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Service Information Bulletin

SUBJECT	DATE
SPN 3556/FMI 0, 1, 18 - Regeneration Temperature Update Procedures	April 2017

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	GHG14 DD Platform	SPN 3556/FMI 0 - GHG14 - ACM	The diagnostic procedures have been updated.
		SPN 3556/FMI 1 - GHG14 - ACM	
		SPN 3556/FMI 18 - GHG14 - ACM	

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2 SPN 3556/FMI 0 - GHG14

Regeneration Temperature - Out of Range High

Table 1.

SPN 3556/FMI 0	
Description	This Code Sets When the ACM Detects that the DOC Outlet Temperature Sensor is Greater than the Modeled Threshold.
Monitored Parameter	Diesel Oxidation Catalyst (DOC) Temperature Outlet Temperature Sensor.
Typical Enabling Conditions	Aftertreatment 1 Hydrocarbon Doser Data Valid But Above Normal Operational Range - Most Severe Level
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Met
Typical Duration	Two Seconds
Dash Lamps	MIL, CEL
Engine Reaction	Derate 25%

Check as follows:

1. Connect DiagnosticLink ®. Go to step 2.
2. Turn the ignition ON (Key ON, Engine OFF). Go to step 3.
3. Check for multiple fault codes. Are fault codes SPN 3246 FMI,3, 4 or 8 and SPN 3250 FMI 3, 4, or 8 also present?
    a. Yes; diagnose and repair those fault codes first. Verify repair.
    b. No; Go to step 4.
4. Are there any Hydrocarbon (HC) doser low pressure fault codes present?
    a. Yes; diagnose HC doser low pressure fault codes first. Verify repair.
    b. No; Go to step 5.
5. Visually inspect the exhaust system for leaks. Look for signs of soot trails indicating a system leak. Are there exhaust leaks present?
    a. Yes; repair the exhaust leaks as necessary. Verify repair.
    b. No; Go to step 6.
6. Remove and inspect the Hydrocarbon (HC) Fuel Doser Injection Valve. Refer to section "Removal of the Hydrocarbon Doser Fuel Injector Valve". Is the HC doser valve plugged?
    a. Yes; replace the Hydrocarbon doser injection valve and clean the port. Refer to section "Installation of the Hydrocarbon Doser Fuel Injector Valve". Verify repair.
    b. No; reinstall the Hydrocarbon Doser Injection Valve. Refer to section "Installation of the Hydrocarbon Doser Fuel Injector Valve". Go to step 7.

WARNING: ENGINE EXHAUST

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

WARNING: PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

7. Perform a low temp Aftertreatment Device (ATD) regeneration; Refer to section "GHG14 Perform Performance Check - Low Temperature ATD". Go to step 8.

8. After the low temp ATD regeneration has run for 20 minutes, monitor the DOC outlet temperature sensor reading. Is the DOC outlet temperature sensor reading within 25°C (45°F) of the DOC inlet temperature sensor?
    a. Yes; replace the HC doser block. Refer to section "Removal of the Hydrocarbon Doser Block ". Verify repair.
    b. No; replace the DOC outlet temperature sensor. Refer to section "Removal of the GHG14 Diesel Oxidation Catalyst Outlet Temperature Sensor". Verify repair.

3 SPN 3556/FMI 1 - GHG14

Regeneration Temperature - Out Of Range Low

Table 2.

SPN 3556/FMI 1	
Description	This Code Sets When the Exhaust Temperature Does Not Increase Above the Modeled Threshold When Regeneration is Enabled.
Monitored Parameter	Diesel Oxidation Catalyst (DOC) Outlet Temperature Sensor
Typical Enabling Conditions	Regeneration Enabled, 1100 to 2050 rpm, 50% to 100% engine load.
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Met
Typical Duration	20 seconds
Dash Lamps	MIL, CEL
Engine Reaction	None
Verification	Parked Regeneration

Check as follows:

1. Connect DiagnosticLink ®. Go to step 2.
2. Turn the key ON (key ON, engine OFF). Go to step 3.
3. Check for multiple codes. Are there DOC outlet temperature sensor drift fault codes, DOC outlet temperature sensor stuck fault codes, or DOC outlet temperature sensor circuit fault codes present?
    a. Yes; diagnose the other fault codes first. Verify repair.
    b. No; Go to step 4.
4. Are there any Hydrocarbon (HC) doser low pressure fault codes present?
    a. Yes; diagnose HC doser low pressure fault codes first. Verify repair.
    b. No; Go to step 5.
5. Visually inspect the exhaust system for leaks. Look for signs of soot trails indicating a system leak. Are there exhaust leaks present?
    a. Yes; repair exhaust leaks as necessary. Verify repair.
    b. No; Go to step 6.
6. Remove and inspect the Hydrocarbon (HC) Fuel Doser Injection Valve. Refer to section "Removal of the Hydrocarbon Doser Fuel Injector Valve". Is the HC doser valve plugged?
    a. Yes; replace the Hydrocarbon doser injection valve and clean the port. Refer to section "Installation of the Hydrocarbon Doser Fuel Injector Valve". Verify repair.
    b. No; reinstall the Hydrocarbon Doser Injection Valve. Refer to section "Installation of the Hydrocarbon Doser Fuel Injector Valve". Go to step 7.

WARNING: ENGINE EXHAUST

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

WARNING: PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

7. Perform a low temp Aftertreatment Device (ATD) regeneration; Refer to section "GHG14 Perform Performance Check - Low Temperature ATD". Go to step 8.

8. After the low temp ATD regeneration has run for 20 minutes, monitor the DOC outlet temperature sensor reading. Is the DOC outlet temperature sensor reading within 25°C (45°F) of the DOC inlet temperature sensor?
    a. Yes; replace the HC doser block. Refer to section "Removal of the Hydrocarbon Doser Block ". Verify repair.
    b. No; replace the DOC outlet temperature sensor. Refer to section "Removal of the GHG14 Diesel Oxidation Catalyst Outlet Temperature Sensor". Verify repair.

4 SPN 3556/FMI 18 - GHG14

Diesel Oxidation Catalyst Outlet Temperature Low (Low Temp Regeneration)

Table 3.

SPN 3556 /FMI 18	
Description	This Code Sets When the Exhaust Temperature Does Not Increase Above the Modeled Threshold When the Low Temp Regeneration is Enabled.
Monitored Parameter	Diesel Oxidation Catalyst (DOC) Outlet Temperature Sensor
Typical Enabling Conditions	Low Temperature Regeneration Enabled, 1100 to 2050 rpm, 50% to 100% Engine Load.
Monitor Sequence	None
Execution Frequency	Continuous When Enabling Conditions Met
Typical Duration	20 seconds
Dash Lamps	MIL, CEL
Engine Reaction	Derate 10%
Verification	Low Temp Regeneration

Check as follows:

1. Connect DiagnosticLink ®. Go to step 2.
2. Turn the key ON (Key ON, Engine OFF). Go to step 3.
3. Check for multiple codes. Are there DOC outlet temperature sensor drift fault codes, DOC outlet temperature sensor stuck fault codes, or DOC outlet temperature sensor circuit fault codes present?
    a. Yes; diagnose the other fault codes first. Verify repair.
    b. No; Go to step 4.
4. Are there any Hydrocarbon (HC) doser low pressure fault codes present?
    a. Yes; diagnose HC doser low pressure fault codes first. Verify repair.
    b. No; Go to step 5.
5. Visually inspect the exhaust system for leaks. Look for signs of soot trails indicating a system leak. Are there exhaust leaks present?
    a. Yes; repair exhaust leaks as necessary. Verify repair.
    b. No; Go to step 6.
6. Remove and inspect the Hydrocarbon (HC) Fuel Doser Injection Valve. Refer to section "Removal of the Hydrocarbon Doser Fuel Injector Valve". Is the HC doser valve plugged?
    a. Yes; replace the Hydrocarbon doser injection valve and clean the port. Refer to section "Installation of the Hydrocarbon Doser Fuel Injector Valve". Verify repair.
    b. No; reinstall the Hydrocarbon doser injection valve. Refer to section "Installation of the Hydrocarbon Doser Fuel Injector Valve". Go to step 7.

WARNING: ENGINE EXHAUST

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

WARNING: PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

7. Perform a low temp Aftertreatment Device (ATD) regeneration; Refer to section "GHG14 Perform Performance Check - Low Temperature ATD". Go to step 8.
8. After the low temp ATD regen has run for 20 minutes, monitor the DOC outlet temperature sensor reading. Is the DOC outlet temperature sensor reading within 25°C (45°F) of the DOC inlet temperature sensor?
    a. Yes; replace the HC doser block. Refer to section "Removal of the Hydrocarbon Doser Block ". Verify repair.
    b. No; replace the DOC outlet temperature sensor. Refer to section "Removal of the GHG14 Diesel Oxidation Catalyst Outlet Temperature Sensor". Verify repair.