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Service Information Bulletin

SUBJECT	DATE
SPN 3510 (MCM) (EPA10;GHG14)	September 2014

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	EPA10 - GHG14 DD Platform	SPN 3510/FMI 3 - EPA10 - GHG14	This is a new section.

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2 SPN 3510/FMI 3 - EPA10 - GHG14

5V Sensor Supply Bank 2 Circuit Failed High

Table 1.

SPN 3510/FMI 3	
Description	5V Sensor Supply Bank 2 Circuit Short to Power
Monitored Parameter	Motor Control Module (MCM) 5V Internal Power Supply
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	2 Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key ON

This fault indicates the Motor Control Module (MCM) detects a short to power (voltage greater than 5.3) on any of the MCM pins, which are listed in the chart below. Inspect the harness and repair as necessary. Verify repairs.

Table 2.

MCM Pins for Short to Power Check	
Component	MCM Pin
Camshaft Position Sensor	82
Engine Oil Pressure Sensor	82
Fuel Compensation Pressure Sensor	82
HC Doser Fuel Pressure Sensor	82
Water Pump Speed Sensor (DD15AT / DD13 Optional)	82
Fan Speed Sensor (If equipped)	85

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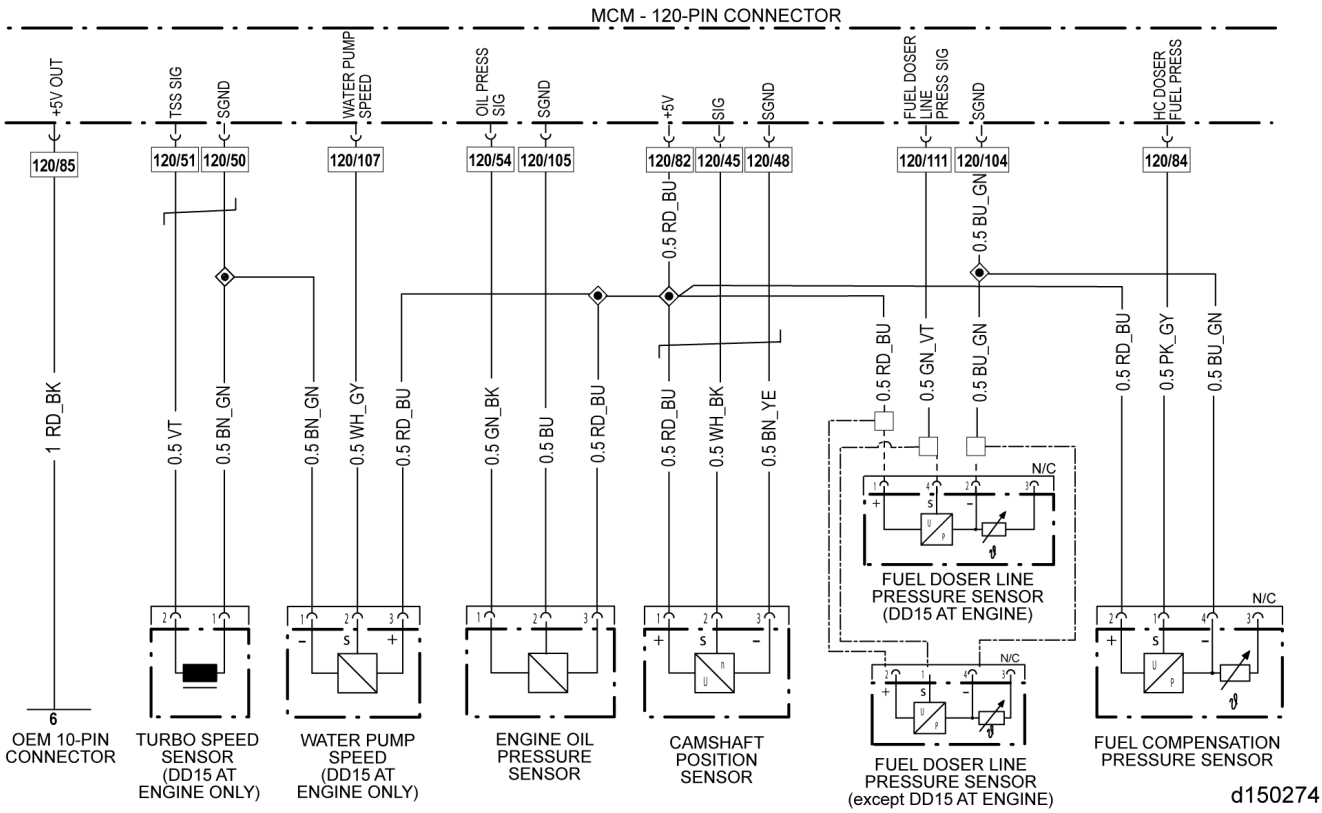

Check as follows:

1. Connect DiagnosticLink ®.
2. Turn the ignition ON (key ON, engine OFF).
3. Disconnect each component listed below (if equipped) one at a time, while monitoring fault code in DiagnosticLink.
   - Fuel Compensation Pressure Sensor
   - HC Doser Fuel Pressure Sensor
   - Camshaft Position Sensor
   - Engine Oil Pressure Sensor
   - Water Pump Sensor (DD15AT/DD13 Optional)
   - Fan Speed Sensor (if equipped)
4. Does the fault code go inactive when a component is disconnected?
   a. Yes; Go to step 5.
   b. No; Go to step 6.
5. For the component in question, inspect the harness connector for signs of damaged, bent, spread, corroded or unseated (pushed out) pins and signs of moisture in the connector or wire damage near the connector. Are any signs of damage present?
   a. Yes; repair as necessary. Verify repairs.
   b. No; replace that component. Verify repairs.
6. Turn the ignition OFF.
7. Disconnect the engine harness 10-pin connector on the left side of engine.
8. Inspect the harness connector for signs of damaged, bent, spread, corroded or unseated (pushed out) pins and signs of moisture in the connector or wire damage near the connector. Are any signs of damage present?
   a. Yes; repair as necessary. Verify repairs.
   b. No; Go to step 9.
9. Turn the ignition ON (key ON, engine OFF).
10. Does the fault code go inactive when the engine harness 10-pin connector is disconnected?
    a. Yes; repair wiring harness between 10-pin connector and the Fan Speed Sensor (if equipped). Refer to Original Equipment Manufacturer (OEM) literature to identify chassis components wired to the 10-pin connector.

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b. No; Go to step 11.

11. Turn the ignition OFF.
12. Disconnect the MCM 120-pin connector.
13. Inspect the MCM 120-pin connector and the 120-pin harness connector for signs of corrosion, spread, unseated (pushed out) or damaged pins, connector seal for damage (signs of water or oil intrusion) or signs of wire damage. Are any signs of damage present?
    a. Yes; repair as necessary. Verify repairs.
    b. No; Go to step 14.
14. Turn the ignition ON (key ON, engine OFF).
15. Does the fault code go inactive when the MCM is disconnected?
    a. Yes; Go to step 16.
    b. No; replace the MCM. Refer to section "Removal of the Motor Control Module". Verify repairs.
16. With the components still disconnected, measure the voltage between pin 82 of the MCM 120-pin connector and ground. Is any voltage present?
    a. Yes; repair the wire short to power on pin 82 of the MCM 120-pin connector. Verify repairs.
    b. No; repair the wire short to power on pin 85 of the MCM 120-pin connector. Verify repairs.

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