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Service Information Bulletin

SUBJECT	DATE
SPN 1693 (MCM) (GHG17)	March 2017

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0193	DD Platform - Medium Duty	SPN 1693/FMI 10 - GHG17	This is a new diagnostic section.

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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Wastegate Slow Response

Table 1.

SPN 1693/FMI 10	
Description	This Fault Code Sets when the Motor Control Module (MCM) Detects that the Measured Intake Manifold Pressure Takes an Excessive Amount of Time to Reach a Commanded Value
Monitored Parameter	Intake Manifold Pressure
Typical Enabling Conditions	Engine Coolant Temperature Greater Than 65°C (149°F) Engine Speed Greater Than 1130 rpm Barometric Pressure Greater Than 755 mbar (10.9 psi) Vehicle Speed Greater Than 89 kph (55 mph)
Monitor Sequence	None
Execution Frequency	Always When Typical Enabling Conditions Are Met
Typical Duration	15 Seconds
Dash Lamps	MIL, CEL
Engine Reaction	25% Derate
Verification	Once the Engine Coolant Temperature is above 65°C (149°F), Road Test the Vehicle above 89 kph (55 mph), rpm greater than 1130 rpm for Five Minutes

WARNING: PERSONAL INJURY

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

- Always start and operate an engine in a well ventilated area.
- If operating an engine in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system or emission control system.

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: ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

Check as follows:

1. Connect DiagnosticLink ®.
2. Turn the ignition ON (key ON, engine OFF).
3. Check for multiple fault codes. Are there also fault codes present for the turbocharger actuator, intake manifold pressure sensor, or barometric pressure sensor?
    a. Yes; diagnose the other fault codes first.
    b. No; Go to step 4.
4. Compare the barometric pressure reading in the MCM to the local barometric pressure reading for your area. Are the readings within 70 mbar (1 psi) of each other?

a. Yes; Go to step 5.
b. No; replace the MCM. Verify repair.

5. Compare the intake manifold pressure reading to the barometric pressure readings. Are the readings within 103 mbar (1.5 psi) of each other?
   a. Yes; Go to step 6.
   b. No; replace the intake manifold pressure sensor. Verify repair.
6. Remove and inspect the air filter. Is the air filter restricted or excessively dirty?
   a. Yes; replace the air filter and perform the verification test.
   b. No; Go to step 7.
7. Inspect the intake system for leaks. Are there any leaks present?
   a. Yes; repair the leaks as necessary. Verify repair.
   b. No; Go to step 8.
8. Refer to Original Equipment Manufacturer (OEM) literature and pressure test the Charge Air Cooler (CAC). Does the CAC pass the pressure test?
   a. Yes; Go to step 9.
   b. No; replace the CAC. Refer to OEM literature for the CAC removal and installation procedures.
9. Refer to OEM literature and perform the CAC restriction test. Does the CAC pass the restriction test?
   a. Yes; replace the turbocharger. Verify repair.
   b. No; replace the CAC. Refer to OEM literature for the CAC removal and installation procedures.

