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CHEMISTRY-DRIVEN PERFORMANCE

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Technical Topic

DPF - Forced/Passive Regeneration

Today's ULSD fuel needs to be treated with an effective multifunctional additive package containing DW-10 Detergents, Cetane, Fuel Stabilizers and Lubricity Improvers and, during the winter, Cold Flow Improvers, Heavy Wax Modifiers and WASA, and Deicers. ULSD fuels that are properly treated provide excellent combustion which allows the conversion of available BTU's into power.

ULSD fuels that are not properly treated year all year using DW-10 Detergents produce significant **soot loading** of the Diesel Particulate Filter [DPF]. When the DPF sensors detect back pressure due to soot loading, **forced regeneration** is required.

During a forced regeneration, a vehicle must pull off the road and, over the next 40 minutes with the engine set at high idle, diesel fuel is injected ahead of the DPF to burn out the soot.

Delivery trucks/vans, waste haulers, and school buses are all prone to forced regeneration because such engines do not reach highway operating temperatures. Passive regeneration occurs while the vehicle is driving down the highway. In this case, a small amount of diesel is injected ahead of the DPF which provides supplemental heat to burn out the soot.

Using a premium multifunctional additive consistently throughout the year reduces forced regeneration up to 80% and saves both time and money.

In addition, eventually, all DPF equipped trucks and vans will need the DPF filter to be removed and sent out for cleaning at an estimated cost of up to \$1500.00.

Notably, some fleets using premium diesel additive packages have noticed improved fuel economy as well.