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> BOSCH 13664 Premium Oxygen Sensor: Installation and Maintenance Guide

Bosch 13664

BOSCH 13664 Premium Oxygen Sensor: Installation and Maintenance Guide

Brand: Bosch | Model: 13664

1. PRODUCT OVERVIEW

The BOSCH 13664 Premium Oxygen Sensor is engineered to provide precise oxygen monitoring in your vehicle's exhaust system. This critical component helps optimize engine performance, improve fuel economy, and reduce harmful emissions. Leveraging decades of Bosch's experience in oxygen sensor technology, this unit is designed for long-lasting, superior performance.

Key features include a double laser-welded stainless steel body for durability and protection against exhaust emissions, and a fast-acting heater that ensures the sensor reaches optimal operating temperature quickly for efficient performance.



Image 1.1: The BOSCH 13664 Premium Oxygen Sensor, featuring its robust construction and electrical connector.

2. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x Oxygen Sensor



Image 2.1: The BOSCH 13664 Premium Oxygen Sensor in its retail packaging.

3. VEHICLE COMPATIBILITY

This BOSCH 13664 Oxygen Sensor is compatible with select vehicles. Always verify specific fitment details, including sensor position (upstream/downstream), with a fit checker or your vehicle's service manual before installation.

DODGE:

- 2001-2003 Dakota
- 2001-2003 Durango
- 2001-2003 Ram 1500
- 2001-2003 Ram 1500 Van
- 2001-2002 Ram 2500
- 2001-2003 Ram 2500 Van
- 2001-2002 Ram 3500
- 2001-2003 Ram 3500 Van

JEEP:

- 2001-2003 Grand Cherokee
- 2002-2003 Liberty
- 2001-2003 TJ
- 2001-2004 Wrangler

4. SAFETY INFORMATION

Always prioritize safety when working on your vehicle. Wear appropriate personal protective equipment (PPE) such as safety glasses and gloves. Ensure the vehicle is properly supported on jack stands and the engine is cool before beginning any work. Disconnect the vehicle's battery to prevent electrical hazards. Refer to your vehicle's service manual for specific safety precautions.

Proposition 65 Warning: This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

5. INSTALLATION INSTRUCTIONS

The BOSCH 13664 Oxygen Sensor features true direct-fit OE connectors and harnesses, along with threads pre-coated

with anti-seize compound, making installation straightforward. However, proper procedure is crucial for optimal performance.

5.1. Preparation

1. Ensure the engine is cool to the touch.
2. Locate the oxygen sensor(s) on your vehicle. Refer to your vehicle's service manual for exact locations.
3. Disconnect the negative terminal of the vehicle's battery.
4. If replacing a universal sensor that requires wiring, refer to the Bosch SmartLink video below for detailed wiring instructions. For direct-fit sensors, proceed to removal.

5.2. Removal of Old Sensor

1. Carefully disconnect the electrical connector from the old oxygen sensor.
2. Using an oxygen sensor socket or an appropriate wrench, loosen and remove the old sensor from the exhaust system. Be aware that sensors can be very tight due to heat and corrosion.

5.3. Installation of New Sensor

1. The new BOSCH 13664 sensor comes with anti-seize compound pre-applied to the threads. Do not add additional anti-seize unless specified by the manufacturer.
2. Carefully thread the new oxygen sensor into the exhaust bung by hand to prevent cross-threading.
3. Tighten the sensor using an oxygen sensor socket or wrench to the manufacturer's specified torque. Overtightening can damage the sensor or exhaust system.
4. Connect the electrical connector of the new sensor, ensuring it clicks securely into place.
5. Route the sensor wire away from hot exhaust components and moving parts to prevent damage.
6. Reconnect the negative terminal of the vehicle's battery.



Image 5.1: The BOSCH 13664 Oxygen Sensor showing its integrated electrical connector.

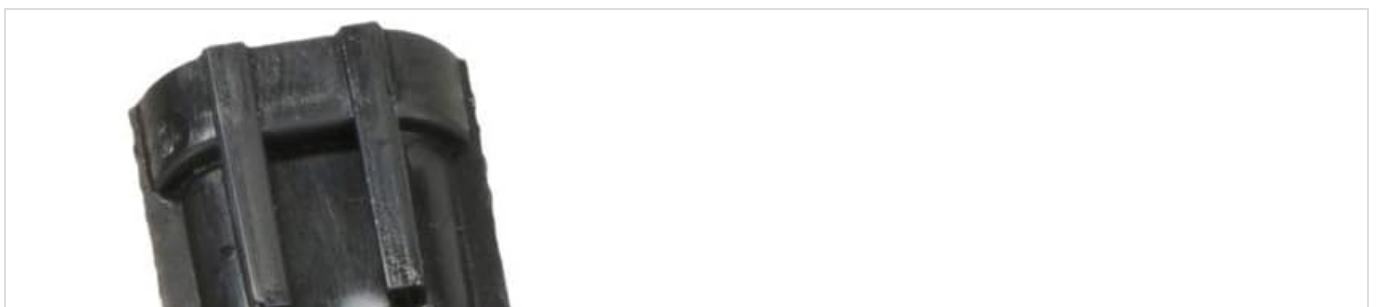




Image 5.2: Another view of the BOSCH 13664 Oxygen Sensor, highlighting the sensor tip and wiring.

5.4. Installation Videos

The following videos provide visual guidance for oxygen sensor installation:

Bosch Premium Oxygen Sensor with SmartLink™ Connector Installation Guide

Your browser does not support the video tag.

Video 5.4.1: This video demonstrates the installation process for Bosch oxygen sensors, including important considerations for wiring and connection. While this specific product is direct-fit, the general principles of handling and installation are applicable.

Oxygen Sensing General Video

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Video 5.4.2: A general overview of oxygen sensing and its importance in vehicle operation and emissions control.

Oxygen O2 Sensor Installation Guide

Your browser does not support the video tag.

Video 5.4.3: This video illustrates the practical steps involved in replacing an oxygen sensor in a vehicle, including removal and installation.

For additional information and resources, visit the [Bosch Auto Parts website](#).

6. OPERATING PRINCIPLES

The oxygen sensor measures the amount of oxygen in the exhaust gases. This data is sent to the engine's computer (ECU), which then adjusts the air-fuel mixture to maintain optimal combustion. A properly functioning oxygen sensor is crucial for efficient engine operation, fuel economy, and compliance with emissions standards.

7. MAINTENANCE AND REPLACEMENT

It is critical that oxygen sensors are replaced at the suggested intervals provided by vehicle manufacturers. Following these recommendations will prevent long-term damage to a vehicle's engine, reduce harmful carbon dioxide (CO₂) emissions, and improve fuel efficiency. Consult your vehicle's service manual for specific replacement intervals.

8. TROUBLESHOOTING COMMON ISSUES

Symptoms of a faulty oxygen sensor may include:

- Check Engine Light illumination
- Lean or rich running condition
- Poor acceleration
- Engine hesitation
- Black smoke from the tailpipe (indicating a rich running condition due to excess fuel)
- Rough idle
- Vehicle stalling out
- Reduced fuel efficiency

To determine if you have a bad oxygen sensor versus a lean or rich running condition, the first step is to check the operation of your O₂ sensor with a scan tool. If these symptoms persist after replacement, consult a qualified automotive technician.

9. SPECIFICATIONS

- **Brand:** Bosch
- **Model:** 13664
- **Item Weight:** 4 ounces
- **Product Dimensions:** 2.2 x 1.97 x 5.83 inches
- **Material:** Stainless Steel
- **Style:** Oxygen Sensor
- **Mounting Type:** Flange Mount
- **Output Type:** Electronic
- **OEM Part Number:** 56041698AA
- **UPC:** 028851136648

10. WARRANTY AND SUPPORT

For warranty information, technical support, or further assistance, please contact Bosch customer service or visit the official Bosch website. Keep your purchase receipt as proof of purchase.