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› BOSAL 099-949 Universal Catalytic Converter Instruction Manual

Bosal 099-949

BOSAL 099-949 Universal Catalytic Converter Instruction Manual

Model: 099-949 | Brand: Bosal

1. PRODUCT OVERVIEW

The BOSAL 099-949 is a universal catalytic converter designed for Otto engines with a cylinder capacity of up to 2000 ccm. This component is integral to the vehicle's exhaust system, facilitating the conversion of harmful pollutants into less toxic substances before they are released into the atmosphere. It features a round shape and is constructed for durability within the demanding automotive environment.

Important Note: This catalytic converter is *not approved for road traffic*. It is intended for specific applications where road homologation is not required.



Image 1.1: General view of the BOSAL 099-949 Universal Catalytic Converter. This image shows the overall cylindrical shape and the inlet/outlet pipes.

2. SAFETY INFORMATION

Installation and maintenance of automotive exhaust components should be performed by qualified personnel. Adhere to all local safety regulations and guidelines.

- Always wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the vehicle is securely supported on a lift or jack stands before working underneath.
- Allow the exhaust system to cool completely before handling to prevent burns.
- Disconnect the vehicle's battery before beginning any electrical work.
- Handle the catalytic converter with care to avoid damage to the internal ceramic substrate.

3. WHAT'S IN THE BOX

The package contains the following item:

- BOSAL 099-949 Universal Catalytic Converter (1 unit)

4. SPECIFICATIONS

Refer to the table below for detailed technical specifications of the BOSAL 099-949 Universal Catalytic Converter.

Attribute	Value
Manufacturer	BOSAL
Model Number	099-949
Shape	Round
Engine Type Compatibility	Otto engines up to 2000 ccm
Length	280 mm
Width	110 mm
Height	110 mm
Inner Diameter	47 mm
Outer Diameter	50 mm
Item Weight	1.88 Kilograms
Road Traffic Approval	Not approved for road traffic





Image 4.1: Side view of the catalytic converter, illustrating its length and cylindrical form.

5. SETUP AND INSTALLATION

Installation of a catalytic converter requires specialized tools and expertise. It is strongly recommended that this procedure be performed by a certified automotive technician.

5.1 Compatibility Verification

Before installation, verify that this part is compatible with your vehicle. You can do this by checking your vehicle's identification number (VIN) with a qualified expert. Note any existing restrictions or criteria for your specific vehicle model.

5.2 Installation Steps (Professional Installation Recommended)

1. **Prepare the Vehicle:** Ensure the vehicle is cool and safely lifted. Disconnect the battery.
2. **Remove Old Converter:** Carefully unbolt or cut the old catalytic converter from the exhaust system. Be mindful of oxygen sensors, which may need to be transferred or replaced.
3. **Position New Converter:** Align the BOSAL 099-949 universal catalytic converter into the exhaust system. Ensure the flow direction arrow (if present on the outer casing) points towards the rear of the vehicle (away from the engine).
4. **Secure Connections:** Weld or clamp the new converter into place, ensuring a tight, leak-free seal. Use appropriate exhaust clamps or welding techniques.
5. **Reinstall Sensors:** Reinstall any oxygen sensors into the new converter or adjacent exhaust pipes.
6. **Check for Leaks:** After installation, start the engine and check for any exhaust leaks. Address any leaks immediately.

7. **Final Check:** Reconnect the battery and clear any diagnostic trouble codes (DTCs) if necessary.



Image 5.1: View of the catalytic converter showing a potential flow direction arrow on its casing, indicating the correct orientation for installation.

6. OPERATING PRINCIPLE

The catalytic converter functions by initiating chemical reactions that transform harmful exhaust gases into less harmful substances. Inside the converter, a ceramic honeycomb structure coated with precious metals (such as platinum, palladium, and rhodium) acts as a catalyst. As hot exhaust gases pass over this surface, carbon monoxide (CO) is oxidized to carbon dioxide (CO₂), unburnt hydrocarbons (HC) are oxidized to CO₂ and water (H₂O), and nitrogen oxides (NO_x) are reduced to nitrogen (N₂) and oxygen (O₂).



Image 6.1: End view of the catalytic converter, revealing the internal honeycomb structure where catalytic reactions occur.

7. MAINTENANCE

Catalytic converters are generally maintenance-free components. However, their longevity and efficiency are directly linked to the overall health of the engine and exhaust system. Regular vehicle maintenance, including proper engine tuning, spark plug replacement, and oxygen sensor checks, is crucial to prevent premature converter failure.

- Ensure the engine runs efficiently to prevent unburnt fuel from reaching the converter, which can cause overheating and damage.
- Address any engine misfires, oil consumption, or coolant leaks promptly, as these can contaminate or damage the catalyst.
- Periodically inspect the exhaust system for physical damage, rust, or loose connections that could affect converter performance.

8. TROUBLESHOOTING

Common issues related to catalytic converters often manifest as a "Check Engine" light or changes in vehicle performance. Consult a qualified technician for diagnosis and repair.

- **Check Engine Light:** A common indicator of catalytic converter issues. This can be due to a failing converter, faulty oxygen sensors, or other engine problems affecting emissions.
- **Reduced Engine Performance:** A clogged catalytic converter can restrict exhaust flow, leading to decreased engine power, acceleration, and fuel efficiency.
- **Sulfur or Rotten Egg Smell:** This odor can indicate that the converter is not efficiently processing hydrogen sulfide in the exhaust gases.
- **Rattling Noise:** A rattling sound from underneath the vehicle may indicate a broken or disintegrated ceramic substrate inside the converter.

These symptoms require professional diagnostic tools and expertise to accurately identify the root cause.

9. WARRANTY INFORMATION

Specific warranty terms for the BOSAL 099-949 Universal Catalytic Converter are provided by the manufacturer or seller at the time of purchase. Please retain your proof of purchase and refer to the documentation included with your product for detailed warranty coverage, duration, and claim procedures. In general, warranties cover defects in materials and workmanship under normal use.

10. SUPPORT

For technical assistance, compatibility inquiries, or support regarding the BOSAL 099-949 Universal Catalytic Converter, please contact your retailer or the official Bosal customer service. When contacting support, please have your product model number (099-949) and purchase details readily available.

You can often find contact information on the manufacturer's official website or through the point of purchase.

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Example: How do I reset this device or fix this error?

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