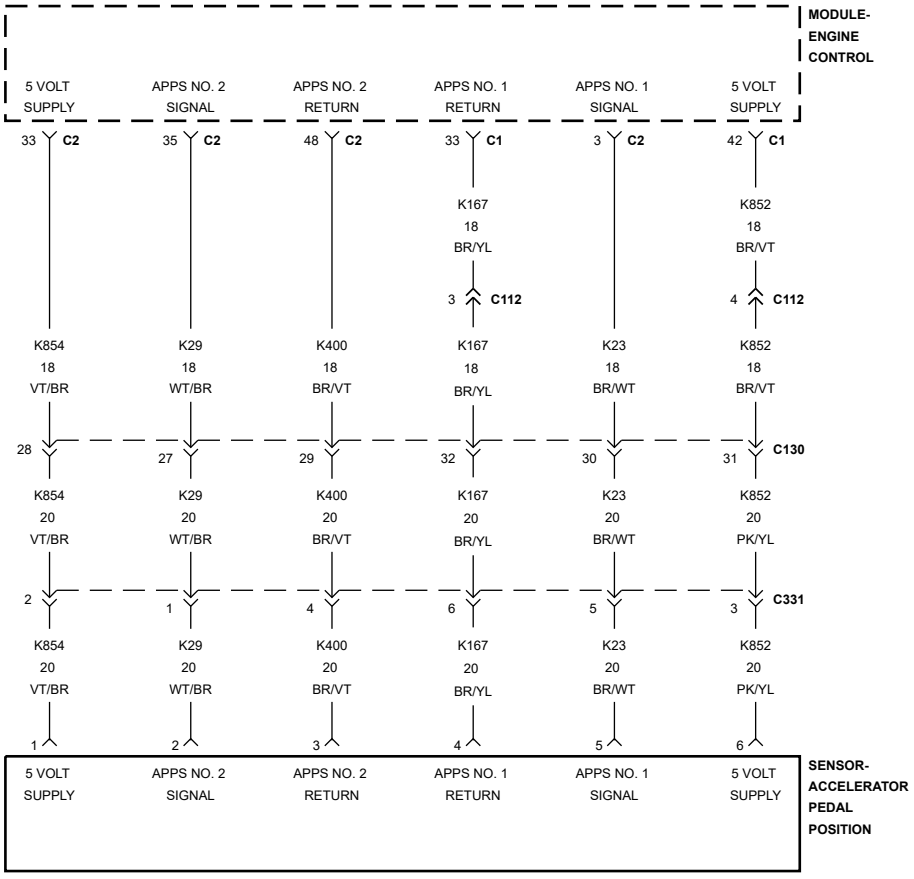
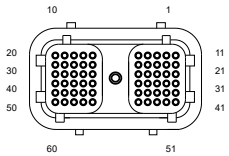
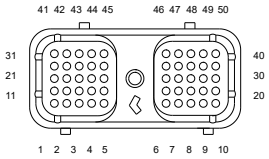
P2121-PPS CONFORMANCE ERROR

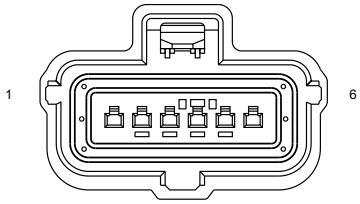




MODULE-
ENGINE
CONTROL C1



MODULE-
ENGINE
CONTROL C2



SENSOR-
ACCELERATOR
PEDAL
POSITION
(5.7L/DIESEL)

8168c6c7

For a complete wiring diagram **Refer to the Wiring Information**.

- **When Monitored:**

While the engine is running

- **Set Condition:**

  The ECM detected a conformance error between PPS 1 and PPS 2

Possible Causes
OTHER DTCS
WIRING HARNESS OR CONNECTOR DAMAGED
APPS
INTERMITTENT CONDITION
ECM

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)

1.OTHER DTCS PRESENT

NOTE: Diagnose all other APPS faults before continuing.

Do you have any additional APPS faults?

Yes

- Go To **2**

No

- Go To **12**

2.APPS HARNESS

---

1. Verify that the APPS is connected.
2. Inspect the harness and the APPS connector.

Are any pins damaged?

Yes

- Repair or replace the harness.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)

No

- Go To **3**

3.APPS

1. Monitor the APPS 1 and APPS 2 voltage with the scan tool while depressing the accelerator pedal.

Is the voltage transition shown on the scan tool smooth while depressing the acceralator pedal and is the voltage from APPS 1 twice as much as the voltage from APPS 2?

Yes

- Go To **4**

No

- Replace the APPS.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)

4.(K23) APPS SIGNAL CIRCUIT OPEN

1. Disconnect the ECM connectors.
2. Disconnect the APPS connector.

NOTE: Check connectors - Clean/repair as necessary.

3. Measure the resistance of the (K23) APPS 1 Signal circuit between the APPS sensor connector and the ECM connector.

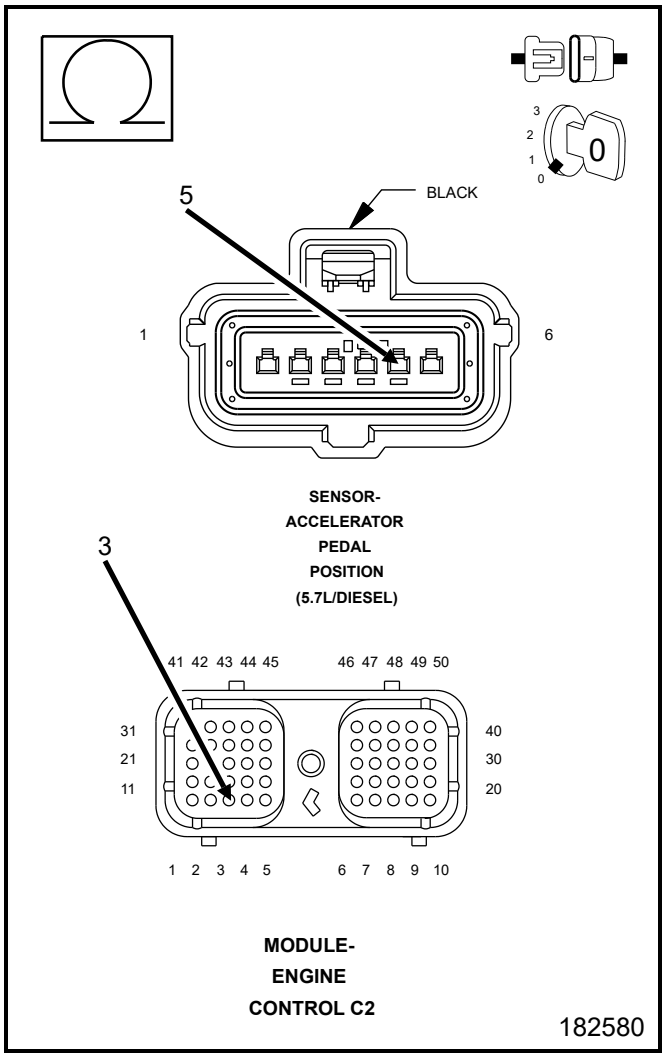
Is the resistance below 5.0 ohms?

Yes

- Go To **5**

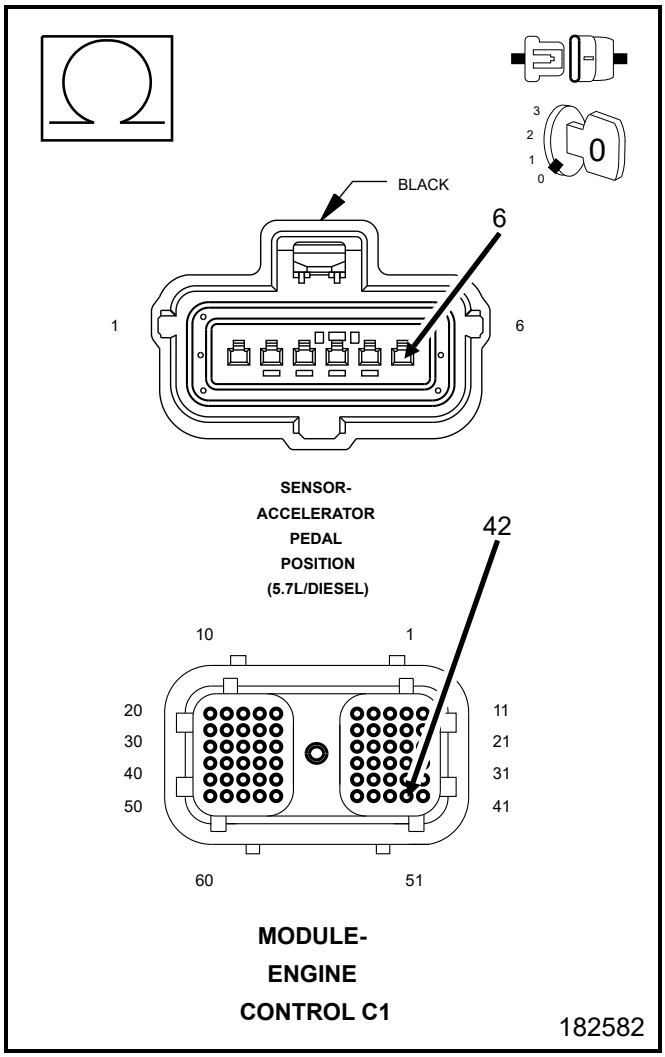
No

- Repair or Replace the harness.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



5.(K852) 5-VOLT SUPPLY CIRCUIT OPEN

1. Measure the resistance of the (K852) 5-volt Supply circuit between the APPS sensor connector and the ECM connector.
2. Is the resistance less than 10 ohms?



Yes

- Go To **6**

No

- Repair or replace the open harness.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)

6.(K23) APPS 1 SIGNAL CIRCUIT SHORTED TO GROUND

1. Measure the resistance between the (K23) APPS 1 Signal circuit at the sensor connector and battery negative.

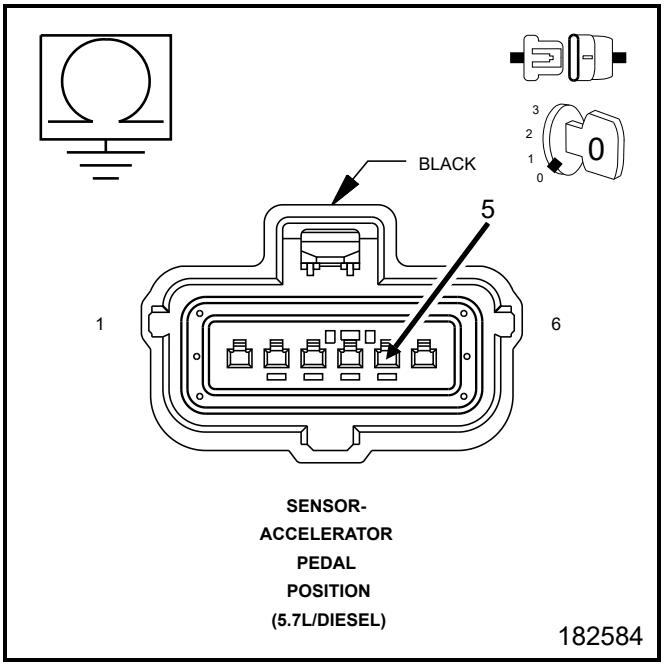
Is the resistance greater than 100 K ohms?

Yes

- Go To **7**

No

- Repair the shorted harness.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



**SENSOR-
ACCELERATOR
PEDAL
POSITION
(5.7L/DIESEL)**

182584

7.(K23) APPS 1 SIGNAL CIRCUIT SHORTED TO OTHER CIRCUITS

1. Measure the resistance between the APPS 1 signal circuit at the ECM connector and all other circuits in the ECM connector.

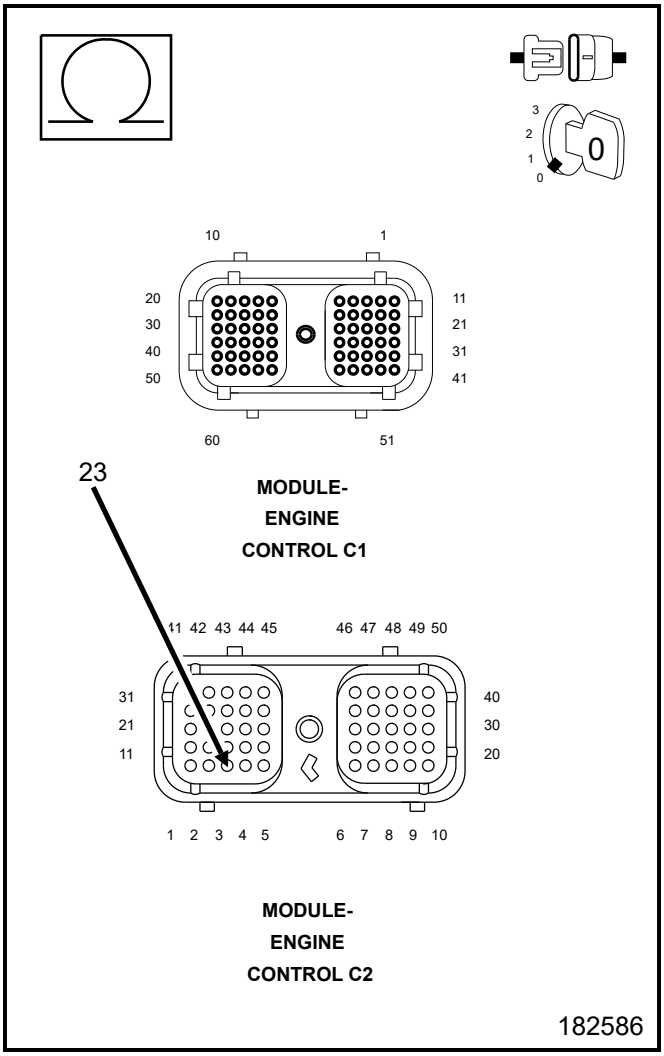
Is the resistance greater than 100 K ohms?

Yes

- Go To **8**

No

- Repair the shorted signal circuit.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



**MODULE-
ENGINE
CONTROL C1**

**MODULE-
ENGINE
CONTROL C2**

182586

8.(K852) 5-VOLT SUPPLY CIRCUIT SHORTED TO GROUND

1. Measure the resistance between the (K852) 5-Volt supply circuit at the sensor connector and battery negative.

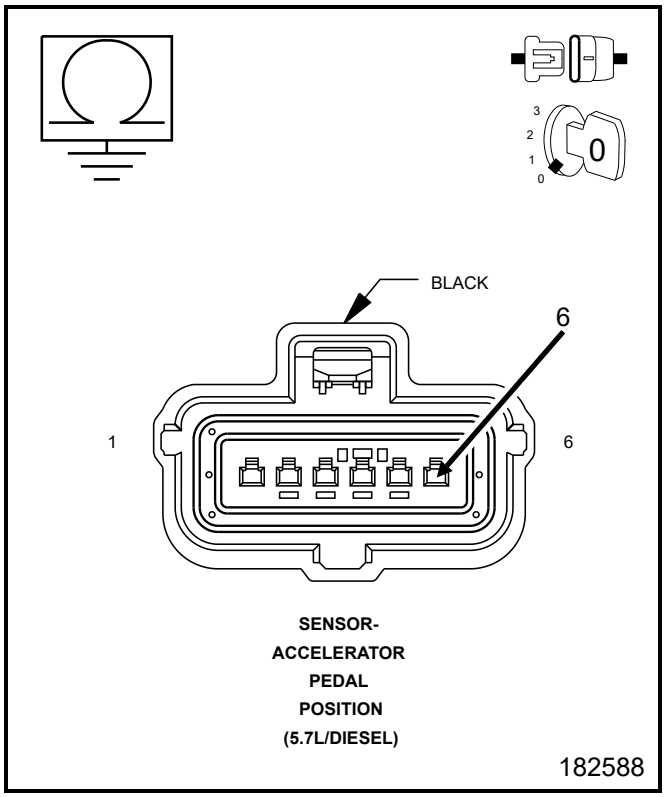
Is the resistance greater than 100 K ohms?

Yes

- Go To **9**

No

- Repair the Supply circuit shorted to ground.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



9.(K852) 5-VOLT SUPPLY CIRCUIT SHORTED TO OTHER CIRCUITS

1. Measure the resistance between the (K852) 5-Volt Supply circuit at the ECM connector and all other circuits in the ECM connector.

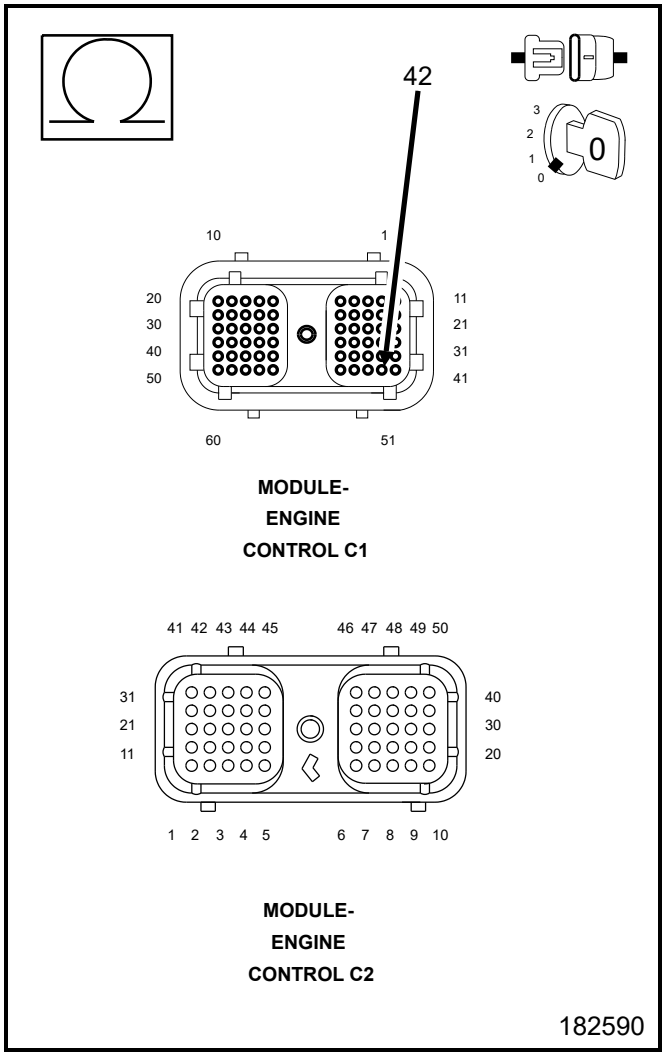
Is the resistance greater than 100 K ohms?

Yes

- Go To **10**

No

- Repair the supply circuit shorted to other circuits.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



10.(K167) APPS 1 RETURN CIRCUIT OPEN

---

1. Measure the resistance on the (K167) APPS 1 Return circuit between the sensor connector and the ECM connector.

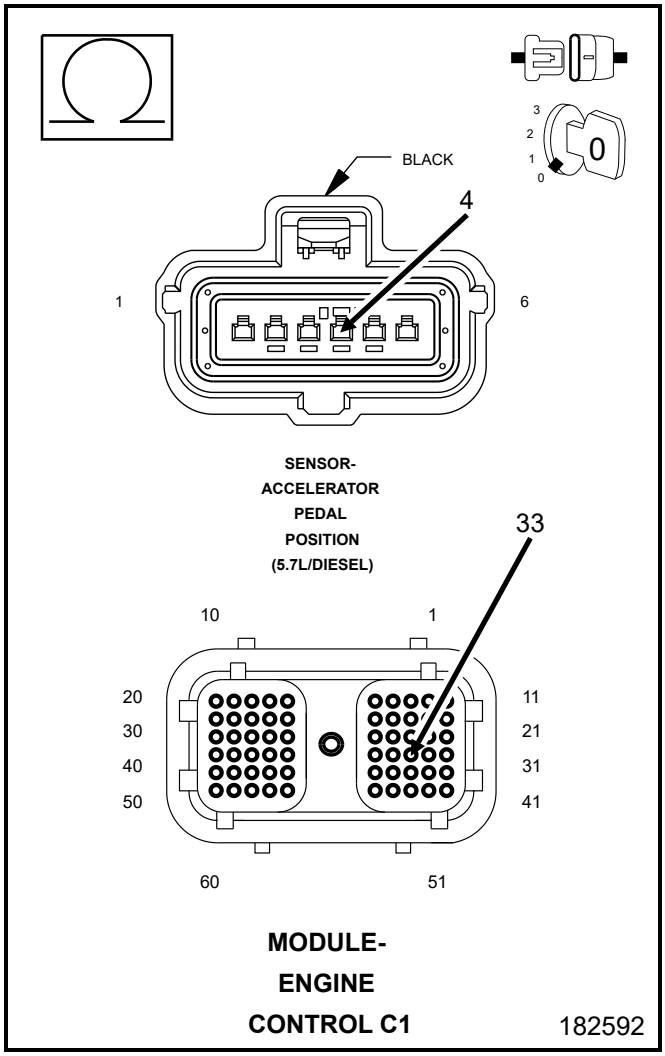
Is the resistance less than 10 ohms?

Yes

- Go To **11**

No

- Repair the open return circuit.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



11. (K23) APPS 1 SIGNAL CIRCUIT SHORTED TO (K852) 5-VOLT SUPPLY CIRCUIT

1. Measure the resistance between the (K23) APPS 1 Signal circuit and the (K852) 5-Volt Supply circuit in the sensor connector.

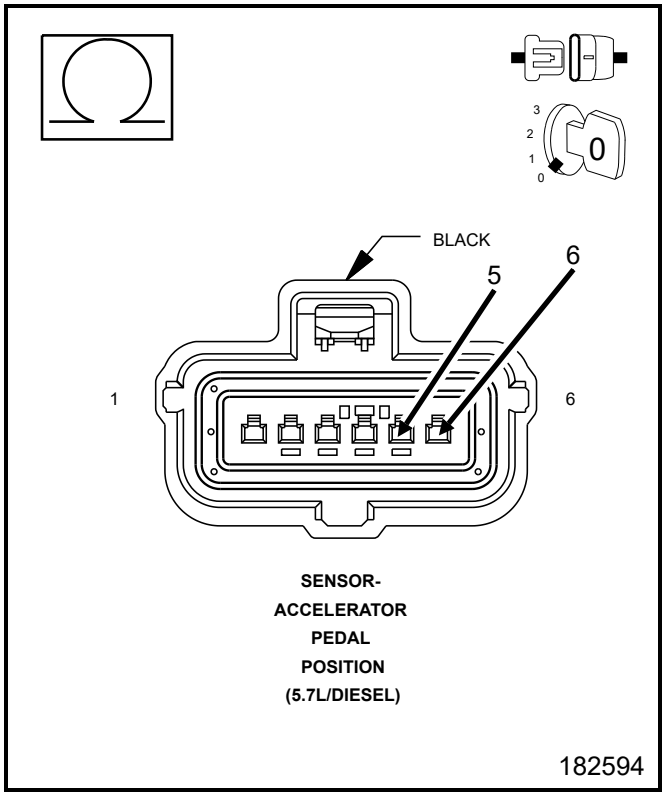
Is the resistance greater than 100 K ohms?

Yes

- Go To **12**

No

- Repair the signal circuit shorted to the supply.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



12.(K167) APPS 1 RETURN CIRCUIT SHORTED TO OTHER CIRCUITS

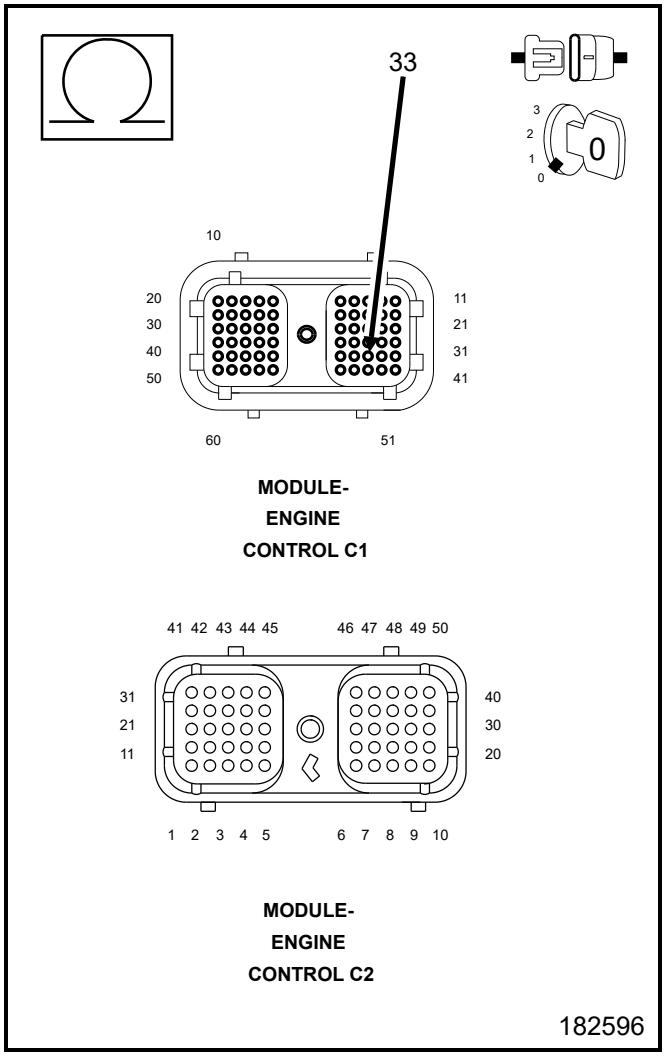
1. Measure the resistance between the (K167) APPS 1 Return circuit at the ECM connector and all other circuits in the ECM connector.

Yes

- Go To **13**

No

- Repair the return circuit shorted to other circuits.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



13.(K29) APPS 2 SIGNAL CIRCUIT OPEN

---

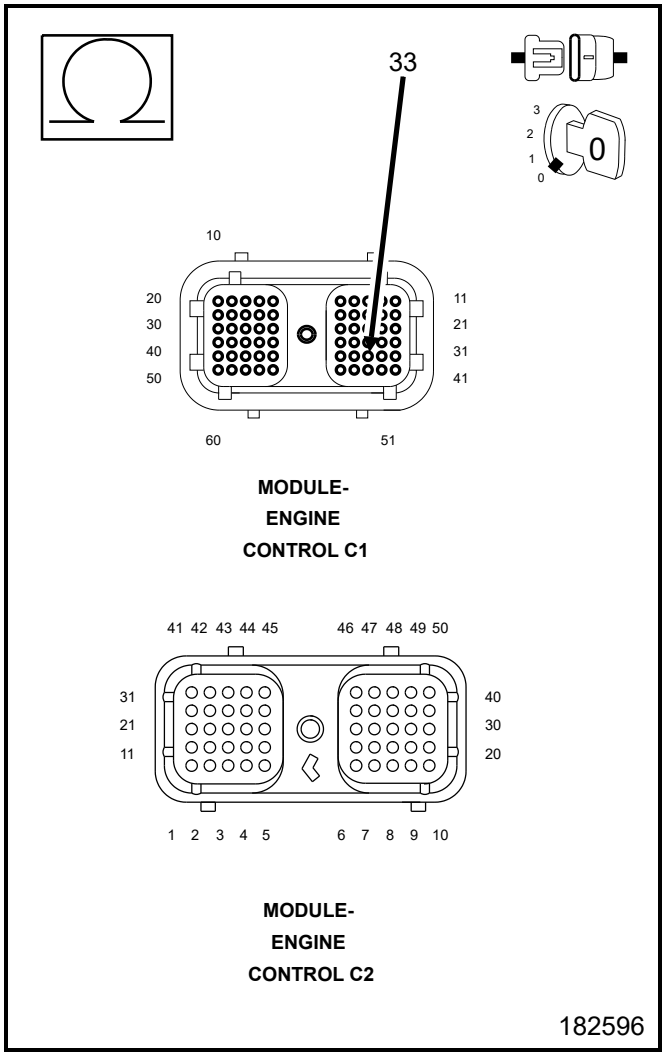
1. Measure the resistance of the (K29) APPS 2 Signal circuit between the APPS sensor connector and the ECM connector.

Yes

- Go To **14**

No

- Repair or Replace the harness.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



14.(F854) 5-VOLT SUPPLY CIRCUIT OPEN

---

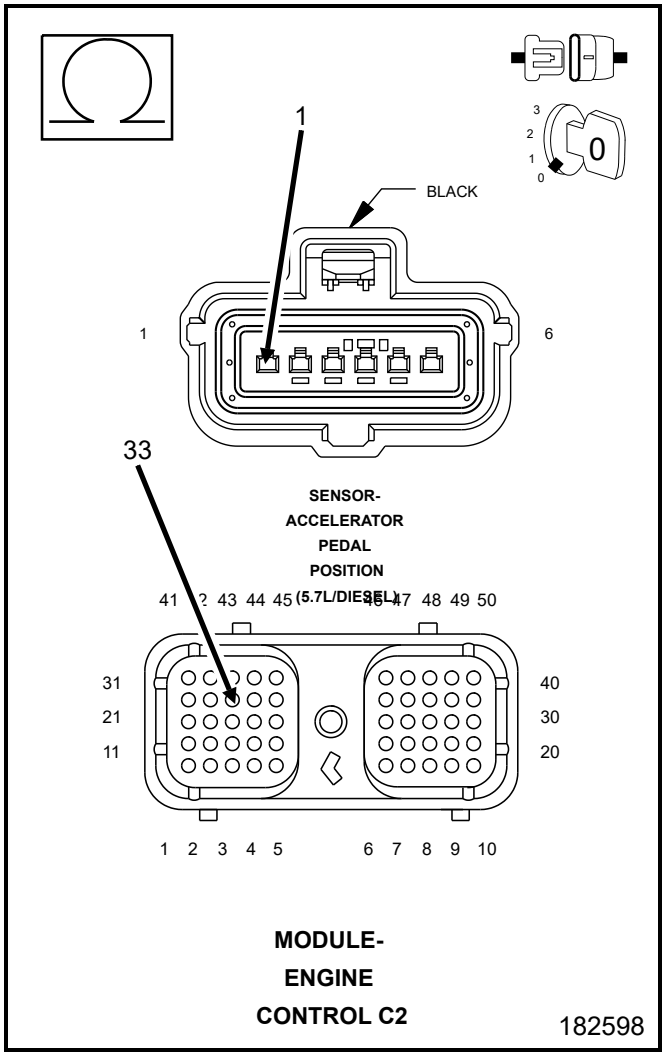
1. Measure the resistance of the (K854) APPS 2 Supply circuit between the APPS sensor connector and the ECM connector.
2. Is the resistance less than 10 ohms?

Yes

- Go To **15**

No

- Repair or replace the open harness.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



15.(K29) APPS 2 SIGNAL CIRCUIT SHORTED TO GROUND

1. Measure the resistance between the (K29) APPS 2 Signal circuit at the sensor connector and battery negative.

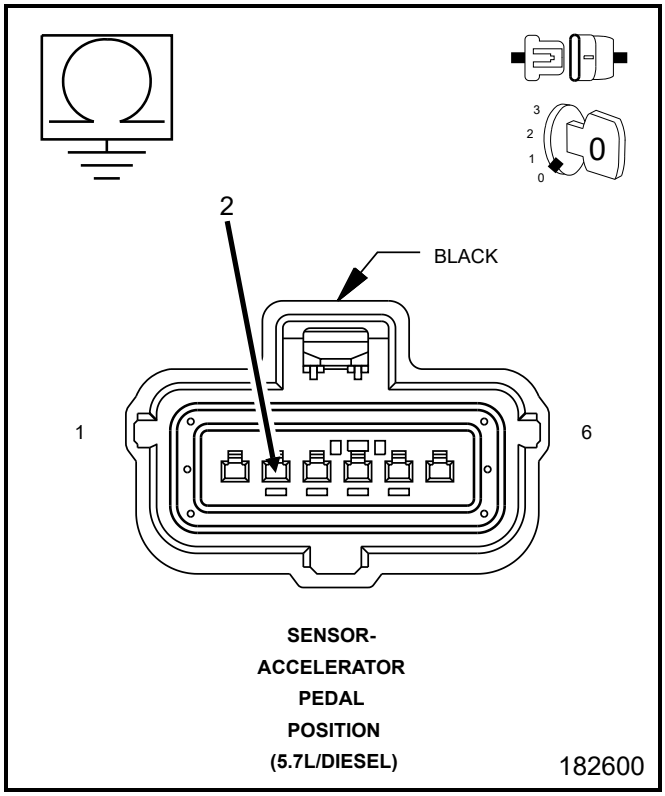
Is the resistance greater than 100 K ohms?

Yes

- Go To **16**

No

- Repair the shorted harness.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



16.(K29) APPS 2 SIGNAL CIRCUIT SHORTED TO OTHER CIRCUITS

1. Measure the resistance between the (K29) APPS 2 Signal circuit at the ECM connector and all other circuits in the ECM connector.

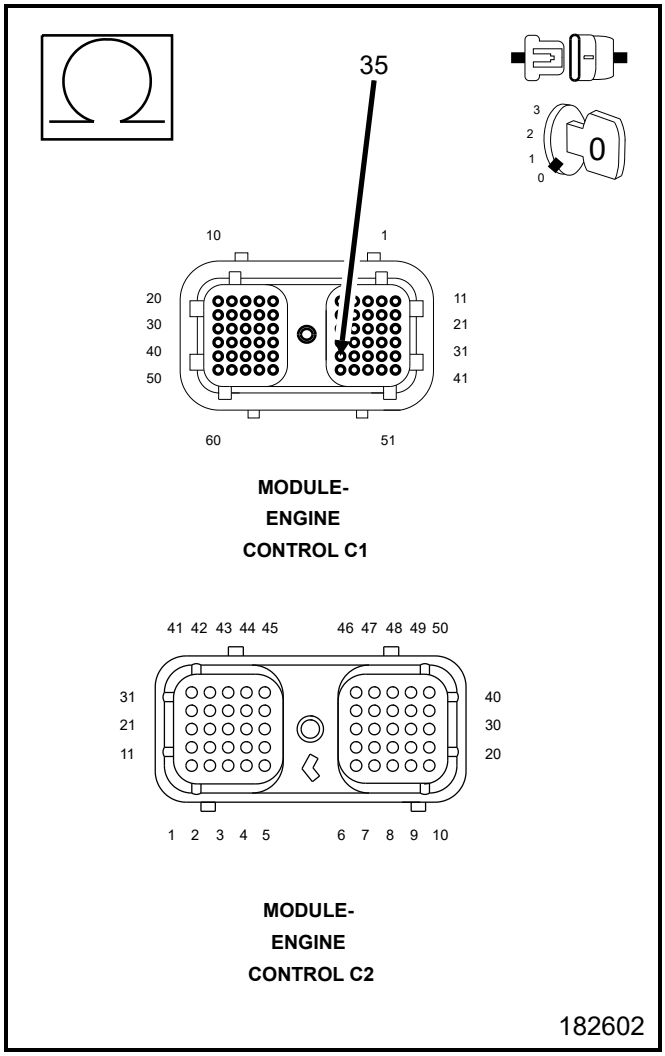
Is the resistance greater than 100 K ohms?

Yes

- Go To **17**

No

- Repair the shorted signal circuit.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



17.(K854) 5-VOLT SUPPLY CIRCUIT SHORTED TO GROUND

1. Measure the resistance between the (K854) 5-Volt Supply circuit at the sensor connector and battery negative.

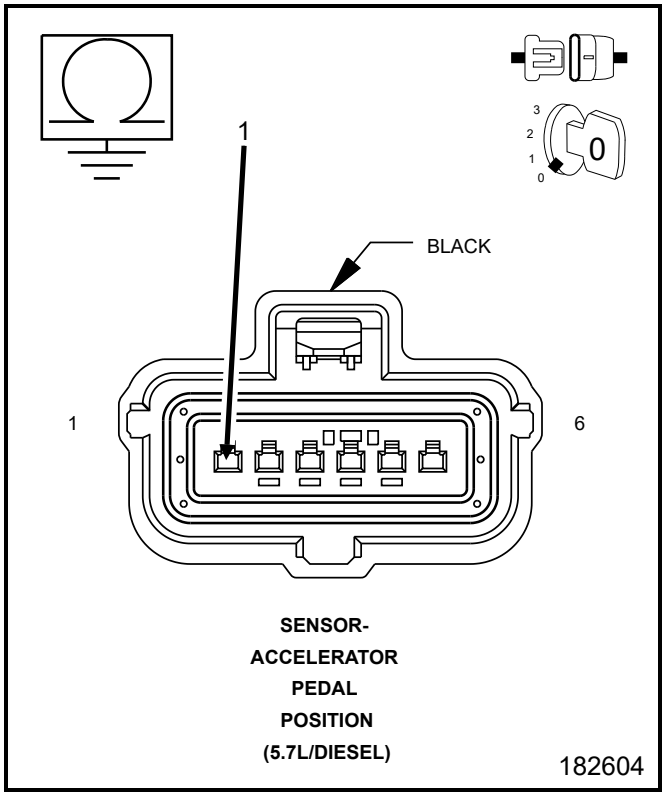
Is the resistance greater than 100 K ohms?

Yes

- Go To **18**

No

- Repair the Supply circuit shorted to ground.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



18.(K854) 5-VOLT SUPPLY CIRCUIT SHORTED TO OTHER CIRCUITS

1. Measure the resistance between the (K854) 5-Volt Supply circuit at the ECM connector and all other circuits in the ECM connector.

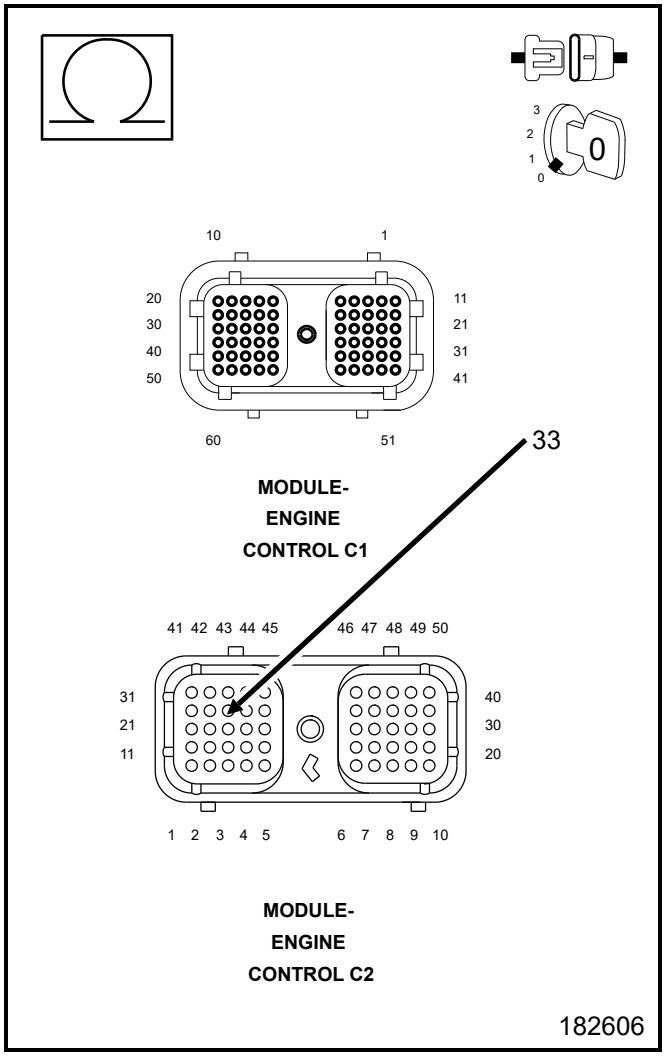
Is the resistance greater than 100 K ohms?

Yes

- Go To **19**

No

- Repair the supply circuit shorted to other circuits.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



19.(K400) APPS 2 RETURN CIRCUIT OPEN

---

1. Measure the resistance on the (K400) APPS 2 Return circuit between the sensor connector and the ECM connector.

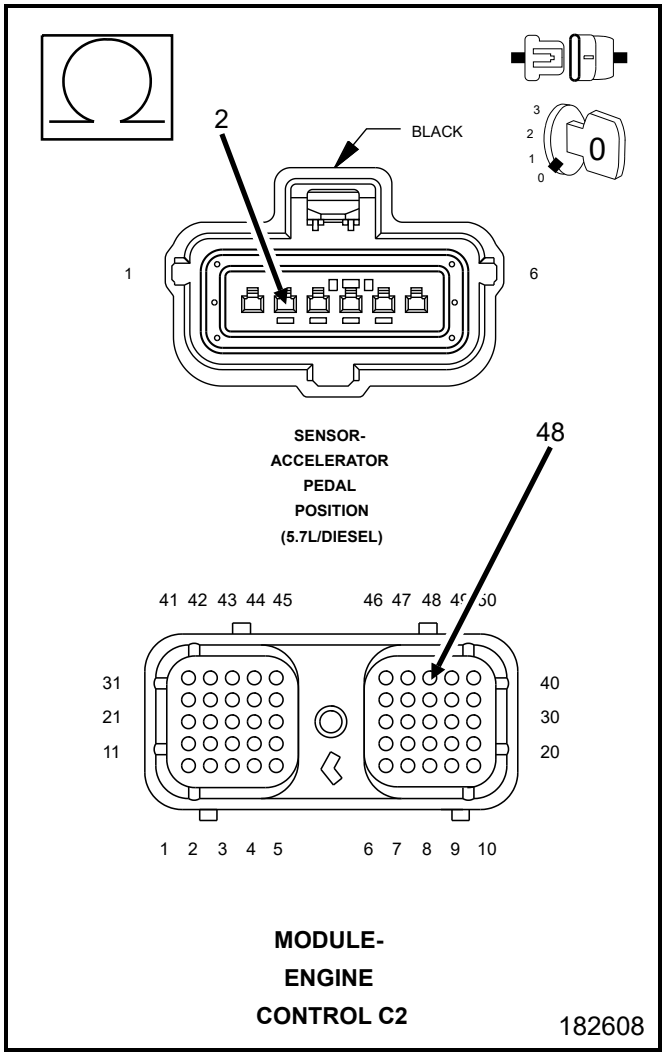
Is the resistance less than 10 ohms?

Yes

- Go To **20**

No

- Repair the open return circuit.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



20. (K29) APPS 2 SIGNAL CIRCUIT SHORTED TO THE (K854) 5-VOLT SUPPLY CIRCUIT

1. Measure the resistance between the (K29) APPS 2 Signal circuit and the (K854) 5-Volt Supply circuit in the sensor connector.

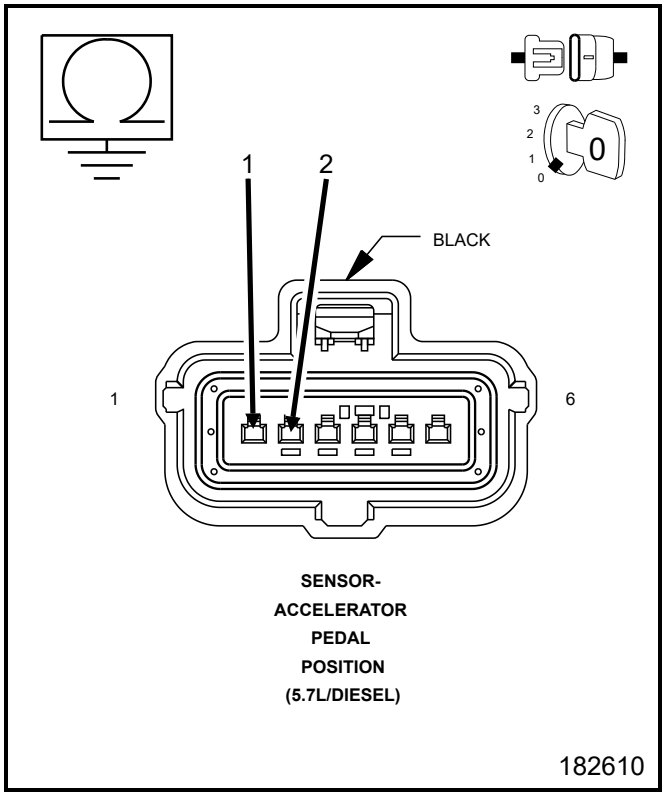
Is the resistance greater than 100 K ohms?

Yes

- Go To **21**

No

- Repair the signal circuit shorted to the supply.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



21.(K400) APPS 2 RETURN CIRCUIT SHORTED TO OTHER CIRCUITS

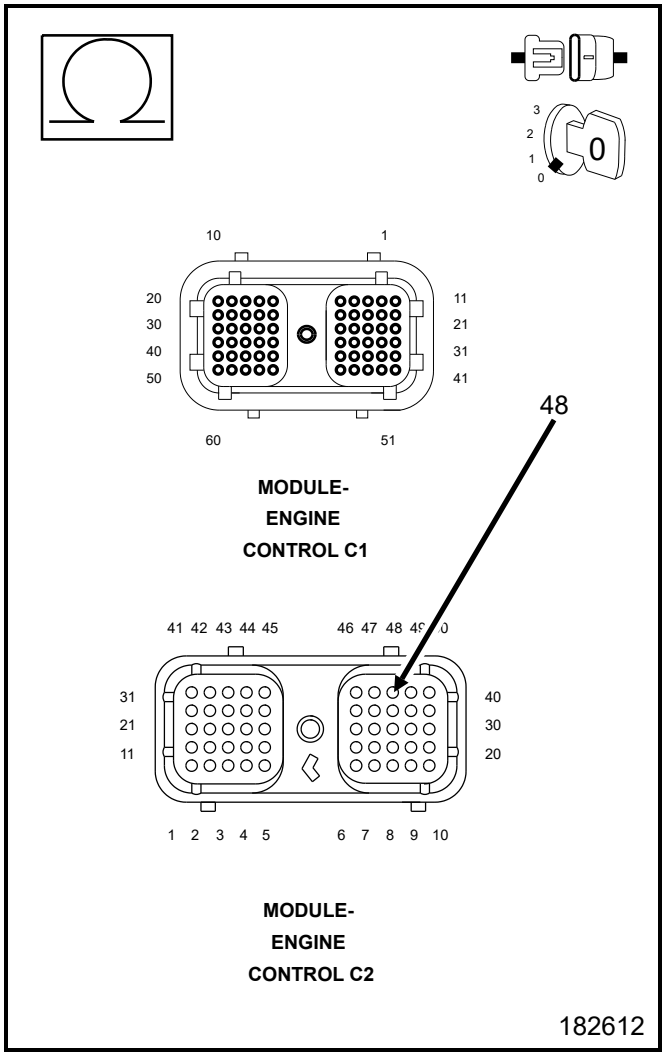
1. Measure the resistance between the (K400) APPS 2 Return circuit at the ECM connector and all other circuits in the ECM connector.

Yes

- Go To **22**

No

- Repair the return circuit shorted to other circuits.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)



22.ECM

1. Reconnect the ECM connectors.
2. Reconnect the APPS connector.
3. Turn Ignition on, engine off.
4. While monitoring with the scan tool, disconnect the sensor connector.

Did a APPS 1 and APPS 2 voltage too low DTC set?

Yes

- Go To **23**

No

- Replace the ECM.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)

23.APPS

1. Reconnect the APPS connector.
2. Monitor the APPS 1 and APPS 2 voltage with the scan tool while depressing the accelerator pedal.

Is the voltage transition shown on the scan tool smooth while depressing the accelerator and is the voltage from APPS 1 twice as much as the voltage from APPS 2?

Yes

- Refer to the INTERMITTENT CONDITION Symptom (Diagnostic Procedure). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)

No

- Replace the APPS.
- Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 28 - DTC-Based Diagnostics/MODULE, Engine Control (ECM) - Standard Procedure)