Owners of 2019 Super Duty trucks equipped with a Power Stroke® V8 Turbo Diesel engine need to be aware of Diesel Emission System maintenance to help ensure that their vehicles continue to operate efficiently. Share the system basics, Diesel Particulate Filter (DPF) cleaning process and maintenance tips with Super Duty diesel owners.

**DIESEL EMISSION SYSTEM BASICS**

To help reduce nitrogen oxide (NOx) levels, the 6.7L Power Stroke features a three-step aftertreatment system. Here’s how it works.

**STEP 1**

The Diesel Oxidation Catalyst (DOC) converts and oxidizes hydrocarbons into water and carbon dioxide.

**DEF RESERVOIR**

Diesel Exhaust Fluid (DEF) is stored in a heated tank and is the solution injected into the exhaust during STEP 2.

**STEP 2**

The Selective Catalytic Reduction (SCR) primarily removes NOx from the exhaust stream using diesel exhaust fluid (DEF).

**STEP 3**

The remaining soot is scrubbed from the exhaust using a Diesel Particulate Filter (DPF).

**TIPS FOR PROPER DPF MAINTENANCE**

While the regeneration process is largely automatic, here are tips drivers can follow to help ensure that the cleaning process is completed.

- It's important to allow the full regeneration to finish. The truck should not be shut off during the process.
- Trucks that idle for long periods of time or are frequently driven for short periods may have difficulty properly maintaining the DPF. This occurs because the drive cycle isn’t long enough to allow DPF regeneration to finish.
  - The vehicle must be driven at a constant speed above 30 mph (48 km/h) with a steady pedal for approximately 20 minutes to activate and complete the DPF regeneration process. See Active Regeneration – “Drive to Clean” on page 2 for more information.
HOW REGENERATION WORKS

The Diesel Particulate Filter (DPF) periodically cleans itself through a process known as “regeneration,” which is similar to a small incinerator burning off trapped particulates. This process can be “passive” or “active” and in most cases is automatic. It's important that owners understand how to operate the vehicle to assist the cleaning process. *Note: Changes in the engine or exhaust sound may be heard during the regeneration process.*

PASSIVE REGENERATION — “Happens on Its Own”

With Passive Regeneration, the exhaust system temperature and constituents automatically clean the DPF by oxidizing (burning off) the soot. Cleaning automatically occurs during normal vehicle operating conditions due to driving patterns. The driver need not do anything except drive the vehicle.

• “Exhaust Filter Cleaning” may briefly appear on the Information Display when Passive Regeneration is taking place (Chassis Cab only)

![Image of Passive Regeneration](image1)

ACTIVE REGENERATION — “Drive to Clean” for a forced burnoff

When the engine control module detects that the Diesel Particulate Filter is nearly full of particulates and the driver is not operating the vehicle in a manner to allow effective automatic (passive) regeneration, messages appear in the Information Display as a reminder to drive the vehicle in order to clean the Diesel Particulate Filter.

• The Information Display shows “Exhaust Filter Overloaded Drive To Clean” or “Exhaust Filter At Limit Clean Now” which is the normal regeneration process

• The vehicle must be driven at a constant speed above 30 mph (48 km/h) with a steady pedal for approximately 20 minutes to activate and complete the Active Regeneration process

  – Drivers should avoid prolonged idling, and observe speed limits and road conditions
  – The ignition switch must not be turned off
  – A suitable gear should be selected to ideally maintain engine speed between 1500 and 3000 rpm

  – Regeneration frequency varies from 100 to 500 miles (160 to 805 km) between occurrences, with each occurrence lasting approximately 9 to 35 minutes

  – Duration of the regeneration can be reduced if a constant speed above 30 mph (48 km/h) is maintained

• “Exhaust Filter Cleaning” will appear when regeneration is taking place

  ![Image of Active Regeneration](image2)

• “Exhaust Filter Drive Complete” will briefly appear when the cleaning process is complete. Once the filter is cleaned, it’s ready to continue the process of trapping exhaust particles

![Image of Active Regeneration Complete](image3)