BG Products, Inc.

INDUSTRY NEWS

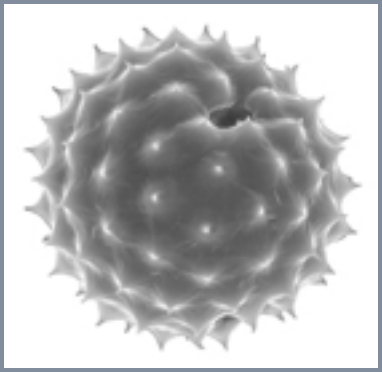
December 2012

WHAT'S BAD FOR DPFS AND WHY YOU SHOULD CARE

All 2007 and newer, on-road diesel vehicles and 2010 and newer off-road vehicles are manufactured with diesel particulate filters (DPF). Many older vehicles have been retrofitted with DPFs. Tight emissions restrictions have caused diesel vehicle manufacturers to turn to after- treatment devices like DPFs for emissions reduction.

SOOT

Soot Agglomeration



What is it?

A diesel particulate filter is a device designed to remove unburned particulate matter (PM), or soot, and other solid matter from the exhaust stream of a diesel engine before it exits the vehicle tailpipe.

By trapping and physically hold- ing the soot within the DPF, the exhaust smoke emitting from a diesel tailpipe is reduced to a clean stream of hot gases, and becomes almost invisible.

Once the DPF collects enough soot to become sufficiently restricted, it cleans itself by removing the soot.

This self- cleaning process, called regeneration, is programmed into the engine management system of the vehicle.

It's done automatically as the DPF becomes full of soot.

One common method of DPF regeneration involves injecting a small amount of diesel fuel into the exhaust stream in order to "super-heat" and burn off the excess soot.

DPF's don't like low speeds

Although the DPF is designed to self-clean excess soot without failure, there are a few problems that disrupt its ability to do this.

Extensive low speed and stop- and-go driving can disrupt the DPF's cleaning ability. This problem is especially prevalent in diesel vehicles with frequent stops (city driving) and a lot of idle time such as school buses and garbage trucks.

For a successful DPF regeneration, highway speeds that generate an increased volume of exhaust flow in conjunction with higher temperatures ensure proper cleaning of the catalyst system (e.g. 60 mph/97 kph for 20 minutes).

Extensive low speed driving inordinately loads excess soot onto the DPF and creates more soot accumulation than it was designed to hold.

Without the high heat and increased exhaust flow to burn and disperse this soot off, the DPF eventually gets plugged, which can result in automatic power reduction and the need for service.

DPF's don't like engine oil ash

Another problem arises with ash from the engine oil making its way to the DPF. Ash is not burned off during the regeneration process.

What can we do about ash? It is very important to use heavy duty engine oils, such as BG SAE 15W-40 Synthetic Blend Engine Oil, PN 714, or BG Shear Power® HD, PN 716.

This is the current U.S. category of heavy-duty engine oil. It is formulated with after-treatment emissions devices in mind. Additionally, regular use of BG 109 Compression Performance Restoration will keep the ring land area free from deposits allowing the rings to function at full potential. This will reduce the amount of ash getting to the DPF.

SOLUTION

BG Shear Power HD

A low-ash full synthetic SAE 15W-40 diesel engine oil formulated with high-quality, shear stable polymer technology. It features enhanced detergency, superior cold flow properties and excellent oxidation inhibitors. It is specifically designed to allow long drain intervals, provide extended wear protection and deposit control even under severe conditions

DPF'S LOVE BG PRODUCTS

The BG Diesel Injection Service and BG Diesel Induction Service can diminish the tendency for the DPF to load with excess soot, enabling it to self- clean more effectively. BG diesel products, such as BG DFC Plus, PN 230, and BG 244 play a very important role in keeping the fuel system clean, especially the fuel injectors. Poor injector function is the beginning of a chain reaction resulting in premature plugging of the DPF. The principle is to keep the system as clean as possible, which in turn optimizes system operation. This reduces the tendency for soot production and DPF plugging. Improved combustion function is restored, thus lowering the frequency at which the DPF must self-clean, as well as optimizing fuel economy.

And again, do not forget the BG 109 for the engine oil system. Proper ring function has shown important benefit in DPF operation.

A clean engine is an efficient engine

Not only does the engine oil need to be kept out of the exhaust, but consistent, optimum compression is an important key in engine performance and control- ling soot production from combustion.

Emissions restrictions are tight and they are only getting tighter. DPFs are the current solution for OEMs. And BG is the solution for DPFs.

Cleans Ring lands

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