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Standard Motor Products PC134

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Model: PC134

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Standard Motor Products PC134 Crankshaft Sensor. The crankshaft position sensor is a critical component in your vehicle's engine management system, monitoring the rotational speed and position of the crankshaft. This data is used by the engine control unit (ECU) to determine ignition timing and fuel injection. Please read this manual thoroughly before proceeding with installation or use.



Figure 1: Standard Motor Products PC134 Crankshaft Sensor. This image shows the overall view of the sensor, highlighting its main body, electrical connector, and mounting point.

2. SAFETY INFORMATION

Always observe the following safety precautions when working with automotive components:

- Disconnect the vehicle's battery before performing any electrical work to prevent electrical shock or damage to components.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the vehicle is securely supported on jack stands if working underneath it.
- Refer to your vehicle's specific service manual for detailed instructions and torque specifications.
- Keep the work area clean and well-lit.
- Do not modify the sensor or its wiring.

3. SETUP AND INSTALLATION

The installation process for a crankshaft position sensor can vary significantly depending on the vehicle make and model. The following steps are general guidelines. Always consult your vehicle's specific repair manual for precise instructions.

1. **Locate the Sensor:** Identify the location of the existing crankshaft position sensor on your vehicle. This is typically near the crankshaft pulley or flywheel.
2. **Disconnect Battery:** Disconnect the negative terminal of the vehicle's battery.
3. **Disconnect Electrical Connector:** Carefully disconnect the electrical connector from the old sensor. Avoid pulling on the wires.
4. **Remove Old Sensor:** Remove the retaining bolt(s) or clip(s) that secure the sensor. Gently pull the old sensor out of its mounting bore.
5. **Inspect Mounting Area:** Clean the mounting bore and ensure there are no debris or old O-ring fragments.
6. **Install New Sensor:** Apply a small amount of clean engine oil to the new sensor's O-ring (if applicable). Carefully insert the new Standard Motor Products PC134 sensor into the mounting bore.
7. **Secure Sensor:** Install and tighten the retaining bolt(s) or clip(s) to the manufacturer's specified torque. Overtightening can damage the sensor or mounting.
8. **Connect Electrical Connector:** Reconnect the electrical connector to the new sensor, ensuring it clicks securely into place.
9. **Reconnect Battery:** Reconnect the negative terminal of the vehicle's battery.
10. **Test Operation:** Start the vehicle and check for any diagnostic trouble codes (DTCs) using an OBD-II scanner. Ensure the engine runs smoothly.



Figure 2: Close-up view of the PC134 Crankshaft Sensor's mounting point. This image details the area where the sensor is secured to the engine block, showing the O-ring and bolt hole.

4. OPERATING PRINCIPLES

The Standard Motor Products PC134 Crankshaft Sensor operates by detecting the rotational speed and precise position of the engine's crankshaft. It typically uses a magnetic pickup or Hall effect principle to sense teeth or notches on a reluctor wheel attached to the crankshaft. As the crankshaft rotates, the sensor generates a series of electrical pulses. These pulses are sent to the vehicle's Engine Control Unit (ECU).

The ECU uses this information for several critical functions:

- **Ignition Timing:** Determining the precise moment to fire the spark plugs.
- **Fuel Injection Timing:** Synchronizing fuel delivery with engine cycles.
- **Engine Speed (RPM):** Providing accurate engine speed data.
- **Misfire Detection:** Helping the ECU identify engine misfires.

A properly functioning crankshaft sensor is essential for smooth engine operation, fuel efficiency, and emissions control.



Figure 3: Close-up view of the PC134 Crankshaft Sensor's electrical connector. This image shows the pins inside the connector, which interface with the vehicle's wiring harness.

5. MAINTENANCE

Crankshaft position sensors are generally maintenance-free components. However, periodic inspection can help ensure their longevity and proper function:

- **Visual Inspection:** Periodically check the sensor and its wiring for any signs of physical damage, corrosion, or loose connections.
- **Wiring Integrity:** Ensure the electrical harness connected to the sensor is free from fraying, cuts, or heat damage.

- **Cleanliness:** While the sensor is designed to operate in an engine environment, excessive buildup of dirt, oil, or metallic particles on the sensor tip can potentially affect its performance. If accessible, gently clean the sensor tip with a non-abrasive cleaner and a soft cloth. Ensure no foreign material enters the engine.

If any issues are observed, it is recommended to consult a qualified automotive technician.

6. TROUBLESHOOTING

A faulty crankshaft position sensor can cause various engine performance issues. Common symptoms and troubleshooting steps include:

- **Engine Cranks but Won't Start:** This is a primary symptom. The ECU needs crankshaft position data to initiate ignition and fuel injection.
- **Intermittent Stalling:** The engine may suddenly lose power and stall, especially when hot.
- **Rough Idling or Misfires:** Incorrect timing information can lead to erratic engine operation.
- **Check Engine Light (CEL):** The ECU will typically illuminate the CEL and store a diagnostic trouble code (DTC) related to the crankshaft position sensor (e.g., P0335).
- **Poor Fuel Economy:** Inaccurate timing can lead to inefficient combustion.

Troubleshooting Steps:

1. **Check for DTCs:** Use an OBD-II scanner to retrieve any stored trouble codes. This is the most direct way to diagnose a sensor issue.
2. **Inspect Wiring and Connector:** Visually check the sensor's electrical connector and wiring harness for damage, corrosion, or loose connections.
3. **Sensor Resistance Test:** If applicable to your sensor type and vehicle, measure the sensor's resistance with a multimeter (consult your vehicle's service manual for specifications).
4. **Sensor Output Signal Test:** Using an oscilloscope, a technician can monitor the sensor's output signal while the engine is cranking or running to verify proper signal generation.

If troubleshooting indicates a faulty sensor, replacement with a new Standard Motor Products PC134 sensor is recommended.

7. SPECIFICATIONS

Key specifications for the Standard Motor Products PC134 Crankshaft Sensor:

Feature	Specification
Brand	Standard Motor Products
Model Number	PC134
Product Type	Auto Part (Crankshaft Sensor)
Material	Alloy Steel, Brass, Metal
Item Weight	0.8 ounces (approx. 22.68 g)
Product Dimensions (L x W x H)	3 x 2 x 5 inches
Country Of Origin	Mexico

Feature	Specification
UPC	091769327804
Specific Uses For Product	Crankshaft Position
Output Type	Digital
Mounting Type	Flange Mount
Upper Temperature Rating	150 Degrees Celsius

8. WARRANTY AND SUPPORT

For specific warranty information regarding the Standard Motor Products PC134 Crankshaft Sensor, please refer to the documentation provided with your purchase or contact Standard Motor Products directly. Warranty terms and conditions can vary based on region and retailer.

If you require technical assistance or have questions not covered in this manual, please contact Standard Motor Products customer support or consult a certified automotive technician.

- **Manufacturer:** STANDARD IGN
- **Brand:** Standard Motor Products
- **Website:** Refer to official Standard Motor Products website for support contact details.

