

CF/XF REGENERATION QUICK GUIDE

What is regeneration?

Euro 6 is all about cleaner emissions and the removal of particulates (soot).

To do this all Euro 6 vehicles incorporate a Diesel Particulate Filter (DPF) to trap any soot that hasn't been burned off.

And as with all filters they do require cleaning which is where Regeneration comes in. Simply put it is a cleaning process

As a driver how will it affect my day to day work?

Realistically it will have little impact on what you do. In fact for most types of operation regeneration will be handled automatically by the vehicle without any driver involvement.

And what do I need to know or do?

Make sure you have enough AdBlue for your journey and familiarise yourself with the DPF switch **and the importance of ensuring it is in the running position** (i.e. not off), the three levels of regeneration, their warnings and what action to take.

3 TYPES OF REGENERATION

There are 3 types of regeneration:

Passive Regeneration:

No intervention required by the driver/operator.

Active Mobile Regeneration:

Triggered automatically by the Engine Management System (EMS), so no intervention is required by the driver/operator.

Stationary Forced Regeneration:

Operator/Driver action required. (When required a pop-up message will appear on the DIP)

PASSIVE REGENERATION

Passive Regeneration of the soot filter happens automatically when the DPF is above a certain temperature

At these temperatures a chemical reaction takes place in the system, which in turn burns off the waste material thus cleaning the filter. NO warnings are shown in the display and NO additional diesel is used during this process.

ACTIVE MOBILE REGENERATION

Active Mobile Regeneration is triggered automatically by the EMS where additional fuel is injected into the exhaust gas system. The injected fuel reacts over the Diesel Oxidisation Catalyst (DOC) producing heat which raises the temperature in the DPF, allowing for a more efficient "burn" of the soot

Generally you will be unaware that this is taking place. However if the system is actively regenerating and the measured exhaust tailpipe temperature becomes too high together with a low vehicle speed, you may see the High Exhaust System Temperature symbol (HEST) displayed in the Body Mapping of the Instrument Panel.



STATIONARY FORCED REGENERATION

When Passive and Active Regeneration of the DPF is not sufficient to keep the soot level below a certain level the system will prompt that a Stationary Forced Regeneration is required via a pop up message in the DIP

As the name suggests the driver **MUST** manually activate the regeneration of the soot filter. Prior to carrying out an active stationary regeneration the driver must prepare the vehicle to ensure this process can be carried out safely (refer to Driver Handbook).

Once you have prepared the vehicle you need to press the dashboard mounted DPF switch to start the process.



HIGH EXHAUST SYSTEM TEMP (HEST)

When the amber High Exhaust System Temperature (HEST) is showing in the Body Mapping section of the Instrument Panel be aware that if the vehicle is stationary then you need to take care that no persons, vehicles, animals or combustible materials are within 2 metres of the exhaust outlet.



On new vehicles an initial regeneration takes place which can produce a noticeable odour. This is part of a 'de-greening' process to condition the DPF (Diesel Particulate Filter).

DPF SWITCH



Functions of the DPF Switch:

Switch off (down) to inhibit regeneration only if absolutely necessary (when working inside or entering an oil refinery for instance).



Note: Remember to reset the DPF switch once back under normal conditions and worth checking this is in the normal running position as part of your vehicle checks

The DPF switch is also used to initiate the Stationary Forced Regeneration.

If a Stationary Forced Regeneration is required you will be prompted by a warning in the DIP (see opposite) and will need to carry out a vehicle safety check before pressing the DPF switch up once, the EMS then carries out a system self check.

Once this is completed you will be prompted to press the switch up again to start the Stationary Forced Regeneration process.

Note: if conditions have not been met at this stage (as detailed in the Handbook) a message will appear in the DIP to indicate the process cannot be started

REGENERATION 'POINTS TO REMEMBER'

If you are requested to carry out a Stationary Forced Regeneration follow these simple vehicle safety checks before starting the process.

Make Sure:

- 1. The vehicle is parked in an outside area with a minimum 2 metre clear space around the exhaust discharge pipe and nothing on the catwalk**
- 2. The park brake is applied**
- 3. The engine is running at idle speed**
- 4. The vehicle is NOT left unattended**

Once you are satisfied that all the above conditions are met **press the DPF switch once.**

A self check is then activated by the EMS to ensure that certain pre-set conditions are met before initiating the process.



Note: Stationary Forced Regeneration NOT Possible may occur:
One or more of the conditions have not been met (refer to Driver Handbook)

If the conditions are correct you will be requested to **press the DPF switch again** to start the process.

The engine speed will increase automatically to a predetermined level.

An active stationary regeneration **can take between 45 to 70 minutes** depending on soot loading. When the process starts the time left to complete the regeneration will countdown in the DIP.

Note: This will be classed as 'Other Work'

And remember:



STATIONARY FORCED REGENERATION WARNINGS

Warning levels & action required:

In all instances ensure that the truck is 2m clear of obstruction

Level 1:

Stationary Forced Regeneration Possible:

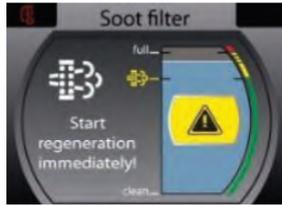


If your current circumstances or the conditions cause you to ignore this first warning the regeneration request message will re-appear and repeat at the next and subsequent key cycle

An alternative to overcome this is to take the motorway route which will clear the soot automatically

Level 2:

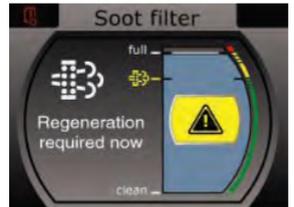
Stationary Forced Regeneration Possible:



Again to overcome this is take the motorway route

Level 3:

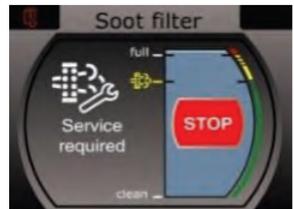
Stationary Forced Regeneration required:



Engine power reduction. Driver intervention is required immediately

Level 4:

Active Stationary Regeneration **NOT** possible by the driver. Dealer Intervention is required:



Further engine power reduction

REMEMBER if the HEST Warning is active:



HEST Warning
Ensure the 2m Rule



Various videos developed to help you get the best out of your DAF truck are available on www.dafblog.co.uk

To view the Regeneration Video:

<https://www.dafblog.co.uk/videos/training/daf-trucks-regeneration/>



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