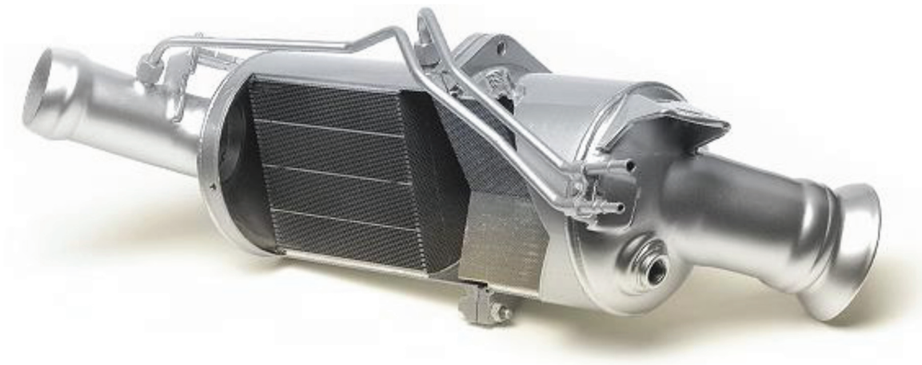
Diesel Particulate Filters (DPF's)
The Facts

What is a DPF?

Diesel Particulate Filters are now common place on many of todays modern diesel cars.

The filter is designed to trap large soot particles within the filter and, like any filter, it requires emptying on a regular basis. For DPF's this process is called regeneration. There are two types of regeneration, passive and active.



How do DPF's regenerate?

Passive Regeneration.
This takes place automatically when the exhaust temperatures are naturally higher. Typically this will be when the car is cruising at 50 to 60 mph at mid rev range for ten minutes or more. However, modern driving conditions coupled with cruising in a high gear (5th/6th), often result in the right conditions for passive regeneration rarely occurring.

Active Regeneration.
This is when the ECU takes control of the regeneration process by adjusting EGR, throttle valve opening and injecting more fuel in order to increase the exhaust temperature. Active regeneration will only take place when soot loading in the DPF exceeds 45% and when conditions for regeneration are deemed appropriate, i.e. the car has been cruising at over 60mph for an extended period.

Vehicles used regularly for urban cycle driving rarely achieve the conditions required for regeneration, resulting in the filter becoming blocked.

Why has my warning light come on?

When soot loading in the DPF exceeds a certain level, typically 50% a warning light will appear.

It is sometimes possible to get the light to extinguish if the car is driven at 50 to 60mph for an extended period.

If left, soot particles will continue to build up. When soot loading exceeds 75% garage intervention will be required and may result in costly replacement.

How do I ensure my DPF keeps working correctly?

Use the correct oil.
The correct oil specification for vehicles fitted with DPF is critical. Low SAPS (Sulphated Ash, Phosphorus and Sulphur) oils should always be used. Frequent oil checks should also be carried out to ensure oil quality and level is correct.

Keep the fuel system clean.
Dirty fuel injectors will reduce the efficiency of combustion and prevent combustion temperatures from achieving the level required for regeneration.

Apply a Tec4 DPF and Turbo system cleaner to aid passive regeneration.
Tec4 DPF and Turbo system cleaner contains cerine additives which bond to the soot particles reducing the temperature at which they combust, this enables the diesel particulate filter to passively regenerate during urban cycle driving.

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