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Service Information Bulletin

SUBJECT	DATE
SPN 2631	December 2018

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0015	EPA07 MBE900	2631/FMI 2	Made corrections.

DiagnosticLink users: Please update the troubleshooting guides in DiagnosticLink with this newest version. To update the tool troubleshooting guide, open DiagnosticLink and from the Help – Troubleshooting Guides menu, select the appropriate troubleshooting manual, then click Update.



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101.2 SPN 2631/FMI 2

The diagnosis is typically Turbocharger Boost Performance.

Check as follows:

1. Using the identification tab in DiagnosticLink®, verify the Motor Control Module (MCM) software version. Is the MCM software version 11.4 or greater?
 - [a] Yes; go to step 2.
 - [b] No; reprogram the MCM using “update device software,” then go to step 2.

NOTE:

Be sure to also inspect turbo, intake manifold and EGR hoses and clamps.

2. Inspect air filter and air inlet piping to turbocharger for blockage, or leaks. Is blockage or leakage found?
 - [a] Yes; repair as necessary.
 - [b] No; go to step 3.
3. Perform CAC inspection and leak test. Refer to OEM literature for procedure.
 - [a] If inspection and/or leak test fail, repair as necessary.
 - [b] If CAC inspection passes. go to step 4.
4. With Ignition ON engine OFF, compare Baro pressure against Intake Manifold and Compressor Inlet Pressure. Are Intake Manifold and Compressor Inlet pressures within 0.6 psi of Baro?
 - [a] Yes; go to step 5.
 - [b] No; replace suspect sensor.
5. Remove the Intake Manifold Pressure Sensor. Inspect sensing cone for soot/oil contamination. Is the sensor cone contaminated?
 - [a] Yes; replace the Intake Manifold Pressure Sensor.
 - [b] No; go to step 6
6. Check Inlet Air Delta-P Sensor with Ignition ON engine OFF. Does the Differential Pressure Compressor In pressure read 0?
 - [a] Yes; go to step 7.
 - [b] No; inspect Inlet Air delta P Sensor hoses and system sensor for damaged leaks or plugged orifices. If no damage is found, replace the Inlet Air delta P Sensor.
7. Check Intake Throttle Valve operation. Using ITV Service Routine, command ITV to 50%. Does the ITV actual position read between 47 and 53%?
 - [a] Yes; go to step 8
 - [b] No; replace the Intake Throttle Valve.

8. Command ITV to 90%. Does the ITV actual position read between 87 and 93%?
 - [a] Yes; go to step 9.
 - [b] No; replace the Intake Throttle Valve.
9. Check EGR Valve Operation. Using Activate Outputs Service Routine, command PWM1 to 50% while monitoring EGR Actual Position. Does EGR Actual Position read between 42-58%?
 - [a] Yes; go to step 10.
 - [b] No; go to step 11.
10. Command PWM1 to 90% while monitoring EGR Actual Position. Does EGR Actual Position read between 82-99%?
 - [a] Yes; go to step 14.
 - [b] No; go to step 11.
11. Turn the ignition OFF.
12. Disconnect EGR Valve Harness connector.
13. Inspect connector for damaged corroded or spread pins. Is pin damage found?
 - [a] Yes; repair as necessary.
 - [b] No; go to step 14.
14. Remove the EGR Valve; inspect valve for heavy soot or coolant contamination or leakage. Is contamination or leakage found?
 - [a] Yes; repair root cause as necessary, and replace the EGR Valve.
 - [b] No; go to step 15.
15. Verify exhaust flap configuration. Is unit equipped with an air-activated exhaust flap?
 - [a] Yes; go to step 16.
 - [b] No; unit is equipped with an electric-activated exhaust flap; go to step 17.
16. Procedure for air-activated exhaust flap: Using Activate Outputs Service Routine, command SW 4 to ON then OFF. Exhaust Flap Actuator should be fully extended when ON and fully retracted when OFF. Does the actuator fully extend and retract?
 - [a] Yes; go to step 18.
 - [b] No; verify air supply. If OK, inspect linkage and exhaust flap for binding.
17. Procedure for Electronic Exhaust Flap Actuator: Inspect the Exhaust Flap Actuator when the ignition is turned ON. As soon as the ignition is on, the Exhaust Flap Actuator (SRA2) will run a self-test (close and open). Does the actuator fully extend and retract?
 - [a] Yes; go to step 18.
 - [b] No; Check Engine Light (CEL) will come on - fault code SPN 615/FMI9. Complete Power Service Literature Troubleshooting procedures for the fault.
18. Perform a parked regeneration.

19. After regeneration completes, monitor DPF Inlet pressure while at 1500 rpm no load. Is the DPF Inlet Pressure greater than 2 psi?

[a] Yes; remove and inspect DOC and DPF for blockage/obstruction. If found, replace suspect component as necessary.

[b] No; replace turbocharger and verify repairs.

101.2.1 Verify Repairs

Verify repairs as follows:

1. Turn ignition OFF.
2. Reconnect any electrical connections that were disconnected to perform the diagnosis.
3. Clear codes with DiagnosticLink® 8.08