

# Moe's operating tips

The new EPA 2007 engines are becoming more widely used in the field. Here is some information on warning lights — both old and new — as well as the different types of regeneration.



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**Passive regeneration** occurs as the engine operates in its normal duty cycle. The harder the EPA '07 engine works, the more effective it is at handling soot. The exhaust heat regenerates trapped soot. Since passive regeneration alone can not keep the filter clean over the course of a workday, the filter must occasionally actively regenerate.

**Active regeneration** occurs when diesel fuel is introduced in the exhaust stream and flows across the diesel oxidation catalyst (DOC) and super heats to regenerate the soot trapped in the filter. Caterpillar engines do not use a DOC. Instead, Cat engines burn diesel fuel at the regeneration head to super heat the exhaust and regenerate the trapped soot. Engine software monitors and controls this process and will activate warning lights if there is a malfunction in the system or components. If conditions are such that the truck is not reaching passive temperatures and can not actively regenerate due to speed or other parameters, the vehicle will need a parked regeneration.

**Passive and Active regeneration occur automatically.**

**Parked regeneration**, as the name implies, occurs when the truck needs to be parked and the operator must initiate the regeneration. Parked regeneration can take from 20 minutes up to an hour depending on ambient conditions.

**Service regeneration** must be done at an authorized dealer. This is necessary whenever you are unable to do a parked regeneration yourself.

## HIGH EXHAUST SYSTEM TEMPERATURE LAMP (HEST / HET LAMP)

This indicates that a higher than normal exhaust temperature may exist due to regeneration. When stationary, keep away from people and flammable materials, vapors, or structures. Ensure that the exhaust outlet is not directed at anything that will melt, burn or explode. The vehicle can be driven and the HEST light will go out once unit is moving.

## DIESEL PARTICULATE FILTER (DPF LAMP)

This indicates that the diesel particulate filter is becoming filled and the operator's assistance is needed. Solid yellow indicates a parked regeneration is required. Flashing yellow indicates that engine power loss (de-rate) and or shut down are possible as soot load continues to increase. Lamp will shut off during parked regeneration.

## CHECK ENGINE LAMP OR AMBER WARNING LAMP (CEL OR AWL)

This indicates a fault with the engine controls. The vehicle can be driven to the end of shift, and contact should be made with the nearest service dealer.

## RED STOP ENGINE LAMP OR ENGINE SHUT DOWN LAMP (RSL OR ESL)

This indicates a major engine fault that may result in engine damage, engine de-rate or the shutdown sequence will be initiated. Move the vehicle to the nearest safe location and shutdown the engine and contact the nearest service dealer.

## MALFUNCTION INDICATOR LAMP (MIL)

The yellow lamp indicates a failure of an emission control device. It may illuminate at the same time as the Amber Warning Lamp. The vehicle can be driven to the end of shift and contact should be made with the nearest service dealer.

