operation or damage the wiring.
- **Address Related Issues:** If other engine components are failing or causing excessive vibration, it could indirectly affect the sensor's lifespan. Address these issues promptly.

6. TROUBLESHOOTING

If you suspect an issue with your camshaft sensor, common symptoms may include:

- Check Engine Light (CEL) illumination.
- Engine misfires or rough idling.
- Difficulty starting the engine.
- Reduced fuel economy.
- Engine stalling.

Common Troubleshooting Steps:

Symptom/Issue	Possible Cause	Solution
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Symptom/Issue	Possible Cause	Solution
Check Engine Light (CEL) with P0340 code (or similar)	Faulty camshaft position sensor, wiring issue, or ECU problem.	1. Verify sensor connection. 2. Inspect wiring for damage. 3. Test sensor output with a multimeter (refer to vehicle service manual for specifications). 4. Replace sensor if faulty.
Engine Cranks but Won't Start	No signal from camshaft sensor, preventing proper ignition timing.	1. Check sensor connection. 2. Scan for diagnostic codes. 3. Consider professional diagnosis.
Rough Idling or Misfires	Intermittent signal from sensor, causing incorrect timing.	1. Inspect sensor and wiring for physical damage. 2. Check for loose connections. 3. Replace sensor if symptoms persist and no other causes are found.

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

7. SPECIFICATIONS

Attribute	Value
Brand	Standard Motor Products
Model Number	PC527
Product Type	Camshaft Position Sensor (also functions as Crankshaft Sensor in some applications)
Item Dimensions (L x W x H)	2 x 1.44 x 3.38 inches
Item Weight	0.02 Pounds (approx. 0.32 ounces)
UPC	091769808396
Manufacturer Part Number	PC527

8. WARRANTY AND SUPPORT

Standard Motor Products offers a limited warranty on its products. For specific warranty terms and conditions, please refer to the official Standard Motor Products website or contact their customer service directly. Keep your proof of purchase for warranty claims.

For technical support, installation assistance, or warranty inquiries, please visit the [Standard Motor Products official website](#) or contact their customer service department.

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