Section 5.18
Parked DPF Regeneration

Regeneration is the oxidation of soot in the Aftertreatment Device (ATD). This process happens during the normal operation cycle of the vehicle; it can occur both passively and actively. If the ATD is not capable of completing a successful regeneration due to duty cycle constraints or other restrictions, a parked regeneration may need to occur.

Section 5.18.1
OPERATION

To initiate a parked regeneration, the following must occur:

- Cycle the park brake OFF to ON – once an ignition cycle
- Cycle the clutch pedal (if configured) – once an ignition cycle
- Park Brake must be ON and the clutch must be released
- Engine should be on the idle governor (can not be in Fast Idle or PTO Mode – not applicable for fire truck applications)
- The engine should be fully warmed up and operating on thermostat temperature (>60°C)
- For J1939 transmissions, the transmission must be cycled to Drive and back to neutral (confirmed by the J1939 data link – current gear and selected gear is 0)
- Vehicle speed must be 0 mph
- Hold the Regen Switch to the ON position for five seconds and release
- Engine Speed < 1000 rpm

When the request is accepted, the DPF Regeneration Lamp will turn on for one second and then go off for the rest of the parked regeneration and the engine RPM will increase. If the DPF is clean the engine will deny the request. The HEST Lamp will flash once every 10 seconds if hardwired, once per second on J1939 clusters. Once the stationary regen is completed successfully, the DPF Regeneration Lamp will remain off and the engine will return to base idle.

If any of the above requirements are removed, the engine will return to idle.

Parked regen initiated by the tool will continue and complete regeneration even if the tool is disconnected and the filter is clean.

To cancel the Parked regeneration, the driver can toggle the Regen Switch to ON for 5 seconds. The DPF Regeneration Lamp will turn on for one second to show acceptance of the cancellation request and then return to the appropriate state as defined by the current level of soot in the engine.

Section 5.18.1.1
Regeneration Options

Two new regeneration options are available:

- DPF Zone Turn On Regen Switch - This feature can be configured to allow a DPF Regeneration via the DPF Regen Switch based on the zone that is programmed (DPF_Zone_Turn_On_Regen_Switch). The switch request will only be honored for the zone programmed or greater.
- Park Brake on Dosing Inhibit - This feature if enabled will not allow dosing unless the park brake

is grounded.

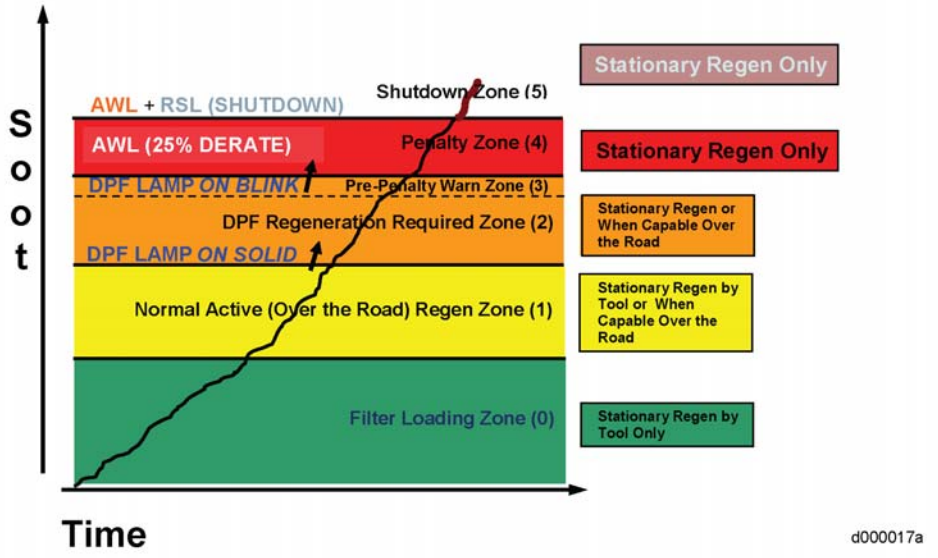

Figure 1. DPF Zone Turn On Regen Switch

Section 5.18.2
DPF Parked (Stationary) Regeneration for hazardous applications ONLY

The ACM2 should be configured to not allow automatically triggered over-the-road regenerations (DPF Parked Regen Only Enable = Enabled).

These are controlled by the 6N4C group at order entry or by the Customer Support Center.

The appropriate options, based on the ACM2, are listed in Table "Parked Regeneration Options" .

Application	ACM2 Setting
Standard	DPF Parked Regen Only Enable – Disabled
Hazardous	DPF Parked Regen Only Enable - Enabled

Table 1. Parked Regeneration Options

Parameter	Setting	Access
DPF Zone Turn on Regen Switch	1 - 5	DDDL 7.X, VEPS, DRS
Extended Idle Auto RPM Elevate	0 (Disable) 1 (Enable)	DDDL 7.X, VEPS, DRS

Table 2. ACM2 Parameters

Section 5.18.2.1
Programming Requirements and Flexibility

The parameters listed in Table "Parameter Settings for Manual Transmissions" must be set for manual transmissions.

Parameter Group	Parameter	Setting
13	Clutch Switch Config	1 – 1 Clutch Switch
13	4 08 DI Selection	1 – 1 Clutch Switch
13	Trans Neutral Input Config	0 – Hardwired 255 – Not Available (typical setting)
13	Park Brake Switch Config	0 – Hardwired (typical setting) 1 – CCVS1 2 – CCVS2 3 – CCVS3
13	1 02 DI Selection	1 – Enable Park Brake Interlock
8	Vehicle Speed Sensor	4 – Magnetic Pickup Vehicle Speed Sensor

Table 3. Parameter Settings for Manual Transmissions

The parameters listed in Table "Parameter Settings for J1939 Transmissions (Allison, Eaton UltraShift, Eaton AutoShift)" must be set for Allison, Eaton UltraShift transmissions.

Parameter Group	Parameter	Setting
13	Clutch Switch Config	0 – No Clutch Switch
13	4 08 DI Selection	0 – Disable
13	Trans Neutral Input Config	1 – Info from J1939
13	Park Brake Switch Config	0 – Hardwired (typical setting) 1 – CCVS1 2 – CCVS2 3 – CCVS3
13	1 02 DI Selection	1 – Enable Park Brake Interlock
8	Vehicle Speed Sensor	3 – J1939 ETCI

Table 4. Parameter Settings for J1939 Transmissions (Allison, Eaton UltraShift, Eaton AutoShift)