




## REGEN PROCEDURE



# DETROIT DIESEL (DD13 ENGINES)

### HOW TO PERFORM A “PARKED REGEN”

- ❖ **Must** have the DPF light on or flashing  to REGEN. Engine should be at 140 or above.
- ❖ Insure tailpipe and surrounding area is clear. **Must be done outside.**
- ❖ Set wheel blocks, start apparatus with parking brake set and in neutral.
- ❖ Release parking brake.
- ❖ Place transmission in “D”, watch transmission “Monitor” to show “1”.
- ❖ Return to neutral.
- ❖ Set Parking and Front Brakes.
- ❖ Request a “PARKED REGEN”
- ❖ Push and hold REGEN button (far left bottom switch) for 5 seconds and release.
- ❖ Idle should increase on its own, REGEN will start.
- ❖ DPF light will go out shortly after starting, REGEN is continuing until a return to idle. (45-60) minutes.
- ❖ **If REGEN is unsuccessful the first time, initiate a second REGEN. After two failed attempts, contact the shop.**
- ❖ When Apparatus returns to idle with a successfully completed REGEN, complete ENGINE REGENERATION RECORD.







To interrupt “PARKED REGEN”, release parking brake and wait to return to idle.





To interrupt “AUTOMATIC REGEN”, use “REGEN INHIBIT” switch.

### REGEN TYPES

- ❖ **PASSIVE-** Will occur when driving. No DPF burn, just higher exhaust temps. No action required by operator.
- ❖ **AUTOMATIC-** Active burn off of soot occurs while driving. Must be sustained “Freeway” driving or pumping of 45-60 minutes. No action required by operator.
- ❖ **PARKED-** Operator uses on board “REGEN” switch to initiate a REGEN. Works for all levels. 45-60 minutes.
- ❖ **LAPTOP-** Used by the shop to perform a REGEN when all other attempts have failed. Only true way to check and analyze system performance.

# REGEN Procedure for Detroit Diesel 13 Engines

	<p>The amber <b>Check Engine Lamp (CEL)</b> warning light indicates a fault with the engine controls or after treatment controls and/or components has occurred. The operator can drive the vehicle to the end of their shift and call service to remedy the problem.</p>
	<p>The red <b>Stop Engine</b> warning light indicates a major engine fault that may result in engine damage. The operator should move the vehicle to a safe location and shutdown the engine.</p>
	<p>The <b>Malfunction Indicator (MIL)</b> light provides an indication to the vehicle operator that a fault has occurred on an emission related component. This light may illuminate at the same time as the Check Engine light. The operator can drive the vehicle to the end of their shift and call service to remedy the problem.</p>
	<p><b>High Exhaust System Temperature (HEST) Automatic</b> (passive) regen occurring. Continue to drive or park with the high idle on when possible. This will extend regen intervals. No other action required. No need to log this event. Note difference between this &amp; the DPF light.</p>

	<p>The <b>Diesel Particulate Filter (DPF)</b> light will illuminate when a regeneration is necessary. There are progressive stages of need for regeneration indicated by this light:</p>
<p><b>LEVEL 1</b></p>  <p>(SOLID)</p>	<p>1. DPF on solid (low to medium levels of particulate build-up). The vehicle requires regeneration but should be able to complete the current mission. Perform a regeneration in a reasonable amount of time.</p> <p><b>In Service.</b></p> <p><b>Ensure the Regen Inhibit Switch is not activated.</b></p> <p><b>Initiate a DPF regeneration by switching to a more challenging duty cycle (such as highway driving for at least 20 minutes or pumping)</b></p> <p><b>OR perform a parked regeneration.</b></p>
<p><b>LEVEL 2</b></p>  <p>(Flashing)</p>	<p>2. DPF flashing (medium to high levels of particulate build-up). DPF reaching system limits and regeneration required as soon as possible.</p> <p><b>Out of Service.</b></p> <p><b>Perform a parked regeneration as soon as possible. <u>If lamps remain on after parked regeneration, repeat the parked regeneration. If second attempt fails, notify the shop.</u></b></p>
<p><b>LEVEL 3</b></p>  <p>(Flashing)</p>	<p>3. DPF flashing, CEL lit. System has REACHED limitations.</p> <p><b>Out of Service.</b></p> <p><b>Parked regeneration must be performed in a safe location. <u>If lamps remain on after parked regeneration, repeat the parked regeneration. If second attempt fails, notify the shop.</u></b></p>
<p><b>LEVEL 4</b></p>  <p>(Flashing)</p>	<p>4. DPF flashing, CEL lit, and Stop Engine light lit. System has EXCEEDED limitations. ENGINE SHUTDOWN.</p> <p><b>Out of Service.</b></p> <p><b>Parked regeneration must be performed in a safe location IMMEDIATELY. <u>If lamps remain on after parked regeneration, repeat the parked regeneration. If second attempt fails, notify the shop.</u></b></p> <p><b>Engine can be restarted, but a parked regeneration must be initiated within 30 seconds or engine will shut down.</b></p>