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Service Information Bulletin

SUBJECT	DATE
SPN 1761/FMI 3, 4 (ACM2-EPA10) (ACM2.1-GHG14)	February 2014

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	DD Platform - ACM - EPA10 - GHG14	SPN 1761/FMI 3 - EPA10 - GHG14	Diagnostic procedure has been updated, the wiring diagram and connector pin out have been added.
		SPN 1761/FMI 4 - EPA10 - GHG14	

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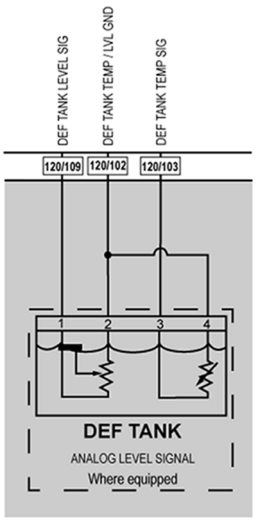
2 SPN 1761/FMI 3 - EPA10 - GHG14

This diagnostic is typically Diesel Exhaust Fluid (DEF) tank level sensor circuit failed high (shorted to power or an open in the circuit).

Table 1.

SPN 1761/FMI 3	
Description	DEF Tank Level Sensor Circuit Failed High
Monitored Parameter	DEF Tank Level Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	2 Seconds
Dash Lamps	MIL, CEL
Engine Reaction	25 Percent derate. After 4 hours engine will be idled after ignition key cycle.
Verification	Engine Idle (1 minute)



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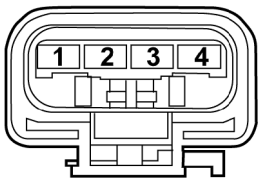

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NOTE: When there is no signal from the DEF level/temperature sender the vehicle will go into the low DEF level derate.

1. Disconnect and inspect the Diesel Exhaust Fluid (DEF) tank level/temperature sender connector. Are there any spread or damaged pins?

a. Yes; repair as necessary. Verify repair.
b. No; Go to step 2.

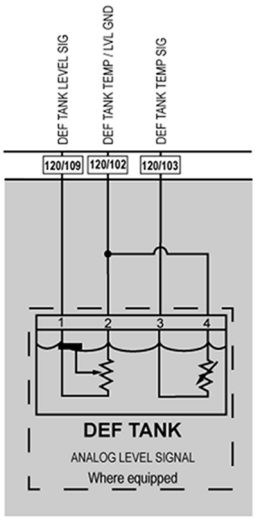
2. Turn the ignition ON (key ON Engine OFF).
3. Measure the voltage between pin 2 of the DEF tank level/temperature sensor, harness side, connector and ground. Is there any voltage present?
   a. Yes; repair the short to power between pin 2 of the DEF tank level/temperature connector and pin 102 of the 120-pin MCM connector. Verify repair.
   b. No; Go to step 4.
4. Measure the voltage between pin 1 of the DEF tank temperature/level sender, harness side, connector and ground. Is the voltage between 2.0 and 3.0 volts?
   a. Yes; Go to step 5.
   b. No; Go to step 10.
5. Turn the ignition OFF. Go to step 6.
6. Measure resistance between pin 2 of the DEF tank level/temperature sender connector and ground. Is the resistance less than 5 ohms?
   a. Yes; replace the DEF tank temperature/level sender. Refer to section "Removal of the GHG14 13 and 23 Gallon Diesel Exhaust Fluid Tank Header Unit" or refer to OEM literature for DEF tank temperature/level sender (DEF tank header) replacement Verify repair.
   b. No; Go to step 7.
7. Disconnect and inspect the 120-pin Aftertreatment Control Module (ACM), harness side, connector. Are there any spread or damaged pins?
   a. Yes; repair as necessary. Verify repair.
   b. No; Go to step 8.
8. Measure the resistance between pin 2 of the DEF tank level/temperature sender, harness side, connector and pin 102 of the 120-pin of the ACM connector. Is the resistance less than 5 ohms?
   a. Yes; Go to step 9.
   b. No; repair the wire between pin 2 of the DEF tank level/temperature sender connector and pin 102 of the 120-pin of the ACM connector. Verify repair.
9. Install a test ACM. Is SPN 1761/FMI 3 still present?
   a. Yes; replace the DEF tank temperature/level sender. Refer to section "Removal of the GHG14 13 and 23 Gallon Diesel Exhaust Fluid Tank Header Unit" or refer to OEM literature for DEF tank temperature/level sender (DEF tank header) replacement. Verify repair.
   b. No; replace the ACM. Verify repair.
10. Disconnect and inspect the 120-pin ACM connector. Are there any spread or damaged pins?
    a. Yes; repair as necessary. Verify repair.
    b. No; Go to step 11.
11. Measure the resistance between pin 1 of the DEF tank level/temperature sender, harness side, connector and pin 109 of the 120-pin of the ACM, harness side, connector. Is the resistance less than 5 ohms?
    a. Yes; Go to step 12.
    b. No; repair the wire between pin 1 of the DEF tank level/temperature sender connector and pin 109 of the 120-pin of the ACM connector.
12. Install a test ACM. Is SPN 1761/FMI 3 still present?
    a. Yes; replace the DEF tank temperature/level sender. Refer to section "Removal of the GHG14 13 and 23 Gallon Diesel Exhaust Fluid Tank Header Unit" or refer to OEM literature for DEF tank temperature/level sender (DEF tank header) replacement. Verify repair.
    b. No; Replace the ACM. Verify repair.

3 SPN 1761/FMI 4 - EPA10 - GHG14

This diagnostic is typically Diesel Exhaust Fluid (DEF) tank level sensor circuit failed low.

Table 2.

SPN 1761/FMI 4	
Description	DEF Tank Level Sensor Circuit Failed Low
Monitored Parameter	DEF Tank Level Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	2 Seconds
Dash Lamps	MIL, CEL
Engine Reaction	25 Percent derate. After 4 hours engine will be idled after ignition key cycle.
Verification	Engine Idle (1 minute)



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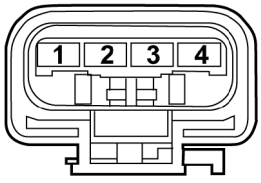

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NOTE: When there is no signal from the DEF level/temperature sender the vehicle will go into the low DEF level derate.

1. Turn the ignition OFF.
2. Disconnect and inspect the Diesel Exhaust Fluid (DEF) tank temperature/level sender connector. Is there any damage, corrosion or water present?

a. Yes; repair as necessary. Verify repair.
b. No; Go to step 3.

3. Measure the resistance from pin 1 of the DEF tank temperature/level sender, harness side connector and ground. Is the resistance less than 10k ohms.
   a. Yes; Go to step 4.
   b. No; repair the wire between pin 1 of the DEF tank temperature/level sender connector and pin 109 of the 120-pin ACM connector.
4. Install a test ACM. Is code SPN 1761/FMI 4 still present?
   a. Yes; replace the DEF tank temperature/level sender. Refer to section "Removal of the GHG14 13 and 23 Gallon Diesel Exhaust Fluid Tank Header Unit" or refer to OEM literature for DEF tank temperature/level sender (DEF tank header) replacement. Verify repair.
   b. No; Replace the ACM. Verify repair.

