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## Service Information Bulletin

| SUBJECT                        | DATE     |
|--------------------------------|----------|
| SPN 3246/FMI 0 - EPA10 - GHG14 | May 2013 |

### Additions, Revisions, or Updates

| Publication Number / Title | Platform                       | Section Title                     | Change                          |
|----------------------------|--------------------------------|-----------------------------------|---------------------------------|
| DDC-SVC-MAN-0084           | EPA10/<br>GHG14 DD<br>Platform | SPN 3246/FMI 0 -<br>EPA10 - GHG14 | This is a new FMI for SPN 3246. |



13400 Outer Drive, West, Detroit, Michigan 48239-4001  
 Telephone: 313-592-5000  
[www.demanddetroit.com](http://www.demanddetroit.com)

## 2 SPN 3246/FMI 0

This diagnostic is typically Diesel Particulate Filter (DPF) Outlet Temperature - Very High.

**NOTE:** Do not clear fault codes prior to any repair.

**NOTE:** The Primary Failed Component must be covered under warranty for the DPF to be covered under warranty.

Check as follows:

1. Connect DDDL 7.X.
2. Turn the ignition ON (key ON, engine OFF).
3. Are any of the following Fault codes active?
  - SPN 3246/FMI 8 DPF Outlet Temperature – Signal Spike
  - SPN 3246/FMI 20 DPF Outlet Temperature Sensor Stuck
  - SPN 3246/FMI 21 Outlet Temperature Sensor – Not Plausible
  - SPN 3250/FMI 0 DOC Outlet Temperature Very High
  - SPN 3250/FMI 16 DOC Outlet Temperature High
    - a. Yes; perform the troubleshooting for the fault code.
    - b. No; Go to step 4.
4. Monitor DPF outlet temperature. Is the DPF outlet temperature greater than 760°C (1400°F)?
  - a. Yes; Go to step 7.
  - b. No; Go to step 5.



### **WARNING: ENGINE EXHAUST**

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



### **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.

5. Run the engine at 1200 rpm for ten minutes.
6. Monitor the Diesel Oxidation Catalyst (DOC) outlet temperature and the DPF outlet temperature. Are the temperatures within 25°C (77°F) of each other?
  - a. Yes; Go to step 9.
  - b. No; Go to step 7.
7. Turn ignition OFF.
8. Disconnect the DPF outlet temperature sensor and inspect the connector for damaged, bent, spread, or corroded pins. If the DPF outlet temperature sensor connector is OK, check the connections upstream of the Motor Control Module (MCM):
  - Pin 5 of the Aftertreatment Device (ATD) harness 14-pin connector
  - Pin 19 of the Vehicle Interface Harness (VIH) 37-pin connector
  - Pin 97 of the ACM 120-pin connector
    - a. If damage is found, repair the connector as necessary. Verify repairs.
    - b. If no damage is found, replace the DPF outlet temperature sensor. Refer to section "Removal of the GHG14 Diesel Particulate Filter Outlet Temperature Sensor".
9. View DDEC Reports, Life to Date, Highest Engine Speed.

- a. If the highest engine speed is over 2800 rpm and within the last month or 5000 miles, inspect the valve train for damage and cam lobe slippage.
  - b. If the highest engine speed is under 2800 rpm, Go to step 10.
10. Measure the Air Inlet Restriction with a gauge (do not use the gauge on the air filter assembly). Is the Air Inlet Restriction greater than 18 H<sub>2</sub>O"?
  - a. Yes; repair the cause of the high inlet restriction.
  - b. No; Go to step 11.
11. Pressurize the intake track, including the Charge Air Cooler and associated piping, inspecting for leaks. Was a leak found?
  - a. Yes; repair the leak.
  - b. No; Go to step 12.
12. With engine OFF, visually inspect the EGR linkage for damage or limited travel. Was damage found?
  - a. Yes; repair the linkage.
  - b. No; Go to step 13.
13. Remove the piping to the turbocharger. Inspect the turbocharger blades/vanes for damage. Was damage found?
  - a. Yes; repair the turbocharger and repair the cause of damage to the turbocharger.
  - b. No; Go to step 14.
14. Inspect for excessive oil coming out of the turbocharger compressor wheel or turbine wheel. Was oil found?
  - a. Yes; replace the turbocharger.
  - b. No; Go to step 15.
15. Install the piping to and from the turbocharger. Go to step 16.
16. Using DDDL/DDRS sweep the Intake Throttle Valve. Is the intake throttle valve stuck or have limited travel?
  - a. Yes; replace the Intake Throttle Valve (ITV).
  - b. No; Go to step 17.
17. Inspect for exhaust leaks before the ATD. Are any exhaust leaks found?
  - a. Yes; repair the exhaust leak.
  - b. No; Go to step 18.
18. Inspect for plugged delta P ports. Are the delta P ports plugged?
  - a. Yes; clean the delta P ports.
  - b. No; Go to step 19.
19. Using DDDL/DDRS, key ON, engine OFF, is the barometric pressure sensor reading above 10 PSIA and below 16 PSIA?
  - a. Yes; Go to step 20.
  - b. No; try a test MCM.
20. Compare Inlet Manifold Pressure (IMP) and Barometric Pressure Reading. Are both sensor readings within 1.2 PSIA of each other?
  - a. Yes; Go to step 21.
  - b. No; replace the Inlet Manifold Pressure Sensor.
21. Compare CAC outlet temperature sensor reading with the inlet manifold temperature sensor reading. Are the temperature readings within 25°C (77°F) of each other?
  - a. Yes; Go to step 22.
  - b. No; replace the sensor that is not plausible.
22. Inspect the CAC outlet temperature sensor connector for corrosion. Was corrosion found?
  - a. Yes; replace the sensor and pigtail.
  - b. No; Go to step 23.
23. Inspect the Inlet Manifold Temperature (IMT) Sensor connector for corrosion. Was corrosion found?
  - a. Yes; replace the sensor and pigtail.
  - b. No; Go to step 24.
24. Perform Idle Speed Balance (ISB) test. Refer to section "Checking the Idle Speed Balance". Was a faulty injector found?
  - a. Yes; replace the injector.
  - b. No; Go to step 25.

25. Perform a Relative Cylinder Compression Test with DDDL. Refer to section "Relative Cylinder Compression Test". Was a faulty cylinder found?
  - a. Yes; Perform a Mechanical Cylinder Compression Test, Refer to section "Mechanical Cylinder Compression Test".
  - b. No; Go to step 26.
26. Check the camshaft timing per the workshop manual. Are the camshafts and crankshaft in time?
  - a. Yes; contact the Detroit™ Customer Support Center at (800-445-1980) for further instructions. Please have the completed troubleshooting ready to email, the first log file KOEO, (Key ON, Engine OFF), Idle Speed Balance Log File, parked regeneration log file and DDEC reports as an XTR File.
  - b. No; cut cylinder using DDDL/DDRS to identify which cylinder is over fueling. If an over fueling cylinder cannot be identified, please contact the Customer Support Center with the following information:
    - Completed troubleshooting results
    - First log file KOEO, (Key ON, Engine OFF)
    - Idle Speed Balance Log File
    - Parked regeneration log file
    - DDEC reports as an XTR File