

## 8.8.1 Rail Pressure Bleed Off Test Using DDDL (EPA07 and EPA10) - Three-Filter Fuel System

The Rail Pressure Bleed Off (RPBO) test will allow a technician to identify a leak in the high pressure fuel system. A leakage rate of 280 bar to 10 bar in 35 seconds or more is acceptable. A leak in one of the following locations will show a fast bleed-down rate over time.

- High pressure fuel pump (pumping elements)
- Fuel feed lines from the high pressure pump to fuel rail
- Fuel transfer lines to each fuel injector
- Leak at the fuel rail pressure sensor
- Leaking pressure limiting valve
- Internal injector amplifier or needle leakage to the return
- Internal injector amplifier or needle leakage into the cylinder

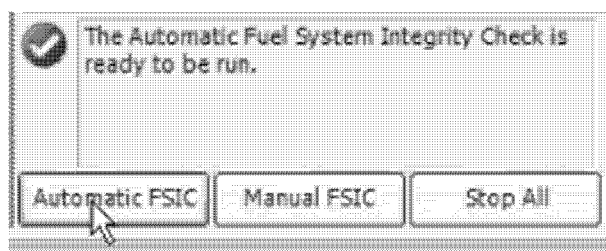
Test as follows:

1.  Using DDDL 7.X, go to the "Service Routines" window and click on the "Fuel System Integrity Check" tab.



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2.  Click "Automatic FSIC."



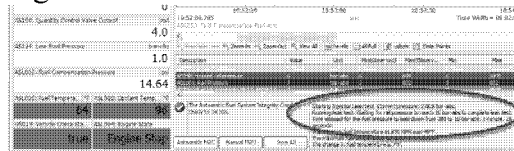
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3.  Start engine and allow FSIC routine to run. The engine will shut down when the routine is complete. Keep the key in the ON position until "Test complete" is shown.

Time	Label
14:20:06.885	Tests complete.
14:20:06.885	The minimum fuel temperature at 850 RPM was 105°F. ...
14:20:06.886	Resetting engine idle speed.

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4.  Once the FSIC routine has completed, review rail pressure bleed down time in the log file. The rail pressure bleed down results can be viewed in the text box at the bottom right corner of the log file screen.



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5.  Rail pressure bleed-down time should be no less than 35 seconds from 280 bar to 10 bar .
6.  A system that has a leak in the high pressure fuel circuit will show the following characteristic.

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Tests complete.
The minimum fuel temperature at 850 RPM was 13.33 degrees Celsius. ...
Time elapsed for the fuel pressure to leak down from 280 to 10 bar abs: 21 seconds.
Resetting engine idle speed.
Resetting Desired Rail Pressure.
SR015 Idle Speed Modification: Stop()=0

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7.  Was the bleed-down rate less than 35 seconds from 280 to 10 bar?
1.  Yes; Refer to section "High Pressure Fuel System - Leak Test - Three-Filter Fuel System" .
  2.  No; return to original troubleshooting.

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