

Technical information



Diesel particulate filter

Problem description

Due to increasingly stricter emission limits, more and more work is being done on exhaust gas aftertreatment. During the repeated combustion of already burnt exhaust gases by the exhaust gas recirculation system (EGR system for short), the formation of soot increases due to the combustion residues contained in the exhaust gas. The increasing stop-and-go driving of the vehicle in the city, on country roads and on highways ensures that the vehicle no longer enters its regeneration mode to burn free the particulate filter.

Consequences

Fuel consumption increases due to the increased exhaust back pressure and the engine performance sinks. The particulate filter is clogged, creating an acute risk of turbocharger or engine damage. The service life of the engine and its add-on parts such as the turbocharger, particulate filter, injectors and EGR system diminish and the emission limits can no longer be met.

With increasing age and especially with frequent operation over short distances, ash and soot accumulate in the DPF. Ash is non-regenerable material and over the years reduces the absorption capacity of the DPF. The regeneration processes are also shortened as a result. In order to remove ash from the DPF, it must be removed, sent in and burnt out. Regular use of our DPF protection can delay this event.



Clean DPF



Clogged DPF

Solution for prevention

Problem

Short-distance and city vehicles in particular are affected by the problem of clogged diesel particulate filters.



Recommended product

Diesel Particulate Filter Protector

Content	PU	Part no.
250 ml	6	5148

Functional characteristics/Application

Description: Ensures optimum combustion of the fuel, reduces soot formation, lowers emissions and extends the service life of diesel particulate filters.

Application: Add to the fuel every 2,000 km just before filling up. Contents sufficient for 50 – 70 l of diesel fuel.

Note: Avoid overdosing as well as application in combination with Diesel Soot Stop!

Deposits on the injectors change their injection pattern. The injectors can no longer finely atomize the fuel and inject larger fuel droplets, which do not burn completely resulting in more soot being formed, which additionally ends up in the DPF.



Recommended product

Pro-Line Diesel System Cleaner

Content	PU	Part no.
500 ml	6	5156

Description: Reduces pollutant emissions, thus optimizing smoke opacity prior to emissions test. Cleans injection nozzles, the entire fuel system and combustion chambers of any troublesome deposits. Prevents any seizing up and gumming up of nozzle needles. Optimizes the combustion process and restores the engine's original performance.

Application: To be added directly into the fuel tank. For preventive use during every inspection, after repairs to the fuel system, for treating problems or after every JetClean cleaning. To eliminate problems, we recommend mixing the product with the fuel during refueling over approximately 2,000 km. Contents are sufficient for max. 70 l of fuel.

Oil deposits and dirt in the intake system lead to unclean combustion and the formation of soot and ash.



Recommended product

Pro-Line Intake System Cleaner Diesel

Content	PU	Part no.
400 ml	6	5168

Description: Active solvent with highly effective additive combination. Eliminates contamination and deposits in the diesel intake and throttle valve area. Loosens and removes contamination such as oil, resin, soot, etc. Ensures the operability of all moving parts and increases the operational reliability of diesel engines.

Application: Recommended for preventive use during the inspection. Suitable for vehicles with EGR (exhaust gas recirculation) valve and DPF (diesel particulate filter). Only suitable for use in diesel engines.

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Problem-specific solution

Cleaning the DPF is cheaper than replacing it and can also extend the service life of the filter. Another advantage is that our combination product allows the cleaning of the DPF while still installed. The cleaning interval depends very much on the vehicle use and DPF age or the mileage. LIQUI MOLY recommends the use of Pro-Line Diesel Particulate Filter Cleaner and Pro-Line Diesel Particulate Filter Purge with every second oil change or major inspection.

Problem

Depending on the age and the vehicle use, dirt accumulates on the DPF and clogs it. Removal and cleaning or replacement often involve high costs.



Pro-Line Diesel Particulate Filter Cleaner

Content	PU	Part no.
1 l	6	2818 ¹⁴¹
1 l	6	5169 ⁷¹
1 l	6	20913 ¹⁸²
1 l	6	21511 ¹²⁸

Functional characteristics/Application

Description: Highly effective fluid for cleaning clogged passenger car diesel particulate filters when installed. Dissolves hardened, dense and encrusted contaminants on the surface of diesel particulate filters.

Application: Through regular cleaning in combination with flushing, expensive repair costs can be avoided. Cleaning is performed with the Pressurized Tank Spray Gun (part no. 7946) and the specially developed DPF Probe with 5 interchangeable tips (part no. 7945).

The cleaner and the dissolved soot remain in the diesel particulate filter. In order for both components to be burned off during a normal regeneration, the material must be distributed and the cleaner must be neutralized by flushing.



Pro-Line Diesel Particulate Filter Purge

Content	PU	Part no.
500 ml	6	2820 ¹⁴¹
500 ml	6	5171 ⁷¹
500 ml	6	20914 ¹⁸²
500 ml	6	21512 ¹²⁸

Description: For flushing passenger car diesel particulate filters (DPF/FAP) after cleaning with Pro-Line Diesel Particulate Filter Cleaner when installed. Flushes the soot softened by the cleaner and distributes this in the diesel particulate filter so that it can be burned off with normal regeneration.

Application: Flushing of car (DPF/FAP) after cleaning with Pro-Line DPF Cleaner. Flushing is performed with the Pressurized Tank Spray Gun (part no. 7946) and the specially developed DPF Probe with 5 interchangeable tips (part no. 7945).

FAQ

After reinstallation of the sensor, we recommend carrying out a test drive for at least 20 minutes in order to initiate the regeneration of the particulate filter. If the engine electronics does not automatically start the regeneration process, the process is to be initiated by a workshop tester or a diagnostic unit.



Our product is water-based and non-flammable. If DPF regeneration is carried out according to vehicle manufacturer's specifications, there is no risk of fire or damage to the DPF or adjacent systems. In addition, there is no need for costly disposal of the used fluids, as the cleaning and flushing fluid remains in the exhaust system after use and evaporates during the next regeneration.

The cleaning process depends on the installation equipment of the DPF and can be used in closed DPF systems. In some vehicles, however, the DPF is located near the exhaust manifold or the turbocharger rather than on the underbody. For safety reasons, we do not recommend cleaning these vehicles to ensure that no cleaning or flushing fluid enters the combustion chamber via an open exhaust valve.

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