1 09 02-17



Service Information Bulletin

SUBJECT	DATE
SPN 3556 (ACM) (GHG14)	September 2017

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	GHG14 DD HD	SPN 3556/FMI 1 - GHG14	Step added to address a plugged DOC.
		SPN 3556/FMI 18 - 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.



13400 Outer Drive, West, Detroit, Michigan 48239-4001 Telephone: 313-592-5000 www.demanddetroit.com

2 SPN 3556/FMI 1 - GHG14

Regeneration Temperature - Out Of Range Low

Table 1.

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[®].
- 2. Turn the ignition ON (key ON, engine OFF).
- **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.



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

- 6. Start the engine and perform a Parked Regen.
- 7. Let the regen run for 22 minutes then monitor the DOC inlet pressure. Is the DOC inlet pressure reading at or above 8 kPa (1.16 psi)?
 - a. Yes; the DOC is face plugged. Use the DOC air cleaning tool PN: DSN0ATZ16002. Refer to section "Diesel Oxidation Catalyst Air Cleaning". Verify repair.
 - b. No; Go to step 8.
- 8. Turn the engine OFF.

- **9**. 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 10.



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

- 10. Perform a low temp Aftertreatment Device (ATD) regeneration; Refer to section "GHG14 Perform Performance Check Low Temperature ATD".
- 11. 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 18 - GHG14

Diesel Oxidation Catalyst Outlet Temperature Low (Low Temp Regeneration)

Table 2.

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[®].
- 2. Turn the ignition ON (key ON, engine OFF).
- **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.



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

- 6. Start the engine and perform a Parked Regen.
- 7. Let the regen run for 22 minutes then monitor the DOC inlet pressure. Is the DOC inlet pressure reading at or above 8 kPa (1.16 psi)?
 - a. Yes; the DOC is face plugged. Use the DOC air cleaning tool PN: DSN0ATZ16002. Refer to section "Diesel Oxidation Catalyst Air Cleaning". Verify repair.
 - b. No; Go to step 8.

- 8. Turn the engine OFF.
- 9. 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 10.



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

- 10. Perform a low temp Aftertreatment Device (ATD) regeneration; Refer to section "GHG14 Perform Performance Check Low Temperature ATD".
- 11. 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.