

## Bosch 17205

# BOSCH 17205 Premium Original Equipment Oxygen Sensor User Manual

Model: 17205

## 1. INTRODUCTION

This manual provides essential information for the BOSCH 17205 Premium Original Equipment Oxygen Sensor. Designed for superior performance and longevity, this sensor plays a crucial role in your vehicle's engine management system, optimizing fuel efficiency and reducing emissions. Bosch, a pioneer in oxygen sensor technology since the 1960s, ensures each sensor meets rigorous quality and performance standards through extensive testing.

## 2. PRODUCT FEATURES

- **Innovative Technology:** Benefits from decades of Bosch's production experience, ensuring long-lasting, superior performance.
- **Factory Tested:** Each sensor undergoes a 100% functional quality test, indicated by a seared appearance on the protection tube, to meet Bosch's stringent standards.
- **Stainless Steel Body:** Features an exclusive double laser-welded stainless steel body, fully submersible and sealed to protect against exhaust emission damage, extending sensor service life.
- **Fast Acting Heater:** Optimizes sensor operation on Planar and 3, 4, and 5 wire Thimble type sensors, allowing the oxygen sensor to reach its operating temperature quickly (within seconds) for optimal performance.
- **Ready to Install:** Equipped with true Direct-fit OE connectors and harnesses, and threads pre-coated with anti-seize compound, ensuring simple and hassle-free installation.



Figure 2.1: BOSCH 17205 Premium Original Equipment Oxygen Sensor.

This image displays the BOSCH 17205 Oxygen Sensor, highlighting its robust construction and integrated electrical connector, ready for direct installation.

### 3. COMPATIBILITY

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The BOSCH 17205 Oxygen Sensor is compatible with select Cadillac vehicles. Please verify specific fitment details, including sensor position, for your vehicle model and year:

- **CADILLAC:**
  - 2004-2005 CTS
  - 2004-2006 SRX
  - 2005-2006 STS

Always consult your vehicle's service manual or a professional mechanic to confirm compatibility and correct sensor placement before installation.

### 4. INSTALLATION

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Installation of the BOSCH 17205 Oxygen Sensor is designed to be straightforward due to its direct-fit OE connectors and pre-applied anti-seize compound on the threads. However, it is recommended that installation be performed by a qualified automotive technician to ensure proper function and avoid damage to the sensor or vehicle components.

## 4.1 Pre-Installation Check

- Ensure the vehicle's engine is cool before beginning work.
- Disconnect the vehicle's battery to prevent electrical issues.
- Identify the correct sensor location (upstream or downstream) as per your vehicle's service manual.
- Inspect the new sensor for any visible damage.

## 4.2 Installation Steps

1. Carefully disconnect the electrical connector from the old oxygen sensor.
2. Using an oxygen sensor wrench, carefully remove the old sensor from the exhaust system.
3. Thread the new BOSCH 17205 sensor into the exhaust bung by hand to prevent cross-threading. The threads are pre-coated with anti-seize compound.
4. Tighten the sensor to the vehicle manufacturer's specified torque using an oxygen sensor wrench. Do not overtighten.
5. Connect the new sensor's electrical connector securely to the vehicle's harness. Ensure it clicks into place.
6. Reconnect the vehicle's battery.
7. Start the engine and check for any exhaust leaks or illuminated check engine lights.



Figure 4.1: Close-up of the BOSCH 17205 Oxygen Sensor's electrical connector and sensor body.

This image provides a detailed view of the sensor's electrical connector and the robust construction of the sensor body, emphasizing the direct-fit design for easy installation.



Figure 4.2: Another view of the BOSCH 17205 Oxygen Sensor, showing the cable and connector assembly.

This image shows the sensor from a different perspective, highlighting the flexible cable and the secure connection point, crucial for reliable operation in a vehicle's exhaust system.

## 5. OPERATING PRINCIPLES

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An oxygen sensor, also known as a lambda sensor, is a key component in your vehicle's exhaust system. It measures the proportion of oxygen in the exhaust gas. This information is then sent to the engine control unit (ECU), which uses it to adjust the air-fuel mixture for optimal combustion.

The BOSCH 17205 sensor's fast-acting heater ensures it reaches its operating temperature quickly, allowing the ECU to receive accurate data almost immediately after engine start-up. This precise measurement helps in:

- Optimizing fuel economy by maintaining the ideal air-fuel ratio.
- Reducing harmful emissions by ensuring efficient catalytic converter operation.
- Preventing long-term damage to the engine and catalytic converter.

## 6. MAINTENANCE

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Oxygen sensors are wear-and-tear components and their performance degrades over time. It is critical that oxygen sensors are replaced at the suggested intervals provided by your vehicle manufacturer. Following these recommendations will:

- Prevent long-term damage to your vehicle's engine.
- Reduce harmful carbon dioxide (CO<sub>2</sub>) emissions.
- Improve fuel efficiency and save money on fuel.

Regular vehicle diagnostics can help identify a failing oxygen sensor before it causes significant issues.

## 7. TROUBLESHOOTING

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A faulty oxygen sensor can lead to various vehicle performance issues. Here are common symptoms and potential troubleshooting steps:

Symptom	Possible Cause	Action
Check Engine Light (CEL) illuminated	Faulty oxygen sensor, wiring issue, or related component failure.	Scan for diagnostic trouble codes (DTCs). If codes related to O <sub>2</sub> sensor are present (e.g., P0130-P0167), inspect sensor and wiring. Consider replacement if sensor is confirmed faulty.
Decreased Fuel Economy	Inaccurate oxygen sensor readings leading to rich or lean fuel mixture.	Check sensor performance with a diagnostic tool. Replace if readings are erratic or out of specification.
Rough Idling or Engine Misfires	Incorrect air-fuel ratio due to sensor malfunction.	Verify sensor operation. Address any related engine codes.
Failed Emissions Test	High levels of pollutants due to improper combustion control.	A failing oxygen sensor is a common cause. Replace the sensor and retest.

For complex issues, it is always best to consult a certified automotive technician.

## 8. SPECIFICATIONS

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Attribute	Detail
Brand	Bosch
Model Number	17205
Item Dimensions (L x W x H)	5.83 x 3.94 x 2.2 inches
Material	Stainless Steel
Item Weight	113 Grams (approx. 3.99 ounces)
Style	Oxygen Sensor
Mounting Type	Flange Mount
Output Type	Electrical signal
Specific Uses For Product	Temperature (for exhaust gas sensing)
UPC	028851172059
Manufacturer Part Number	17205
OEM Part Number	12575657



Figure 8.1: Retail packaging for BOSCH Premium Oxygen Sensor.

This image shows the product's retail packaging, emphasizing the "Premium Oxygen Sensor" branding and key benefits like "Improved Fuel Economy" and "Cleaner Exhaust Emissions." For more information, visit the official Bosch Automotive website: [boschautoparts.com/QR/PremO2.aspx](https://boschautoparts.com/QR/PremO2.aspx).

## 9. WARRANTY AND SUPPORT

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BOSCH Oxygen Sensors are manufactured to high-quality standards. For specific warranty information, please refer to the documentation included with your product or visit the official Bosch Automotive website. For technical support or inquiries, please contact Bosch customer service through their official channels. You can find more information and support resources on the [Bosch Automotive Store on Amazon](#).