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Service Information Bulletin

SUBJECT	DATE
SPN 3216 (MCM) (GHG14)	July 2014

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	GHG14 DD Platform	SPN 3216/FMI 2 - GHG14	This is a new section.



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2 SPN 3216/FMI 2 - GHG14

SCR Inlet NOx Sensor Rationality Error

Table 1.

SPN 3216/FMI 2			
Description	This fault code sets when difference between the expected NOx ppm and the actual NOx ppm is greater than 200 ppm.		
Monitored Parameter	Aftertreatment Inlet NOx Sensor		
Typical Enabling Conditions (Common Subset for all Engines)	General Enabling Condition: Engine is not in regeneration and operating at high speed and loads		
	Specific Enabling Conditions:		
	Engine Parameter	Min	Max
	Engine Speed (rpm)	1350	1600
	Torque (Nm)	1100	1500
	Battery Voltage (Volts)	11.08	
	Engine Coolant Outlet Temperature	70°C (158°F)	
	Ambient Temperature	-8°C (17.6°F)	
	Barometric Pressure (mbar)	755	
	Time Since DPF regeneration (min.)	15	
	Beginning of Injection (BOI) - Degrees of Crankshaft Rotation	10	
	EGR Mass (Kg/min)	5	
Monitor Sequence	None		
Execution Frequency	Continuous when enabling conditions met		
Typical Duration	150 seconds (2 Cycle)		
Dash Lamps	MIL		
Engine Reaction	None		
Verification	Warm up engine and ensure engine is not in regeneration mode. Drive with a loaded trailer on highway and maintain above enabling conditions for 150 seconds.		

Check as follows:

1. Connect DiagnosticLink[®].
2. Turn the ignition ON (key ON, engine OFF).
3. Check the Motor Control Module (MCM) software level. Is the MCM software level 4.1.0.47 or higher?
 - a. Yes; Go to step 4.
 - b. No; update the MCM software, then perform the repair verification in the chart above. If the fault code returns, Go to step 4.
4. Check for multiple fault codes. Are any of the following fault codes present?
 - SPN 102/FMI 16, 18
 - SPN 1636/FMI 2
 - SPN 2630/FMI 2
 - SPN 2659/FMI 0, 18
 - SPN 3058/FMI 9
 - SPN 3216/FMI 3, 4, 13
 - SPN 3464/FMI 16, 18
 - SPN 5312/FMI 7
 - a. Yes; diagnose the other fault codes first.
 - 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. Start the engine.
6. Check the Exhaust Gas Recirculation (EGR) system for leaks. Are there any EGR system leaks present?
 - a. Yes; repair the EGR system leaks. Verify repair.
 - b. No; Go to step 7.
7. Check for exhaust leaks. Are there any exhaust leaks present?
 - a. Yes; repair the exhaust leaks. Verify repair.
 - b. No; replace the Selective Catalyst Reduction (SCR) inlet NOx sensor. Refer to section "Removal of the GHG14 Selective Catalytic Reduction Inlet NOx Sensor". Verify repair.