

CATALYTIC CONVERTER

INTRODUCTION

The main function of a catalytic converter is to reduce pollutants by causing carbon monoxide, unburned hydrocarbons, and nitrous oxides to completely combust by converting them into safe carbon dioxide, water, and nitrogen. The catalytic converter is the main source of air flow restriction in any exhaust system.

CATALYTIC CONVERTER WARRANTY

ANSA Automotive Parts Distributors, Inc. warrants to the original purchaser that its catalytic converter has been designed and manufactured to meet Federal EPA emission reduction requirements for 2 years or 24,000 miles when the vehicle is properly maintained. The stainless steel body is separately warranted for 5 years or 50,000 miles. Tubing, flanges, flexes, brackets, and hangers are covered under this warranty for a period of 1 year.

If found defective, ANSA Automotive will replace the converter provided that it be returned with a authorization number assigned by ANSA Automotive and a valid invoice, sales slip or other proof of purchase. If a warranty claim relates to emission performance, proof of failure of the emission test should be provided. Furthermore, proof of the engine being tuned to the original manufacturer's specifications and maintained in proper condition is also required.

This warranty is conditioned upon the converter being properly installed on the vehicle for which it is cataloged and the vehicle being maintained in proper operating condition with all emission control equipment connected and operating according to the vehicle's manufacturer's specifications. This warranty does not cover exhaust components. ANSA Automotive assumes no liability for converter failures caused by engines improperly maintained, the use of leaded fuel, or physically damaged. Converters that have been installed on vehicles with modified exhaust or emission systems are not covered under this warranty. Moreover this warranty does not apply to converters that have been modified or installed on a vehicle for which they have not been cataloged.

ANSA Automotive reserves the right to make a determination as to the proper cause of the failure. **IMPORTANT:** many disputed warranties are a result of improper installation or incorrect application. Also, many internal defects cannot be detected and verified unless the vehicle is in operation. The original purchaser or his agent **MUST** inspect the disputed defective catalytic converter while it is still installed on the vehicle to insure that the consumer has a valid warranty claim.

If the converter has failed and needs to be replaced, the engine should be diagnosed for any underlying problems before a warranty claim is made and/or a new converter is installed. The following steps should be taken to determine if the problem is due to a defect in the product and whether it is eligible for warranty.

1. Access the vehicle maintenance schedule and vehicle modifications, and determine proper working condition of all engine components.
2. Determine the problem with the converter (see Causes of Converter Failure on page 2).
3. If the converter is rattling, clogged or melted, do not return, it is not covered under the limited warranty.
4. Ascertain that the application is correct.
5. If it is suspected the problem is the result of a defective product contact an ANSA Automotive representative for an authorization number.
6. Package the converter in a box or suitable container (to avoid additional damage) with the authorization number clearly marked on the outside of the box. The disputed part must be accompanied by a valid invoice, sales slip, or other proof of purchase and a brief explanation of the problem. All authorized returns must be shipped prepaid to the address that is provided with the authorization number.

CAUSES OF CONVERTER FAILURES

A catalytic converter should never fail! If it does, then there is an underlying cause. Just replacing the converter will not fix the problem. If the catalytic converter has failed, one of the problems below most likely contributed to its failure.

Engine Tune-up Required

Any time an engine is operating outside proper specifications, unnecessary wear and damage may be caused to the catalytic converter. The damage is often the result of:

- An incorrect air/fuel mixture
- Incorrect timing
- Misfiring spark plugs

Excess Fuel Entering Exhaust

The fuel that powers a vehicle is meant to burn in the combustion chamber only. Any fuel that leaves the combustion chamber unburned will enter the exhaust system and light-off when it reaches the catalytic converter. This can super-heat the converter far above operating conditions and cause a converter meltdown.

Possible causes include:

- Incorrect fuel mixture
- Incorrect timing
- Corroded spark plugs
- A faulty oxygen sensor
- Sticking float
- Faulty fuel injector or a malfunctioning check valve

Oil or Antifreeze Entering Exhaust

Oil or antifreeze entering the exhaust system can block the air passages by creating heavy carbon soot that coats the ceramic catalyst. These heavy carbon deposits create two problems; they prevent the catalytic converter from reducing harmful emission in the exhaust flow and two, clog the pores in the ceramic catalyst and block exhaust flow, increasing backpressure and causing heat and exhaust to back up into the engine compartment. Possible causes include:

- Worn piston rings
- Faulty valve seals
- Failed gaskets
- Warped engine components

Deteriorated Spark Plug or Spark Plug Wires

Spark plugs that don't fire or misfire cause unburned fuel to enter the exhaust system. The unburned fuel ignites inside the converter and could result in a partial or complete meltdown of the ceramic catalyst.

Oxygen Sensor Not Functioning Properly

An oxygen sensor failure can lead to incorrect readings of exhaust gasses. The faulty sensor can cause a too rich or too lean condition. Too rich and the catalyst can melt down. Too lean and the converter is unable to convert the hydrocarbons into safe elements and may not pass a state inspection. The damage is often the result of a:

- Faulty oxygen sensor
- Thermostat that is stuck open or is too cold for the application

Road Damage or Broken Hangers

The ceramic catalyst inside a catalytic converter is made from a lightweight, thin-walled, fragile material. It is protected by a dense, insulating mat. This mat holds the catalyst in place and provides moderate protection against damage. However, rock or road debris striking the converter or improper or broken exhaust system support can cause catalyst fracture. Once the ceramic catalyst is fractured, the broken pieces become loose and rattle around and break up into smaller pieces. Flow is interrupted and backpressure in the exhaust system increases. This leads to heat buildup and loss of power. Possible causes of catalyst fracture include:

- Road debris
- Striking the converter, loose or broken hangers
- Potholes or off-road driving

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