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Service Information Bulletin

SUBJECT	DATE
SPN 5741 / FMI 13 (GHG17) (MCM)	February 2017

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0191	GHG17 Heavy Duty	SPN 5741 / FMI 13 - GHG17	Update for new routine available.

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.



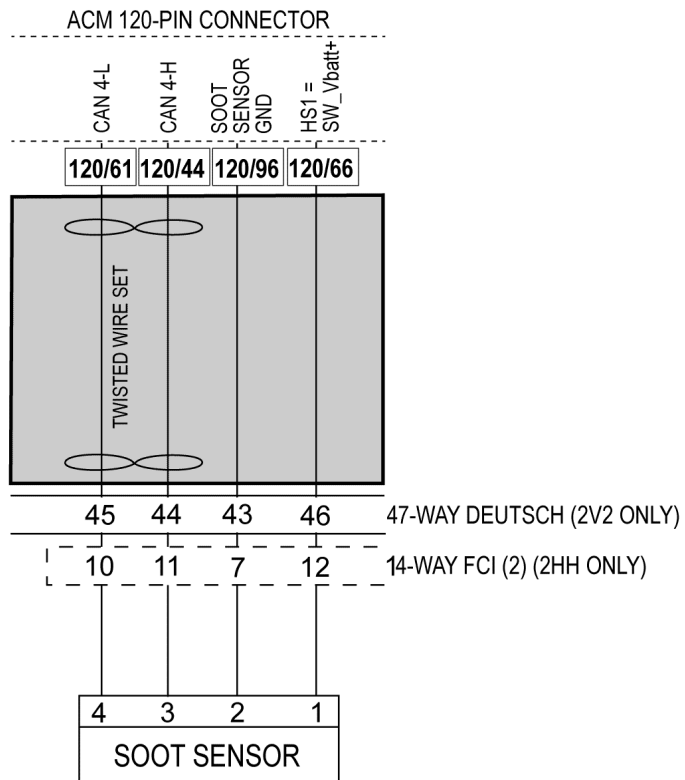
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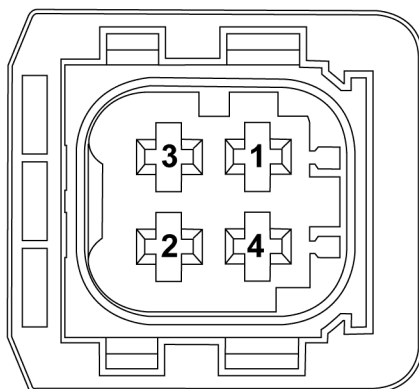
Soot Sensor Controller Area Network Signal Missing

Table 1.

SPN 5741 / FMI 13	
Description	Soot Sensor Controller Area Network (CAN) Feedback Signal Failure
Monitored Parameter	Soot Sensor CAN Communication
Typical Enabling Conditions	Soot Sensor Enabled
Monitor Sequence	Continuously
Execution Frequency	Always Enabled
Typical Duration	Five Seconds
Dash Lamps	MIL, CEL
Engine Reaction	None
Verification	Key Cycle



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Check as follows:

1. Turn the ignition OFF.
2. Disconnect the soot sensor harness connector.
3. Inspect the harness and connector for signs of damage, bent, spread, corroded or unseated (pushed out) pins. Is any damage found?
 - a. Yes; repair as necessary. Verify repairs.
 - b. No; Go to step 4.
4. Inspect soot sensor wiring between the sensor probe and the sensor control unit. Is any damage found?
 - a. Yes; replace the soot sensor. Refer to section "Removal of the Soot Sensor" or Refer to section "Removal of the 2V2/2HH Soot Sensor". Verify repairs.
 - b. No; Go to step 5.
5. Inspect the harness and connectors between soot sensor and the Aftertreatment Control Module (ACM) for signs of damage, chaffing, overheating, or corrosion. Is any damage found?
 - a. Yes; repair as necessary. Verify repairs.
 - b. No; Go to step 6.
6. Turn the ignition OFF.
7. Measure the resistance between pins 3 and 4 of the soot sensor connector harness side. Is the resistance between 55 and 65 ohms?
 - a. Yes; Go to step 8.
 - b. No; Go to step 13.
8. Measure the resistance between pin 3 of the soot sensor connector harness side and ground. Is the resistance greater than 10K ohms?
 - a. Yes; repair the short to ground between pin 3 of the soot sensor connector and pin 44 of the ACM 120-pin connector. Verify repair.
 - b. No; Go to step 9.
9. Measure the resistance between pin 4 of the soot sensor connector harness side and ground. Is the resistance greater than 10K ohms?
 - a. Yes; repair the short to ground between pin 4 of the soot sensor connector and pin 61 of the ACM 120-pin connector.
 - b. No; Go to step 10.
10. Turn the ignition ON (key ON, engine OFF).
11. Measure the voltage between pins 1 and 2 of the soot sensor harness connector, harness side. Is the voltage reading within .5 volts of battery voltage?
 - a. Yes; replace the soot sensor. Refer to section "Removal of the Soot Sensor" or Refer to section "Removal of the 2V2/2HH Soot Sensor". Verify repairs.

- b. No; Go to step 12.
12. Measure the voltage between pin 1 of the soot sensor connector harness side and ground. Is the voltage within .5 volts of battery voltage?
 - a. Yes; repair the open circuit between pin 2 of the soot sensor connector and pin 96 of the ACM 120-pin connector.
 - b. No; fix the open circuit between pin 1 of the soot sensor connector and pin 66 of the ACM 120-pin connector.
13. Disconnect the ACM 120-pin connector.
14. Inspect the ACM 120-pin harness connector for signs of damage, bent, spread, corroded or unseated (pushed out) pins and signs of moisture in the connector or wire damage near the connector. Is any damage found?
 - a. Yes; repair as necessary. Verify repairs.
 - b. No; Go to step 15.
15. Measure the resistance between pins 44 and 61 on the ACM 120-pin connector, component side. Is the resistance between 55 to 65 ohms?
 - a. Yes; replace the aftertreatment harness. Refer to section "Removal of the 1-BOX™ Aftertreatment Harness".
 - b. No; replace the ACM.
Refer to section "Removal of the 1-BOX™ Aftertreatment Control Module". Verify repairs.
Refer to section "Removal of the Two-BOX (2V2) Aftertreatment Control Module". Verify repairs.