### Service Information Bulletin

**SUBJECT**

<table>
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<th>SPN 2631/FMI 1 - ALL YEARS</th>
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**DATE**

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<th>February 2013</th>
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### Additions, Revisions, or Updates

<table>
<thead>
<tr>
<th>Publication Number / Title</th>
<th>Platform</th>
<th>Section Title</th>
<th>Change</th>
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<td>DDC-SVC-MAN-0084</td>
<td>DD Platform</td>
<td>SPN 2631/FMI 1 - ALL YEARS</td>
<td>Added an instruction to inspect the air line fitting on the wastegate solenoid as well as the air supply line routing.</td>
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Telephone: 313-592-5000  
www.demanddetroit.com
2 **SPN 2631/FMI 1 - ALL YEARS**

This diagnostic is typically Low Air Flow.

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<td><strong>Engine Parameter</strong></td>
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1. Connect DDDL/DDRS 7.08 SP2 or newer.
2. Are any other faults including SPN 51/FMI (any) also present?
   a. Yes; repair those faults first.
   b. No; If only SPN 2631/ FMI 1 is present, clear code and road test; complete verification cycle. If fault returns, Go to step 3.
3. Inspect entire air intake system including the Charge Air Cooler (CAC) for loose clamps, leaks and/or restrictions.
   a. If air intake system leaks or restrictions are found, repair as necessary.
   b. If no air intake system leaks are found, Go to step 4.

**NOTE:** For DD13 engines, the wastegate is command "on" during a Parked Regen.

4. If equipped, inspect the wastegate actuator and the plumbing to and from the actuator.
   a. If damage is found, repair as necessary.
   b. If no damage is found, Go to step 5.
   c. If not equipped, Go to step 7.
5. Inspect air line to wastegate solenoid for the turbo. Does the wastegate solenoid have a dedicated air line from the vehicle primary air tank with a minimum pressure of 3.0 bar? 
   a. Yes; Go to step 7.
   b. No. If the air line supplies other components, it will have to be altered. Go to step 6.
6. Ensure the vehicle air supply is at least 100 psi. Inspect the air line connection to the wastegate solenoid; if there are leaks, repair or replace as necessary.
7. Turn ignition ON (key ON, engine OFF).
8. Compare intake manifold pressure to ambient pressure (Baro).
   a. If the intake manifold pressure is within 0.4 ambient pressure (Baro), Go to step 11.
   b. If the intake manifold pressure is not within 0.4 ambient pressure, Go to step 9.
9. Disconnect intake manifold pressure/temperature sensor.
10. Inspect intake manifold pressure/temperature sensor connector for bent, spread or corroded pins.
a. If damage is found, repair connector as necessary.
b. If no damage is found, replace the intake manifold pressure/temperature sensor. Refer to section "Removal of the Intake Pressure/Temperature Sensor".

12. Is the EGR delta p voltage between 0.55 and 0.83 volts?
   a. Yes; Go to step 15.
   b. No; Go to step 13.
13. Remove the EGR delta p sensor from the mounting pad, leave electrical harness connected.
14. Is the EGR delta p voltage between 0.55 and 0.83 volts?
   a. Yes; Go to step 15.
   b. No; replace the EGR delta p sensor. Refer to section "Removal of the Delta P Sensor".
15. Inspect the EGR delivery pipe delta p pressure ports for blockage.
   a. If excessive build-up or blockage is found, clean the venturi pipe and reinstall the sensor.
   b. If no damage is found, Go to step 16.
16. Remove the EGR cooler hot pipe, EGR crossover pipe and delivery pipe and inspect for excessive build-up or blockage.
   Refer to section "Removal of the Exhaust Gas Recirculation Hot Pipe".
   Refer to section "Removal of the Exhaust Gas Recirculation Crossover Tube".
   a. If excessive build-up or blockage is found, clean piping and replace EGR cooler.
   b. If there is no excessive build-up or blockage, Go to step 17.
17. Using SCR voltage service routine, monitor the Diesel Oxidation Catalyst (DOC) inlet pressure (pin 87) and Diesel Particulate Filter (DPF) outlet pressure (pin 72) voltages with key ON, engine OFF.
18. Are the DOC inlet and DPF outlet pressure sensors voltages between .44 to .56 volts?
   a. Yes, Go to step 19.
   b. If the voltage is greater than .56 volts, replace the suspect sensor.
   c. If the voltage is less than .44 volts, inspect electrical connections between suspect sensor connector and Aftertreatment Control Module (ACM) for bent, spread, or corroded pins. Repair as necessary.
19. Inspect the DOC and DPF pressure sensor tubes and elbows for leaks, kinks, or blockage.
   a. If leaks, kinks, or blockage are found, repair as necessary.
   b. If no damage is found, Go to step 20.
20. Disconnect the turbo inlet elbow and outlet pipe, and inspect for signs of oil residue/contamination or foreign debris.
   a. If contamination is found, contact the Customer Support Center for further instruction.
   b. If no contamination is found, Go to step 21.

**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.

**WARNING: HOT EXHAUST**

During parked regeneration the exhaust gases will be extremely HOT and could cause a fire if directed at combustible materials. The vehicle must be parked outside.

21. Obtain a log file with the following conditions while monitoring DOC Inlet and DPF Outlet Pressures and contact the Customer Support Center at (800) 445-1980 for further instructions:
   a. Start the engine and run at idle for one minute.
b. Raise engine speed to 1500 rpm for one minute.

c. Perform a parked regeneration. Refer to section "Performing a Parked Regeneration Using DDDL".