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Service Information Bulletin

SUBJECT	DATE
SPN 3246 (ACM)(EPA10;GHG14)	March 2015

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	DD Platform	SPN 3246/FMI 15 - EPA10-GHG14	Updating existing section with new information.



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2 SPN 3246/FMI 15 - EPA10 - GHG14

Diesel Particulate Filter Outlet Temperature - High

Table 1.

SPN 3246/FMI 15	
Description	This Code Sets When The Diesel Particulate Filter (DPF) Outlet Temperature is Greater Than 730°C (1346°F) for More Than Two Seconds
Monitored Parameter	DPF Outlet Temperature Sensor
Typical Enabling Conditions	Always On
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Are Met
Typical Duration	Two Seconds
Dash Lamps	CEL, MIL
Engine Reaction	25% Derate
Verification	Parked Regeneration

Check as follows:

Possible causes:

- Faulty DPF outlet temperature sensor
- Fluid intrusion into the exhaust
- Biased input for fuel mapping
- Incorrect or over-contributing fuel injectors
- Restricted air filter
- Incorrect camshaft timing
 1. Connect DiagnosticLink®. Go to step 2.
 2. Turn the ignition ON (key ON, engine OFF). Go to step 3.
 3. Check for any fuel system fault codes. Are there fuel system fault codes present?
 - a. Yes; diagnose the fuel system codes first.
 - b. No; Go to step 4.
 4. Check for multiple DPF outlet temperature sensor fault codes. Is code SPN 3246/FMI 8 present?
 - a. Yes; diagnose code SPN 3246/FMI 8 first. Verify repair.
 - b. No; Go to step 5.
 5. Check for any SPN 190/FMI engine over-speed fault codes. Are any SPN 190/FMI fault codes active or previously active?
 - a. Yes; Check DDEC reports for an engine over-speed and inspect camshafts for spun cam lobes. Go to step 6.
 - b. No; Go to step 6.
 6. Check for multiple high exhaust temperature fault codes. Are fault codes SPN 3250/FMI 0, SPN 4360/FMI 15 or SPN 4363/FMI 0 present?
 - a. Yes; Go to step 7.
 - b. No; Go to step 9.
 7. Remove and inspect the turbocharger exhaust outlet pipe. Are there signs of fluid in the exhaust?
 - a. Yes; determine the cause of fluid in the exhaust. Repair as necessary. Inspect the Diesel Oxidation Catalyst (DOC) and Diesel Particulate Filter (DPF).
Refer to section "Diesel Oxidation Catalyst (DOC) Inspection - All Years" .
Refer to section "Diesel Particulate Filter (DPF) Inspection - All Years". Verify repair.
 - b. No; Go to step 8.
 8. Remove and inspect the Exhaust Gas Recirculation (EGR) outlet pipe. Refer to section "Removal of the Exhaust Gas Recirculation Hot Pipe". Is there fuel present in the EGR outlet pipe?

- a. Yes;
For two-filter fuel systems, Refer to section "Test-E - Two-Filter Fuel System" . Verify repair.
For three-filter fuel systems, Refer to section "Test-E - Three-Filter Fuel System" . Verify repair.
 - b. No; Go to step 9.
9. Check for any air management system fault codes. Are there any air management system fault codes present?
- a. Yes; diagnose the air management system fault codes first. Verify repair.
 - b. No; Go to step 10.
10. Remove and inspect the air filter; refer to OEM literature for removal and inspection procedures. Is the air filter restricted?
- a. Yes; replace the air filter. Verify repair.
 - b. No; Go to step 11.

NOTE: A cold soak may take up to eight hours.

11. Allow the engine to cold soak so the temperature of the exhaust stabilizes with the ambient air temperature. Go to step 12.
12. Turn the ignition ON (key ON, engine OFF). Go to step 13.
13. Monitor the DPF outlet temperature sensor reading. Is the DPF outlet temperature sensor within 25°C (45°F) of the other exhaust temperature sensors?
- a. Yes; Go to step 14.
 - b. No; replace the DPF outlet temperature sensor.
For EPA10 vehicles, Refer to section "Removal of the EPA10 Diesel Particulate Filter Outlet Temperature Sensor". Verify repair.
For GHG14 vehicles, Refer to section "Removal of the GHG14 Diesel Particulate Filter Outlet Temperature Sensor". Verify repair.
14. Compare the barometric sensor reading to the intake manifold pressure sensor reading. Are the readings within 8.27 kPa (1.2 psi) of each other?
- a. Yes; Go to step 15.
 - b. No; replace the intake manifold pressure sensor. Refer to section "Removal of the Intake Pressure/Temperature Sensor" . Verify repair.
15. Compare the intake manifold temperature sensor reading to the charge air cooler temperature sensor reading. Are the readings within 5°C (9°F) of each other?
- a. Yes; Go to step 16.
 - b. No; replace the intake manifold temperature sensor. Refer to section "Removal of the Intake Manifold Air Temperature Sensor" . Verify repair.



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.

16. Start the engine. Go to step 17.
17. Perform the Idle Speed Balance (ISB) test. Refer to section "Checking Idle Speed Balance" . Do all of the injectors pass the ISB test?
- a. Yes; Go to step 18.
 - b. No; replace the faulty injector. Verify repair.
18. Turn the engine OFF. Go to step 19.
19. Remove the exhaust pipe from the turbocharger. Go to step 20.

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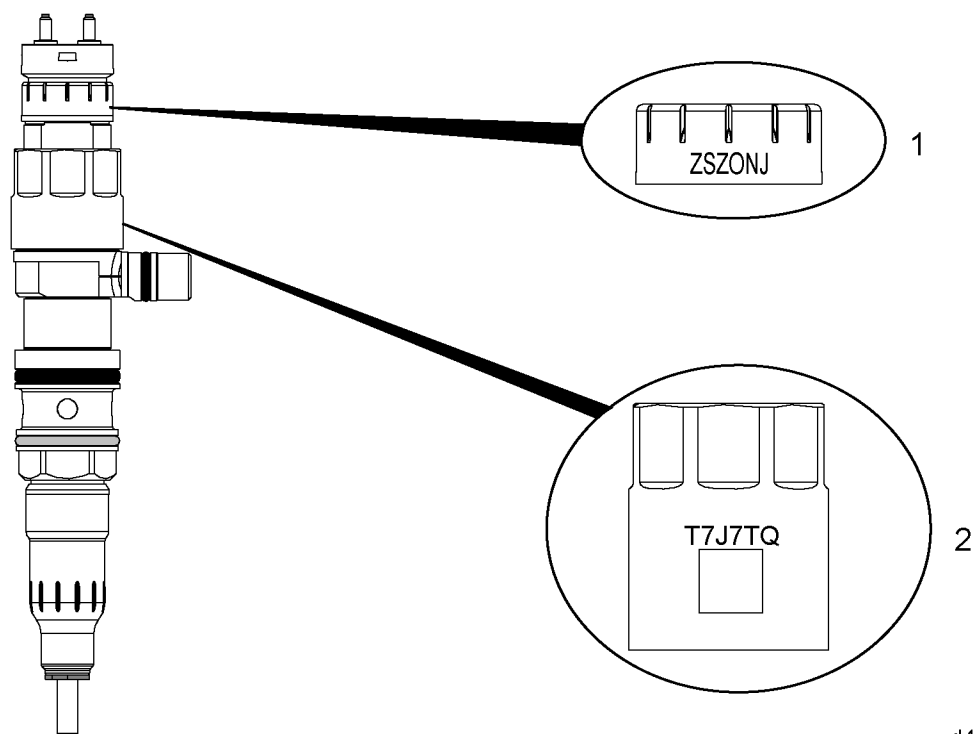
20. Start the engine. Go to step 21.

NOTE: There will be a small amount of black smoke present when initially snapping the throttle. The black smoke should dissipate within a few seconds.

Any black smoke continuing to come out after the initial throttle snap should be considered excessive.

NOTE: It is not EPA-compliant to permanently bypass the Aftertreatment System (ATS). The ATS should only be disconnected for diagnostic purposes.

21. Snap the throttle while watching the exhaust. Is there an excessive or continuous amount of black smoke present from the exhaust when the throttle snap is performed three times?
 - a. Yes; Go to step 22.
 - b. No; Go to step 23.
22. Using DiagnosticLink, manually cut out one cylinder at a time while snapping the throttle pedal. Does the smoke stop when the cylinders are cut out?
 - a. Yes; replace the injector in that cylinder. Verify repair.
 - b. No; Go to step 23.
23. Remove and inspect the EGR cooler outlet pipe. Is there fuel present in the EGR cooler outlet pipe?
 - a. Yes;
 - For two-filter fuel systems, Refer to section "Test-E - Two-Filter Fuel System" . Verify repair.
 - For three-filter fuel systems, Refer to section "Test-E - Three-Filter Fuel System". Verify repair.
 - b. No; Go to step 24.
24. Perform an Automatic Fuel System Integrity Check (FSIC) routine and monitor Actual Fuel Mass at 600 rpm. Does Actual Fuel Mass exceed 50 mg/st at 600 rpm?
 - a. Yes; stop FSIC routine and inspect for stuck engine brakes. Refer to section "Checking for Poor Engine Brake Performance" . Verify repair.
 - b. No; Go to step 25.
25. Verify the fuel injector(s) part number is correct for engine application.
 - For two-filter fuel system, Refer to section "Removal of the Fuel Injector - Two-Filter System" . Is the fuel injector(s) part number correct for the application?
 - For three-filter fuel system, Refer to section "Removal of the Fuel Injector Cup - Three-Filter System". Is the fuel injector(s) part number correct for the application?



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- a. Yes; verify the camshaft timing. Refer to section "Camshaft Timing Verification" . Repair as necessary. Verify repair
- b. No; install the correct injectors.
For two-filter fuel systems, Refer to section "Test-E - Two-Filter Fuel System" . Verify repair.
For three-filter fuel systems, Refer to section "Test-E - Three-Filter Fuel System". Verify repair.