CARB Diesel, Biodiesel and Renewable Diesel: **What's the Difference?**

When it comes to choosing a fuel to power their vehicles, fleet managers have plenty of options; however, not all fuels are created equal. See how the three fuel types stack up:

	CARB (ULSD) Diesel	Biodiesel (B5-B20)	Renewable Diesel
What is it?	Conventional, petroleum-based hydrocarbon fuel approved for use in California by the California Air Resources Board (CARB). Meets ASTM-D975 standard for diesel fuel oils.	Non-hydrocarbon fuel produced from the same feedstocks as renewable diesel. Variability in source materials can impact cold properties and storage life of the final product. ASTM-D975 diesel fuel oil standard allows for blending of only 5% biodiesel (B5).	Premium-quality, non-petroleum hydrocarbon fuel made from 100% renewable raw materials. Every molecule in renewable diesel is found in CARB diesel; can be swapped into vehicles with no change in infrastructure. Meets ASTM-D975 standard for diesel fuel oils.
System Maintenance	Contains aromatics, which do not combust as easily as paraffins. Incomplete combustion products contaminate oil, foul injectors and clog DPF filters.	May contain soaps and metals, which foul injectors and clog DPF filters. Attracts water, subjecting it to microbial growth in storage, and has poor cold-temperature performance. Accumulates and dilutes motor oil.	Contains no aromatics or impurities, allowing fuel to combust with maximum efficiency while decreasing the frequency of injector maintenance and DPF filter regenerations.
Shelf Life	Can be stored for about 12 months at an ambient temperature of 68°F.	Can be stored for a maximum of six months.	Can be stored for long periods of time in proper conditions with no change in quality.
Environmental Impact	Generates nitrogen oxides (NOx),* which can increase the risk of respiratory conditions.	Generates more nitrogen oxides than CARB diesel.*	Generates lower total hydrocarbons, lower methane and lower non-methane hydrocarbons, as well as lower nitrogen-oxide output, in pre-2010 engines.*

The Results Are In

Renewable diesel boasts the same engine performance as CARB diesel and biodiesel but requires less system maintenance, offers a longer shelf life and produces less environmental impact. With Neste MY Renewable Diesel™, fleet managers no longer need to choose between performance and sustainability; they can optimize performance while lowering their maintenance costs and doing their part to clear the air.

* Engine-out emissions

NESTE MY Renewable Diesel