



Diesel Engine Emissions Regulations & Effects on Fuel System FAQs

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Are all '07 trucks equipped with '07 certified engines?

No. Many engine manufacturers have built inventories of '06 engines that will be used in many '07 vehicle chassis. The Environmental Protection Agency (EPA) regulations apply to the engines themselves, and not the vehicle. A '07 vehicle with a '06 engine is not required to use ultra-low sulfur diesel (ULSD). The EPA has released a statement supporting this for fleet owners.

What is LSD (Low Sulfur Diesel) and ULSD (Ultra Low Sulfur Diesel)?

LSD is a term used to describe diesel fuel with lowered sulfur content. ULSD describes diesel fuel with substantially lower sulfur content. In the US, the allowable sulfur content for ULSD is no more than 15 ppm of sulfur compared to the US standard for LSD of 500 ppm.

Will I always be able to get LSD fuel?

In the US, only ULSD fuel will be available for highway use starting on December 1, 2010.

Will the fuel economy and performance of my fleet be impacted by the ULSD fuel?

Under typical operating conditions, there should be no noticeable impact on overall power using ULSD fuel. Fuel economy may be reduced slightly because the process that removes sulfur also can reduce the energy content of the fuel.

Will ULSD harm my older engines?

No. Engine manufacturers expect the ULSD fuel to be fully compatible with 2006 and earlier model year vehicles. In some instances, the introduction of ULSD fuel to older vehicles may affect fuel system components or loosen deposits in fuel tanks. As part of a good maintenance program, owners and operators are encouraged to monitor their diesel-powered vehicles closely for potential fuel system leaks or premature fuel filter plugging during the change-over to ULSD fuel.

What happens if I fuel up with LSD in my '07 certified engines just once?

It is believed that if a unit is filled with LSD only once, there should not be too many adverse effects; however, '07 and beyond certified engines are designed to operate only with ULSD fuel. Improper fuel use will reduce the efficiency and durability of engines, permanently damage many advanced emissions control systems, reduce fuel economy, and possibly prevent the vehicles from running at all. Manufacturer warranties are likely to be voided by improper fuel use. Additionally, burning LSD fuel in 2007 and later model year diesel engines is illegal and punishable with civil penalties.

What is Biodiesel?

Biodiesel is a blend of petroleum diesel fuel and any fuel processed from a grain, or vegetable such as soy, canola (rape seed), palm, cotton, olive, coconut, peanut, corn, etc. Biodiesel is frequently represented by an acronym including the letter 'B' and a number indicating the percentage of the processed fuel blended in the petroleum diesel fuel. For example, B5 indicates the blend contains 5% processed fuel. Engine Manufacturer Association (EMA) members approve up to a 5% biodiesel blend. Updates to this are expected soon from EMA on B20 blends. Cummins Inc recently announced approval of B20 blends after extensive testing and evaluations to ensure that customers can reliably operate their equipment.

Is it ok to use a ULSD with a B20 blend?

Currently only some members of the EMA have approved the use of B20 that meet accepted (ASTM) fuel quality standards. Check your Operations and Maintenance manual for specific recommendations for different fuel types.

What kinds of filtration challenges can I anticipate with either ULSD or Biodiesel blends?

Upon initial changeover, there may be some cleaning of the fuel supply system, tank, lines etc with either ULSD or a biodiesel blend. If this occurs, it could temporarily cause

premature filter plugging due to the higher amount of particles in the fuel system. This should be a short term condition. In addition to this cleaning effect, the properties of both ULSD and Biodiesel are a more favored environment for microbe growth. Owners and operators are encouraged to monitor their diesel-powered vehicles closely and perform proper maintenance.

What are these microorganisms I am starting to hear about?

Microorganisms such as algae and bugs are constantly present in air and moisture. If excess moisture enters a fuel storage system, microorganisms can reproduce, feeding off of the fuel itself. In the past, natural sulfur content was a deterrent to this growth, but with ULSD and Biodiesel this is not the case. Excessive microorganism growth can cause premature filter plugging, reducing service intervals. If an odorous, shiny black substance is found on the filters, contact Cummins Filtration for information about our Fleetguard chemical products that will treat and maintain the system.

