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Denso 234-4905

Denso Oxygen Sensor 234-4905 User Manual

Model: 234-4905

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Denso Oxygen Sensor, model 234-4905. This sensor is a critical component in your vehicle's emission control system, designed to monitor the oxygen content in the exhaust gases and send signals to the engine control unit (ECU) for optimal fuel mixture adjustments.

The Denso 234-4905 is engineered as a direct-fit OE replacement, ensuring compatibility and performance equivalent to the original equipment part. It replaces part numbers such as 24466, 350-34699, 226A03TA0B, and 250-241106.

2. Safety Information

Always observe the following safety precautions when working on your vehicle:

- Ensure the vehicle is parked on a level surface with the parking brake engaged.
- Allow the engine and exhaust system to cool completely before beginning work to prevent burns.
- Disconnect the vehicle's negative battery terminal before starting any electrical work to prevent accidental shorts or injury.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Refer to your vehicle's service manual for specific instructions and torque specifications.
- If you are unsure about any step, consult a qualified automotive technician.

3. Package Contents

Verify that all components are present and undamaged before proceeding with installation.

- 1x Denso Oxygen Sensor (Part Number: 234-4905)



Figure 1: Denso Oxygen Sensor 234-4905. This image shows the sensor with its electrical connector and threaded body, ready for installation into an exhaust system.

4. Setup and Installation

This section outlines the general procedure for replacing an oxygen sensor. Specific steps may vary by vehicle model.

4.1. Tools Required

- Oxygen sensor wrench or appropriate socket
- Ratchet
- Torque wrench (recommended)
- Anti-seize compound (if not pre-applied to new sensor threads)
- Safety glasses and gloves

4.2. Installation Procedure

1. **Prepare Vehicle:** Park the vehicle on a level surface, engage the parking brake, and allow the engine and

exhaust system to cool completely. Disconnect the negative battery terminal.

2. **Locate Sensor:** Identify the oxygen sensor to be replaced. Oxygen sensors are typically located in the exhaust manifold or exhaust pipe. Your vehicle may have multiple sensors (upstream and downstream).
3. **Disconnect Electrical Connector:** Carefully disconnect the electrical connector from the old oxygen sensor. This may involve pressing a tab or sliding a lock.
4. **Remove Old Sensor:** Using an oxygen sensor wrench or appropriate socket, loosen and remove the old sensor from the exhaust system. It may be tight due to heat and corrosion.
5. **Prepare New Sensor:** Inspect the threads of the new Denso oxygen sensor. If anti-seize compound is not pre-applied, apply a thin layer to the threads only, avoiding the sensor tip.
6. **Install New Sensor:** Carefully thread the new sensor into the exhaust bung by hand to prevent cross-threading. Once hand-tight, use the oxygen sensor wrench to tighten it. Refer to your vehicle's service manual for the correct torque specification. Overtightening can damage the sensor or exhaust system.
7. **Connect Electrical Connector:** Reconnect the electrical connector to the new oxygen sensor, ensuring it clicks securely into place.
8. **Final Steps:** Reconnect the negative battery terminal. Start the vehicle and check for any exhaust leaks or illuminated check engine lights. It may take a few drive cycles for the ECU to fully adapt to the new sensor.

5. Operating Principles

The Denso Oxygen Sensor 234-4905 functions by measuring the amount of unburned oxygen in the exhaust gases. This measurement is converted into an electrical signal that is sent to the vehicle's Engine Control Unit (ECU). The ECU uses this information to adjust the air-fuel mixture in real-time, ensuring optimal combustion efficiency, reduced emissions, and improved fuel economy. A properly functioning oxygen sensor is crucial for your vehicle's performance and compliance with emission standards.

6. Maintenance

Oxygen sensors are not typically user-serviceable or repairable. Their lifespan is influenced by various factors, including fuel quality, engine condition, and driving habits. While no routine maintenance is required for the sensor itself, it is recommended to:

- Ensure regular vehicle maintenance, including tune-ups and oil changes, to prevent conditions that can prematurely foul the sensor.
- Address any engine misfires or excessive oil consumption promptly, as these can damage oxygen sensors.
- Have your vehicle's emission system checked periodically by a qualified technician.

7. Troubleshooting

A faulty oxygen sensor can lead to various issues. If you experience any of the following symptoms, it may indicate a problem with your oxygen sensor:

- **Check Engine Light:** This is the most common indicator. Diagnostic trouble codes (DTCs) related to oxygen sensor performance will often be stored.
- **Decreased Fuel Economy:** An inaccurate signal can cause the engine to run rich or lean, wasting fuel.
- **Increased Emissions:** The vehicle may fail emission tests due to improper air-fuel mixture.
- **Rough Idling or Engine Hesitation:** Poor engine performance can sometimes be attributed to a failing oxygen sensor.

Recommendation: If you suspect a problem with your oxygen sensor, it is recommended to have your vehicle diagnosed by a qualified mechanic using an OBD-II scanner. This will help pinpoint the exact issue and prevent unnecessary part replacement.

8. Specifications

Feature	Specification
Brand	Denso
Model Number	234-4905
Part Number	234-4905
Material	Stainless Steel
Item Weight	3.52 ounces (approximately 0.1 kg)
Output Type	Electrical Signal
Mounting Type	Flange Mount (threaded)
Specific Uses	Vehicle emission control, engine performance monitoring
Replaces OE Part Numbers	24466, 350-34699, 226A03TA0B, 250-241106

9. Warranty Information

This Denso Oxygen Sensor 234-4905 includes a manufacturer-provided warranty. For specific details regarding warranty coverage, terms, and conditions, please refer to the documentation included with your purchase or visit the official Denso website. Keep your proof of purchase for warranty claims.

10. Support

For technical assistance, installation questions, or warranty inquiries, please contact Denso customer support or consult a certified automotive technician. Always refer to your vehicle's specific service manual for detailed repair procedures.
Denso Official Website: www.denso.com

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