

What is a DPF (Diesel Particulate Filter)? - explained by United Diesel

A DPF is a filter fitted to modern diesel engines designed to remove particular matter or soot from the exhaust gases of diesel engines so that they are not released into the atmosphere. This soot is then trapped and under certain conditions the DPF Filter heats up and burns the soot turning it into ash thus “self cleaning” the DPF Filter. The ash then stays trapped in the DPF Filter until the filter needs to be replaced. Every so often new legislation requires vehicle manufactures to produce cleaner burning engines. Here in Europe this is classified as an Emission Euro Standard. The emissions standards in force in the U.K. are amongst the strictest in the world, all new cars must meet the new Euro-6 standard, the cleanest in history.

Sounds good but what goes wrong?

Depending on the vehicles driving patterns and also the introduction of other emission reducing mechanisms the DPF filters get clogged up, which causes all sorts of running problems with the vehicle. The manufactures have built in various methods to “self clean” these filters called regeneration but there comes a point when this does not work so the vehicle owner is left with an expensive vehicle that does not perform well or will even not be able to drive.

Particulate filters tend to block irreversibly due to the combustion residues. FAP filters (the system used primarily in French manufactured vehicles) contain cerium, which cannot burn and remains trapped permanently in the filter.

A clogged filter leads to, poor engine performance and an increase in fuel consumption, or worst-case scenario damage to the turbo.

The cleaning of the particulate filter, that is the combustion of the PM10s (particles smaller than 10 microns) trapped inside the filter, is called regeneration and it takes place automatically under certain circumstances: every 400-800 km at a driving speed of 90 km/h for at least 10-12 minutes.

It is obvious that most car drivers who drive in the city for short routes at a low speed, are not able to satisfy the parameters to allow the regeneration process to occur. The driver realizes that the regeneration hasn't occurred when the “recovery” light comes on or, as happens most of the time, when the engine performance decreases and the fuel consumption increases.

At this point it is necessary to take the vehicle to a garage in order to do a “forced regeneration”. Should this not be done, the filter could block permanently, causing engine damage and requiring replacement (replacement is not covered under the warranty if the cause is a lack of maintenance)

A solution?

You can get you local garage to replace the filter but due to the complicated construction of the filter the costs are anything from £ 800.00 to £ 2000.00 for normal car applications.

Where there is a problem someone will try to find a better solution.

There are various ways to try and clean the DPF but none of them have proven to be a long-term success. Fuel additives, chemical cleaners do not work, we then get into the realms of removal with heat or ultrasonic cleaning again certain methods prove to be better than others.

The only effective solution is DPF cleaning with the Flash Cleaner Machine, a unique system that guarantees the complete removal of pm10, cerium and oil deposits without damaging the filter.

Contact us.

If you are experiencing problems with your vehicles DPF contact us for a solution. We can diagnose, clean and repair any diesel engine related problem ensuring that your vehicle gets back to running well. Either email us at info@uniteddiesel.co.uk or phone us on 01939 291155