

Buzz here! Calling all  
County Technicians!

Do you or your drivers  
have questions about  
the 2007 emission DPF  
regeneration process  
and the dash lights?

We get periodic calls  
from counties asking  
questions.



Normal highway driving, or operating the engine under load, helps keep the Diesel Particulate Filter (DPF) hot enough to self-clean, but operating with a light load or at reduced speeds or idling can allow soot to build up in the DPF.



The soot accumulation causes a dash indicator lamp to come on indicating that a regeneration must happen soon. The light is pictured below. If ignored, it will start to flash and eventually de-rate the engine.



All 2007 emission buses delivered had the following in each bus:

- Colored placard left of the driver seat explaining the dash lights.
- Laminated cards provided for each bus with dash light and regeneration info.
  - Explanation sheet prepared by Carolina Thomas at request of DPI to help.



I am providing this information here so you can refresh yourselves on this information. My hope is that this will make your job easier.

Please call us if you need any help. 1-800-440-3492.

There is additional information in your operators manual to manually make a bus regen.

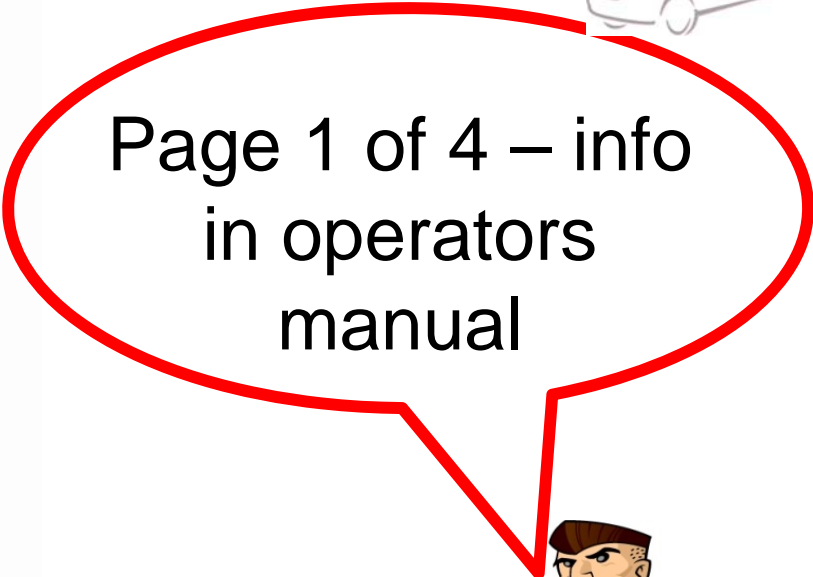


Description of Revisions: This bulletin replaces the version dated January 2008. Regen-switch operating parameters are further defined.

General Information

Normal highway driving, or operating the engine under load, helps keep the Diesel Particulate Filter (DPF) hot enough to self-clean, but operating with a light load or at reduced speeds can allow soot to build up on the DPF. Eventually the soot accumulation causes the indicator lamp to come on, indicating that a regeneration must happen soon. During regeneration, intense heat converts the soot to less-restrictive ash.

A decal, p/n 24-01583-000B for Mercedes-Benz engines, see Fig. 1 and p/n TBB 153028 for Cummins engines, see Fig. 2, generally describing EPA07 exhaust treatment operations and indicator lamps may be present on the switch cabinet, and a similar reference card may be included with the vehicle.



EXHAUST AFTERTREATMENT SYSTEM INFORMATION					
INDICATOR LAMP(S)	Level 1	Level 2	Level 3	Level 4	WARNING
Indicator Lamp Message(s)	Filter Regeneration Recommended	Filter Regeneration Necessary	Parked Regeneration Required – Engine Derate	Parked Regeneration Required – Engine Shut Down	HEST (High Exhaust System Temperature)
Diesel Particulate Filter Condition	Filter is reaching capacity.	Filter is now reaching maximum capacity.	Filter has reached maximum capacity.	Filter has exceeded maximum capacity.	<b>Flashing</b> A regeneration is in progress.
Required Action	Bring vehicle to highway speeds to allow for an Automatic Regeneration or perform a Parked Regeneration.	To avoid engine derate bring vehicle to highway speeds to allow for an Automatic Regeneration or perform a Parked Regeneration as soon as possible.	Vehicle must be parked and a Parked Regeneration must be performed – engine will begin derate.	Vehicle must be parked and a Parked Regeneration or Service Regeneration must be performed. Check engine operator's manual for details – engine will shut down.	<b>Solid</b> Exhaust Components and exhaust gas are operating at high temperature. When stationary, keep away from people and flammable materials, vapors, or structures.
For a driver performed Parked Regeneration, vehicle must be equipped with a dash mounted Regeneration Switch.					
See Engine Operator's Manual for complete Regeneration Instructions.					

Fig. 1, Aftertreatment System (ATS) Indicator Lamps Decal, Mercedes-Benz engines

If the DPF light (see Fig. 3) begins flashing while the vehicle is being driven, the driver can either pull over and initiate a parked regeneration (regen) or change the duty cycle while driving at highway speeds. The procedure varies for different engines; for more information, refer to the engine manufacturer's documentation.

If a vehicle is received at a dealership with the amber DPF indicator lamp on, perform a parked regeneration, following the procedure below.



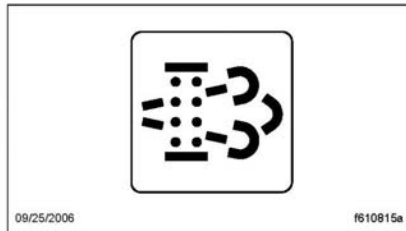


EXHAUST AFTERTREATMENT SYSTEM INFORMATION					
INDICATOR LAMP(S)	Level 1	Level 2	Level 3	Level 4	
Indicator Lamp Message(s)	Filter Regeneration Recommended.	Filter Regeneration Necessary.	Parked Regeneration Required - Engine Derate.	Service Regeneration Required Engine Derate To Idle Only.	HEST (High Exhaust System Temperature)
Diesel Particulate Filter Condition	Filter is reaching capacity.	Filter is now reaching maximum capacity.	Filter has reached maximum capacity.	Filter has exceeded maximum capacity.	<b>Flashing</b> A regeneration is in progress.
Required Action	Bring vehicle to highway speeds to allow for an Automatic Regeneration or perform a Parked Regeneration.	To avoid engine derate, bring vehicle to highway speeds to allow for an Automatic Regeneration, or perform a Parked Regeneration as soon as possible.	Vehicle must be parked, and a Parked Regeneration must be performed. Engine will begin derate.	Vehicle must be parked, and a Service Regeneration must be performed. Check engine operator's manual for details. Engine will shut down.	<b>Solid</b> Exhaust components and exhaust gas are at high temperature. When stationary, keep away from people and flammable materials or vapors.
For a driver performed Parked Regeneration, vehicle must be equipped with a dash mounted Regeneration Switch.					

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Fig. 2, Aftertreatment System (ATS) Indicator Lamps Decal, Cummins engines



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Fig. 3, Diesel Particulate Filter (DPF) Indicator Lamp

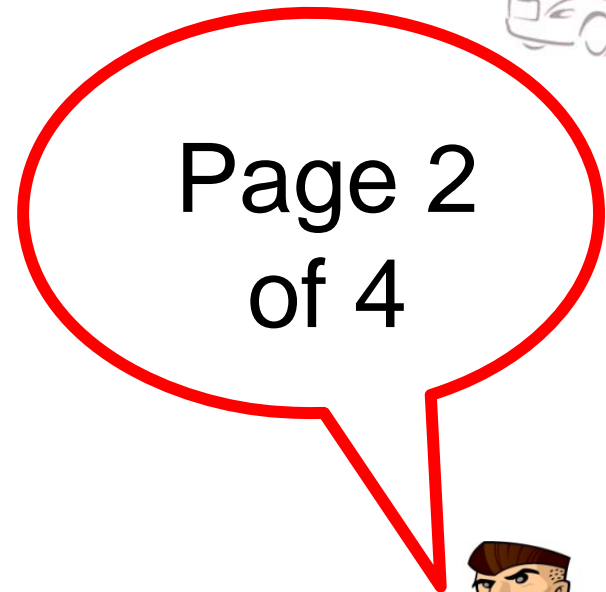
**Procedure**

**WARNING**

The exhaust gas temperature could reach 1500°F (800°C), which is hot enough to ignite or melt common materials, and to burn people.

1. Make sure the vehicle is parked away from all combustible and flammable materials.

NOTE: If the engine is a Mercedes-Benz, warm the engine until the coolant is at least 140°F (60°C) before beginning regeneration.





2. With the engine running:
  - 2.1 Set the parking brake (if the parking brake is already set, you must release it, then set it again).
  - 2.2 Put the transmission in neutral.
  - 2.3 Fully depress and release the clutch pedal, if equipped.
  - 2.4 If the vehicle has a two-pedal automated transmission, shift it into gear, then back to neutral.

NOTE: The Regen switch may have a lockout button, as shown in Fig. 4. If the Regen switch has a lockout button, slide the button toward the center of the switch in the direction of the arrow, then press and hold the switch in for 4 seconds. The engine rpm will increase to between 1100 and 1600 and initiate the regeneration process.

3. If the Regen switch does not have a lockout button, simply press the Regen switch and hold it in for 4 seconds.

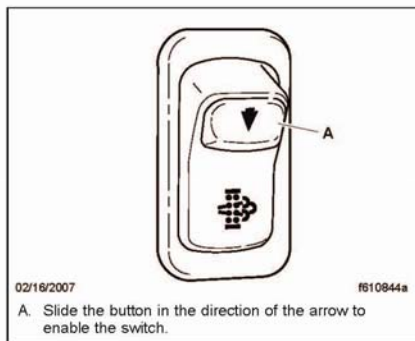


Fig. 4, Dash Regen Switch (shown with lockout button)

### Regeneration Process

The Regen switch causes the engine to increase rpm and initiate the regeneration process.

NOTE: The Regen switch will only initiate a regen if the engine software deems it necessary.

In about 20 to 40 minutes regeneration will be complete, and the engine idle will drop to the base idle speed.

The vehicle may now be driven normally. The High Exhaust System Temperature (HEST) light may be lit, but will go out when the ATD has cooled to normal operating temperature. See Fig. 5. This light is informational; no driver action is required.

### Warranty

This is an informational bulletin only; warranty does not apply.

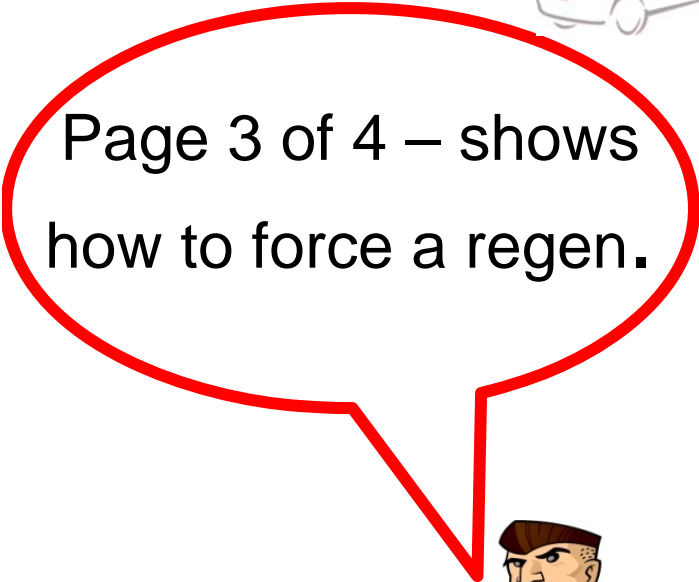
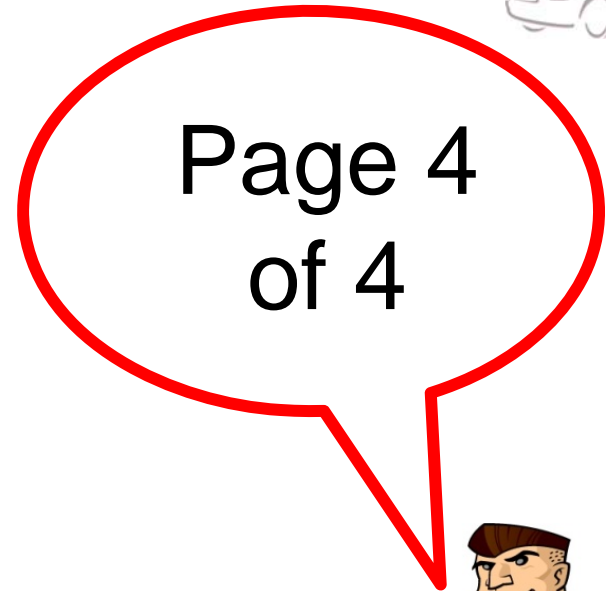






Fig. 5, High Exhaust System Temperature (HEST) Light





## 2007 EPA ENGINES

**PLEASE ALWAYS REFER TO OWNER OPERATOR'S MANUAL PROVIDED IN EVERY VEHICLE FOR EXACT MAINTENANCE REQUIREMENTS!**

**CUMMINS ENGINES MEETING 2007 EPA REQUIREMENTS REQUIRE:**

- LOW ASH ENGINE OIL MEETING CJ-4 SPECIFICATIONS.
- OIL THAT MEETS CES-20081 STANDARD.
  - REFER TO SECTION V – PAGE 10-11 IN YOUR OPERATOR'S MANUAL.
- USE ONLY ULTRA LOW SULFUR DIESEL.
- REFER TO PICTORAL CHART LEFT OF DRIVER FOR KEY TO EPA EMISSION LIGHTS AND HOT EXHAUST TEMPERATURES.
- EXPECTED SERVICE INTERVAL ON ATD (AFTER TREATMENT DEVICE FOR EXHAUST) IS 200,000 MILES.
- AVOID PROLONGED IDLING WHENEVER POSSIBLE.
- COOLING SYSTEM MUST BE MAINTAINED PER OWNER OPERATOR'S MANUAL TO PREVENT ENGINE AND SYSTEM DAMAGE.

### STATIONARY REGEN EVENT FOR EXHAUST SYSTEM

**IF A STATIONARY REGEN EVENT IS REQUIRED FOR THE EXHAUST SYSTEM OF THIS EPA 2007 COMPLIANT VEHICLE PLEASE FOLLOW THESE PROCEDURES TO ACTIVATE.**

- REGEN MUST BE REQUIRED BY THE ECM TO ALLOW EVENT.
- TRANSMISSION MUST BE IN NEUTRAL.
- ENGINE MUST BE AT OPERATING TEMPERATURE AND ENGINE IDLING.
- CYCLE THE PARK BRAKE AND MAKE SURE THAT IT IS LEFT APPLIED.
- HOLD REGEN SWITCH ON THE DASH UNTIL FAST IDLE ENGAGES.
- REGEN EVENT WILL TAKE 20-30 MINUTES TO COMPLETE.

**CAUTION: THE EXHAUST CAN REACH VERY HOT TEMPERATURES DURING A STATIONARY REGEN. PLEASE USE ALL CAUTIONS NECESSARY AND REFER TO OWNER OPERATOR'S MANUAL.**

Carolina Thomas, LLC  
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Greensboro, NC 27409  
336-851-1718

This is the information sheet delivered with each bus and paperwork to refer to.



Good luck knocking the  
soot out of these DPF's!  
Talk to you soon!

