# 1    01 16-17

DETROIT™

# Service Information Bulletin

| SUBJECT | DATE |
|---|---|
| SPN 4752 (MCM) (GHG17) - EGR Cooler Efficiency Fault Codes | January 2017 |

**Additions, Revisions, or Updates**

| Publication Number / Title | Platform | Section Title | Change |
|---|---|---|---|
| DDC-SVC-MAN-0193 | GHG17 Medium Duty | SPN 4752/FMI 0 - GHG17 | These are new diagnostic procedures for MDEG. |
| | | SPN 4752/FMI 16 - GHG17 | |

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 4752/FMI 0 - GHG17

Exhaust Gas Recirculation Cooler Low Efficiency
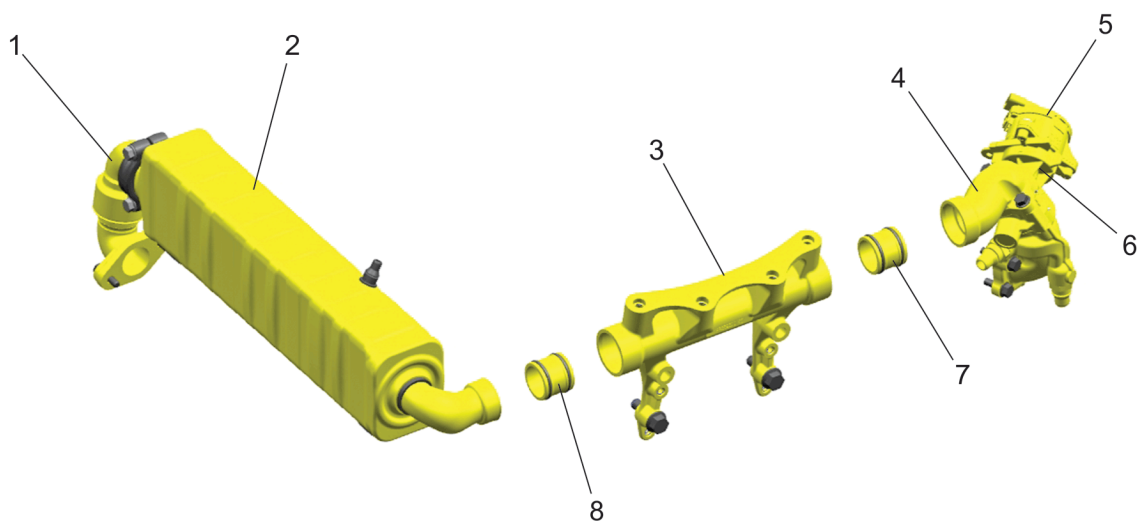
**Table 1.**

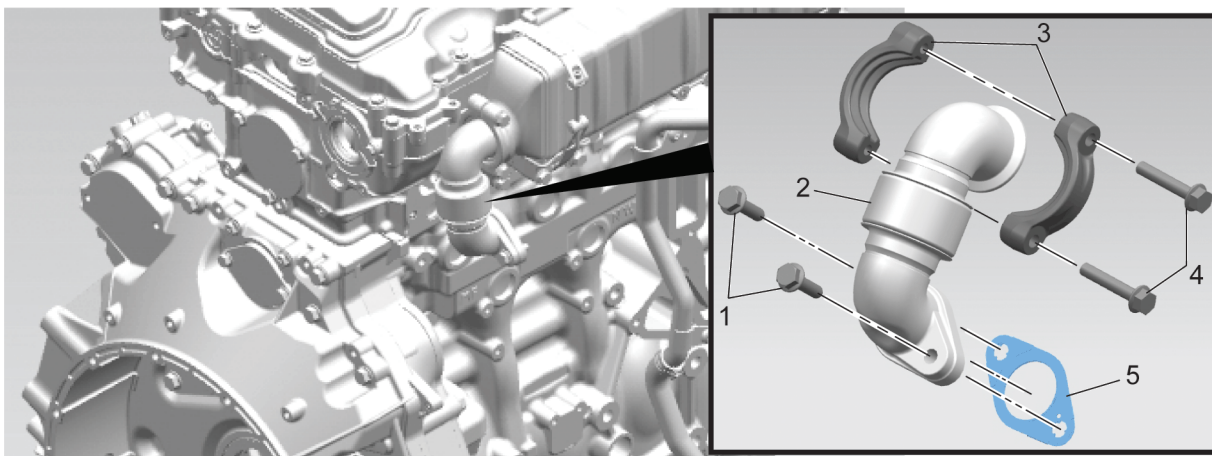| SPN 4752/FMI 0 | |
|---|---|
| Description | This fault Code Sets When the Motor Control Module (MCM) Detects That the EGR Temperature After the EGR Cooler is Not Within a Threshold. |
| Monitored Parameter | Intake Manifold Temperature, CAC Outlet Temperature Sensor |
| Typical Enabling Conditions | Engine Coolant Temperature Greater than 65°C (149°F). Ambient Air Temperature less than 45°C (113°F), Barometric Pressure Greater than 755 mbar (10.95 psi). |
| Monitor Sequence | None |
| Execution Frequency | Always Enabled |
| Typical Duration | 30 Seconds |
| Dash Lamps | MIL, CEL |
| Engine Reaction | Derate 10% |
| Verification | Ensure that the Ambient Air Temperature is Less than 45°C (113°F) and the Barometric Pressure is Greater than 755 Mbar (10.95 psi). Start and Run the Engine Until the Engine Coolant Temperature is Greater than 65°C (149°F). Then Let the Engine Idle For Five Minutes and Recheck For the Fault. |

Check as follows:
1. Connect DiagnosticLink ®.
2. Turn the ignition ON (key ON, engine OFF).
3. Check for multiple fault codes. Are any of the fault codes below present?
    - SPN 27/FMI 0, 1, 3, 4, 7, 10, 12
    - SPN 110/FMI 0, 3, 4, 10, 16, 18
    - SPN 1636/FMI 0, 3, 4, 10, 14, 16
    - SPN 2630/FMI 3, 4, 10, 14
    - SPN 2631/FMI 3, 4
    - SPN 521018/FMI 0
    - SPN 521019/FMI 0
    - SPN 521020/FMI 0
        a. Yes; diagnose the other fault codes.
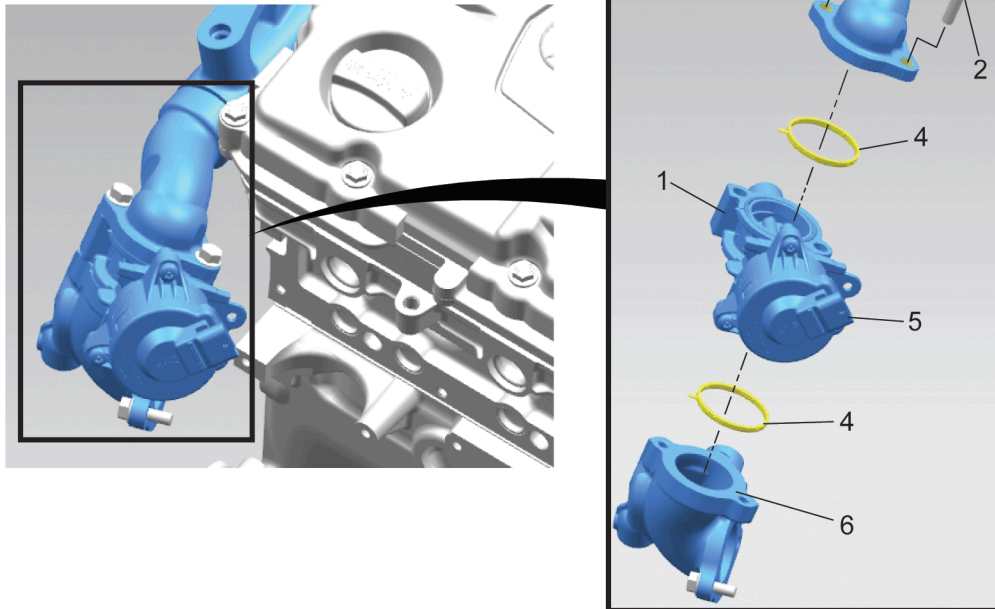        b. No; Go to step 4.

d140631

4. Visually inspect the EGR system for leaks. Are there any leaks present?



d140609

    a. Yes; repair the leaks as necessary.
    b. No; Go to step 5.
5. Remove the EGR hot pipe heat shield and the EGR hot pipe. Refer to section "Removal of the DD5 Exhaust Gas Recirculation Hot Pipe" and Refer to section "Removal of the Exhaust Gas Recirculation Hot Pipe Heat Shield".

6. Visually inspect the inside of the EGR hot pipe, mating area of the exhaust manifold and the back side of the EGR cooler. Are there any restrictions present?



d140613

   a. Yes; clean the EGR system. Refer to section "Cleaning of the Exhaust Gas Recirculation Cooler".
   b. No; Go to step 7.
7. Remove the EGR valve and EGR crossover elbow. Refer to section "Removal of the Exhaust Gas Recirculation Valve".
8. Inspect the inside of the EGR valve, EGR crossover pipe, EGR crossover elbow, EGR delivery elbow and EGR mixer housing. Are there any restrictions present?
   a. Yes; clean the EGR system. Refer to section "Cleaning of the Exhaust Gas Recirculation Cooler".
   b. No; replace the EGR cooler. Refer to section "Removal of the Exhaust Gas Recirculation Cooler". Verify repair.
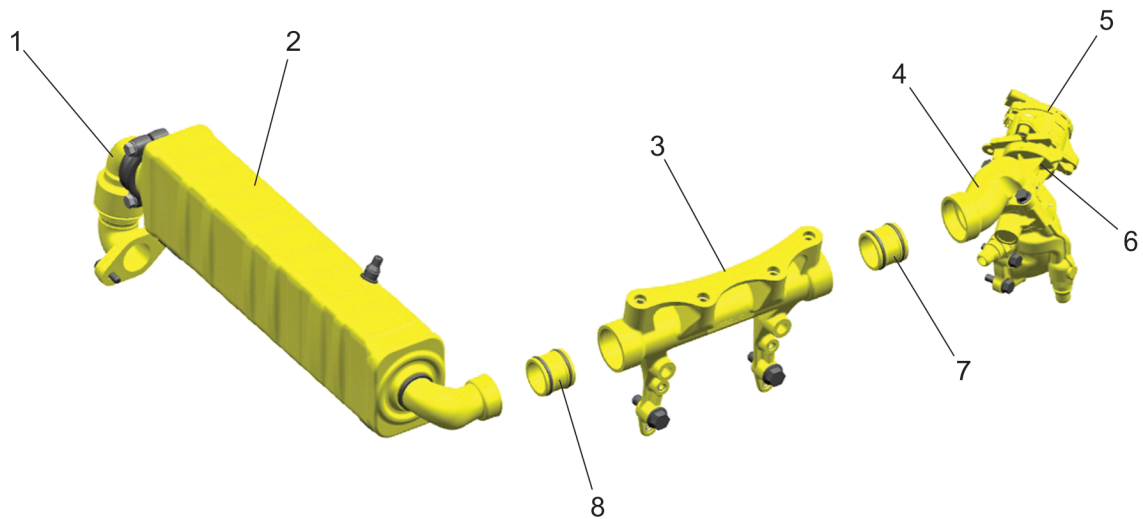
# 3    SPN 4752/FMI 16 - GHG17

Cooling Efficiency of the EGR Cooler Too Low

**Table 2.**

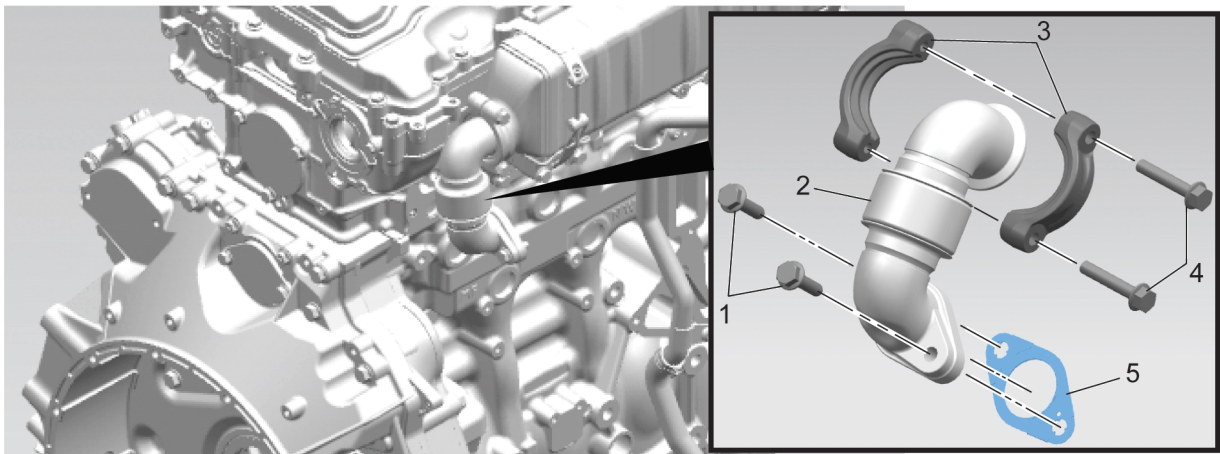| SPN 4752/FMI 16 | |
|---|---|
| Description | This fault Code Sets When the Motor Control Module (MCM) Detects That the EGR Temperature After the EGR Cooler is Not Within a Threshold. |
| Monitored Parameter | Intake Manifold Temperature, CAC Outlet Temperature Sensor |
| Typical Enabling Conditions | Engine Coolant Temperature Greater than 65°C (149°F). Ambient Air Temperature less than 45°C (113°F), Barometric Pressure Greater than 755 mbar (10.95 psi). |
| Monitor Sequence | None |
| Execution Frequency | Always Enabled |
| Typical Duration | 30 Seconds |
| Dash Lamps | MIL, CEL |
| Engine Reaction | Derate 10% |
| Verification | Ensure that the Ambient Air Temperature is Less than 45°C (113°F) and the Barometric Pressure is Greater than 755 Mbar (10.95 psi). Start and Run the Engine Until the Engine Coolant Temperature is Greater than 65°C (149°F). Then Let the Engine Idle For Five Minutes and Recheck For the Fault. |

Check as follows:

1. Connect DiagnosticLink ®.
2. Turn the ignition ON (key ON, engine OFF).
3. Check for multiple fault codes. Are any of the fault codes below present?
   - SPN 27/FMI 0, 1, 3, 4, 7, 10, 12
   - SPN 110/FMI 0, 3, 4, 10, 16, 18
   - SPN 1636/FMI 0, 3, 4, 10, 14, 16
   - SPN 2630/FMI 3, 4, 10, 14
   - SPN 2631/FMI 3, 4
   - SPN 521018/FMI 0
   - SPN 521019/FMI 0
   - SPN 521020/FMI 0
     a. Yes; diagnose the other fault codes.
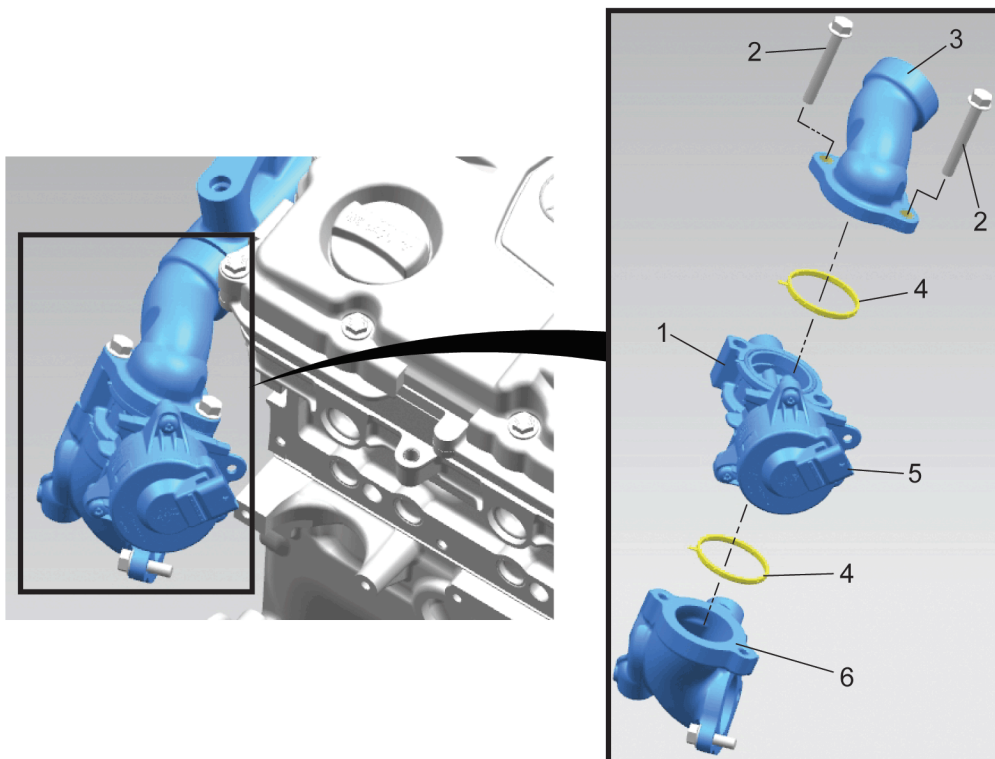     b. No; Go to step 4.

d140631

4. Visually inspect the EGR system for leaks. Are there any leaks present?



d140609

    a. Yes; repair the leaks as necessary.
    b. No; Go to step 5.

5. Remove the EGR hot pipe heat shield and the EGR hot pipe. Refer to section "Removal of the DD5 Exhaust Gas Recirculation Hot Pipe" and Refer to section "Removal of the Exhaust Gas Recirculation Hot Pipe Heat Shield".

6. Visually inspect the inside of the EGR hot pipe, mating area of the exhaust manifold and the back side of the EGR cooler. Are there any restrictions present?



d140613

    a. Yes; clean the EGR system. Refer to section "Cleaning of the Exhaust Gas Recirculation Cooler".

    b. No; Go to step 7.

7. Remove the EGR valve and EGR crossover elbow. Refer to section "Removal of the Exhaust Gas Recirculation Valve".

8. Inspect the inside of the EGR valve, EGR crossover pipe, EGR crossover elbow, EGR delivery elbow and EGR mixer housing. Are there any restrictions present?

    a. Yes; clean the EGR system. Refer to section "Cleaning of the Exhaust Gas Recirculation Cooler".

    b. No; replace the EGR cooler. Refer to section "Removal of the Exhaust Gas Recirculation Cooler". Verify repair.