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Service Information Bulletin

SUBJECT	DATE
SPN 98 (CPC)(EPA10-GHG14) and SPN 98 (CPC)(GHG17)	March 2017

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	EPA10/ GHG14 HD Platform	SPN 98/FMI 0 - EPA10 - GHG14	Updated diagnostic procedures
		SPN 98/FMI 1 - EPA10 - GHG14	
		SPN 98/FMI 18 - EPA10 - GHG14	
DDC-SVC-MAN-0191	GHG17 HD Platform	SPN 98/FMI 0 - GHG17	
		SPN 98/FMI 1 - GHG17	
		SPN 98/FMI 18 - GHG17	
DDC-SVC-MAN-0193	DD MD Platform	SPN 98/FMI 0 - GHG17	New Med Duty diagnostic procedures
		SPN 98/FMI 1 - GHG17	
		SPN 98/FMI 18 - 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 98/FMI 0 - EPA10 - GHG14

Oil Level High

Table 1.

SPN 98/FMI 0	
Description	This Code is Not Configured for NAFTA Applications. If this Code is Active, CPC Configuration is Incorrect.
Monitored Parameter	Engine Oil Level Signal from MCM
Typical Enabling Conditions	Not Enabled
Monitor Sequence	None
Execution Frequency	None
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key ON, engine OFF

1. Connect DiagnosticLink[®].
2. Reprogram the CPC with the proper server configuration.
3. Clear fault codes. Turn ignition OFF and disconnect DiagnosticLink. Wait five minutes for all modules to power down.
4. Connect DiagnosticLink and check for codes. Did SPN 98/FMI 0 return?
 - a. Yes; replace the CPC. Refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; release the vehicle.

3 SPN 98/FMI 1 - EPA10 - GHG14

Oil Level Very Low

Table 2.

SPN 98/FMI 1	
Description	This Code is Not Configured for NAFTA Applications. If this Code is Active, CPC Configuration is Incorrect.
Monitored Parameter	Engine Oil Level Signal from MCM
Typical Enabling Conditions	Not Enabled
Monitor Sequence	None
Execution Frequency	None
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key ON, engine OFF

1. Connect DiagnosticLink[®].
2. Reprogram the CPC with the proper server configuration.
3. Clear fault codes. Turn ignition OFF and disconnect DiagnosticLink. Wait five minutes for all modules to power down.
4. Connect DiagnosticLink and check for codes. Did SPN 98/FMI 1 return?
 - a. Yes; replace the CPC. Refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; release the vehicle.

4 SPN 98/FMI 18 - EPA10 - GHG14

Low Engine Oil Level

Table 3.

SPN 98/FMI 18	
Description	This fault code sets when the engine oil level is low.
Monitored Parameter	Engine Oil Level
Typical Enabling Conditions	Always On
Monitor Sequence	Key On Engine Running
Execution Frequency	Continuous When Enabling Conditions Are Met
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None, Engine Derate or Engine Shut Down - Calibration Dependent
Verification	Key on engine off

1. Check for multiple codes. Are SPN 100/ FMI any active?
 - a. Yes; diagnose the other codes first.
 - b. No, Go to step 2.
2. Inspect the engine for leaks. Are there any leaks present?
 - a. Yes; refer to section "Symptom Diagnostics - Engine Oil Leaks".
Refer to section "Engine Oil Leaks".
Refer to section "Engine Oil Leaks - Oil Developer Method".
 - b. No; Go to step 3.
3. Inspect the engine for any signs of oil consumption, Refer to section "Check for Excessive Oil Consumption". Are there any oil consumption concerns present?
 - a. Yes; repair as necessary.
 - b. No; Go to step 4.
4. Check the oil level. Is the oil level low?
 - a. Yes; fill oil to proper level.
 - b. No; Go to step 5.
5. Check the operation of the oil level gauge. Is the oil level reading erratic?
 - a. Yes; repair or replace the oil gauge as required.
 - b. No; replace the oil level sensor.

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Oil Level High

Table 4.

SPN 98/FMI 0	
Description	This Code is Not Configured for NAFTA Applications. If this Code is Active, CPC Configuration is Incorrect.
Monitored Parameter	Engine Oil Level Signal from MCM
Typical Enabling Conditions	Not Enabled
Monitor Sequence	None
Execution Frequency	None
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key ON, engine OFF

1. Connect DiagnosticLink[®].
2. Reprogram the CPC with the proper server configuration.
3. Clear fault codes. Turn ignition OFF and disconnect DiagnosticLink. Wait five minutes for all modules to power down.
4. Connect DiagnosticLink and check for codes. Did SPN 98/FMI 0 return?
 - a. Yes; replace the CPC. Refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; release the vehicle.

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Oil Level Very Low

Table 5.

SPN 98/FMI 1	
Description	This Code is Not Configured for NAFTA Applications. If this Code is Active, CPC Configuration is Incorrect.
Monitored Parameter	Engine Oil Level Signal from MCM
Typical Enabling Conditions	Not Enabled
Monitor Sequence	None
Execution Frequency	None
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key ON, engine OFF

1. Connect DiagnosticLink[®].
2. Reprogram the CPC with the proper server configuration.
3. Clear fault codes. Turn ignition OFF and disconnect DiagnosticLink. Wait five minutes for all modules to power down.
4. Connect DiagnosticLink and check for codes. Did SPN 98/FMI 1 return?
 - a. Yes; replace the CPC. Refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; release the vehicle.

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Low Engine Oil Level

Table 6.

SPN 98/FMI 18	
Description	This fault code sets when the engine oil level is low.
Monitored Parameter	Engine Oil Level
Typical Enabling Conditions	Always On
Monitor Sequence	Key On Engine Running
Execution Frequency	Continuous When Enabling Conditions Are Met
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None, Engine Derate or Engine Shut Down - Calibration Dependent
Verification	Key on engine off

1. Check for multiple codes. Are SPN 100/ FMI any active?
 - a. Yes; diagnose the other codes first.
 - b. No; Go to step 2.
2. Inspect the engine for leaks. Are there any leaks present?
 - a. Yes; refer to section "Symptom Diagnostics - Engine Oil Leaks".
Refer to section "Engine Oil Leaks".
Refer to section "Engine Oil Leaks - Oil Developer Method".
 - b. No; Go to step 3.
3. Inspect the engine for any signs of oil consumption, Refer to section "Check for Excessive Oil Consumption". Are there any oil consumption concerns present?
 - a. Yes; repair as necessary.
 - b. No; Go to step 4.
4. Check the oil level. Is the oil level low?
 - a. Yes; fill oil to proper level.
 - b. No; Go to step 5.
5. Check the operation of the oil level gauge. Is the oil level reading erratic?
 - a. Yes; repair or replace the oil gauge as required.
 - b. No; replace the oil level sensor.

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Oil Level High

Table 7.

SPN 98/FMI 0	
Description	This Code is Not Configured for NAFTA Applications. If this Code is Active, CPC Configuration is Incorrect.
Monitored Parameter	Engine Oil Level Signal from MCM
Typical Enabling Conditions	Not Enabled
Monitor Sequence	None
Execution Frequency	None
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key ON, engine OFF

1. Connect DiagnosticLink[®].
2. Reprogram the CPC with the proper server configuration.
3. Clear fault codes. Turn ignition OFF and disconnect DiagnosticLink. Wait five minutes for all modules to power down.
4. Connect DiagnosticLink and check for codes. Did SPN 98/FMI 0 return?
 - a. Yes; replace the CPC. Refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; release the vehicle.

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Oil Level Very Low

Table 8.

SPN 98/FMI 1	
Description	This Code is Not Configured for NAFTA Applications. If this Code is Active, CPC Configuration is Incorrect.
Monitored Parameter	Engine Oil Level Signal from MCM
Typical Enabling Conditions	Not Enabled
Monitor Sequence	None
Execution Frequency	None
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key ON, engine OFF

1. Connect DiagnosticLink[®].
2. Reprogram the CPC with the proper server configuration.
3. Clear fault codes. Turn ignition OFF and disconnect DiagnosticLink. Wait five minutes for all modules to power down.
4. Connect DiagnosticLink and check for codes. Did SPN 98/FMI 1 return?
 - a. Yes; replace the CPC. Refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; release the vehicle.

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Low Engine Oil Level

Table 9.

SPN 98/FMI 18	
Description	This fault code sets when the engine oil level is low.
Monitored Parameter	Engine Oil Level
Typical Enabling Conditions	Always On
Monitor Sequence	Key On Engine Running
Execution Frequency	Continuous When Enabling Conditions Are Met
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None, Engine Derate or Engine Shut Down - Calibration Dependent
Verification	Key on engine off

1. Check for multiple codes. Are SPN 100/ FMI any active?
 - a. Yes; diagnose the other codes first.
 - b. No; Go to step 2.
2. Inspect the engine for leaks. Are there any leaks present?
 - a. Yes; refer to "Symptom Diagnostics – Engine Oil Leaks".
 - b. No; Go to step 3.
3. Inspect the engine for any signs of oil consumption, Refer to section "Excessive Oil Consumption". Are there any oil consumption concerns present?
 - a. Yes; repair as necessary.
 - b. No; Go to step 4.
4. Check the oil level. Is the oil level low?
 - a. Yes; fill oil to proper level.
 - b. No; Go to step 5.
5. Check the operation of the oil level gauge. Is the oil level reading erratic?
 - a. Yes; repair or replace the oil gauge as required.
 - b. No; replace the oil level sensor.