5.2 AUTO-ELEVATE IDLE

The Auto-Elevate feature eliminates the hydrocarbon buildup before reaching critical levels by automatically increasing engine RPM. This process results in a temporary increase of exhaust temperatures that effectively oxidizes the hydrocarbon within the ATD.

5.2.1 OPERATION

When Auto-Elevate is enabled, after a predetermined amount of idle, DDEC VI will automatically elevate engine RPM, typically seven to eight minutes, in order to raise exhaust temperatures and eliminate hydrocarbon buildup in the ATD.

Engine speed is slowly elevated from idle to 1200 RPM and is held there for three to four minutes. This is followed by an increase in engine speed to 1600 RPM for the remainder of the cycle.

Once the correct exhaust temperature is achieved, hydrocarbon will be oxidized (burned-off) from the ATD and the engine will return to normal idle speed.

When the process of eliminating the hydrocarbon from the ATD is complete, the timer for the Auto-Elevate feature resets.

Regeneration indicator lamps will work exactly as they do for the regeneration process except that the engine will not derate in zone 4.

Idle Speed	Regen Strategy (Time Until Shutdown)	Auto-Elevate Enabled (Time Until Shutdown)	Auto-Elevate Enabled (Auto-Elevate Begins After)
1100 RPM	38 Hours	17 Hours	15 Hours
900 RPM	95 Hours	26 Hours	22 Hours
600 RPM	190 Hours	32 Hours	28 Hours

Table 5-2 Auto-Elevate

When Auto-Elevate is enabled, a unit can continuously idle for 17 hours, 26 hours, and 32 hours respectively, based upon idle speed until forced to shutdown.

Generally speaking, under this regeneration startegy a unit can continuously idle for 38 hours, 95 hours, and 190 hours respectively, based upon idle speed until forced to shutdown.

5.2.2 PROGRAMMING REQUIREMENTS AND FLEXIBILITY

The Auto-Elevate parameter is listed in Table 5-3.

Diagnostic Name	Parameter Group	Min	Max	Default	Description	Access
Extended Idle Auto PRM Elevate	MCM Parameter	0	1	0	0 – Disabled 1 – Enabled	DDDL 7.0, DRS, VEPS

Table 5-3 Auto-Elevate Parameter

