

1 05 27-16



## Service Information Bulletin

SUBJECT	DATE
SPN 704 (CPC) (GHG17)	May 2016

### Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0193	GHG17 DD Medium Duty	SPN 704 FMI 3 - GHG17	New DD5 and DD8 diagnostic procedures.
		SPN 704 FMI 4 - GHG17	
		SPN 704 FMI 5 - GHG17	
DDC-SVC-MAN-0191	GHG17 DD Platform	SPN 704 FMI 3 - GHG17	Updated GHG17 HD diagnostic procedures.
		SPN 704 FMI 4 - GHG17	
		SPN 704 FMI 5 - GHG17	
DDC-SVC-MAN-0084	GHG14 DD Platform	SPN 704 FMI 3 - GHG14	Updated GHG14 HD diagnostic procedures.
		SPN 704 FMI 4 - GHG14	
		SPN 704 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.



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## 2 SPN 704/FMI 3 - GHG17

Digital Output 4 07 Circuit Failed High

**Table 1.**

SPN 704/FMI 3	
Description	CPC Output 4 07 Short to Voltage
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
<b>Vehicle Speed Sensor</b>			
<b>Inputs</b>			
<b>Outputs</b>			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
	5 coolant temperature		
	6 pedal torque		
	7 boost temperature		0
	8 oil pressure (threshold)		0
	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters - go to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

### 3 SPN 704/FMI 4 - GHG17

Digital Output 4 07 Circuit Failed Low

**Table 2.**

SPN 704/FMI 4	
Description	CPC Output 4 07 Short to Ground
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
+ Vehicle Speed Sensor			
+ Inputs			
- Outputs			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
- SAE J1939 Source Addresses			
CC1 Source Address SAE J1939	5 coolant temperature		
CC2 Source Address SAE J1939	6 pedal torque		
CC3 Source Address SAE J1939	7 boost temperature		
CMI DPF Source Addr SAE J1939	8 oil pressure (threshold)		0
CMI Fan Source Addr1 SAE J1939	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters - go to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

## 4 SPN 704/FMI 5 - GHG17

Digital Output 4 07 Circuit Open

**Table 3.**

SPN 704/FMI 5	
Description	CPC Output 4 07 Open Circuit
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
<b>Vehicle Speed Sensor</b>			
<b>Inputs</b>			
<b>Outputs</b>			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
	5 coolant temperature		
	6 pedal torque		
	7 boost temperature		0
	8 oil pressure (threshold)		0
	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters - go to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

## 5 SPN 704/FMI 3 - GHG17

Digital Output 4 07 Circuit Failed High

**Table 4.**

SPN 704/FMI 3	
Description	CPC Output 4 07 Short to Voltage
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
<b>Vehicle Speed Sensor</b>			
<b>Inputs</b>			
<b>Outputs</b>			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
	5 coolant temperature		
	6 pedal torque		
	7 boost temperature		
	8 oil pressure (threshold)		0
	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters by going to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

## 6 SPN 704/FMI 4 - GHG17

Digital Output 4 07 Circuit Failed Low

**Table 5.**

SPN 704/FMI 4	
Description	CPC Output 4 07 Short to Ground
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
+ Vehicle Speed Sensor			
+ Inputs			
- Outputs			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
- SAE J1939 Source Addresses			
CC1 Source Address SAE J1939	5 coolant temperature		
CC2 Source Address SAE J1939	6 pedal torque		
CC3 Source Address SAE J1939	7 boost temperature		
CMI DPF Source Addr SAE J1939	8 oil pressure (threshold)		0
CMI Fan Source Addr1 SAE J1939	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters - go to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

## 7 SPN 704/FMI 5 - GHG17

Digital Output 4 07 Circuit Open

**Table 6.**

SPN 704/FMI 5	
Description	CPC Output 4 07 Open Circuit
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
<b>Vehicle Speed Sensor</b>			
<b>Inputs</b>			
<b>Outputs</b>			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
	5 coolant temperature		
	6 pedal torque		
	7 boost temperature		
	8 oil pressure (threshold)		0
	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters - go to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

## 8 SPN 704/FMI 3 - GHG14

Digital Output 4 07 Circuit Failed High

**Table 7.**

SPN 704/FMI 3	
Description	CPC Output 4 07 Short to Voltage
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
+ Vehicle Speed Sensor			
+ Inputs			
- Outputs			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
- SAE J1939 Source Addresses			
CC1 Source Address SAE J1939	5 coolant temperature		
CC2 Source Address SAE J1939	6 pedal torque		
CC3 Source Address SAE J1939	7 boost temperature		
CMI DPF Source Addr SAE J1939	8 oil pressure (threshold)		0
CMI Fan Source Addr1 SAE J1939	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters by going to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

## 9 SPN 704/FMI 4 - GHG14

Digital Output 4 07 Circuit Failed Low

**Table 8.**

SPN 704/FMI 4	
Description	CPC Output 4 07 Short to Ground
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
<b>Vehicle Speed Sensor</b>			
<b>Inputs</b>			
<b>Outputs</b>			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
	5 coolant temperature		
	6 pedal torque		
	7 boost temperature		0
	8 oil pressure (threshold)		0
	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters - go to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.

## 10 SPN 704/FMI 5 - GHG14

Digital Output 4 07 Circuit Open

**Table 9.**

SPN 704/FMI 5	
Description	CPC Output 4 07 Open Circuit
Monitored Parameter	CPC Output 4/7
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<sup>®</sup>.

Parameter	Value	Units	Minimum
+ Vehicle Speed Sensor			
+ Inputs			
- Outputs			
1 05 DO Selection	DPF Lamp		
1 05 DO Fault Detection	Fault Detection Off		
3 07 DO Selection	disabled		
3 07 DO Fault Detection	Fault Detection Off		
3 08 DO Selection	disabled		
3 08 DO Fault Detection	Fault Detection Off		
3 09 DO Selection	WIF-Lamp		
3 09 DO Fault Detection	Fault Detection Off		
3 10 DO Selection	DEF Low Lamp		
3 10 DO Fault Detection	Fault Detection Off		
3 12 DO Selection	Fuel Filter Restriction ...		
3 12 DO Fault Detection	Fault Detection Off		
3 17 DO Selection	disabled		
3 17 DO Fault Detection	Fault Detection Off		
4 06 DO Selection	grid heater lamp		
4 06 DO Fault Detection	Fault Detection Off		
4 07 DO Selection			
4 07 DO Fault Detection	0 disabled		
4 09 DO Fault Detection	1 accelerator pedal kick down		
4 09 DO Selection	2 actual torque		
4 10 DO Fault Detection	3 road speed		
4 10 DO Selection	4 engine speed		
- SAE J1939 Source Addresses			
CC1 Source Address SAE J1939	5 coolant temperature		
CC2 Source Address SAE J1939	6 pedal torque		
CC3 Source Address SAE J1939	7 boost temperature		
CMI DPF Source Addr SAE J1939	8 oil pressure (threshold)		0
CMI Fan Source Addr1 SAE J1939	9 coolant temperature (Eng.Controller threshold)		0
	10 vehicle power shutdown / ignition relay		0
	11 optimized idle ACC bus (ignition relay)		0
	12 split valve 1		0
	13 High Exhaust Temperature Lamp		0
	14 AUX-Relay		
	15 PTO2valve2		
Parameters were successfully imported from M:\DD\Parfiles\M2 Service Truck\M2 CPC.par.			

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3. Verify parameters - go to the parameters work window.
4. Verify that the parameter set to 4 07 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 7 of the CPC connector #4 and the wired component. For wiring schematic information, refer to Original Equipment Manufacturer (OEM) literature.
  - b. No; configure the parameters correctly.