

# Diesel Passenger Vehicles Making a Comeback



Over the years, Americans and Europeans have been worlds apart when it comes to diesel vehicles. Diesel passenger vehicles have been popular in Europe for years, and they become increasingly more popular each year. In fact, according to a survey performed by Eurocarprice.com and Pricewaterhouse Coopers, diesel car sales in Europe are on pace to exceed gasoline car sales in 2006. Even in the United Kingdom, which has the highest diesel fuel prices in Europe, gasoline-fueled car sales dropped 11 percent last year while diesel-fueled car sales increased by more than 7 percent.

In America, diesel passenger vehicles have traditionally been a tough sell, with many Americans harboring negative impressions of diesel vehicles as being noisy, polluting and foul-smelling. However, industry experts predict a dramatic comeback for diesel passenger vehicles in America. According to TechnoMetrica, diesel vehicles may eventually become as common in the United States as they are in Europe, and J.D. Power and Associates projects diesel sales to nearly triple in the United States over the next decade, accounting for more than 10 percent of U.S. vehicle sales by 2015.

Diesel technology has come a long way since the 1970s, and stringent new federal diesel emissions requirements take effect in 2007. As the 2006 model year expires, most of the year's diesel vehicle models will be discontinued, giving way to a new generation of diesel engines designed to not only meet stringent federal clean air requirements, but

also be as quiet and odor-free as gasoline engines, increase fuel economy by 25 to 40 percent and provide enough torque to satisfy American drivers.

A significant breakthrough in this new era of clean diesel technology was this year's introduction of Ultra Low Sulfur Diesel (ULSD) fuel. Sulfur is a key element to particulate formation, and ULSD eliminates 97 percent of pollution-causing sulfur. While present diesel passenger vehicles can be sold in all states except California, New York, Vermont, Massachusetts and New Jersey, automakers plan to take advantage of new Ultra Low Sulfur Diesel fuel and advances in diesel technology to create diesel engines that meet the pollution requirements in all 50 states.

Automakers are developing different pollution-reducing technologies for future diesel passenger vehicle models. For example, DaimlerChrysler and General Motors plan to introduce engines that inject urea into the cylinders during combustion. Honda, on the other hand, recently announced the development of a new catalytic converter that significantly reduces nitrogen oxide (NOx).



## AMSOIL Synthetic 5W-40 Premium Diesel Oil

AMSOIL Synthetic 5W-40 Premium Diesel Oil (DEO) provides unsurpassed protection for modern diesel engines requiring API CJ-4 emission quality oil standards. It withstands the stress of heat, soot and acids to prevent deposits, corrosion and wear, while its broad viscosity range offers superior protection over a wide temperature range. Synthetic 5W-40 Premium Diesel Oil is recommended for the longest service interval established by the vehicle manufacturer, and drain intervals may be extended further based on oil analysis. It is compatible with all exhaust treatment devices and designed to extend the service life of particulate filters. Synthetic 5W-40 Premium Diesel Oil replaces 5W-40, 10W-40 and 15W-40 viscosity oils and is "backwards compatible" with pre-2007 diesel engines.

## What are the differences between gasoline and diesel engines?

A gasoline engine compresses a mixture of gasoline and air, which is ignited with a spark from a spark plug, while a diesel engine creates heat by compressing air only. The fuel is injected into the compressed air, where the heat ignites it.

Diesel engines are more efficient than gasoline engines because their compression ratios are higher. Diesel

engines compress at ratios between 14:1 and 25:1, while gasoline engines compress at ratios between 8:1 and 12:1.

Diesel fuel is more efficient than gasoline due to its higher energy density. One gallon of diesel fuel contains approximately 147,000 BTU, while one gallon of gasoline contains about 125,000 BTU.