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Service Information Bulletin

SUBJECT	DATE
SPN 4374/FMI 0 (ACM2.1) (GHG14)	August 2013

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	DD Platform	SPN 4374/FMI 0 - GHG14	Updating procedure in steps 11 and 12. Adding steps 15 and 16.



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2 SPN 4374/FMI 0 – GHG14

This diagnostic is typically Under Pressurized DEF System.

Check as follows:

Table 1.

SPN 4374/FMI 0	
Description	This diagnostic is typically an under pressurized DEF system
Monitored Parameter	DEF pump speed vs. DEF Pressure
Monitor Sequence	None
Execution Frequency	Continuous when enabling conditions met
Typical Duration	Continuous until resolved
Dash Lamps	MIL, CEL
Engine Reaction	Derate 25%
Verification	SCR ADS Self Check

NOTE: Retain a log file if Detroit™ customer assistance is required.

NOTE: SPN 520328/FMI 7 or SPN 520327/FMI 4 may also set as a result of this fault.

1. Connect DDDL/DDRS 7.08 SP2 or newer version.
2. Turn the ignition ON (key ON, engine OFF).
3. Check for multiple codes.
 - a. If other faults are active, including SPN 4334/FMI 3, 4, or SPN 4374/FMI 3, 4, troubleshoot the other faults first.
 - b. If only SPN 4374/FMI 0 is present, Go to step 4.
4. Turn the ignition OFF.
5. Inspect the Diesel Exhaust Fluid (DEF) dosing unit, DEF pump, Aftertreatment Control Module (ACM2.1), and Chassis Aftertreatment System (ATS) harness wiring and connectors for damage, wire chafing, bent, spread or corroded pins. Check 47-pin connector pins 29, 30, 31, 35, 36, 37, and 38.

Table 2.

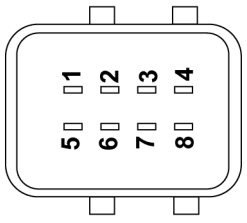
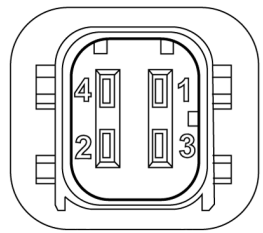
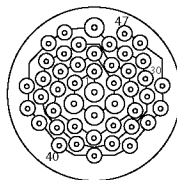
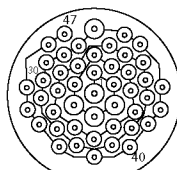
Dosing Unit			
8-Pin	Circuit	ACM2.1 - Pin	Connector
1	Dosing Unit Low Side	28	 d150162
2	Dosing Unit High Side	33	
3	Heating Low Side	22	
4	Heating Supply	3	
5	Sensor Supply 5V	84	
6	Not Used	Not Used	
7	Sensor Ground	99	
8	DEF Pressure Signal	100	

Table 3.

DEF Pump Connector			
4-Pin	Circuit	ACM2.1 - Pin	Connector
1	RPM Pump Feedback	95	 d150160a
2	Pump Supply	1	
3	Pump RPM Control	20	
4	Pump GND	31	



d150160a

- a. If damage is found, repair as necessary. Verify repairs. Refer to section "Verify Repairs".
 - b. If no pin damage is found, Go to step 6.
6. Using DEF test strip A0005850202, check for diesel fuel or oil contamination of the DEF fluid. Do the test strips indicate contamination?
- a. Yes; refer to Original Equipment Manufacturer (OEM) appropriate manual for DEF tank cleaning/flushing procedure.
 - b. No; Go to step 7.
7. Visually check all DEF lines for physical damage (kinks, cracks, leaks, disconnects).
- a. If damage is found, repair as necessary. Go to step 12.
 - b. If no damage is found, Go to step 8.

8. Remove DEF pressure line from DEF doser unit. Refer to section "Removal of the GHG14 Diesel Exhaust Fluid Lines". Insert line into DEF-safe container. Run Selective Catalytic Reduction Airless Dosing System – SCR ADS Self-Check Routine. Check for flow from DEF pressure line.
 - a. If DEF flow is found, reinstall line and Go to step 9.
 - b. If no flow is found, Go to step 10.
9. Remove DEF return line from DEF doser unit. Connect a line from DEF doser unit return fitting into DEF-safe container. Run ADS Self-Check Routine. Check for flow from DEF doser unit.
 - a. If DEF flow is found, reinstall line and Go to step 10.
 - b. If no flow is found, replace DEF doser unit inlet screen. Refer to section "Removal of the GHG14 Diesel Exhaust Fluid Dosing Unit Inlet Screen". Go to step 12.

**WARNING: EYE INJURY**

To avoid injury from flying debris when using compressed air, wear adequate eye protection (face shield or safety goggles) and do not exceed 276 kPa (40 psi) air pressure.

10. Remove DEF pressure and suction lines from DEF pump. Inspect lines for restrictions. Flush with regulated, clean shop air.
 - a. If a line restriction is found, replace line. Refer to section "Removal of the GHG14 Diesel Exhaust Fluid Lines". Go to step 12.
 - b. If no restriction is found, reinstall lines. Go to step 11.
11. Inspect inlet (screen) in DEF pump. Refer to section "Removal of the GHG14 Diesel Exhaust Fluid Pump Module Inlet Screen".
 - a. If restriction is found, replace inlet screen. Before installing DEF lines, apply clean shop air to DEF pump inlet fitting for five to ten seconds. Verify air flow out of psi outlet fitting. Go to step 12.
 - b. If no restriction is found, replace Pressure Relief Valve (PRV). Refer to section "Removal of the Diesel Exhaust Fluid Pump Pressure Relief Valve". Before installing DEF lines, apply clean shop air to DEF pump inlet fitting for five to ten seconds. Verify air flow out of psi outlet fitting. Reinstall lines. Go to step 12.
12. Perform SCR ADS Self-Check Routine to prime the system. Did SCR ADS Self-Check Routine complete successfully?
 - a. Yes; clear codes and release vehicle.
 - b. No; Go to step 13.
13. Remove DEF tank header and inspect DEF supply filter. Refer to section "Removal of the GHG14 13 and 23 Gallon Diesel Exhaust Fluid Tank Header Unit".
 - a. If debris is found, replace DEF tank header. Go to step 14.
 - b. If no restriction is found, Go to step 14.
14. Perform SCR ADS Self-Check Routine. Did the SCR ADS test pass?
 - a. Yes; clear codes and release vehicle.
 - b. No; Go to step 15.

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15. Remove DEF PUMP pressure and suction lines from DEF pump. Apply clean shop air to DEF pump inlet fitting for five to ten seconds. Verify air flow out of psi outlet fitting. Perform SCR ADS Self-Check Routine to prime the system. Did SCR ADS Self-Check Routine complete successfully?
 - a. Yes; verify repairs and release vehicle.
 - b. No; Go to step 16.
16. Replace DEF pump. Refer to section "Removal of the GHG14 Diesel Exhaust Fluid Pump Module Filter". Perform SCR ADS Self-Check Routine to prime the system. Did SCR ADS Self-Check Routine complete successfully?
 - a. Yes, verify repairs and release vehicle.
 - b. No; Contact the Customer Support Center at 800-445-1980 for further instruction.