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## Service Information Bulletin

SUBJECT	DATE
SPN 2631 (MCM) (GHG17)	March 2017

### Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0193	GHG17 Medium Duty	SPN 2631/FMI 1 - 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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## 2 SPN 2631/FMI 1 - GHG17

Low Air Flow

**Table 1.**

SPN 2631/FMI 1	
Description	This Fault Code Sets when the Motor Control Module (MCM) Detects Insufficient Air Flow through the Engine
Monitored Parameter	Smoke Mode Operation
Typical Enabling Conditions	Engine Coolant Temperature greater than 65°C (149°F) Barometric Pressure greater than 755 mbar (10.9 psi) Vehicle Speed greater than 89 kph (55 mph) Increase in Accelerator Pedal Position to Increase Engine/Vehicle Speed
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Are Met
Typical Duration	15 Seconds
Dash Lamps	MIL, CEL
Engine Reaction	25% Derate
Verification	With Engine Coolant Temperature above 65°C (149°F), Road Test at a Speed Above 89 kph (55 mph). Coast for 30 Seconds and Quickly Increase Accelerator Pedal Position to 100% for 15 Seconds

Check as follows:

1. Connect DiagnosticLink<sup>®</sup>.
2. Turn the ignition ON (key ON, engine OFF).
3. Check for multiple fault codes. Are there any air management system or aftertreatment fault codes present?
  - a. Yes; diagnose the other fault codes first.
  - b. No; Go to step 4.
4. Remove and inspect the air filter. Is the air filter restricted or excessively dirty?
  - a. Yes; replace the air filter.
  - b. No; reinstall the air filter and Go to step 5.
5. Check the air intake system for leaks. Are there any leaks present?
  - a. Yes; repair the leaks. Verify repair.
  - b. No; Go to step 6.
6. Compare the barometric pressure sensor reading to the barometric pressure reading for your area. Are the readings within 69 mbar (1 psi) of each other?
  - a. Yes; Go to step 7.
  - b. No; replace the MCM. Verify repair.
7. Compare the intake manifold pressure reading to the barometric pressure sensor reading. Is the intake manifold pressure sensor reading within 103 mbar (1.5 psi) of the barometric pressure sensor reading?
  - a. Yes; Go to step 8.
  - b. No; replace the intake manifold pressure sensor. Verify repair.
8. Monitor the Diesel Oxidation Catalyst (DOC) inlet pressure sensor voltage. Is the voltage between 0.44 and 0.56 volts?
  - a. Yes; Go to step 9.
  - b. No; replace the DOC inlet pressure sensor. Verify repair.
9. Monitor the Diesel Particulate Filter (DPF) outlet pressure sensor voltage. Is the voltage between 0.44 and 0.56 volts?
  - a. Yes; Go to step 10.
  - b. No; replace the DPF outlet pressure sensor. Verify repair.

**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.

10. Perform a parked regeneration.
11. Once the parked regeneration is completed, review the DOC inlet pressure sensor reading in the log file. Does the DOC inlet pressure reading ever read zero during the parked regeneration?
  - a. Yes; replace the DOC inlet pressure sensor. Verify repair.
  - b. No; Go to step 12.
12. Did the DOC inlet pressure sensor reading decrease during the regeneration?
  - a. Yes; the DOC/DPF was restricted, which caused the fault code to set. The restriction was cleared by the parked regeneration. Clear the fault code and release the vehicle.
  - b. No; the DOC is restricted. Perform the DOC face plugging service routine. Verify repair.