

1 05 13-16



Service Information Bulletin

SUBJECT	DATE
SPN 974 (CPC) (GHG17)	May 2016

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0193	GHG17 DD Medium Duty	SPN 974/FMI 2 - GHG17	New DD5 and DD8 diagnostic procedures.
		SPN 974/FMI 3 - GHG17	
		SPN 974/FMI 4 - GHG17	
DDC-SVC-MAN-0191	GHG17 DD Platform	SPN 974/FMI 2 - GHG17	Updated GHG17 HDEP diagnostic procedures.
		SPN 974/FMI 3 - GHG17	
		SPN 974/FMI 4 - GHG17	
DDC-SVC-MAN-0084	GHG14 DD Platform	SPN 974/FMI 2 - GHG14	Updated GHG14 HDEP diagnostic procedures.
		SPN 974/FMI 3 - GHG14	
		SPN 974/FMI 4 - 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 974/FMI 2 - GHG17

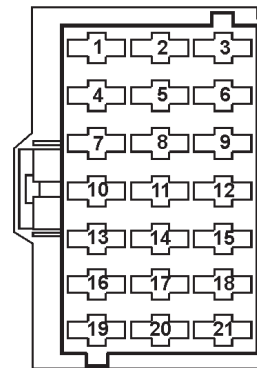
Remote Accelerator Pedal Supply Voltage Out of Range

Table 1.

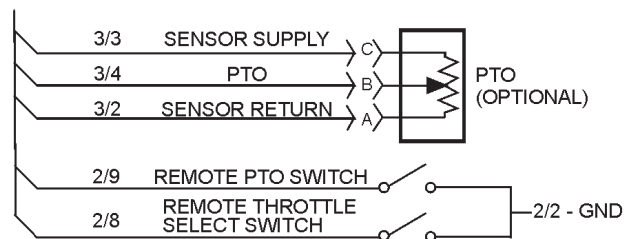
SPN 974/FMI 2	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Power or Ground
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On

21-PIN CONNECTOR #3

- 3/1 OI THERMOSTAT
- 3/2 SENSOR RETURN
- 3/3 SENSOR SUPPLY
- 3/4 REMOTE PTO
- 3/5 NOT USED
- 3/6 NOT USED
- 3/7 TOP 2 LOCKOUT SOLENOID
- 3/8 TOP 2 SHIFT SOLENOID
- 3/9 WATER-IN-FUEL INDICATOR
- 3/10 DEF LOW LAMP
- 3/11 LOW COOLANT LEVEL SENSOR
- 3/12 FUEL FILTER RESTRICTION LAMP
- 3/13 VEHICLE SPEED (+)
- 3/14 VEHICLE SPEED (-)
- 3/15 AMBIENT AIR TEMPERATURE SENSOR
- 3/16 RED STOP LAMP
- 3/17 OI ALARM
- 3/18 NOT USED
- 3/19 ENGINE CAN (-)
- 3/20 ENGINE CAN SHIELD
- 3/21 ENGINE CAN (+)



BROWN FRONT
LOOKING INTO PINS ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the voltage between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is voltage present?
 - a. Yes; repair the short to power between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; repair the short to ground between pin 4 of the CPC connector #3 and the remote throttle switch.

3 SPN 974/FMI 3 - GHG17

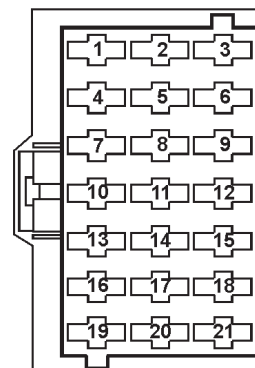
Remote Accelerator Pedal Circuit Failed High

Table 2.

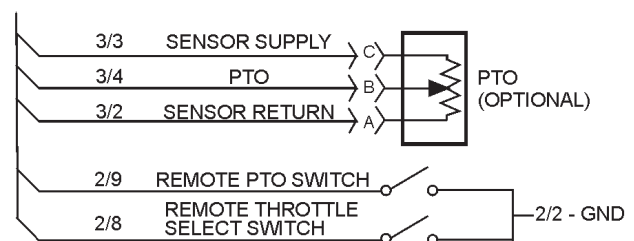
SPN 974/FMI 3	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Power While Pin 8 of the Common Powertrain Controller (CPC) Connector #2 is Grounded
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On with Remote Pedal Activated

21-PIN CONNECTOR #3

3/1	OI THERMOSTAT
3/2	SENSOR RETURN
3/3	SENSOR SUPPLY
3/4	REMOTE PTO
3/5	NOT USED
3/6	NOT USED
3/7	TOP 2 LOCKOUT SOLENOID
3/8	TOP 2 SHIFT SOLENOID
3/9	WATER-IN-FUEL INDICATOR
3/10	DEF LOW LAMP
3/11	LOW COOLANT LEVEL SENSOR
3/12	FUEL FILTER RESTRICTION LAMP
3/13	VEHICLE SPEED (+)
3/14	VEHICLE SPEED (-)
3/15	AMBIENT AIR TEMPERATURE SENSOR
3/16	RED STOP LAMP
3/17	OI ALARM
3/18	NOT USED
3/19	ENGINE CAN (-)
3/20	ENGINE CAN SHIELD
3/21	ENGINE CAN (+)



**BROWN
FRONT**
LOOKING INTO PINS
ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the voltage between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is voltage present?
 - a. Yes; repair the short to power between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; replace the remote throttle switch.

4 SPN 974/FMI 4 - GHG17

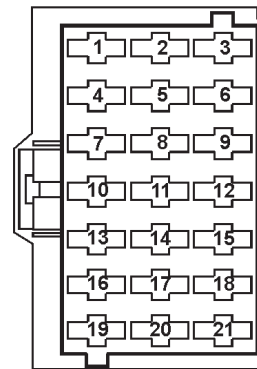
Remote Accelerator Pedal Circuit Failed Low

Table 3.

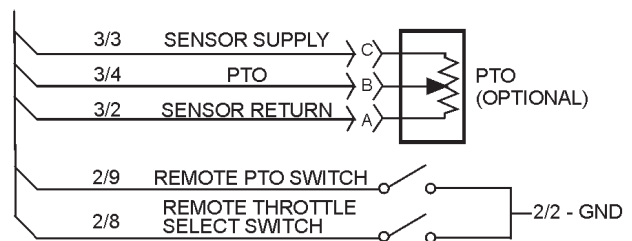
SPN 974/FMI 4	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Ground While Pin 8 of the Common Powertrain Controller (CPC) Connector #2 is Grounded
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On with Remote Pedal Activated

21-PIN CONNECTOR #3

- 3/1 OI THERMOSTAT
- 3/2 SENSOR RETURN
- 3/3 SENSOR SUPPLY
- 3/4 REMOTE PTO
- 3/5 NOT USED
- 3/6 NOT USED
- 3/7 TOP 2 LOCKOUT SOLENOID
- 3/8 TOP 2 SHIFT SOLENOID
- 3/9 WATER-IN-FUEL INDICATOR
- 3/10 DEF LOW LAMP
- 3/11 LOW COOLANT LEVEL SENSOR
- 3/12 FUEL FILTER RESTRICTION LAMP
- 3/13 VEHICLE SPEED (+)
- 3/14 VEHICLE SPEED (-)
- 3/15 AMBIENT AIR TEMPERATURE SENSOR
- 3/16 RED STOP LAMP
- 3/17 OI ALARM
- 3/18 NOT USED
- 3/19 ENGINE CAN (-)
- 3/20 ENGINE CAN SHIELD
- 3/21 ENGINE CAN (+)



BROWN FRONT
LOOKING INTO PINS ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the resistance between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is the resistance less than five ohms?
 - a. Yes; repair the short to ground between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; replace the remote throttle switch.

5 SPN 974/FMI 2 - GHG17

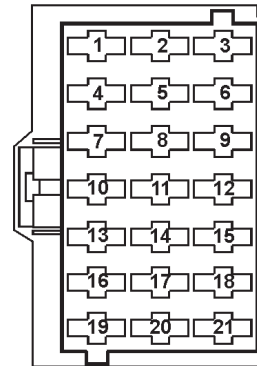
Remote Accelerator Pedal Supply Voltage Out of Range

Table 4.

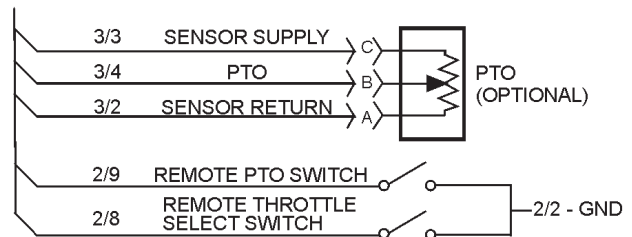
SPN 974/FMI 2	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Power or Ground
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On

21-PIN CONNECTOR #3

3/1	OI THERMOSTAT
3/2	SENSOR RETURN
3/3	SENSOR SUPPLY
3/4	REMOTE PTO
3/5	NOT USED
3/6	NOT USED
3/7	TOP 2 LOCKOUT SOLENOID
3/8	TOP 2 SHIFT SOLENOID
3/9	WATER-IN-FUEL INDICATOR
3/10	DEF LOW LAMP
3/11	LOW COOLANT LEVEL SENSOR
3/12	FUEL FILTER RESTRICTION LAMP
3/13	VEHICLE SPEED (+)
3/14	VEHICLE SPEED (-)
3/15	AMBIENT AIR TEMPERATURE SENSOR
3/16	RED STOP LAMP
3/17	OI ALARM
3/18	NOT USED
3/19	ENGINE CAN (-)
3/20	ENGINE CAN SHIELD
3/21	ENGINE CAN (+)



**BROWN
FRONT**
LOOKING INTO PINS
ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the A & I manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).
4. Measure the voltage between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is voltage present?

- a. Yes; repair the short to power between pin 4 of the CPC connector #3 and the remote throttle switch.
- b. No; repair the short to ground between pin 4 of the CPC connector #3 and the remote throttle switch.

6 SPN 974/FMI 3 - GHG17

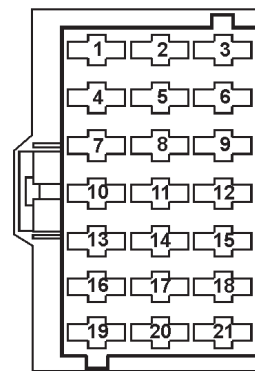
Remote Accelerator Pedal Circuit Failed High

Table 5.

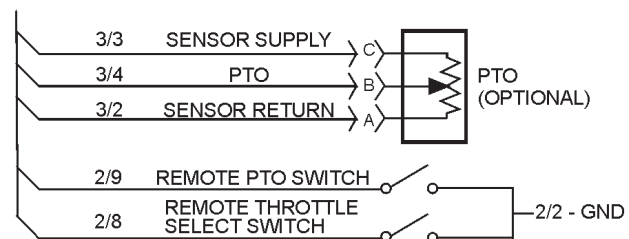
SPN 974/FMI 3	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Power While Pin 8 of the Common Powertrain Controller (CPC) Connector #2 is Grounded
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On with Remote Pedal Activated

21-PIN CONNECTOR #3

3/1	OI THERMOSTAT
3/2	SENSOR RETURN
3/3	SENSOR SUPPLY
3/4	REMOTE PTO
3/5	NOT USED
3/6	NOT USED
3/7	TOP 2 LOCKOUT SOLENOID
3/8	TOP 2 SHIFT SOLENOID
3/9	WATER-IN-FUEL INDICATOR
3/10	DEF LOW LAMP
3/11	LOW COOLANT LEVEL SENSOR
3/12	FUEL FILTER RESTRICTION LAMP
3/13	VEHICLE SPEED (+)
3/14	VEHICLE SPEED (-)
3/15	AMBIENT AIR TEMPERATURE SENSOR
3/16	RED STOP LAMP
3/17	OI ALARM
3/18	NOT USED
3/19	ENGINE CAN (-)
3/20	ENGINE CAN SHIELD
3/21	ENGINE CAN (+)



**BROWN
FRONT**
LOOKING INTO PINS
ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the voltage between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is voltage present?
 - a. Yes; repair the short to power between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; replace the remote throttle switch.

7 SPN 974/FMI 4 - GHG17

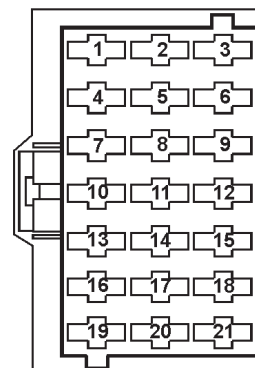
Remote Accelerator Pedal Circuit Failed Low

Table 6.

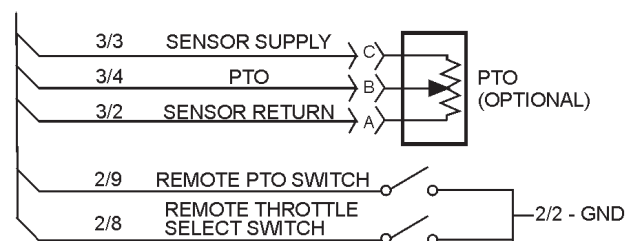
SPN 974/FMI 4	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Ground While Pin 8 of the Common Powertrain Controller (CPC) Connector #2 is Grounded
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On with Remote Pedal Activated

21-PIN CONNECTOR #3

3/1	OI THERMOSTAT
3/2	SENSOR RETURN
3/3	SENSOR SUPPLY
3/4	REMOTE PTO
3/5	NOT USED
3/6	NOT USED
3/7	TOP 2 LOCKOUT SOLENOID
3/8	TOP 2 SHIFT SOLENOID
3/9	WATER-IN-FUEL INDICATOR
3/10	DEF LOW LAMP
3/11	LOW COOLANT LEVEL SENSOR
3/12	FUEL FILTER RESTRICTION LAMP
3/13	VEHICLE SPEED (+)
3/14	VEHICLE SPEED (-)
3/15	AMBIENT AIR TEMPERATURE SENSOR
3/16	RED STOP LAMP
3/17	OI ALARM
3/18	NOT USED
3/19	ENGINE CAN (-)
3/20	ENGINE CAN SHIELD
3/21	ENGINE CAN (+)



**BROWN
FRONT**
LOOKING INTO PINS
ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the resistance between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is the resistance less than five ohms?
 - a. Yes; repair the short to ground between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; replace the remote throttle switch.

8 SPN 974/FMI 2 - EPA10 - GHG14

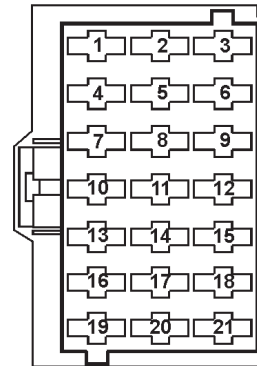
Remote Accelerator Pedal Supply Voltage Out of Range

Table 7.

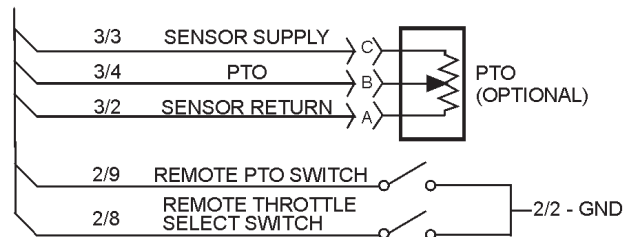
SPN 974/FMI 2	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Power or Ground
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On

21-PIN CONNECTOR #3

3/1	OI THERMOSTAT
3/2	SENSOR RETURN
3/3	SENSOR SUPPLY
3/4	REMOTE PTO
3/5	NOT USED
3/6	NOT USED
3/7	TOP 2 LOCKOUT SOLENOID
3/8	TOP 2 SHIFT SOLENOID
3/9	WATER-IN-FUEL INDICATOR
3/10	DEF LOW LAMP
3/11	LOW COOLANT LEVEL SENSOR
3/12	FUEL FILTER RESTRICTION LAMP
3/13	VEHICLE SPEED (+)
3/14	VEHICLE SPEED (-)
3/15	AMBIENT AIR TEMPERATURE SENSOR
3/16	RED STOP LAMP
3/17	OI ALARM
3/18	NOT USED
3/19	ENGINE CAN (-)
3/20	ENGINE CAN SHIELD
3/21	ENGINE CAN (+)



BROWN FRONT
LOOKING INTO PINS ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the voltage between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is voltage present?
 - a. Yes; repair the short to power between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; repair the short to ground between pin 4 of the CPC connector #3 and the remote throttle switch.

9 SPN 974/FMI 3 - EPA10 - GHG14

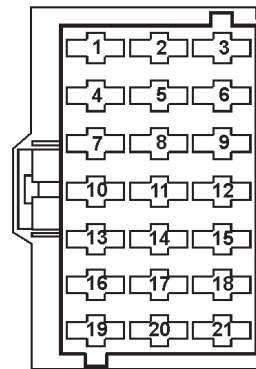
Remote Accelerator Pedal Circuit Failed High

Table 8.

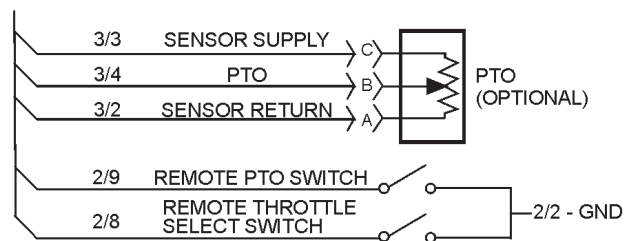
SPN 974/FMI 2	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Power While Pin 8 of the Common Powertrain Controller (CPC) Connector #2 is Grounded
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On with Remote Pedal Activated

21-PIN CONNECTOR #3

- 3/1 OI THERMOSTAT
- 3/2 SENSOR RETURN
- 3/3 SENSOR SUPPLY
- 3/4 REMOTE PTO
- 3/5 NOT USED
- 3/6 NOT USED
- 3/7 TOP 2 LOCKOUT SOLENOID
- 3/8 TOP 2 SHIFT SOLENOID
- 3/9 WATER-IN-FUEL INDICATOR
- 3/10 DEF LOW LAMP
- 3/11 LOW COOLANT LEVEL SENSOR
- 3/12 FUEL FILTER RESTRICTION LAMP
- 3/13 VEHICLE SPEED (+)
- 3/14 VEHICLE SPEED (-)
- 3/15 AMBIENT AIR TEMPERATURE SENSOR
- 3/16 RED STOP LAMP
- 3/17 OI ALARM
- 3/18 NOT USED
- 3/19 ENGINE CAN (-)
- 3/20 ENGINE CAN SHIELD
- 3/21 ENGINE CAN (+)



BROWN FRONT
LOOKING INTO PINS ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the voltage between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is voltage present?
 - a. Yes; repair the short to power between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; replace the remote throttle switch.

10 SPN 974/FMI 4 - EPA10 - GHG14

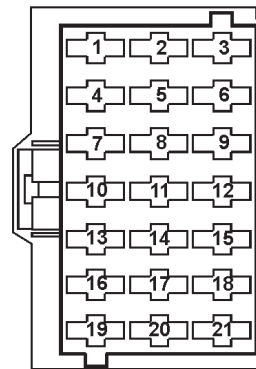
Remote Accelerator Pedal Circuit Failed Low

Table 9.

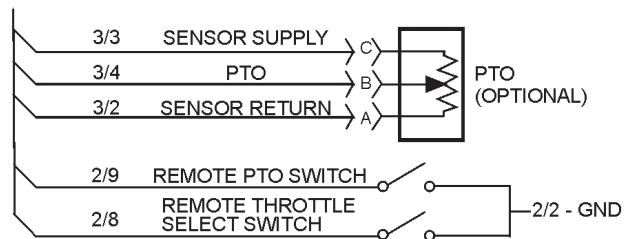
SPN 974/FMI 4	
Description	This Fault May Occur if Remote Accelerator Pedal is Programmed ON and Remote Pedal Circuit is Shorted to Ground While Pin 8 of the Common Powertrain Controller (CPC) Connector #2 is Grounded
Monitored Parameter	Remote Throttle Sensor
Typical Enabling Conditions	Always Enabled
Monitor Sequence	None
Execution Frequency	Always Enabled
Typical Duration	Two Seconds
Dash Lamps	CEL
Engine Reaction	None
Verification	Key On Engine On with Remote Pedal Activated

21-PIN CONNECTOR #3

- 3/1 OI THERMOSTAT
- 3/2 SENSOR RETURN
- 3/3 SENSOR SUPPLY
- 3/4 REMOTE PTO
- 3/5 NOT USED
- 3/6 NOT USED
- 3/7 TOP 2 LOCKOUT SOLENOID
- 3/8 TOP 2 SHIFT SOLENOID
- 3/9 WATER-IN-FUEL INDICATOR
- 3/10 DEF LOW LAMP
- 3/11 LOW COOLANT LEVEL SENSOR
- 3/12 FUEL FILTER RESTRICTION LAMP
- 3/13 VEHICLE SPEED (+)
- 3/14 VEHICLE SPEED (-)
- 3/15 AMBIENT AIR TEMPERATURE SENSOR
- 3/16 RED STOP LAMP
- 3/17 OI ALARM
- 3/18 NOT USED
- 3/19 ENGINE CAN (-)
- 3/20 ENGINE CAN SHIELD
- 3/21 ENGINE CAN (+)



BROWN FRONT
LOOKING INTO PINS ON THE HARNESS



d150387

Check as follows:

1. Is the unit equipped with a remote accelerator pedal?
 - a. Yes; Go to step 2.
 - b. No; refer to the Application and Installation manual for proper Common Powertrain Controller (CPC) configuration.
2. Disconnect the remote throttle switch.
3. Turn the ignition ON (key ON, engine OFF).

-
4. Measure the resistance between remote throttle switch connector (from pin 4 of the CPC connector #3) and ground. Refer to Original Equipment Manufacturer (OEM) literature for schematic information. Is the resistance less than five ohms?
 - a. Yes; repair the short to ground between pin 4 of the CPC connector #3 and the remote throttle switch.
 - b. No; replace the remote throttle switch.