



Service Bulletin

Bulletin No.: 05-06-04-022R

Date: October, 2020

INFORMATION

Subject: TOP TIER™ Detergent Gasoline and TOP TIER™ Diesel Fuel Information and Licensed Brands

Models: 2021 and Prior GM Passenger Cars and Trucks (includes Medium Duty)
United States, Canada, Argentina, El Salvador, Guatemala, Honduras, Mexico, Panama and Puerto Rico

This bulletin has been revised to add 2021 Model Year vehicles. Please discard Corporate Bulletin Number 05-06-04-022Q.

TOP TIER™ Fuels – General Motors Recommendation



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Note: This is a voluntary program for fuel marketers and not all fuel marketers will offer TOP TIER™ Detergent Gasoline or TOP TIER™ Diesel Fuel. Not all stations of a licensed brand may be selling TOP TIER™ Diesel Fuel. Registration is based on certification data and marketers of all sizes including some major brands, independents and big box stores.

- A class of fuel called TOP TIER™ Detergent Gasoline is available from various fuel marketers for all octane grades of gasoline sold at their stations in the United States (including US Territories), Canada, Puerto Rico and certain Central American countries. This gasoline meets the detergent standards developed by eight automotive companies. All vehicle engines will benefit from using TOP TIER™ Detergent Gasoline over gasoline containing the “Lowest Additive Concentration” (LAC). LAC is also known as the minimum detergent treat rate, recommended by the Environmental Protection Agency (EPA) in the United States and in Canada, the Canadian General Standards Board (CGSB). Those vehicles that have experienced engine deposit related concerns may especially benefit from using TOP TIER™ Detergent Gasoline.
- The TOP TIER™ program is not just about a high detergency rate. It is a robust engine cleanliness and performance specification validating the specific chemistry within the detergent package. TOP TIER™ Detergent Gasoline must conform to the standards which specify that gasoline sold in the selected nation or region shall not contain metallic additives, including methylcyclopentadienyl manganese tricarbonyl (MMT). If a fuel marketer successfully completes all of the engine and fuel injector testing required in the TOP TIER™ specification, they can claim to be TOP TIER™. All performance testing must be conducted at an independent, ISO 17025 accredited laboratory.
- A class of fuel called TOP TIER™ Diesel Fuel is available from various fuel marketers. Since diesel fuel retailers may also sell non-additized diesel fuel or diesel fuel not meeting the TOP TIER™ requirements, always check the dispenser for TOP TIER™ Diesel Fuel designation.
- The EPA and CGSB require only a minimum amount of detergent in gasoline. TOP TIER™ Detergent gasoline contains 2–3 times more detergent than the EPA and CGSB minimum requirement, resulting in a lower amount of intake valve deposits (IVD). The IVD can negatively affect fuel economy, emissions, and performance.
- General Motors, FCA, BMW, Honda, Toyota, Volkswagen, Audi and Mercedes-Benz developed the TOP TIER™ Detergent Gasoline Standards and support the use of TOP TIER™ Detergent Gasoline by recommending it in their vehicle Owner Manuals. All eight corporations recognize the benefits to the engine, the environment, and the consumer. Additionally, the companies recognize that by joining together they can better address the industry concern with low fuel detergency levels and the intentional addition of harmful organometallic additives. GM strongly recommends the use of TOP TIER™ Detergent Gasoline and TOP TIER™ Diesel Fuel.

A Cleaner Engine Has Performance and Environmental Advantages

The following gasoline engine intake valve graphics show the difference between an engine that did not use TOP TIER™ Detergent Gasoline and an engine that did use TOP TIER™ Detergent Gasoline at 16,093 km (10,000 miles).



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Engine intake valve using Non-TOP TIER™ Detergent Gasoline having the minimum detergent treat rate with more than 1,000 mg of deposits.

Deposits (1 and 2) on the intake valve reduce fuel economy by creating a porous surface that collects wet fuel, thereby affecting the air to fuel mixture in the cylinder and releases fuel late in the combustion cycle leading to increased unburnt hydrocarbon (HC) and carbon monoxide (CO) emissions. Likewise fuel injectors may become restricted with carbon deposits over time resulting in an incorrect injector spray pattern and similarly increasing HC and CO emissions.



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Engine intake valve using TOP TIER™ Detergent Gasoline having a high detergent treat rate with less than 50 mg deposits.

This intake valve is significantly cleaner, resulting in optimal fuel economy and engine driveability performance as well as reduced emissions.

TOP TIER™ Licensed Brands

The latest list of TOP TIER™ Detergent Gasoline and TOP TIER™ Diesel Fuel Brands that have met the TOP TIER™ standards will appear on the Home page under the Licensed Brands tab. Use the drop down menu to select Gasoline or Diesel. Visit this website:

<https://www.toptiergas.com/>

- Additional gasoline retailers are added to the TOP TIER™ Licensed Brands list when they meet the TOP TIER™ Detergent Gasoline standards.
- Additional diesel fuel retailers are added to the TOP TIER™ Licensed Brands list when they meet the TOP TIER™ Diesel Fuel standards.

Trademark Footnotes

TOP TIER™ Detergent Gasoline and its Logo are Trademarks of General Motors LLC

TOP TIER™ Diesel Fuel and its Logo are Trademarks of General Motors LLC