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NEWS

Signature Series Protects Turbochargers

The turbocharger/direct fuel injection combo has emerged as automakers' favored choice for producing powerful engines and meeting government fuel-economy requirements....



August 30, 2018



The tremendous heat and stress turbochargers create cause some oils to break down and form harmful burning deposits through a process known as turbo coking. Over time, turbos can suffer reduced performance or fail altogether.

How Turbos Could Slow You Down

The deposits common to turbochargers can lead to:

- Blocked oil passages, oil starvation and eventual failure
- Reduced turbine speed – resulting in lower boost pressures, reduced performance and poor efficiency
- Oil breakdown and oil burning
- Expensive turbo rebuild or replacement

The GM Turbo Coking Test

The Turbo Coking Test was designed to simulate the extreme operating conditions of a turbocharged engine. It evaluates a motor oil's ability to resist deposit buildup in the oil passages and bushings of a turbocharger. Temperature increases within the turbo and the weight of any deposits are recorded.

Test Parameters

Engine	2012 GM 1.4L
Duration	2,000 cycles of extreme heat soaks – approximately 537 hours
Measures	A motor oil's ability to resist deposits in a turbocharger's oil passages and bushings
Simulates	High-heat operation of a turbocharged engine
Requirement	Temperature change within the turbocharger limited to 13%



Signature Series controlled heat and minimized performance-robbing deposits on the turbo-bearing and shaft surfaces.

Signature Series protects turbochargers 72% better than required by GM dexos1® Gen 2¹ The GM Turbo Coking Test requires an oil to limit the temperature change within the turbocharger to 13% or less to pass the test. Signature Series limited the temperature increase to only 3.6%, controlling heat and proving it protects against deposits common to high-temperature engine environments.

¹Based on independent testing of AMSOIL Signature Series 5W-30 in the GM Turbo Coking Test as required for the GM dexos1 Gen 2 specification.

All products advertised here are developed by AMSOIL for use in the applications shown.



AMSOIL Product Guide.

Related Reading

- What's the Best Oil for Turbo Cars?
- How Extreme Heat Affects Your Engine
- Turbocharger vs. Supercharger: How Each One Works
- How Turbos Boost Powersports

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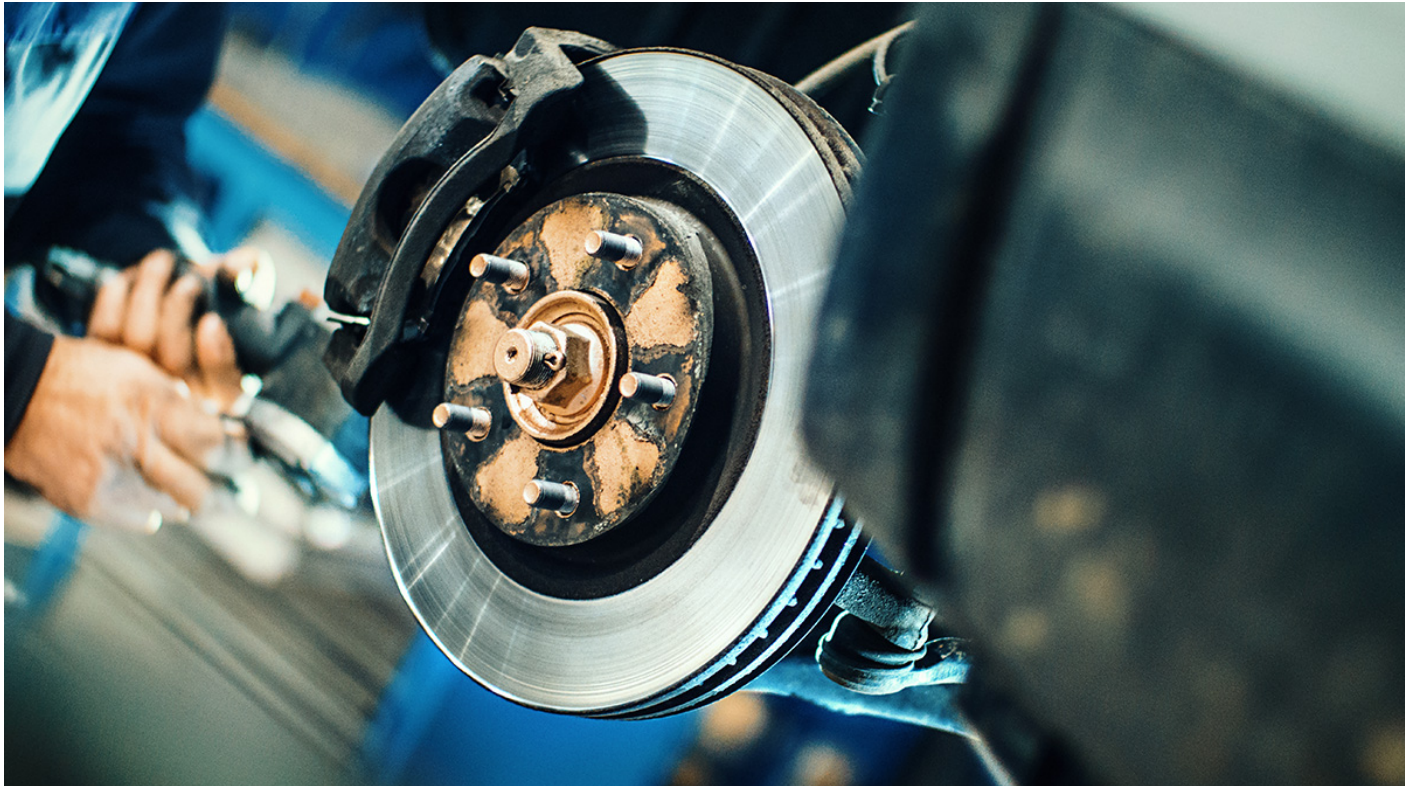
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