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 Conversion Calculator

2006 Dodge Truck RAM 1500 Truck 2WD V8-5.7L VIN 2

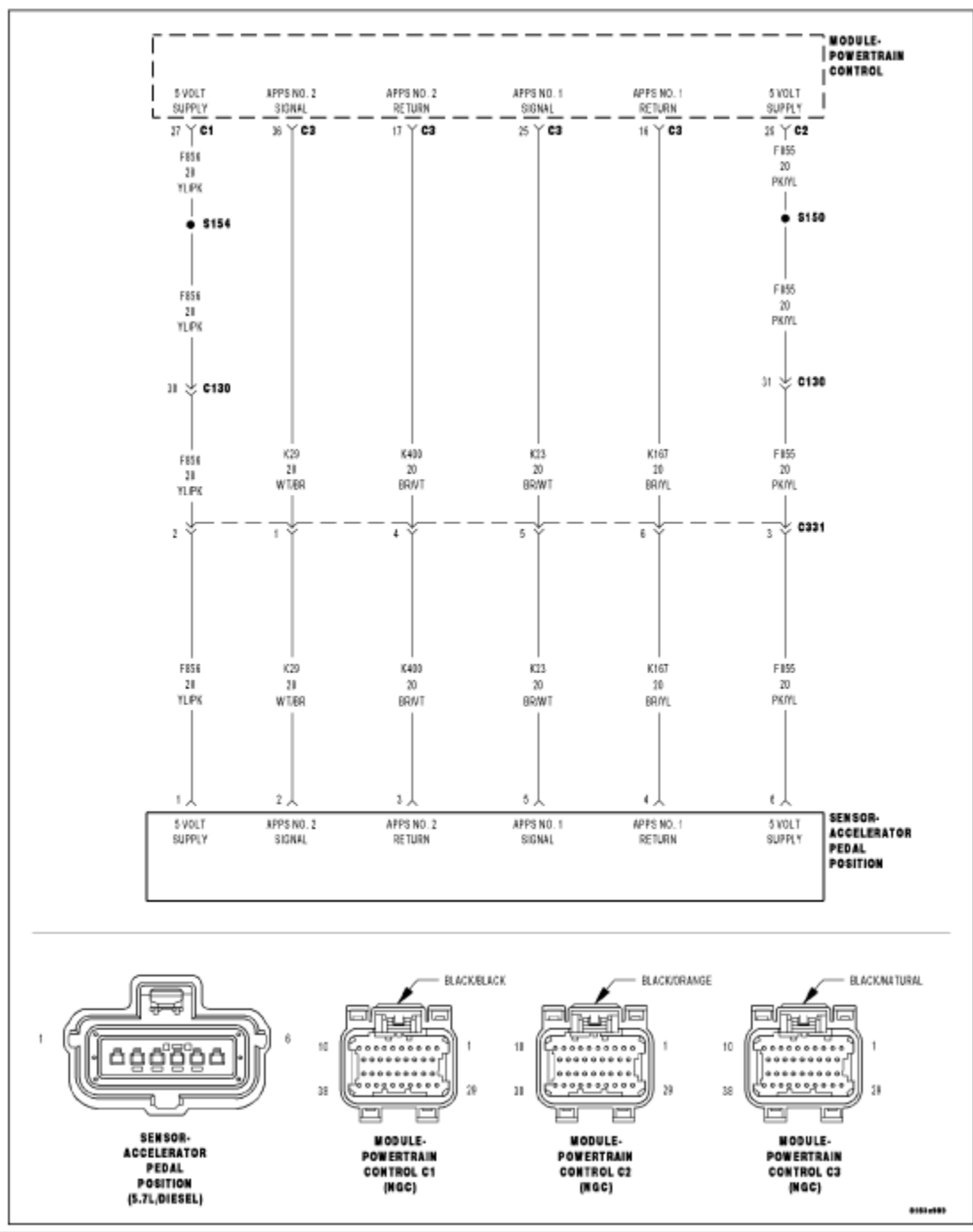
[Vehicle Level](#) → [Powertrain Management](#) → [Computers and Control Systems](#) → [Testing and Inspection](#)
→ [Diagnostic Trouble Code Tests and Associated Procedures](#) → [P Code Charts](#) → [P2122](#) ←

P2122

P2122-ACCELERATOR PEDAL POSITION SENSOR 1 CIRCUIT LOW

P2122 - Accelerator Pedal Position Sensor 1 Circuit Low

P2122-ACCELERATOR PEDAL POSITION SENSOR 1 CIRCUIT LOW



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WHEN MONITORED:

With the ignition on and no other APPS No.1 DTCs present.

SET CONDITION:

When the APP Sensor No.1 voltage is too low. Engine will additionally idle if the

brake pedal is pressed or has failed. Acceleration rate and Engine output are limited. One trip fault and the code will set within **5 seconds** . ETC light is flashing.

POSSIBLE CAUSES

- (F855) **5-volt** supply circuit open
- (F855) **5-volt** supply circuit shorted to ground
- (K23) APP sensor no.1 signal circuit open
- (K23) APP sensor no.1 signal circuit shorted to ground
- (K23) APP sensor no.1 signal circuit shorted to the (K167) APP sensor no.1 return circuit
- (K23) APP sensor no.1 signal circuit shorted to the (K400) APP sensor no.2 return circuit
- APP sensor
- PCM

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding.

DIAGNOSTIC TEST

1. APP SENSOR BELOW 0.25 OF A VOLT

Ignition on, engine not running.

With a scan tool, read the APP Sensor No.1 voltage.

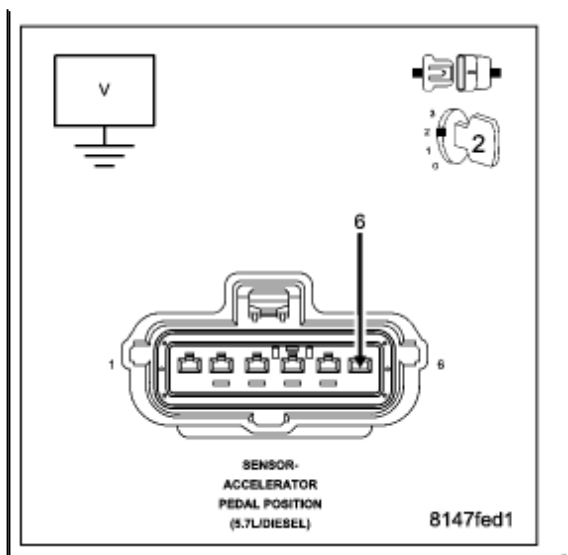
Q: Is the voltage below 0.25 of a volt?

YES: Go To 2

NO: Go To 11

2. (F855) 5-VOLT SUPPLY CIRCUIT





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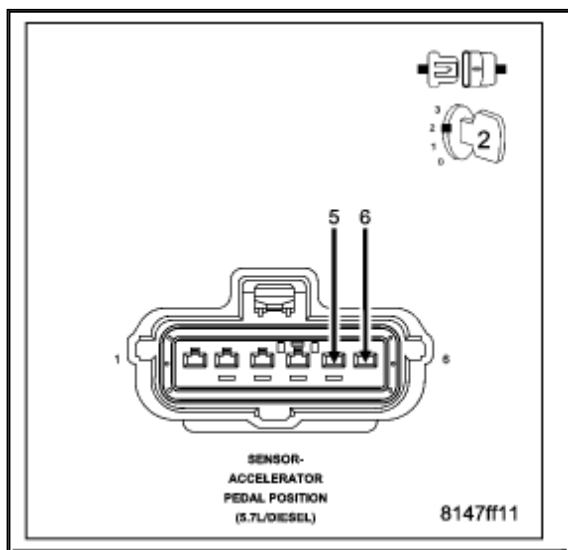
Turn the ignition off.
 Disconnect the APP Sensor harness connector.
 Ignition on, engine not running.
 Measure the voltage on the (F855) **5-volt** Supply circuit in the APP Sensor harness connector.

Q: Is the voltage between 4.5 and 5.2 volts?

YES: Go To 3

NO: Go To 8

3. [ACCELERATOR PEDAL POSITION SENSOR](#)



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Connect a jumper wire between the (F855) **5-volt** Supply circuit and the (K23) APP Sensor No.1 Signal circuit in the Sensor harness connector.
 With a scan tool, monitor the APP Sensor No.1 voltage.

Q: Is the voltage above 4.5 volts?

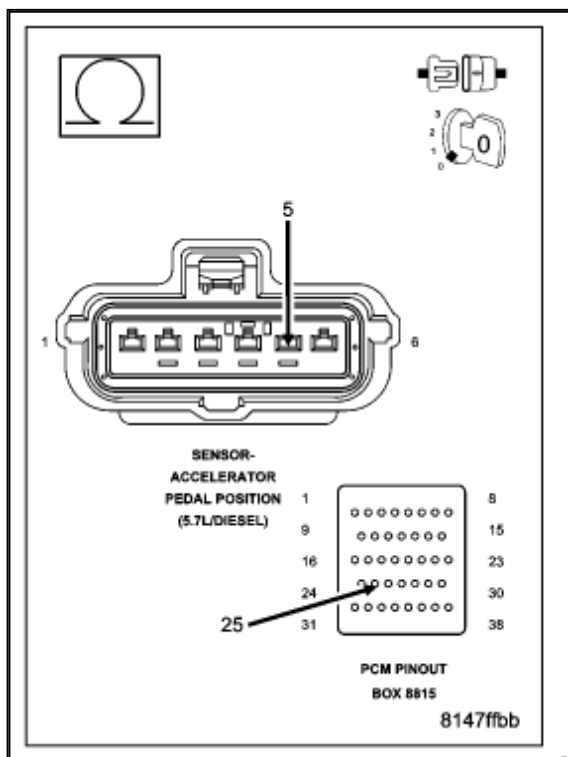
YES: Replace the APP Sensor Assembly.

After installation is complete, use a scan tool and select the ETC RELEARN function to relearn the APPS values. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

NO: Go To 4

NOTE: Remove the jumper wire before continuing.

4. (K23) APP SENSOR NO.1 SIGNAL CIRCUIT OPEN



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Turn the ignition off.
 Disconnect the C3 PCM harness connector.

CAUTION: Do not probe the PCM harness connectors. Probing the PCM harness connectors will damage the PCM terminals resulting in poor terminal to pin connection. Install Miller Special Tool #8815 to perform diagnosis.

Measure the resistance of the (K23) APP Sensor No.1 Signal circuit from the APP

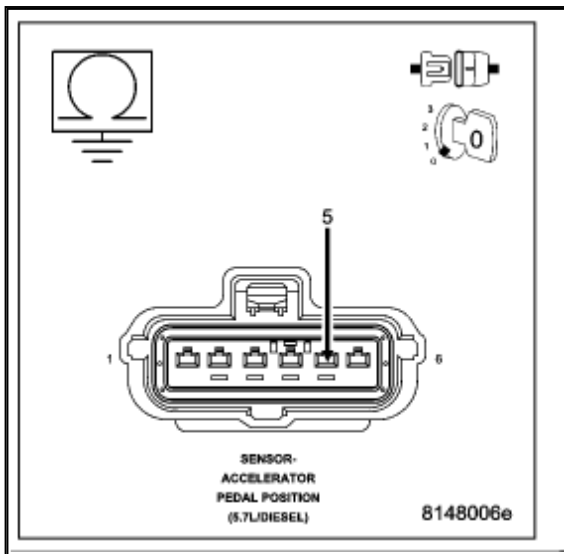
Sensor harness connector to the appropriate terminal of special tool #8815.

Q: Is the resistance below 5.0 ohms?

YES: Go To 5

NO: Repair the open in the (K23) APP Sensor No.1 Signal circuit. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

5. (K23) APP SENSOR NO.1 SIGNAL CIRCUIT SHORTED TO GROUND



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Measure the resistance between ground and the (K23) APP Sensor No.1 Signal circuit in the APP Sensor harness connector.

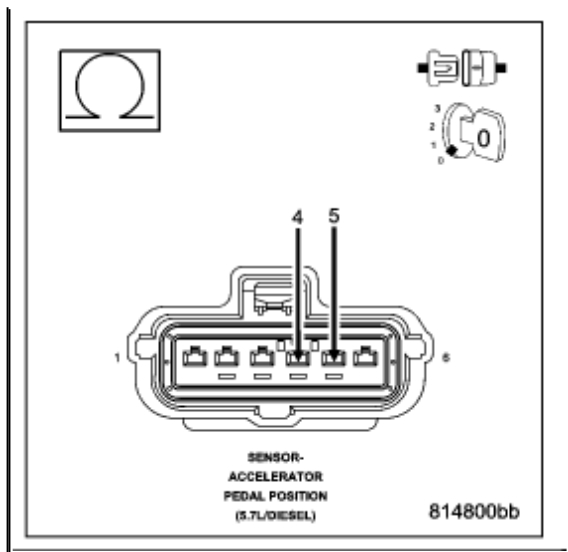
Q: Is the resistance below 100 ohms?

YES: Repair the short to ground in the (K23) APP Sensor No.1 Signal circuit. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

NO: Go To 6

6. (K23) APP SENSOR NO.1 SIGNAL CIRCUIT SHORTED TO THE (K167) APP SENSOR NO.1 RETURN CIRCUIT





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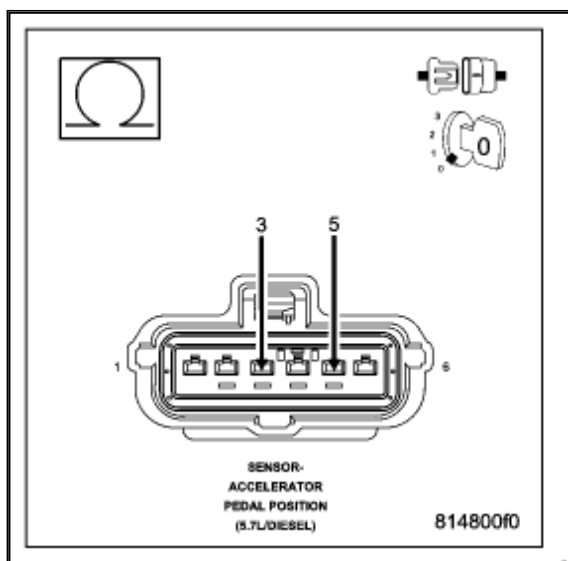
Measure the resistance between the (K23) APP Sensor No.1 Signal circuit and the (K167) Sensor No.1 Return circuit at the APP Sensor harness connector.

Q: Is the resistance below 100 ohms?

YES: Repair the short between the (K167) App Sensor No.1 Return circuit and the (K23) APP Sensor No.1 Signal circuit. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

NO: Go To 7

7. (K23) APP SENSOR NO.1 SIGNAL CIRCUIT SHORTED TO THE (K400) APP SENSOR NO.2 RETURN CIRCUIT



Zoom

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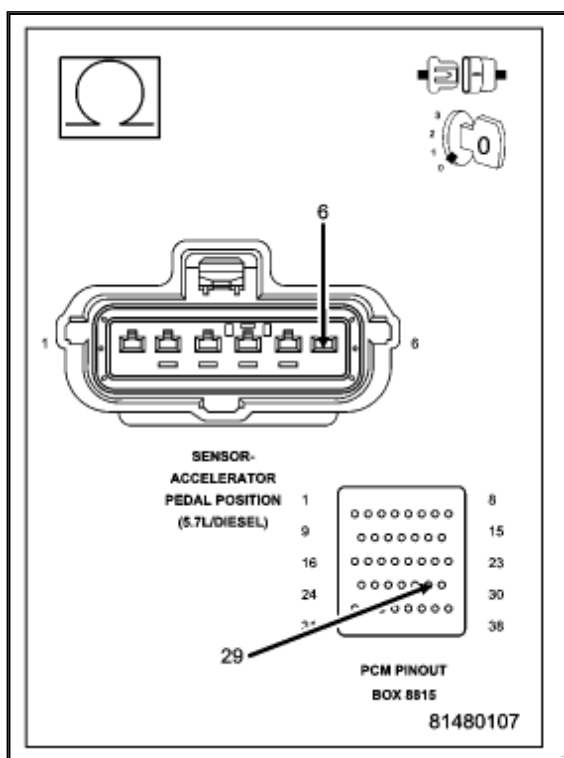
Measure the resistance between the (K23) APP Sensor No.1 Signal circuit and the (K400) Sensor No.2 Return circuit in the APP Sensor harness connector.

Q: Is the resistance below 100 ohms?

YES: Repair the short between the (K400) App Sensor No.2 Return circuit and the (K23) APP Sensor No.1 Signal circuit. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

NO: Go To 10

8. (F855) 5-VOLT SUPPLY CIRCUIT OPEN



Zoom

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Turn the ignition off.
Disconnect the C2 PCM harness connector.

CAUTION: Do not probe the PCM harness connectors. Probing the PCM harness connectors will damage the PCM terminals resulting in poor terminal to pin connection. Install Miller Special Tool #8815 to perform diagnosis.

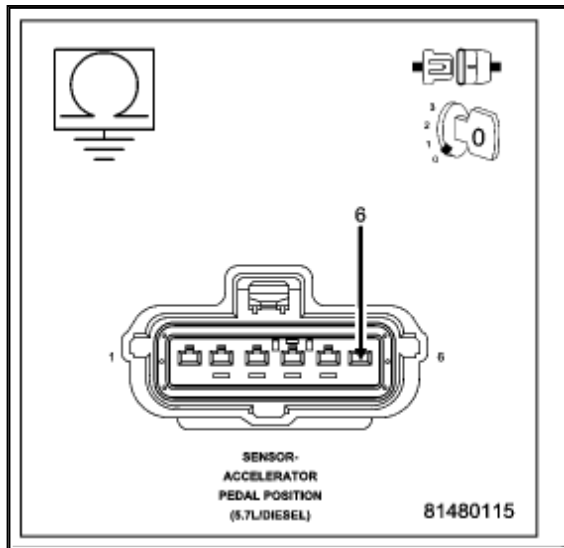
Measure the resistance of the (F855) **5-volt** Supply circuit from the Sensor harness connector to the appropriate terminal of special tool #8815.

Q: Is the resistance below 5.0 ohms?

YES: Go To 9

NO: Repair the open in the (F855) **5-volt** Supply circuit. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

9. (F855) 5-VOLT SUPPLY CIRCUIT SHORTED TO GROUND



Zoom

Sized for Print

Measure the resistance between ground and the (F855) **5-volt** Supply circuit in the APP Sensor harness connector.

Q: Is the resistance below 100 ohms?

YES: Repair the short to ground in the (F855) **5-volt** Supply circuit. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

NO: Go To 10

10. PCM

NOTE: Before continuing, check the PCM harness connector terminals for corrosion, damage, or terminal push out. Repair as necessary.

Using the schematics as a guide, inspect the wire harness and connectors. Pay particular attention to all Power and Ground circuits.

Q: Were there any problems found?

YES: Repair as necessary. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

NO: Replace and program the Powertrain Control Module. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

11. APP SENSOR SWEEP

Ignition on, engine not running.

With a scan tool, monitor the APP Sensor No.1 voltage.

Slowly press the [Accelerator pedal](#) down.

Q: Does voltage start at approximately 0.45 of a volt and go above 4.6 volts with a smooth transition?

YES: Refer to the INTERMITTENT CONDITION Diagnostic Procedure. [See: Component Tests and General Diagnostics](#)

Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)

NO: Replace the APP Sensor Assembly. After installation is complete, use a scan tool and select the ETC RELEARN function to relearn the APPS values. Perform the POWERTRAIN VERIFICATION TEST. [See: Verification Tests\Powertrain Verification Test](#)