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## Answers to Questions about Auto-Elevate



### What is Auto-Elevate?

When EPA07 engines are idled for extended periods of time, unburned fuel, also known as hydrocarbon, from the combustion process may collect in the aftertreatment device (ATD). If too much hydrocarbon is allowed to collect in the ATD, the hydrocarbon burning off during the next drive cycle may cause the temperature inside the ATD to become high enough to damage the ATD. Auto-Elevate is a feature that raises the engine speed for a few minutes during the extended idle period to increase the engine's exhaust temperature enough to burn off the collected hydrocarbon. The hydrocarbon is burned off before enough has accumulated to damage the aftertreatment device.

### How does Auto-Elevate work?

When the Auto-Elevate feature is enabled in the engine's control module, after a predetermined amount of idle time, the DDEC VI Motor Control Module (MCM) will automatically elevate engine RPM for roughly seven to eight minutes. This will raise exhaust temperature and cause the accumulated hydrocarbon to burn off.

- On DD15, DD13, Series 60, and MBE 900 engines the engine speed will elevate to 1200 rpm and hold there for three to four minutes. Then the engine speed will increase to 1600 rpm for the remainder of the cycle to burn off the hydrocarbon.
- On MBE 4000 engines the rpm will increase to 1500 rpm and stay for the cycle.
- When the hydrocarbon has been eliminated from the ATD, the engine will return to idle speed and the timer for Auto-Elevate will reset.

### On which engines is Auto-Elevate available?

The Auto-Elevate feature is available on EPA07 Series 60 engines with MCM software Version 62 or higher, and on EPA07 DD15, DD13 and MBE engines with MCM software Version 11.4 or higher. To determine whether the MCM software level is high enough, connect Detroit Diesel Diagnostic Link to the vehicle, open the "Identification" window and observe the MCM Software level (see Figure 1). If the MCM software level is not high enough the MCM will require programming to the latest software level.

### What programming has to be done to make Auto-Elevate work?

First, make sure that the MCM has the correct software level as described above. If it doesn't have late enough software the MCM will have to be updated using a computer equipped with Detroit Diesel Reprogramming System (DDRS) software. Second, the Auto-Elevate feature must be enabled using either Detroit Diesel Reprogramming System software or Detroit Diesel Diagnostic Link software (see Figure 2). To enable the feature open the "Parameters" screen. Under the MCM parameters expand the parameter group "PGR007\_1\_DPFFConfig." On the line labeled "Extended Idle RPM Elevate" click on the parameter setting under the "Value" column. A drop-down list will appear with the options "0 Disabled" or "1 Enabled." Click on the choice "1 Enabled." Next click on the "Send" button located at the lower right-hand corner of the screen. A dialogue box will appear requiring the programming password. Enter the vehicle's parameter password and click OK. The Auto-Elevate feature will now be enabled.

### Inform the vehicle's driver.

Because Auto-Elevate will ramp up the engine idle rpm without an input from the driver, the driver should be informed about the new feature. Otherwise he or she may be surprised when the engine rpm starts ramping up on its own and shut the engine down before it has a chance to burn off the hydrocarbon that is collected in the ATD.

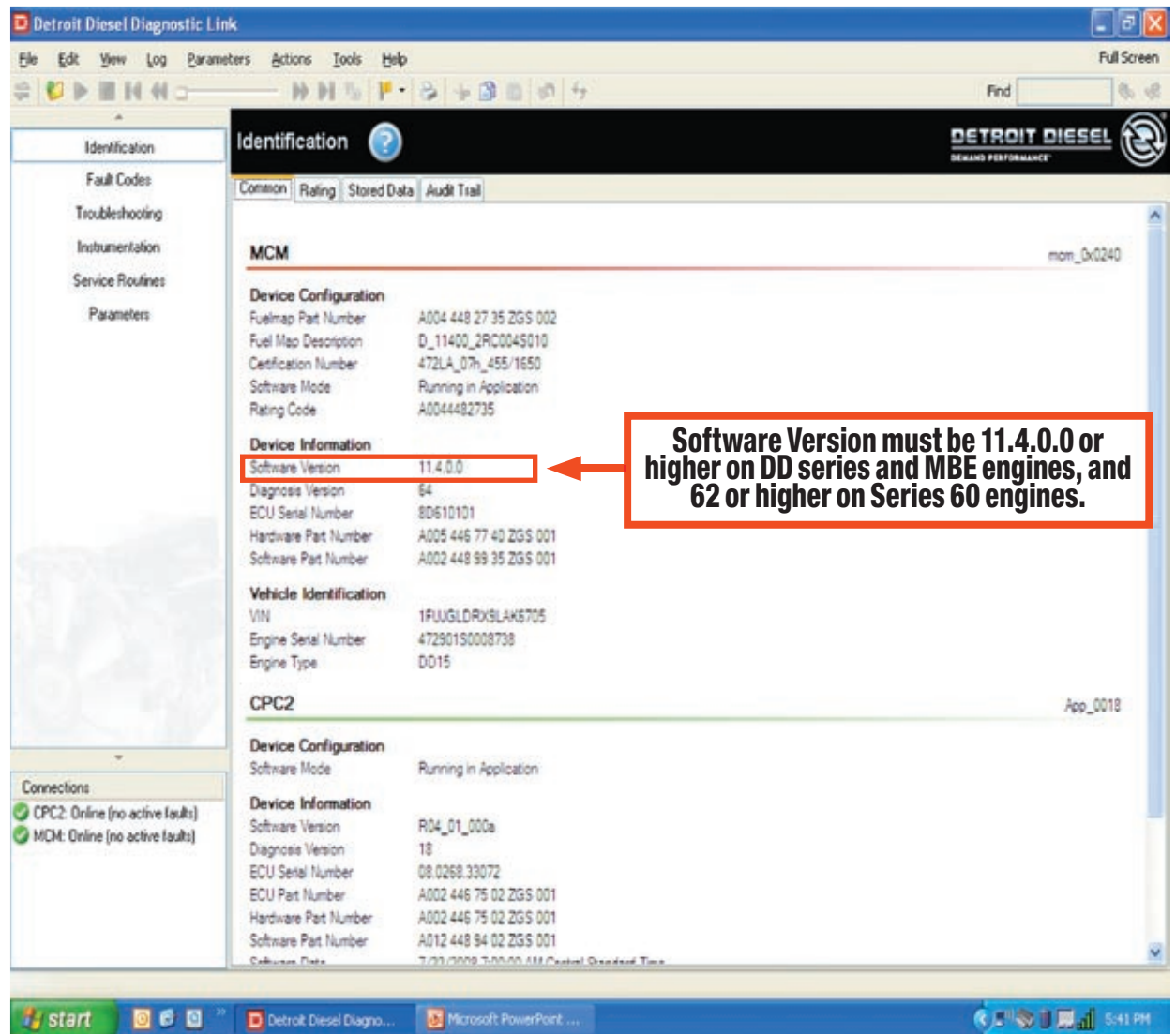


Figure 1

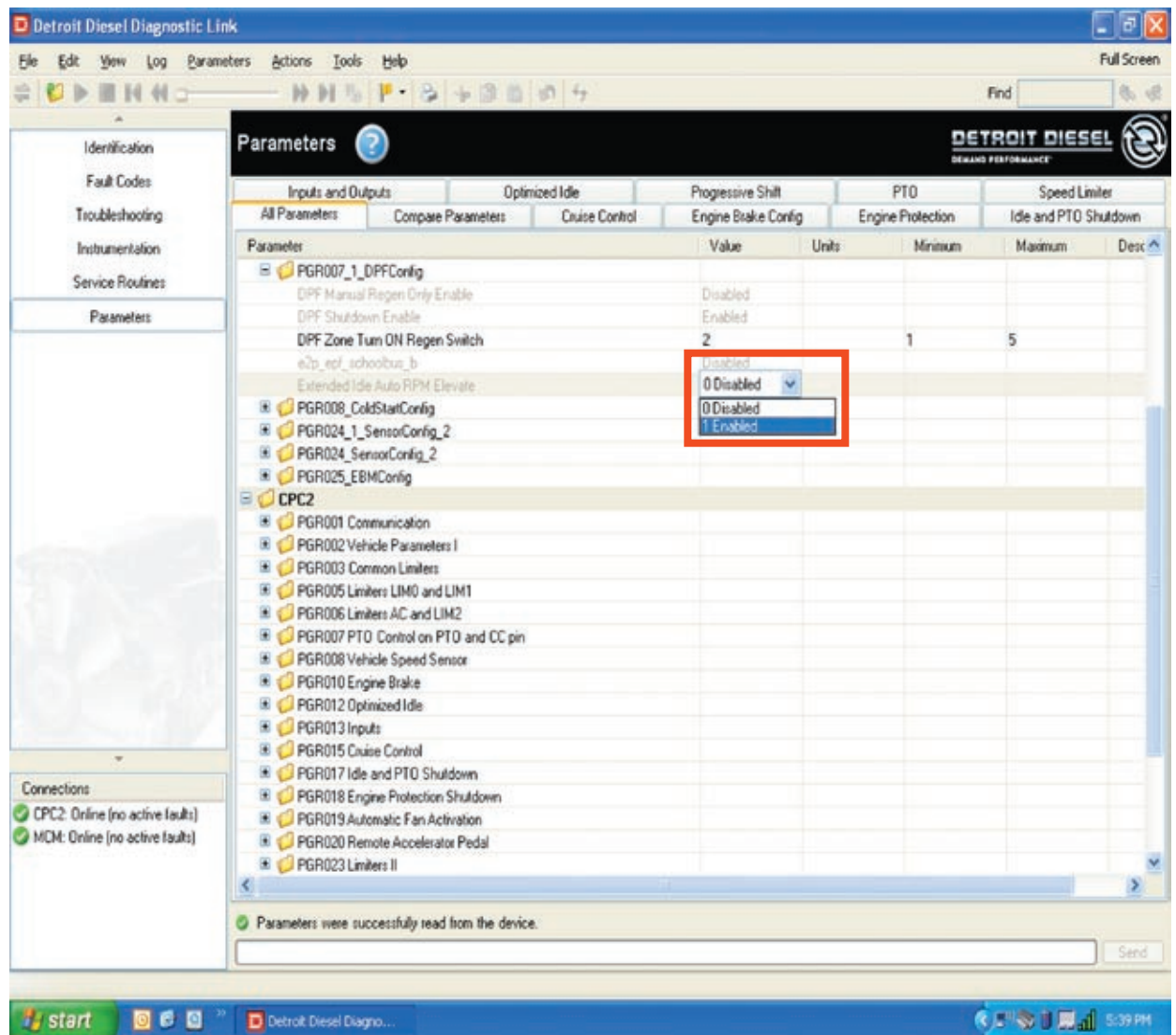


Figure 2



## wheels & deals

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