

## 15.1 Engine RPM Flare During Upshifts

Check as follows:

1. Connect DiagnosticLink 8.04 SP2 or higher.

### **WARNING**

#### PERSONAL INJURY

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

### **WARNING**

#### PERSONAL INJURY

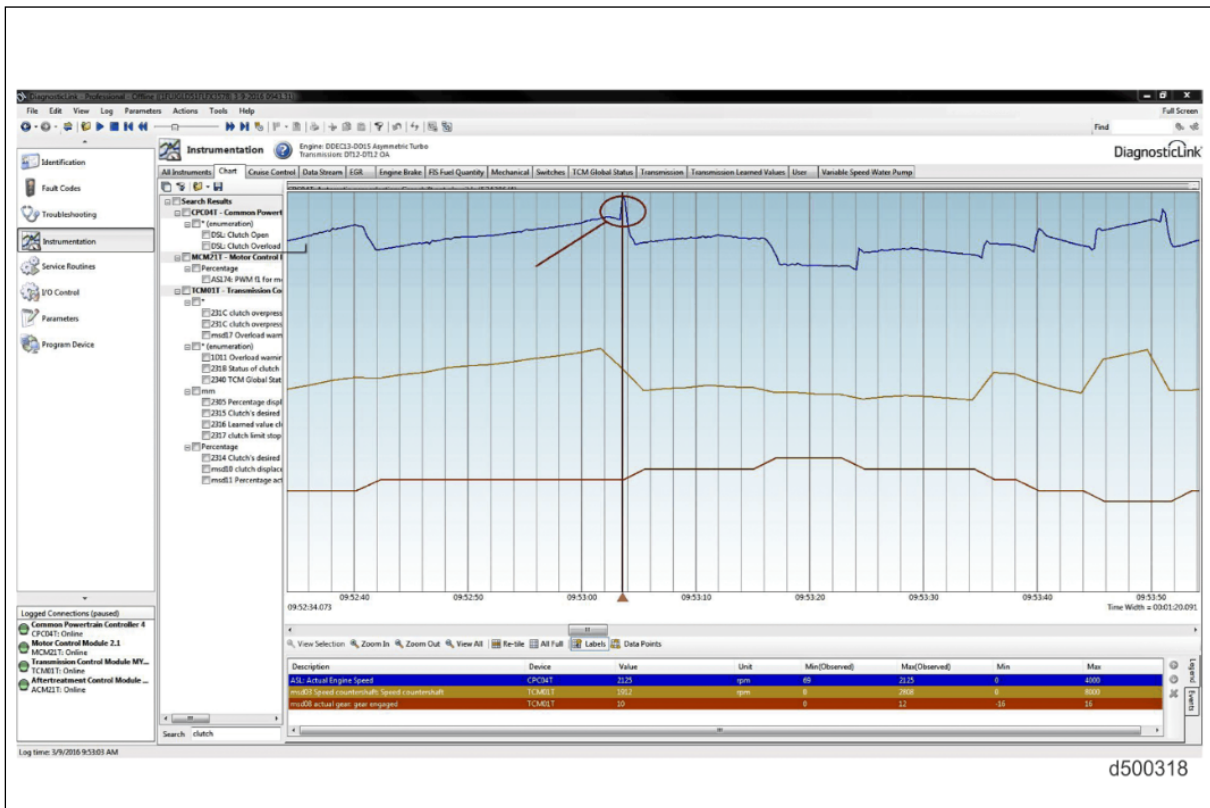
To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

### **WARNING**

#### ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

2. Start the engine and idle for two minutes.
3. Is the transmission air supply pressure greater than 689 kPa (100 psi)?
  - 3.a Yes; [Go to step 6.](#)
  - 3.b No; [Go to step 4.](#)
4. Shut the engine OFF.
5. Inspect transmission air supply lines and fittings for leaks; repair as necessary. Repeat all steps in this procedure.
6. Take unit on a test drive to confirm complaint. Note that this condition is more noticeable on 8 through 12 gear upshift under load. Retain log file of drive.
7. Review the drive log file. In log file, monitor the listed instruments below: Does ASL Actual Engine Speed flare up as shown below?
  - ASL Actual Engine Speed
  - Msd03 Countershaft Speed
  - Msd08 Actual Gear Engaged



- 7.a Yes; [Go to step 9.](#)
- 7.b No; [Go to step 8.](#)
8. Under the Actions menu, select Transmission heading and then choose Countershaft Brake Test; execute routine. Does the result indicate a successful completion test pass? Note that the test may have to be performed up to three times in order to get a "pass" result.. Unit needs to be up to full operating temperature.
  - 8.a Yes; perform another road test (preferably with loaded trailer if available). Review log for engine flare. If unable to duplicate after second road test, release vehicle. If flare is present, [Go to step 9.](#)
  - 8.b No; [Go to step 9.](#)
9. Remove transmission.
 

[Refer to section "Removal of the Transmission"](#) .
10. Rebuild countershaft brake.
 

[Refer to section "Removal of the Counter Shaft Brake Valve"](#) .

[Refer to section "Installation of the Counter Shaft Brake Valve"](#) .

[Refer to section "Removal of the Countershaft Brake Seals and Disks"](#) .

[Refer to section "Installation of the Countershaft Brake Seals and Disks"](#) .
11. Install transmission. [Refer to section "Installation of the Transmission"](#) .
12. Replace transmission fluid. Refer to Original Equipment Manufacturer (OEM) procedures.