

# Tier 4 Engine Operating Tips



Most of the time, operating a Cummins Tier 4 Interim/Stage IIIB off-highway engine requires no operator action. Under certain circumstances, an operator-initiated active regeneration may be needed to clean the Diesel Particulate Filter (DPF). Indicator lamps on the instrument panel light up to show system status and alert the operator when action is needed.



On

## High Exhaust System Temperature (HEST) Lamp

Higher-than-normal exhaust temperatures may exist due to active DPF regeneration. **Operator should make sure the exhaust pipe outlet is not directed at any surface or material that may become hazardous.**



On

## Diesel Particulate Filter (DPF) Lamp

Lamp on when the DPF is starting to overfill with soot because the system is unable to undertake an automatic active regeneration.

**Operator should check to make sure the Regeneration Inhibit Switch is in the "Off" position, and continue working until it is convenient to perform a Stationary (parked) Regeneration.**



Flashing

## Diesel Particulate Filter (DPF) Lamp

When the DPF is nearly full, the DPF Lamp will start flashing.

A reduction in power may be noticed. **Operator should ensure that the Regeneration Inhibit Switch is off. Work may continue, but a Stationary Regeneration must be performed as soon as possible.**



Flashing



On

## Diesel Particulate Filter (DPF) and Check Engine Lamps

Lamps on indicate DPF is full and engine power has been significantly reduced until regeneration has occurred. **Stationary Regeneration should be performed as soon as it is safe to do so.**



On

## Stop Engine Lamp

Lamp on indicates that continued operation could result in damage to the DPF. **Shut down the engine as soon as it is safe to do so and call for service or risk damage to the DPF.**



On

## Regeneration Inhibit Switch/Lamp

Pressing the Regeneration Inhibit Switch allows the operator to prevent active regeneration. Should be used only when high exhaust temperatures present a hazard. Excess use will result in need to service/replace DPF. Lamp on indicates that the Inhibit Switch is set to the "On" position.

# How to Perform a Stationary Regeneration

- Park machine in an appropriate location, making sure the exhaust pipe outlet is not directed at any surface or material that may become hazardous.
- Set the brake and place the transmission in Park or Neutral.
- Press the Regeneration Switch. The High Exhaust System Temperature (HEST) Lamp will illuminate, engine speed may increase and there may be a noticeable change to the sound of the turbocharger.
- Monitor the machine and surrounding area throughout the process. If unsafe conditions occur, shut off the engine immediately. To stop a Stationary Regeneration, depress the clutch, brake or throttle.
- Once the Diesel Particulate Filter is fully regenerated, the engine will automatically return to normal idle speed, and the HEST Lamp will turn off. Exhaust system surface temperatures will remain elevated for 3 to 5 minutes.

Reference your Owners Manual for complete operating instructions.

## Operation and Service Information



### Diesel Particulate Filter

Ash cleaning of the Cummins Particulate Filter should be performed by an authorized technician at your local Cummins distributor or dealer at 5,000-hour intervals.



### Coalescing Filter

Requires filter change every 2,000 hours. Seek a genuine Fleetguard® service replacement element through your local Cummins distributor or dealer as required.



### Filter Replacement for Cummins Direct Flow™ Air Filtration

For best performance, be sure to use a genuine Fleetguard service replacement element from your local Cummins distributor or dealer as required in the maintenance schedule.



### Use Low-Ash Engine Oil

To maximize your particulate filter ash cleaning interval, API CJ-4 or ACEA-E9 (European equivalent) engine oil is required.



### Use the Right Fuel – Ultra-Low Sulfur Diesel (ULSD)

Using ULSD fuel is an EPA and EU legal requirement. Use only ULSD fuel containing 15-ppm or less sulfur content for engines meeting Tier 4 Interim or equivalent emissions regulations.



**Cummins Inc.**  
Box 3005  
Columbus, IN 47202-3005  
U.S.A.

Phone: 1-800-DIESELS™  
(1-800-343-7357)  
Fax: 1-800-232-6393  
E-Mail: [powermaster@cummins.com](mailto:powermaster@cummins.com)

**Cummins Ltd.**  
Yarm Road, Darlington  
County Durham, DL1 4PW  
UK

Phone: +44 (0) 1327 886464  
Fax: +44 (0) 870 2413180  
E-Mail: [cabo.customerassistance@cummins.com](mailto:cabo.customerassistance@cummins.com)

Bulletin 4087187  
Printed in U.S.A. Rev. 7/12  
©2012 Cummins Inc.