

# Technical Bulletin

**Model**  
All

**Group**  
2

**Subject**  
Sulfer-Like Smell from the Exhaust System

**Part Identifier**  
2673

**Number**  
9604

**ATTENTION: Service Manager / Service Technician**

**Concern:** Some customers may complain of a sulfur or rotten egg smell from the exhaust system.

**General Information:** Sulfur found in gasoline is normally converted during combustion and catalytic after-treatment processes into sulfur dioxide (SO<sub>2</sub>). Under certain operating conditions, hydrogen sulfide (H<sub>2</sub>S) is formed instead of sulfur dioxide. To what extent this occurs depends largely on two factors: Sulfur content of the fuel and operating condition of the catalytic converter.

When the engine is running a rich mixture, such as under acceleration or under heavy load, there may be a relative lack of oxygen available in the catalytic converter to form sulfur dioxide. Hydrogen sulfide is formed instead. If there is an excess of sulfur in the fuel, more hydrogen sulfide is formed. It is the hydrogen sulfide which produces the sulfur or rotten egg smell. Hydrogen sulfide can be detected by the human nose at extremely low concentration levels, on the order of several parts per billion. Under normal operating conditions, hydrogen sulfide is not formed at a level detectible by the customer.

If you have a customer complaint of a sulfur or rotten egg smell, you should do the following:

1. Check to make sure that there are no faults stored in the engine control module and that the engine and fuel systems are operating properly.
2. If there are no problems found with these systems, advise the customer to change to a different fuel brand. Since the sulfur content of available fuels can vary greatly, changing to a different brand of fuel with lower sulfur content should reduce the formation of hydrogen sulfide.

Please note that if there are no problems found in the engine or fuel systems, replacement of emission related components such as oxygen sensors or catalytic converters will not reduce the smell since the primary cause lies in the fuel. In this case, replacement of these or other emissions components will not be considered a warranty matter, and is strongly discouraged.

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# SERVICE

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