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› Standard Motor Products ALS183 Anti Lock Speed Sensor User Manual

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Model: ALS183

INTRODUCTION

This user manual provides essential information for the Standard Motor Products ALS183 Anti Lock Speed Sensor. It covers product overview, installation guidelines, operational principles, maintenance tips, and troubleshooting advice. This sensor is a critical component of your vehicle's Anti-lock Braking System (ABS), designed to monitor wheel speed and transmit this data to the ABS control module.

For optimal performance and safety, it is recommended that installation and any related repairs be performed by a qualified automotive technician.

PRODUCT OVERVIEW

The Standard Motor Products ALS183 is an Anti-Lock Brake System (ABS) wheel speed sensor. It is designed to accurately measure the rotational speed of a vehicle's wheel and relay this information to the ABS control unit. This data is crucial for the ABS system to prevent wheel lock-up during braking, enhancing vehicle control and safety.



Figure 1: Standard Motor Products ALS183 Anti Lock Speed Sensor. This image displays the complete sensor assembly, including the main cable, the sensor head with its mounting point, and the electrical connector at the opposite end of the cable. The cable is coiled to show its full length, and a small clip is visible along the cable for securing it during installation.

Key Components:

- **Sensor Head:** The part that detects wheel speed, typically mounted near the wheel hub or axle.
- **Electrical Connector:** Connects the sensor to the vehicle's wiring harness and ABS control module.
- **Cable:** The wiring that transmits signals from the sensor head to the connector.

SETUP AND INSTALLATION

Installation of an ABS speed sensor requires specific tools and automotive knowledge. It is highly recommended that this procedure be performed by a certified automotive technician to ensure proper function and vehicle safety.

General Installation Steps (for reference only):

1. **Safety First:** Ensure the vehicle is safely lifted and supported. Disconnect the vehicle's battery to prevent electrical hazards.
2. **Locate Old Sensor:** Identify the faulty ABS speed sensor on the specific wheel.
3. **Remove Old Sensor:** Carefully disconnect the electrical connector and unbolt the sensor from its mounting location. Note the routing of the cable.
4. **Install New Sensor:** Mount the new ALS183 sensor into position, ensuring it is securely fastened. Route the new

cable exactly as the old one was to prevent damage from moving parts.

5. **Connect Electrical:** Plug the new sensor's electrical connector firmly into the vehicle's wiring harness.
6. **Reconnect Battery:** Reconnect the vehicle's battery.
7. **Test System:** Start the vehicle and check for any ABS warning lights. A diagnostic scan tool may be required to clear fault codes and verify proper sensor operation.

Important: Always refer to your vehicle's specific service manual for detailed, model-specific installation instructions and torque specifications.

OPERATION

The Standard Motor Products ALS183 Anti Lock Speed Sensor operates by generating an electrical signal proportional to the rotational speed of the wheel. This signal is sent to the vehicle's Anti-lock Braking System (ABS) control module. During braking, the ABS module uses the data from all wheel speed sensors to detect if any wheel is about to lock up. If a wheel is detected to be locking, the ABS system rapidly modulates the brake pressure to that wheel, allowing it to continue rotating and maintaining traction. This process helps the driver maintain steering control during hard braking and reduces stopping distances on slippery surfaces.

MAINTENANCE

ABS speed sensors are generally maintenance-free components. However, periodic inspection can help identify potential issues before they lead to system malfunctions.

Recommended Checks:

- **Visual Inspection:** During routine vehicle service (e.g., tire rotations, brake inspections), visually inspect the sensor and its cable for any signs of physical damage, fraying, or corrosion.
- **Cable Routing:** Ensure the sensor cable is securely routed and not rubbing against any moving parts or sharp edges.
- **Connector Integrity:** Check that the electrical connector is clean, dry, and securely seated.
- **Cleanliness:** While not typically required, if the sensor head becomes excessively dirty or covered in debris, it may affect its ability to read wheel speed accurately. Cleaning should be done carefully to avoid damaging the sensor.

If any damage or issues are observed, consult a qualified technician for diagnosis and replacement.

TROUBLESHOOTING

A malfunctioning ABS speed sensor typically triggers the Anti-lock Brake System (ABS) warning light on the vehicle's dashboard. Other symptoms may include:

- Illuminated ABS warning light.
- Illuminated Traction Control (TC) or Stability Control (ESC) warning light, as these systems often rely on ABS sensor data.
- Erratic speedometer readings (less common for wheel speed sensors, more for vehicle speed sensors).
- ABS system not engaging or engaging improperly during braking.

Diagnostic Steps:

1. **Check Warning Lights:** Note which warning lights are illuminated on the dashboard.
2. **Scan for Codes:** Use an OBD-II scanner with ABS diagnostic capabilities to retrieve Diagnostic Trouble Codes (DTCs) from the vehicle's ABS module. These codes will often pinpoint the specific wheel sensor that is

malfunctioning.

- 3. **Visual Inspection:** As mentioned in maintenance, inspect the sensor and wiring for visible damage.
- 4. **Professional Diagnosis:** Due to the complexity of ABS systems and the critical safety function, it is strongly advised to have a qualified technician diagnose and repair any ABS-related issues. They can perform advanced tests, such as live data monitoring of sensor outputs, to accurately identify the problem.

Do not ignore ABS warning lights. A malfunctioning ABS system can compromise your vehicle's braking performance and safety.

SPECIFICATIONS

Brand	Standard Motor Products
Model	ALS183 (Speed Sensor)
Item Weight	0.01 Ounces
Product Dimensions (L x W x H)	6.5 x 6.6 x 2.5 inches
Material	Acrylonitrile Butadiene Styrene
Mounting Type	Flange Mount
UPC	091769693947
Manufacturer Part Number	ALS183
What's in the Box	Speed Sensor

WARRANTY AND SUPPORT

For information regarding the warranty of your Standard Motor Products ALS183 Anti Lock Speed Sensor, please refer to the official warranty documentation provided by Standard Motor Products at the time of purchase, or visit their official website.

For technical support, installation assistance, or to inquire about specific vehicle compatibility, please contact Standard Motor Products customer service directly or consult with a certified automotive parts specialist.

Note: Warranty terms and conditions may vary. Keep your purchase receipt for warranty claims.

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