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## Service Information Bulletin

SUBJECT	DATE
SPN 175 (MCM) (GHG17) and SPN 175 (MCM) (EPA07;EPA10;GHG14)	June 2016

### Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0191	DD Platform	SPN 175/FMI 4 - GHG17	The diagnostic procedure has been updated.
DDC-SVC-MAN-0084		SPN 175/FMI 4 - EPA07 - EPA10 -GHG14	

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 175/FMI 4 - GHG17

Engine Oil Temperature Circuit Failed Low

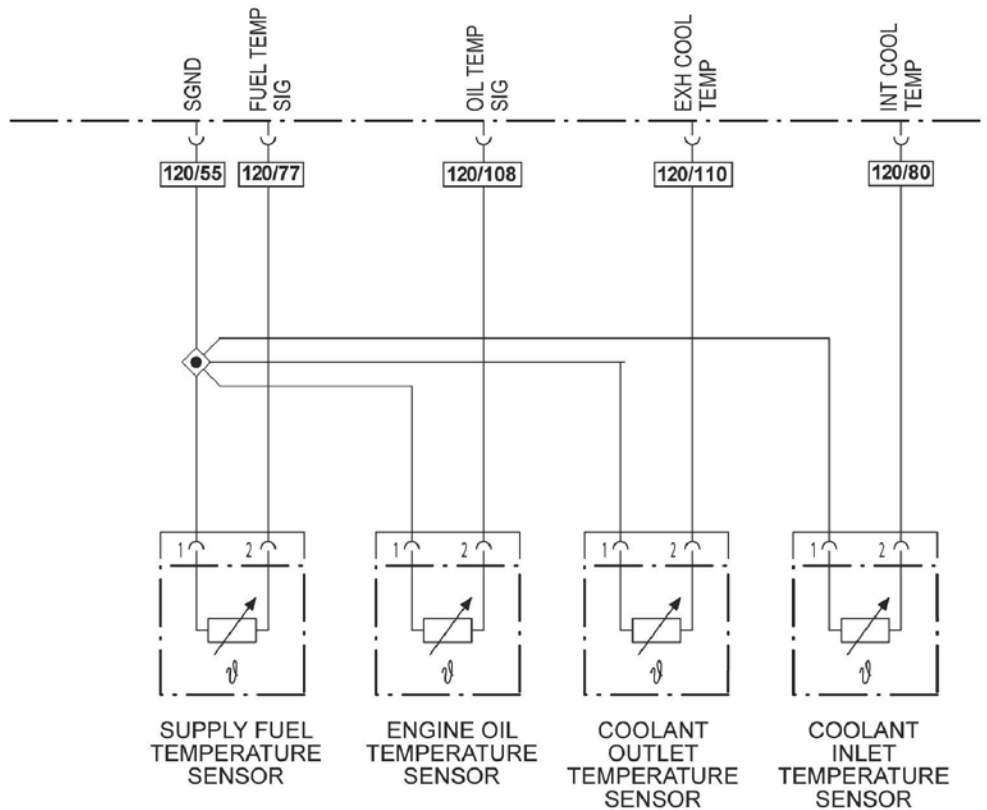
**Table 1.**

SPN 175/FMI 4	
Description	This Fault Code Sets when the Motor Control Module Detects a Short to Ground on the Engine Oil Temperature Circuit.
Monitored Parameter	Engine Oil Temperature Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	MIL, CEL
Engine Reaction	
Verification	Engine Idle (One Minute)



**WARNING: ENGINE EXHAUST**

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



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Check as follows:

1. Disconnect and inspect the Engine Oil Temperature sensor electrical connector harness side. Is there corrosion present in the connector?
  - a. Yes; replace the Engine Oil Temperature sensor and the electrical connector. Refer to section "Removal of the Engine Oil Temperature Sensor" and Technical Service letter 13 TS-16 (<http://ddcsn-ddc.freightliner.com/cps/rde/xbcr/ddcsn/13TS16.pdf>). Verify repair.
  - b. No; Go to step 2.
2. Inspect the Engine Oil Temperature sensor electrical connector harness side. Are the pins or the connector damaged?
  - a. Yes; Go to step 3.
  - b. No; Go to step 4.
3. Inspect the Engine Oil Temperature sensor electrical connector component side. Are the pins or the connector damaged?
  - a. Yes; replace the Engine Oil Temperature sensor and the electrical connector. Refer to section "Removal of the Engine Oil Temperature Sensor" and Technical Service letter 13 TS-16 (<http://ddcsn-ddc.freightliner.com/cps/rde/xbcr/ddcsn/13TS16.pdf>). Verify repair.
  - b. No; replace the Engine Oil Temperature electrical connector. Refer to Technical Service letter 13 TS-16 (<http://ddcsn-ddc.freightliner.com/cps/rde/xbcr/ddcsn/13TS16.pdf>). Verify repair.
4. With the Engine Oil Temperature sensor disconnected, turn the ignition ON (Key On, engine OFF).
5. Is fault code SPN 175/FMI 4 still active?
  - a. Yes; Go to step 6.
  - b. No; replace the Engine Oil Temperature sensor. Refer to section "Removal of the Engine Oil Temperature Sensor". Verify repair.
6. Turn the ignition OFF.
7. Disconnect and inspect the MCM 120-pin electrical connector harness side. Are the pins or the connector damaged?
  - a. Yes; Go to step 8.
  - b. No; Go to step 9.
8. Inspect the MCM 120-pin electrical connector component side. Are the pins or the connector damaged?
  - a. Yes; replace the MCM and the engine harness. Refer to section "Removal of the Motor Control Module". Verify repair.
  - b. No; replace the engine harness. Verify repair.
9. Measure the resistance between pin 2 of the engine oil temperature sensor electrical connector harness side and pin 108 of the MCM 120-pin electrical connector harness side. Is the resistance less than 10k ohms?
  - a. Yes; repair the short to ground between pin 2 of the Engine Oil Temperature sensor electrical connector harness side and pin 108 of the MCM 120-pin electrical connector harness side. Verify repair.
  - b. No; replace the MCM. Refer to section "Removal of the Motor Control Module". Verify repair.

### 3 SPN 175/FMI 4 - EPA07 - EPA10 - GHG14

Engine Oil Temperature Circuit Failed Low

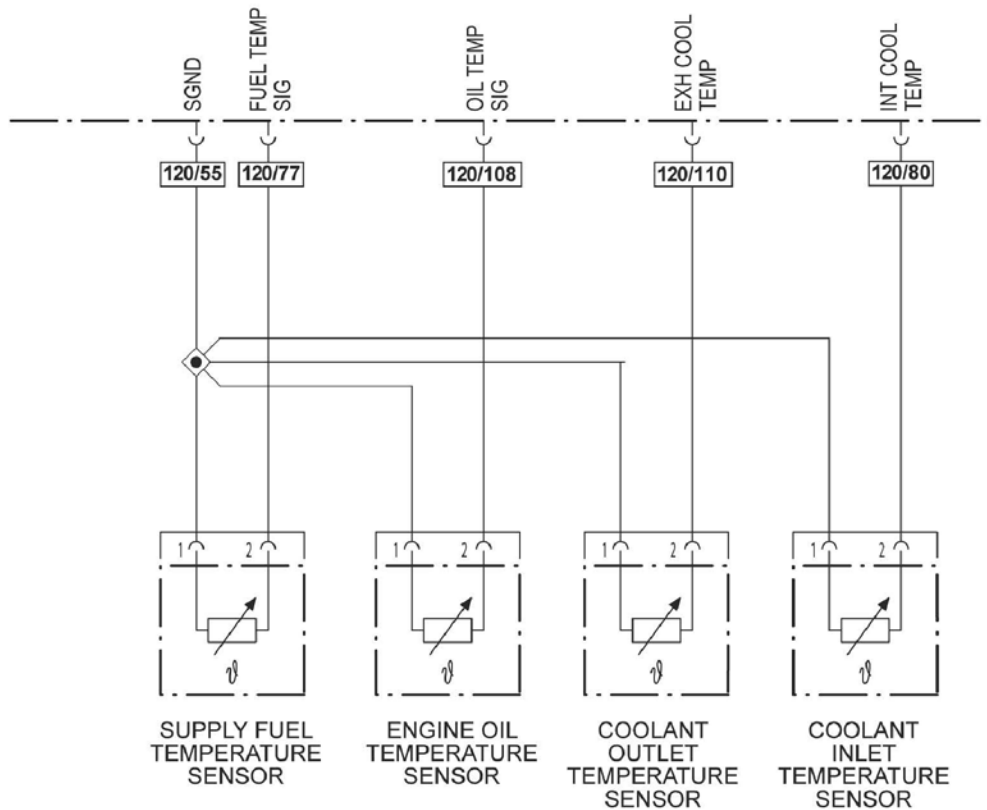
**Table 2.**

SPN 175/FMI 4	
Description	This Fault Code Sets when the Motor Control Module Detects a Short to Ground on the Engine Oil Temperature Circuit.
Monitored Parameter	Engine Oil Temperature Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	MIL, CEL
Engine Reaction	
Verification	Engine Idle (One minute)



**WARNING: ENGINE EXHAUST**

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1. Disconnect and inspect the Engine Oil Temperature sensor electrical connector harness side. Is there corrosion present in the connector?

- a. Yes; replace the Engine Oil Temperature sensor and the electrical connector. Refer to section "Removal of the Engine Oil Temperature Sensor" and Technical Service letter 13 TS-16 (<http://ddcsn-ddc.freightliner.com/cps/rde/xbcr/ddcsn/13TS16.pdf>). Verify repair.
  - b. No; Go to step 2.
2. Inspect the Engine Oil Temperature sensor electrical connector harness side. Are the pins or the connector damaged?
  - a. Yes; Go to step 3.
  - b. No; Go to step 4.
3. Inspect the Engine Oil Temperature sensor electrical connector component side. Are the pins or the connector damaged?
  - a. Yes; replace the Engine Oil Temperature sensor and the electrical connector. Refer to section "Removal of the Engine Oil Temperature Sensor" and Technical Service letter 13 TS-16 (<http://ddcsn-ddc.freightliner.com/cps/rde/xbcr/ddcsn/13TS16.pdf>). Verify repair.
  - b. No; replace the Engine Oil Temperature electrical connector. Refer to Technical Service letter 13 TS-16 (<http://ddcsn-ddc.freightliner.com/cps/rde/xbcr/ddcsn/13TS16.pdf>). Verify repair.
4. With the Engine Oil Temperature sensor disconnected, turn the ignition ON (Key ON, engine OFF).
5. Is fault code SPN 175/FMI 4 still active?
  - a. Yes; Go to step 6.
  - b. No; replace the Engine Oil Temperature sensor. Refer to section "Removal of the Engine Oil Temperature Sensor". Verify repair.
6. Turn the ignition OFF.
7. Disconnect and inspect the MCM 120-pin electrical connector harness side. Are the pins or the connector damaged?
  - a. Yes; Go to step 8.
  - b. No; Go to step 9.
8. Inspect the MCM 120-pin electrical connector component side. Are the pins or the connector damaged?
  - a. Yes; replace the MCM and the engine harness. Refer to section "Removal of the Motor Control Module". Verify repair.
  - b. No; replace the engine harness. Verify repair.
9. Measure the resistance between pin 2 of the engine oil temperature sensor electrical connector harness side and pin 108 of the MCM 120-pin electrical connector harness side. Is the resistance less than 10k ohms?
  - a. Yes; repair the short to ground between pin 2 of the Engine Oil Temperature sensor electrical connector harness side and pin 108 of the MCM 120-pin electrical connector harness side. Verify repair.
  - b. No; replace the MCM. Refer to section "Removal of the Motor Control Module". Verify repair.