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Service Information Bulletin

SUBJECT	DATE
SPN 707 (CPC) (GHG17)	May 2016

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0193	GHG17 DD Medium Duty	SPN 707/FMI 3 - GHG17	New DD5 and DD8 diagnostic procedures.
		SPN 707/FMI 4 - GHG17	
		SPN 707/FMI 5 - GHG17	
DDC-SVC-MAN-0191	GHG17 DD Platform	SPN 707/FMI 3 - GHG17	Updated GHG17 HD diagnostic procedures.
		SPN 707/FMI 4 - GHG17	
		SPN 707/FMI 5 - GHG17	
DDC-SVC-MAN-0084	GHG14 DD Platform	SPN 707/FMI 3 - GHG14	Updated GHG14 HD diagnostic procedures.
		SPN 707/FMI 4 - GHG14	
		SPN 707/FMI 5 - 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 707/FMI 3 - GHG17

Digital Output 2 10 Circuit Failed High

Table 1.

SPN 707/FMI 3	
Description	CPC Output 2 10 Short to Voltage
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



WARNING: ENGINE EXHAUST

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

1. Has the Common Powertrain Controller (CPC) recently been changed or reprogrammed?
 - a. Yes; verify that the correct CPC parameter list has been installed. If the correct calibration and correct parameter list have been installed, then Go to step 2.
 - b. No; Go to step 2.
2. Connect to DiagnosticLink[®].

Parameter	Value	Units	Minimum
PGR035 Digital Outputs			
1 04 DO Selection	ground, idle validatio...		
1 05 DO Selection	DPF Lamp		
1 13 DO Selection	MIL lamp		
2 10 DO Selection	0 disabled 1 check engine lamp yellow		
3 02 DO Selection	disabled		
3 07 DO Selection	WIF-Lamp		
3 08 DO Selection	DEF Low Lamp		
3 09 DO Selection	Fuel Filter Restriction ...		
3 10 DO Selection	stop engine lamp red		
3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
4 01 DO Selection	grid heater lamp		
4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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3. Verify parameters by going to the parameters work window.
4. Verify that the parameter set to 2 10 DO Selection is set to the specific component to which this is configured. Are the parameters configured correctly?
 - a. Yes; repair the short to power between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

3 SPN 707/FMI 4 - GHG17

Digital Output 2 10 Circuit Failed Low

Table 2.

SPN 707/FMI 4	
Description	CPC Output 2 10 Short to Ground
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



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 - a. Yes; verify that the correct CPC parameter list has been installed. If the correct calibration and correct parameter list have been installed, then Go to step 2.
 - b. No; Go to step 2.
2. Connect to DiagnosticLink[®].

Parameter	Value	Units	Minimum
PGR035 Digital Outputs			
1 04 DO Selection	ground, idle validatio...		
1 05 DO Selection	DPF Lamp		
1 13 DO Selection	MIL lamp		
2 10 DO Selection	0 disabled 1 check engine lamp yellow		
3 02 DO Selection	disabled		
3 07 DO Selection	WIF-Lamp		
3 08 DO Selection	DEF Low Lamp		
3 09 DO Selection	Fuel Filter Restriction ...		
3 10 DO Selection	stop engine lamp red		
3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
4 01 DO Selection	grid heater lamp		
4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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4. Verify that the parameter set to 2 10 DO Selection is set to the specific component to which this is configured. Are the parameters configured correctly?
 - a. Yes; repair the short to ground between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

4 SPN 707/FMI 5 - GHG17

Digital Output 2 10 Circuit Open

Table 3.

SPN 707/FMI 5	
Description	CPC Output 2 10 Open Circuit
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



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 - a. Yes; verify that the correct CPC parameter list has been installed. If the correct calibration and correct parameter list have been installed, then Go to step 2.
 - b. No; Go to step 2.
2. Connect to DiagnosticLink[®].

Parameter	Value	Units	Minimum
PGR035 Digital Outputs			
1 04 DO Selection	ground, idle validatio...		
1 05 DO Selection	DPF Lamp		
1 13 DO Selection	MIL lamp		
2 10 DO Selection	0 disabled 1 check engine lamp yellow		
3 02 DO Selection	disabled		
3 07 DO Selection	WIF-Lamp		
3 08 DO Selection	DEF Low Lamp		
3 09 DO Selection	Fuel Filter Restriction ...		
3 10 DO Selection	stop engine lamp red		
3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
4 01 DO Selection	grid heater lamp		
4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 07 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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3. Verify parameters by going to the parameters work window.
4. Verify that the parameter set to 2 10 DO Selection is set to the specific component to which this is configured. Are the parameters configured correctly?
 - a. Yes; repair the open circuit between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

5 SPN 707/FMI 3 - GHG17

Digital Output 2 10 Circuit Failed High

Table 4.

SPN 707/FMI 3	
Description	CPC Output 2 10 Short to Voltage
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



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 - b. No; Go to step 2.
2. Connect to DiagnosticLink[®].

Parameter	Value	Units	Minimum
PGR035 Digital Outputs			
1 04 DO Selection	ground, idle validatio...		
1 05 DO Selection	DPF Lamp		
1 13 DO Selection	MIL lamp		
2 10 DO Selection	0 disabled 1 check engine lamp yellow		
3 02 DO Selection	disabled		
3 07 DO Selection	WIF-Lamp		
3 08 DO Selection	DEF Low Lamp		
3 09 DO Selection	Fuel Filter Restriction ...		
3 10 DO Selection	stop engine lamp red		
3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
4 01 DO Selection	grid heater lamp		
4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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 - a. Yes; repair the short to power between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

6 SPN 707/FMI 4 - GHG17

Digital Output 2 10 Circuit Failed Low

Table 5.

SPN 707/FMI 4	
Description	CPC Output 2 10 Short to Ground
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Continuous when enabling conditions met
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



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 - b. No; Go to step 2.
2. Connect to DiagnosticLink[®].

Parameter	Value	Units	Minimum
PGR035 Digital Outputs			
1 04 DO Selection	ground, idle validatio...		
1 05 DO Selection	DPF Lamp		
1 13 DO Selection	MIL lamp		
2 10 DO Selection	0 disabled 1 check engine lamp yellow		
3 02 DO Selection	disabled		
3 07 DO Selection	WIF-Lamp		
3 08 DO Selection	DEF Low Lamp		
3 09 DO Selection	Fuel Filter Restriction ...		
3 10 DO Selection	stop engine lamp red		
3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
4 01 DO Selection	grid heater lamp		
4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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4. Verify that the parameter set to 2 10 DO Selection is set to the specific component to which this is configured. Are the parameters configured correctly?
 - a. Yes; repair the short to ground between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

7 SPN 707/FMI 5 - GHG17

Digital Output 2 10 Circuit Open

Table 6.

SPN 707/FMI 5	
Description	CPC Output 2 10 Open Circuit
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



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Parameter	Value	Units	Minimum
PGR035 Digital Outputs			
1 04 DO Selection	ground, idle validatio...		
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3 07 DO Selection	WIF-Lamp		
3 08 DO Selection	DEF Low Lamp		
3 09 DO Selection	Fuel Filter Restriction ...		
3 10 DO Selection	stop engine lamp red		
3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
4 01 DO Selection	grid heater lamp		
4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 07 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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3. Verify parameters by going to the parameters work window.
4. Verify that the parameter set to 2 10 DO Selection is set to the specific component to which this is configured. Are the parameters configured correctly?
 - a. Yes; repair the open circuit between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

8 SPN 707/FMI 3 - GHG14

Digital Output 2 10 Circuit Failed High

Table 7.

SPN 707/FMI 3	
Description	CPC Output 2 10 Short to Voltage
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

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3 09 DO Selection	Fuel Filter Restriction ...		
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3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
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4 10 DO Selection	disabled		

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 - a. Yes; repair the short to power between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

9 SPN 707/FMI 4 - GHG14

Digital Output 2 10 Circuit Failed Low

Table 8.

SPN 707/FMI 4	
Description	CPC Output 2 10 Short to Ground
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Continuous when enabling conditions met
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



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3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
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4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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 - a. Yes; repair the short to ground between pin 10 of the CPC connector #2 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
 - b. No; configure the parameters correctly.

10 SPN 707/FMI 5 - GHG14

Digital Output 2 10 Circuit Open

Table 9.

SPN 707/FMI 5	
Description	CPC Output 2 10 Open Circuit
Monitored Parameter	CPC Output 2/10
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Engine On with Output Activation

Check as follows:



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PGR035 Digital Outputs			
1 04 DO Selection	ground, idle validatio...		
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3 08 DO Selection	DEF Low Lamp		
3 09 DO Selection	Fuel Filter Restriction ...		
3 10 DO Selection	stop engine lamp red		
3 12 DO Selection	disabled		
3 16 DO Selection	disabled		
3 17 DO Selection	disabled		
4 01 DO Selection	grid heater lamp		
4 02 DO Selection	High Exhaust Temper...		
4 06 DO Selection	disabled		
4 07 DO Selection	disabled		
4 09 DO Selection	disabled		
4 10 DO Selection	disabled		

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 - b. No; configure the parameters correctly.