GENERAL

Throttle Position Sensor

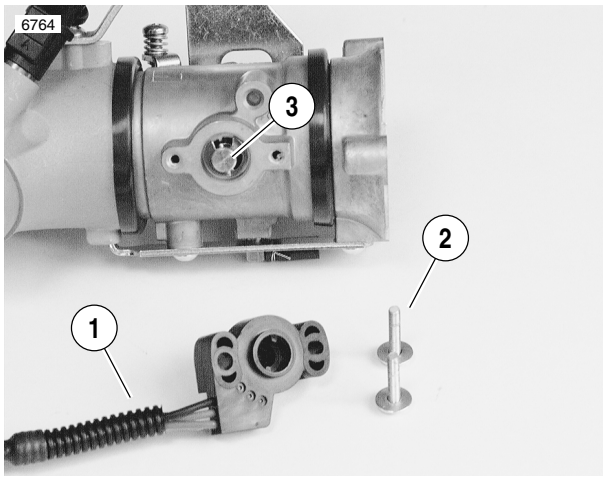
See Figure 4-40. The throttle position sensor (TP sensor) is supplied 5.0 volts from the ECM (5v REF) and sends a signal back to the ECM (TP sensor signal) which varies according to throttle position. The output signal from the TP sensor varies from:

- 0.5-1.5 volts at idle (closed throttle).
- 3.9-4.9 volts at wide open throttle.

A Code 11 will set if the TP sensor signal voltage does not fall within the acceptable range.

NOTE

If the TP sensor is removed and/or replaced, the sensor must be calibrated using a Scanalyzer. See 4.36 THROTTLE POSITION SENSOR.



1. **Throttle Position Sensor and Harness**
2. **Screws (2) (metric)**
3. **Throttle Shaft**

Figure 4-40. TP Sensor Assembly

DIAGNOSTICS

DiagnosticTips

The Scanalyzer reads throttle position in degrees. TP sensor voltage should increase at a steady rate as throttle is moved from idle to wide open throttle. An open or short to ground in R/W or BK/W wires will also result in a Code 11.

Check for the following conditions:

- **Poor connection.** Inspect ECM harness connector for backed out terminals, improper mating, broken locks improperly formed or damaged terminals, poor terminal-to-wire connection and damaged harness.
- **Perform 4.8 WIGGLE TEST to locate intermittents.** If connections and harness check out OK, monitor TP sensor voltage using a Scanalyzer or DVOM while moving related connectors and wiring harness. If the failure is induced, the TP sensor display will change.
- **TP sensor scaling.** Observe the TP sensor voltage display while opening the throttle with engine stopped and ignition switch ON. Display should vary from closed throttle TP sensor voltage (when throttle is closed) to greater than 4.0 volts (when throttle is held wide open). As the throttle is **slowly** moved, the voltage should change gradually without spikes or low voltages being observed.

Scanalyzer Notes

The Scanalyzer icon appears at those points in the flow chart where the Scanalyzer can be used.

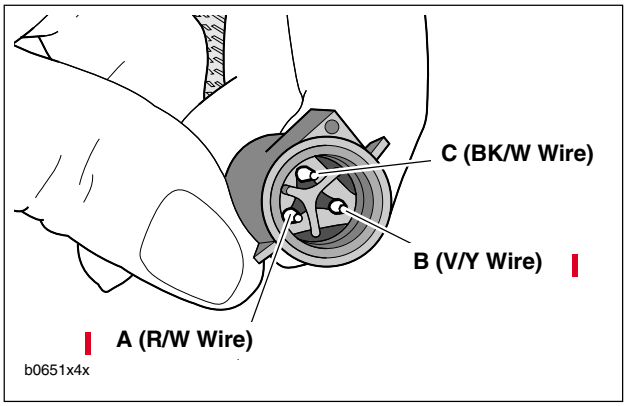


Figure 4-41. TP Sensor Terminals [88A]

Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 11 flow charts.

1. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.
2. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), black socket probe and patch cord.

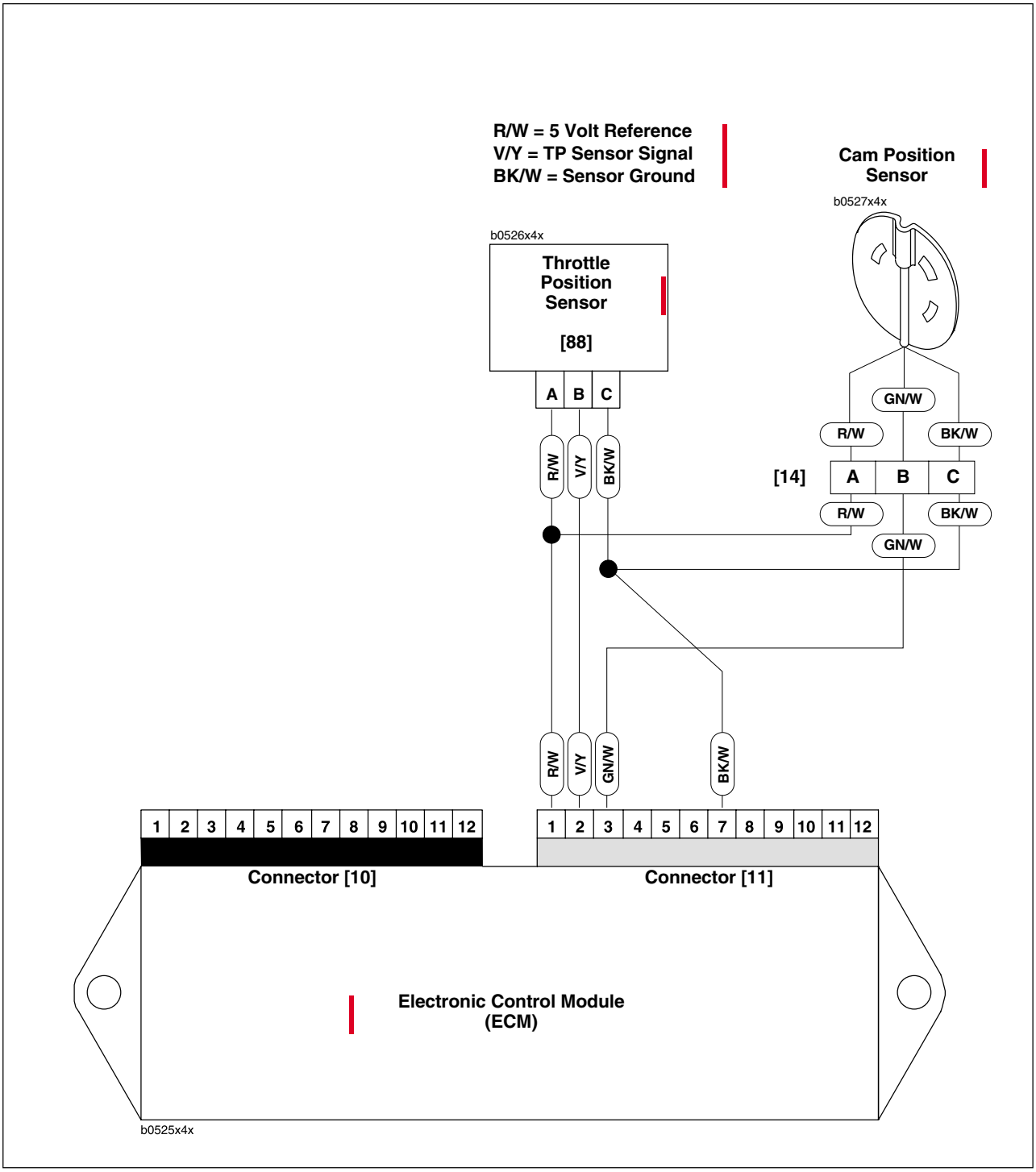
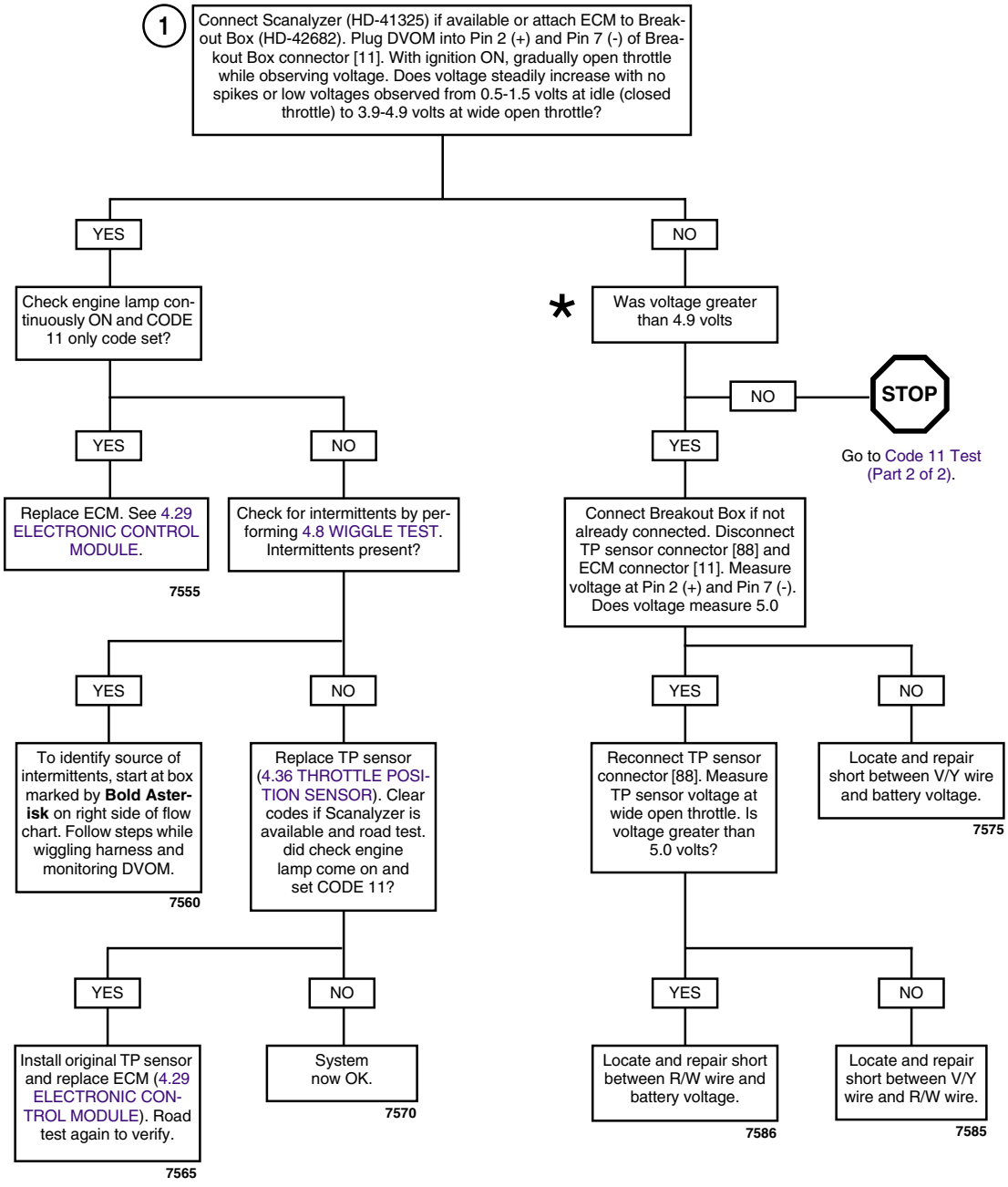


Figure 4-42. Throttle Position Sensor Circuit

Table 4-14. Wire Harness Connectors in Figure 4-42.

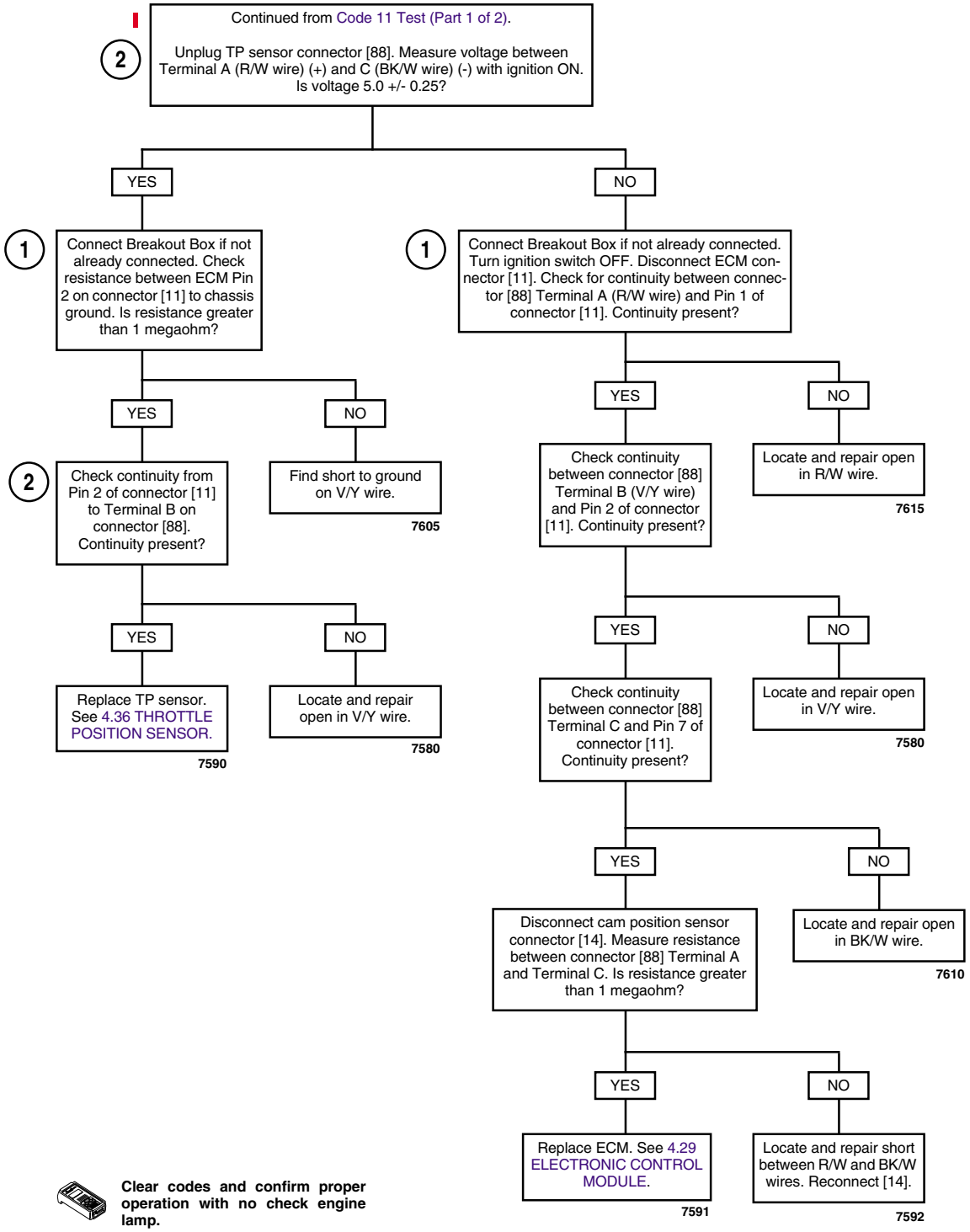
NO.	DESCRIPTION	TYPE	LOCATION
[11]	ECM (gray)	12-place Deutsch	under seat
[14]	Cam position sensor	3-place Deutsch	near starter
[88]	TP sensor	3-place Packard	behind air cleaner backplate

Code 11 Test (Part 1 of 2)



Clear codes and confirm proper operation with no check engine lamp.

Code 11 Test (Part 2 of 2)



GENERAL

Oxygen (O2) Sensor

See Figure 4-43. The oxygen (O2) sensor provides a signal to the ECM which indicates whether the engine is running rich or lean.

- A low voltage signal (<0.41 V) indicates the engine is running lean.
- A high voltage signal (>0.56 V) indicates the engine is running rich.

When the air/fuel mixture is ideal, approximately 14 parts air to 1 part fuel, the voltage will be approximately 0.48 V.

DIAGNOSTICS

Diagnostic Tips

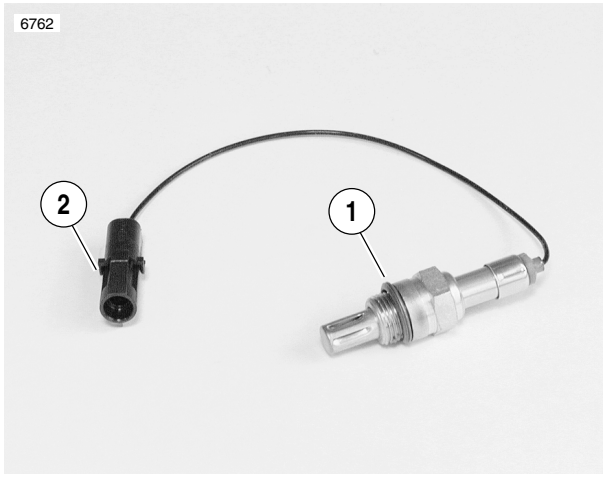
The Scanalyzer or DVOM displays the signal from the O2 sensor in volts. This voltage will have an average value tending towards lean, rich or ideal value depending on operating temperature of the engine, engine speed and throttle position. An open/short to voltage or short to ground in the V/GY wire will cause the engine to run rich (short to ground) or lean (short to voltage). The engine must be running at part throttle (2500 RPM) for the ECM to detect an O2 sensor failure.

Check for the following conditions:

- **Poor connection.** Inspect the ECM harness connector [11], fuel injector connectors [84, 85] and O2 sensor connector wiring for backed out terminals, improper mating, broken locks, improperly formed or damaged terminals, poor terminal-to-wire connection and damaged harness.
- **Dirty/stuck open injectors.** The motorcycle may run lean (dirty/clogged injectors) or rich (stuck open injectors) if there is an injector problem. This could also cause poor fuel economy and performance.
- **Loose O2 sensor.** See Figure 4-44. If the O2 sensor is loose engine performance may be affected. This could also show up as a slow changing O2 sensor voltage on the Scanalyzer.
- **Loose/leaking exhaust.** This can cause a poor ground connection for sensor or allow fresh air into the exhaust system. If fresh air enters exhaust system, the O2 sensor will read a lean condition, causing the system to go rich.

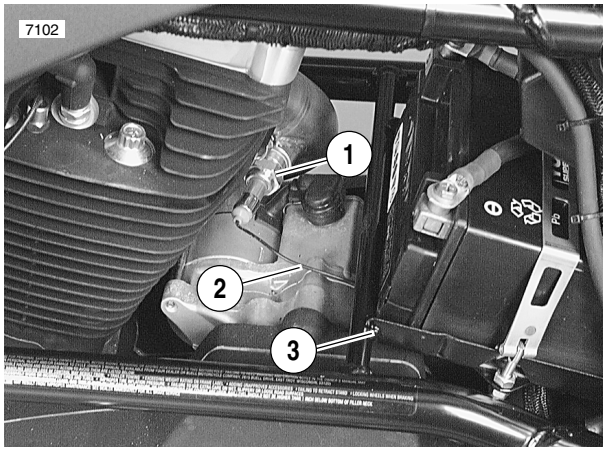
Diagnostic Notes

1. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.



1. **Oxygen Sensor**
2. **Connector [137]**

Figure 4-43. Oxygen Sensor



1. **Oxygen Sensor**
2. **Connector Wiring [137]**
3. **Battery Tray**

Figure 4-44. Oxygen Sensor Installed (Typical)

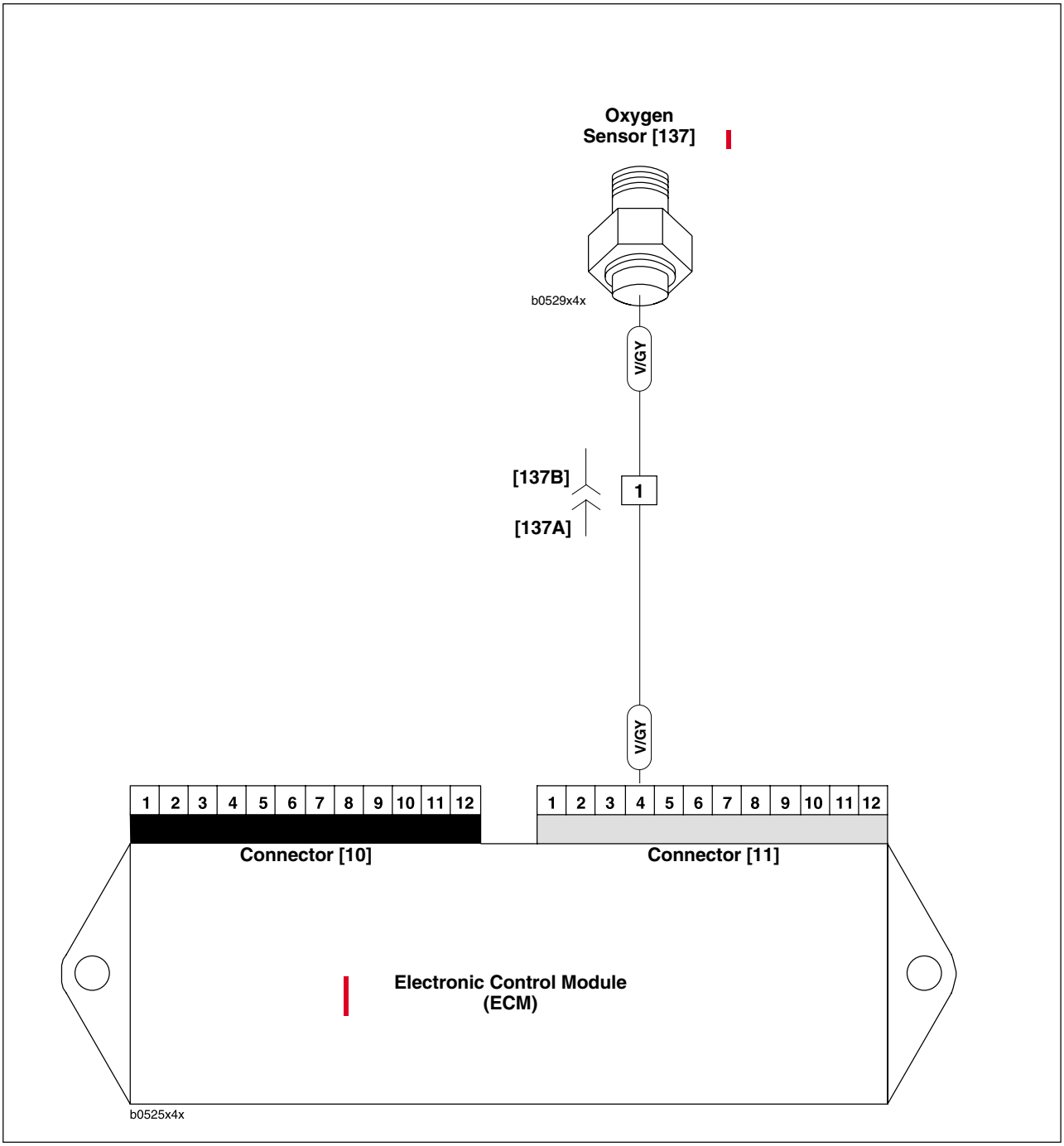
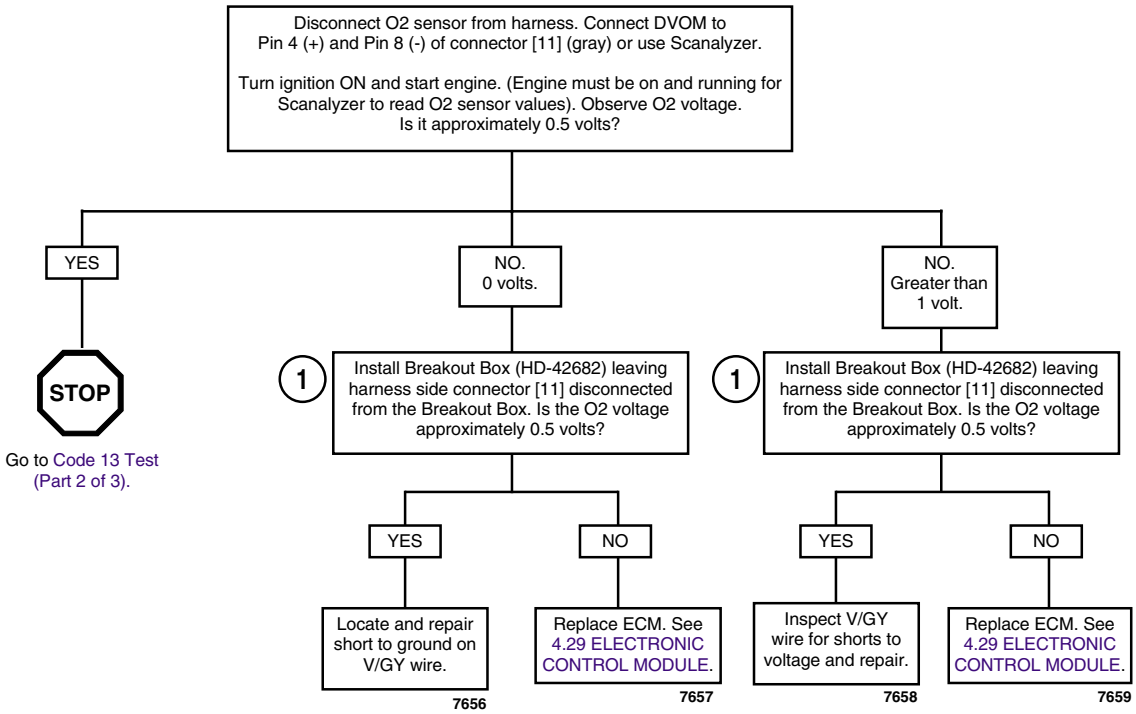


Figure 4-45. Oxygen Sensor Circuit

Table 4-15. Wire Harness Connectors in Figure 4-45.

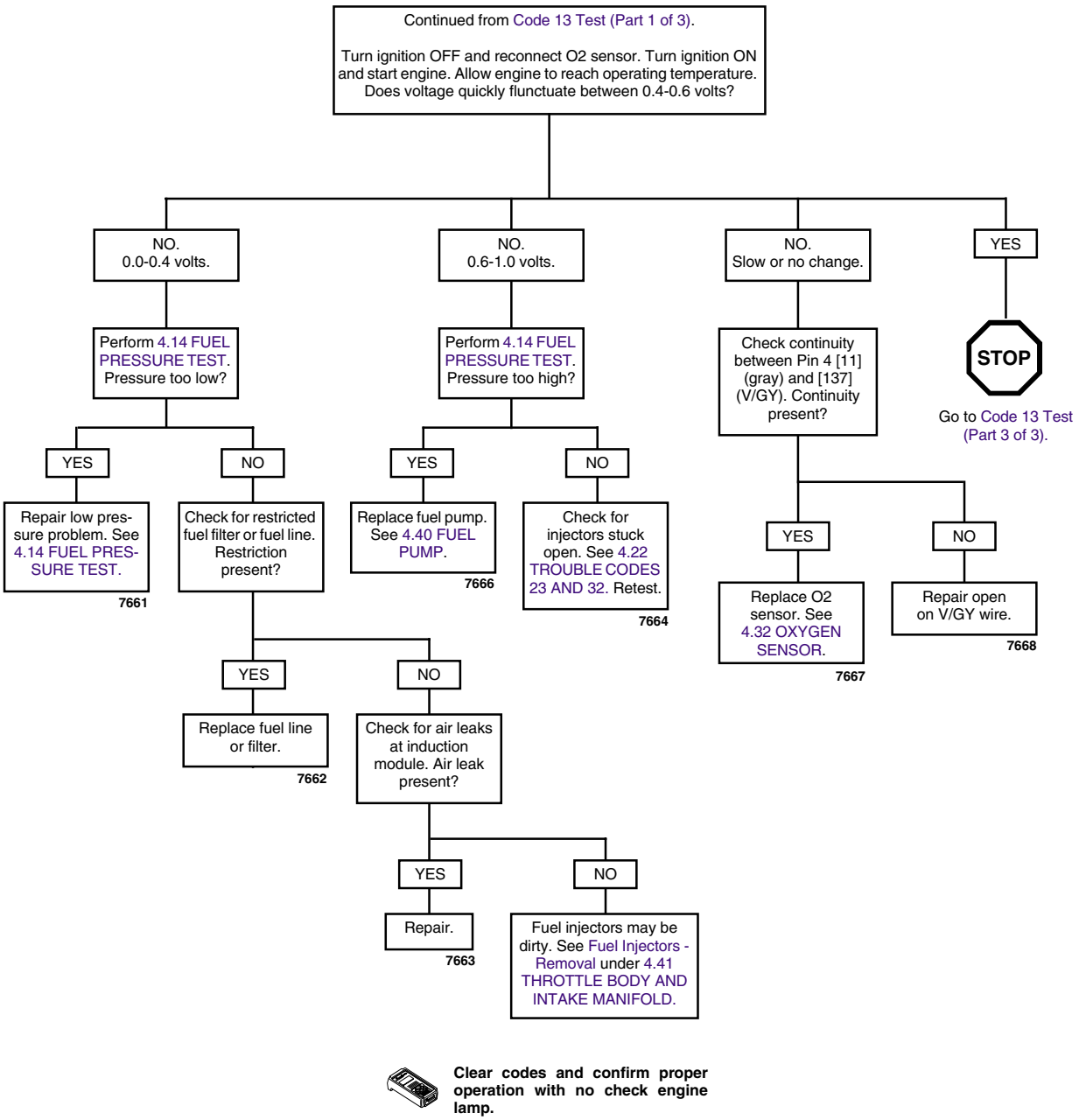
NO.	DESCRIPTION	TYPE	LOCATION
[11]	ECM (gray)	12-place Deutsch	under seat
[137]	Oxygen sensor	1-place	above starter

Code 13 Test (Part 1 of 3)



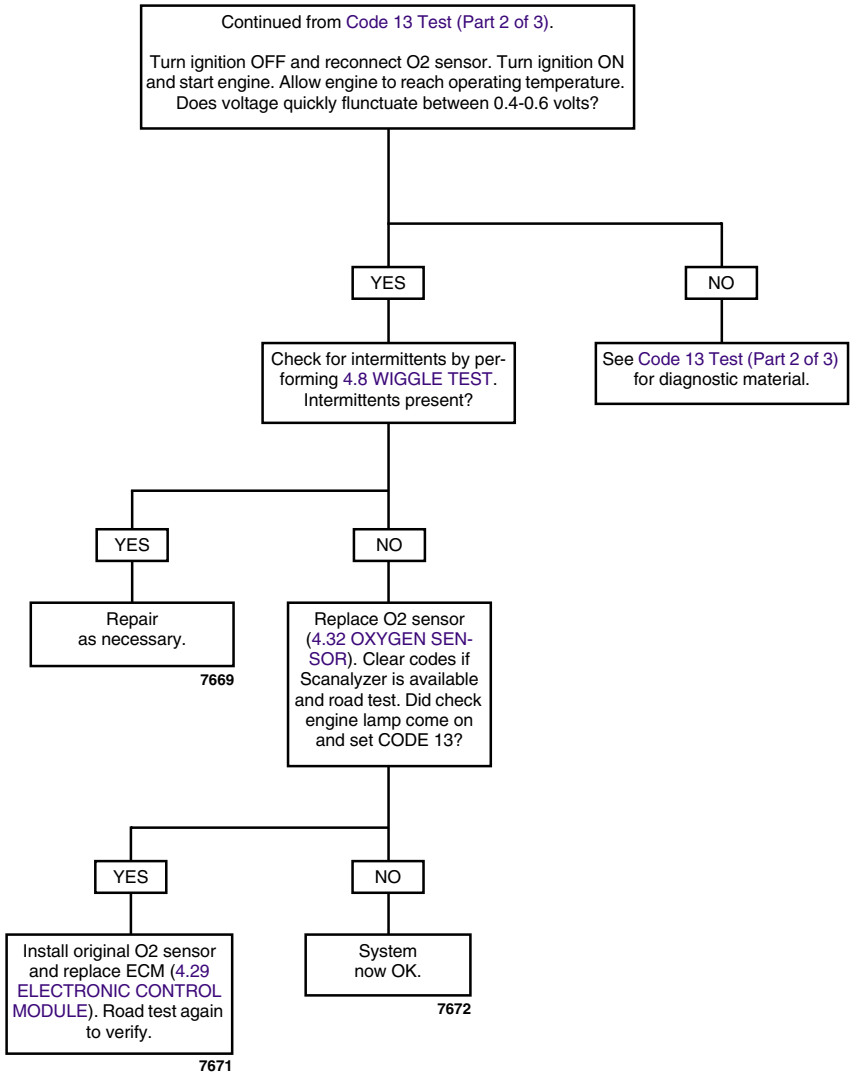
Clear codes and confirm proper operation with no check engine lamp.

Code 13 Test (Part 2 of 3)



Clear codes and confirm proper operation with no check engine lamp.

Code 13 Test (Part 3 of 3)



Clear codes and confirm proper operation with no check engine lamp.

GENERAL

Engine Temperature Sensor

CAUTION

Do not pull on engine temperature sensor wiring. Excess strain to sensor wiring will cause sensor damage.

The ECM supplies and monitors a 0-5 volt signal to one side of the engine temperature sensor (ET sensor). The other side of the ET sensor is connected to ground through the engine.

See Table 4-16. The ET sensor is a thermistor device which means that at a specific temperature it will have a specific resistance across its terminals. As this resistance varies, so does the supplied voltage.

- At high temperatures, the resistance of the sensor is very low. This effectively lowers the signal voltage.
- At low temperatures, the resistance is very high, allowing the voltage to rise close to the supplied voltage of 5 volts.

The ECM monitors this voltage to compensate for various operating conditions.

DIAGNOSTICS

DiagnosticTips

The Scanalyzer displays engine temperature in degrees. Once the engine is started, the temperature should rise steadily.

An intermittent may be caused by poor connection, rubbed through wire insulation or a wire broken inside the insulation.

Check the following conditions:

- **Poor connection.** Inspect ECM harness connector [11] for backed out terminals, improper mating, broken locks, improperly formed or damaged terminals, poor terminal-to-wire connection and damaged harness.
- **Shifted sensor.** The temperature-to-resistance values table may be used to test the ET sensor at various temperature levels in order to evaluate the possibility of a shifted (out-of-calibration) sensor which may result in driveability problems.

Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 14 flow charts.

1. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.
2. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), gray pin probes and patch cord.

Scanalyzer Notes

The Scanalyzer icon appears at those points in the flow chart where the Scanalyzer can be used.

Table 4-16. Engine Temperature Sensor Specifications

VOLTS	RESISTANCE	TEMP °C	TEMP °F
0.00	0	300	572
0.21	145	255	491
0.42	303	210	410
0.62	463	190	374
0.81	638	170	338
1.20	1042	150	302
1.59	1539	130	266
3.01	4991	85	185
4.43	25,647	40	104
4.63	41,295	25	77
4.83	93,759	10	50
4.88	134,200	0	32
4.93	232,414	-10	14

NOTE

All voltage and resistance values are approximate (+/- 20%). Engine temperature sensor is measured between Terminal 9 of connector [11] and system ground (Terminals 2 and 11 of connector [10]).

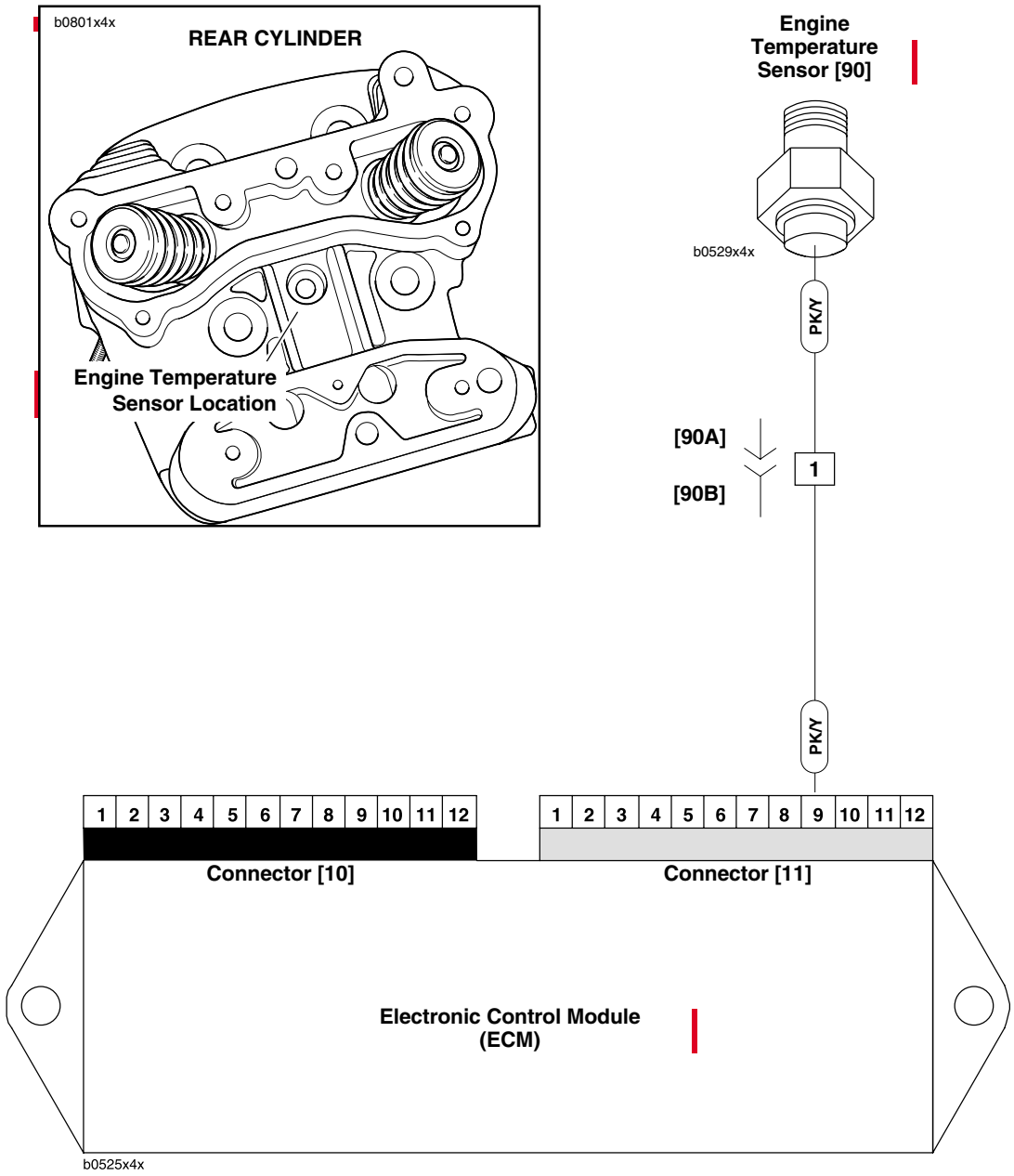
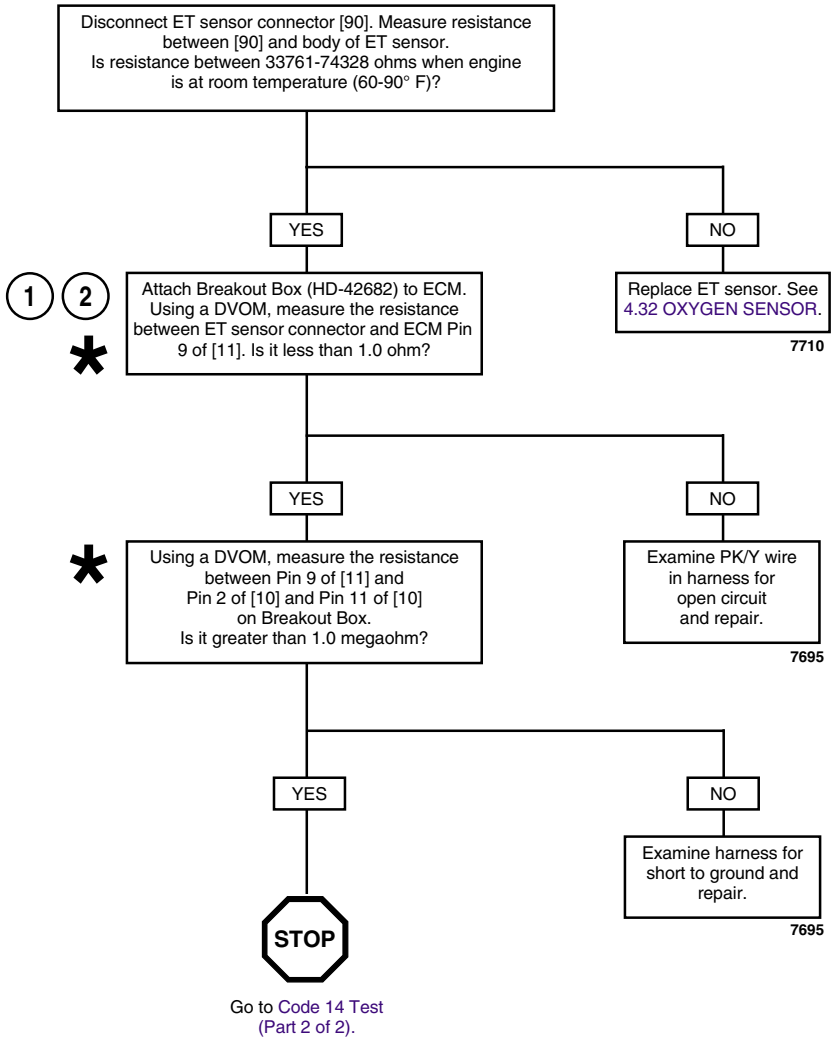


Figure 4-46. Engine Temperature Sensor Circuit

Table 4-17. Wire Harness Connectors in Figure 4-46.

NO.	DESCRIPTION	TYPE	LOCATION
[11]	ECM (gray)	12-place Deutsch	under seat
[90]	Engine temperature sensor	1-place bullet	above rear cylinder head, left side

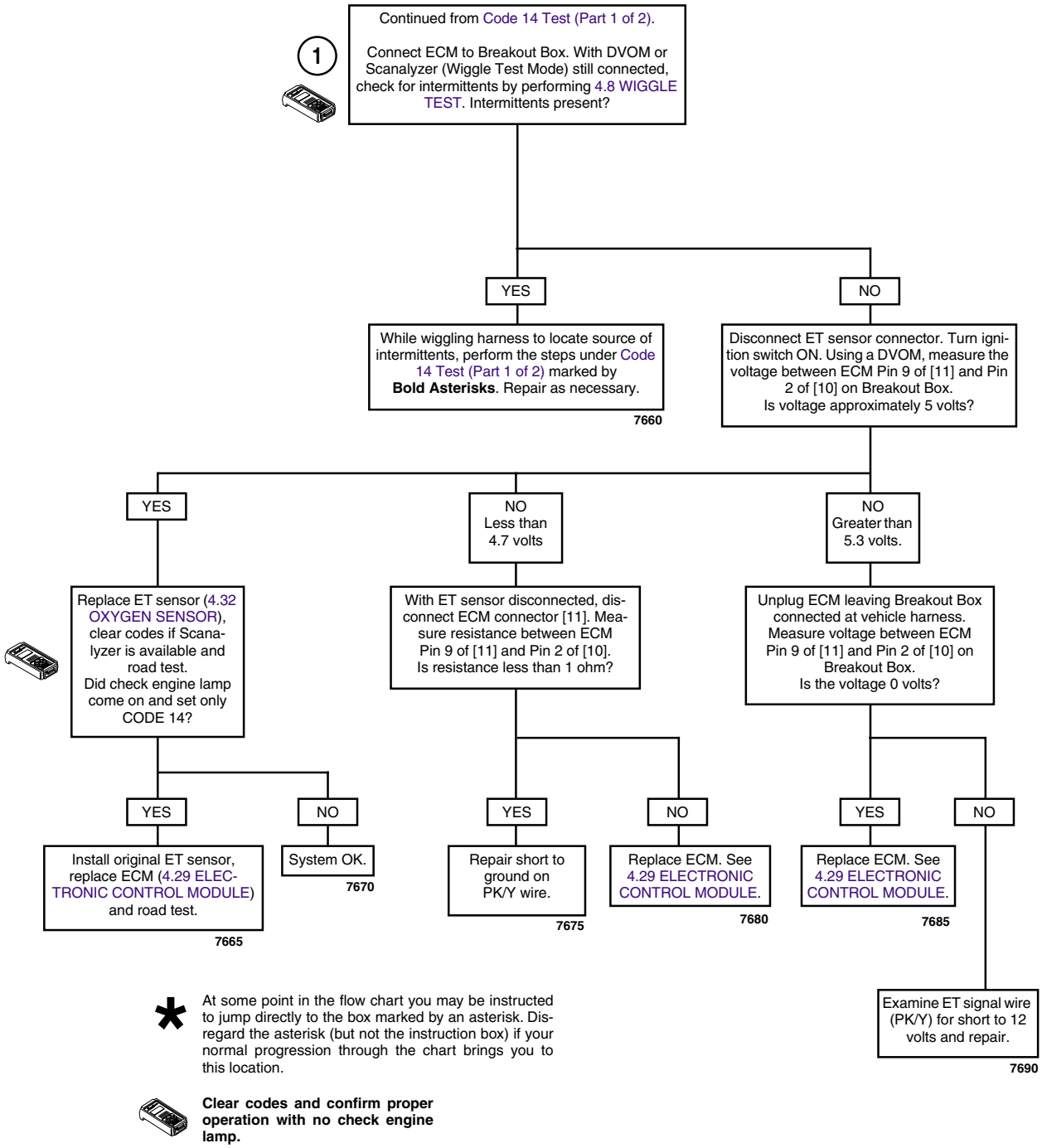
Code 14 Test (Part 1 of 2)



* At some point in the flow chart you may be instructed to jump directly to the box marked by an asterisk. Disregard the asterisk (but not the instruction box) if your normal progression through the chart brings you to this location.

Clear codes and confirm proper operation with no check engine lamp.

Code 14 Test (Part 2 of 2)



GENERAL

Intake Air Temperature Sensor

The ECM supplies and monitors a signal at Pin 10 of [11] to one side of the intake air temperature sensor (IAT sensor). The other side of the IAT sensor is connected to a common sensor ground, which is also connected to the ECM (Pin 7 of [11]).

See Table 4-18. The IAT sensor is a thermistor device, meaning that at a specific temperature, it will have a specific resistance across its terminals. As this resistance varies, so does the supplied voltage (Pin 10).

- At high temperatures, the resistance of the sensor is very low. This effectively lowers the signal voltage on Pin 10.
- At low temperatures, the resistance is very high, allowing the voltage to rise close to the supplied voltage of 5 volts.

The ECM monitors this voltage to compensate for various operating conditions.

DIAGNOSTICS

DiagnosticTips

The Scanalyzer displays intake air temperature in degrees.

An intermittent may be caused by a poor connection, rubbed through wire insulation or a wire broken inside the insulation.

Check for the following conditions:

- **Poor connection.** Inspect ECM harness connector for backed out terminals, improper mating, broken locks improperly formed or damaged terminals, poor terminal-to-wire connection and damaged harness.
- **Perform 4.8 WIGGLE TEST to locate intermittents.** If connections and harness check out OK, use the Scanalyzer to check intake air temperature reading while moving related connectors and wiring harness. If the failure is induced, the IAT sensor display will change.
- **Shifted sensor.** The temperature-to-resistance values table may be used to test the ET sensor at various temperature levels in order to evaluate the possibility of a shifted (out-of-calibration) sensor which may result in driveability problems.

Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 15 flow charts.

1. Connect BREAKOUT BOX (Part No. HD-42682) to EFI harness **only** (leave ECM disconnected). See 4.7 BREAKOUT BOX.
2. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), gray socket probes and patch cord.
3. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), gray pin probe and patch cord.

Scanalyzer Notes

The Scanalyzer icon appears at those points in the flow chart where the Scanalyzer can be used.

Table 4-18. Intake Air Temperature Sensor Specifications

VOLTS	RESISTANCE	TEMP °C	TEMP °F
0.49	1086	125	257
0.68	1561	113	234.5
0.86	2077	100	212
1.13	2920	90	194
1.40	3889	80	176
2.25	8149	60	140
3.09	16,178	40	104
3.52	23,670	30	86
3.94	37,170	20	68
4.24	55,359	10	50
4.53	96,383	0	32
4.68	146,250	-10	14
4.83	284,118	-20	-4

NOTE

All voltage and resistance values are approximate (+/- 20%). Intake air temperature sensor is measured between Terminal 10 of [11] and system ground (Terminals 2 and 11 of [10]).

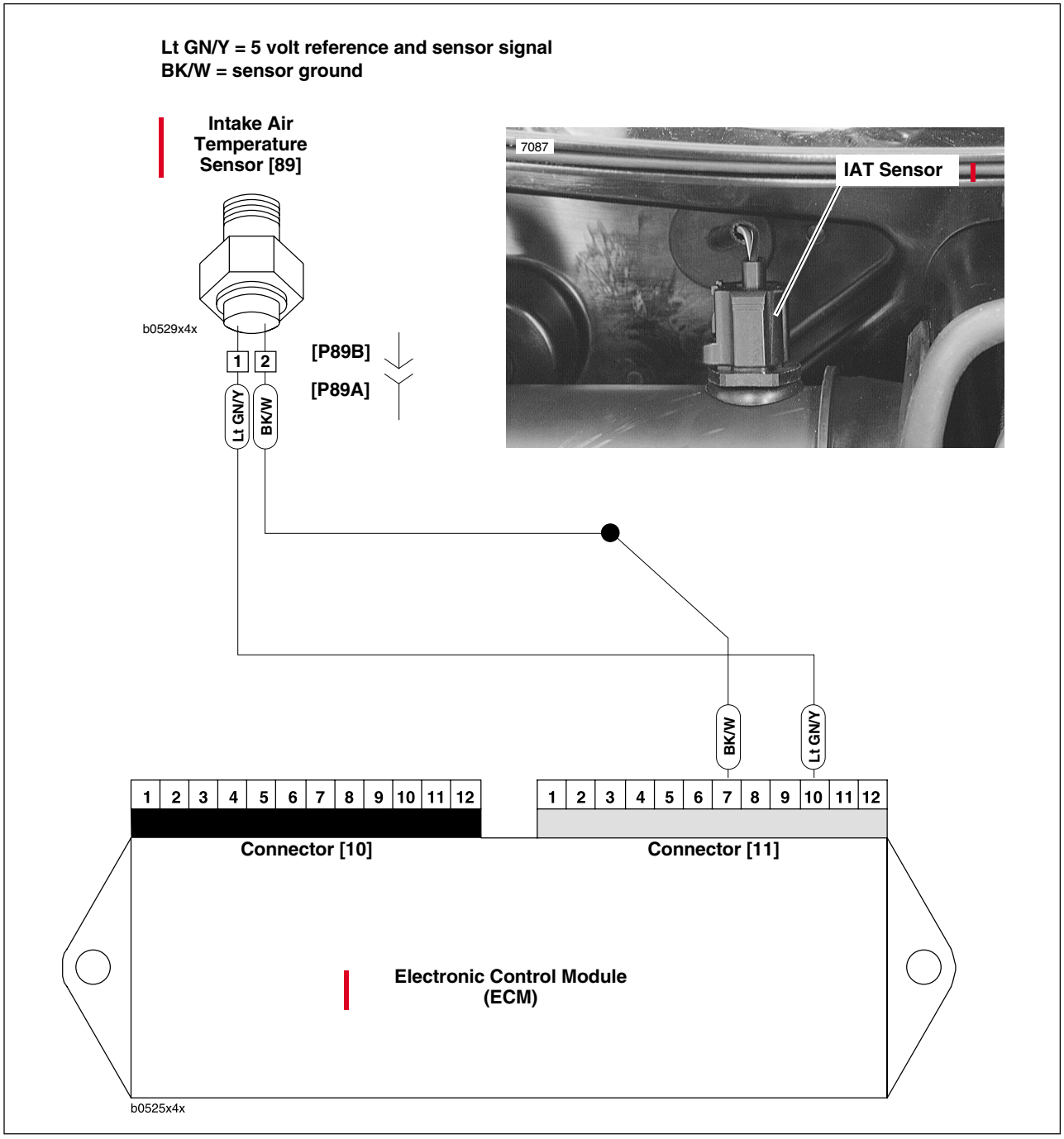
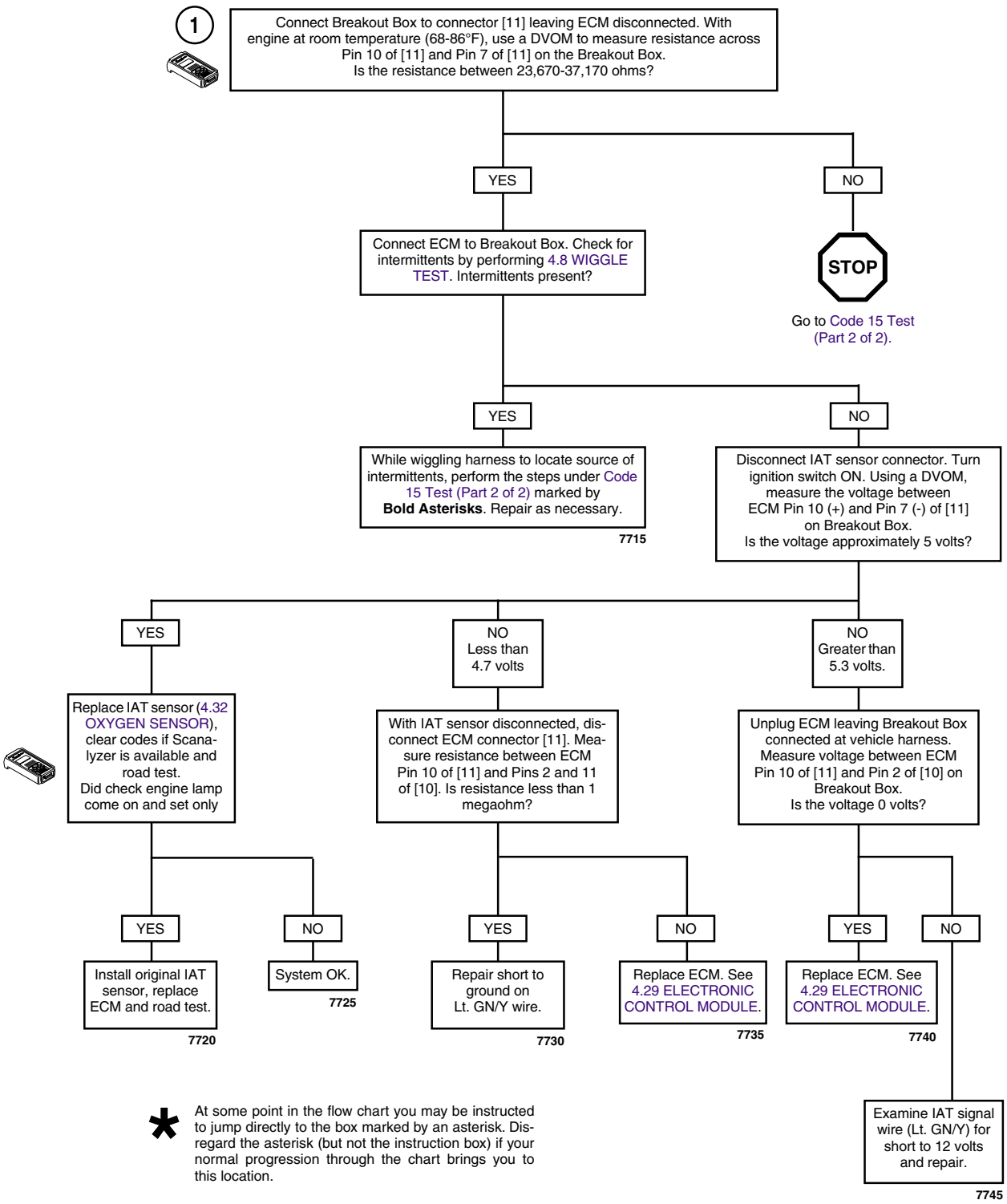


Figure 4-47. Intake Air Temperature Sensor Circuit

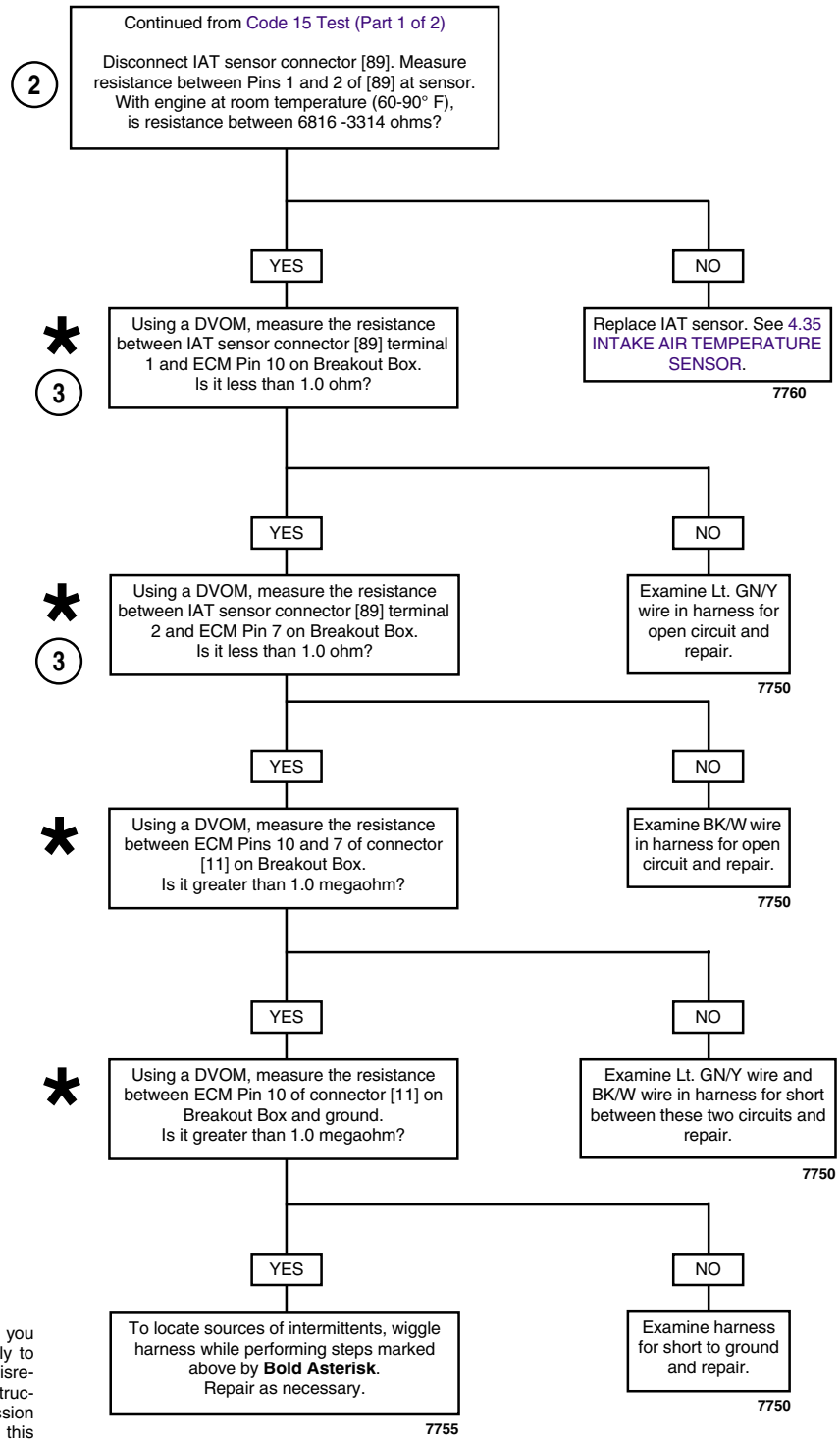
Table 4-19. Wire Harness Connectors in Figure 4-47.

NO.	DESCRIPTION	TYPE	LOCATION
[11]	ECM (gray)	12-place Deutsch	under seat
[89]	IAT sensor	2-place Deutsch	behind air cleaner backplate

Code 15 Test (Part 1 of 2)



Code 15 Test (Part 2 of 2)



* At some point in the flow chart you may be instructed to jump directly to the box marked by an asterisk. Disregard the asterisk (but not the instruction box) if your normal progression through the chart brings you to this location.

Clear codes and confirm proper operation with no check engine lamp.

GENERAL

Battery Voltage

A Code 16 will set if the ECM sees battery positive voltage less than 6 volts or greater than 18 volts.

- A low voltage condition typically occurs during activation of the starter or generally indicates loose wire connections.
- A high voltage condition is usually caused by a faulty voltage regulator.

DIAGNOSTICS

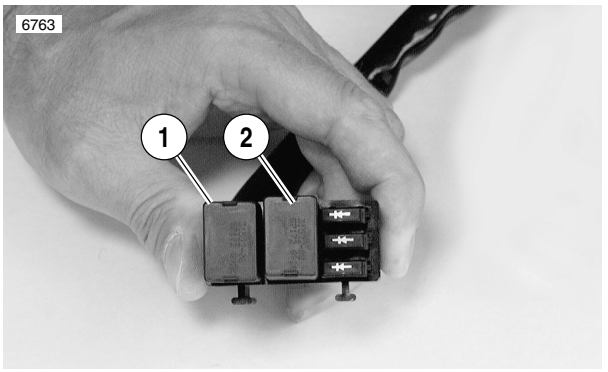
Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 16 flow charts.

1. The ECM is monitoring voltage at ECM connector [10] (black) Terminal 1. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.
2. This checks for voltage drops in the ECM power circuit. If a significant voltage drop is not present, condition may be caused by excessive starter current draw.

Scanalyzer Notes

The Scanalyzer icon appears at those points in the flow chart where the Scanalyzer can be used.



1. Ignition Relay
2. Starter Relay

Figure 4-48. Electrical Relays

Figure 4-49. Fuse Holder

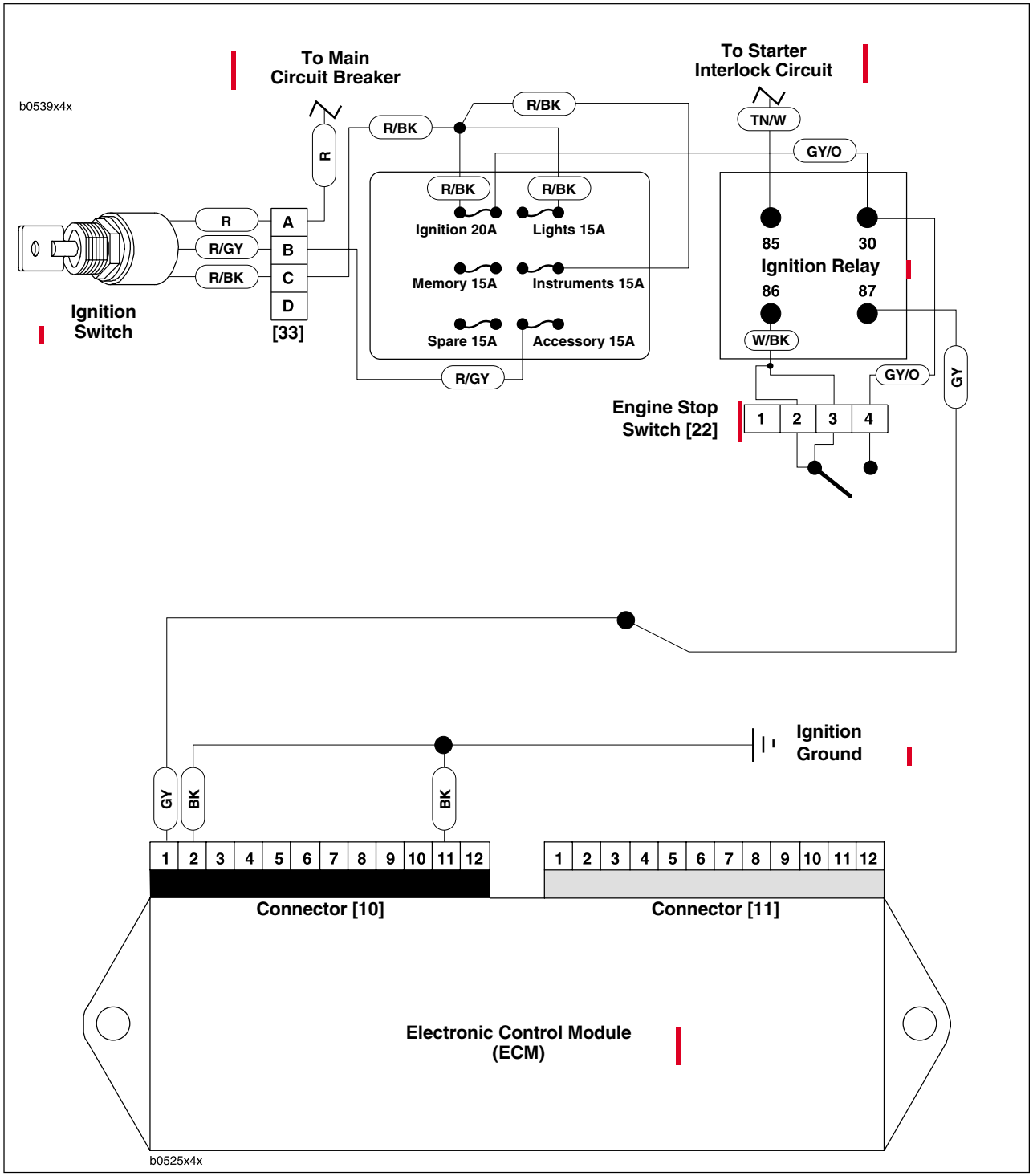
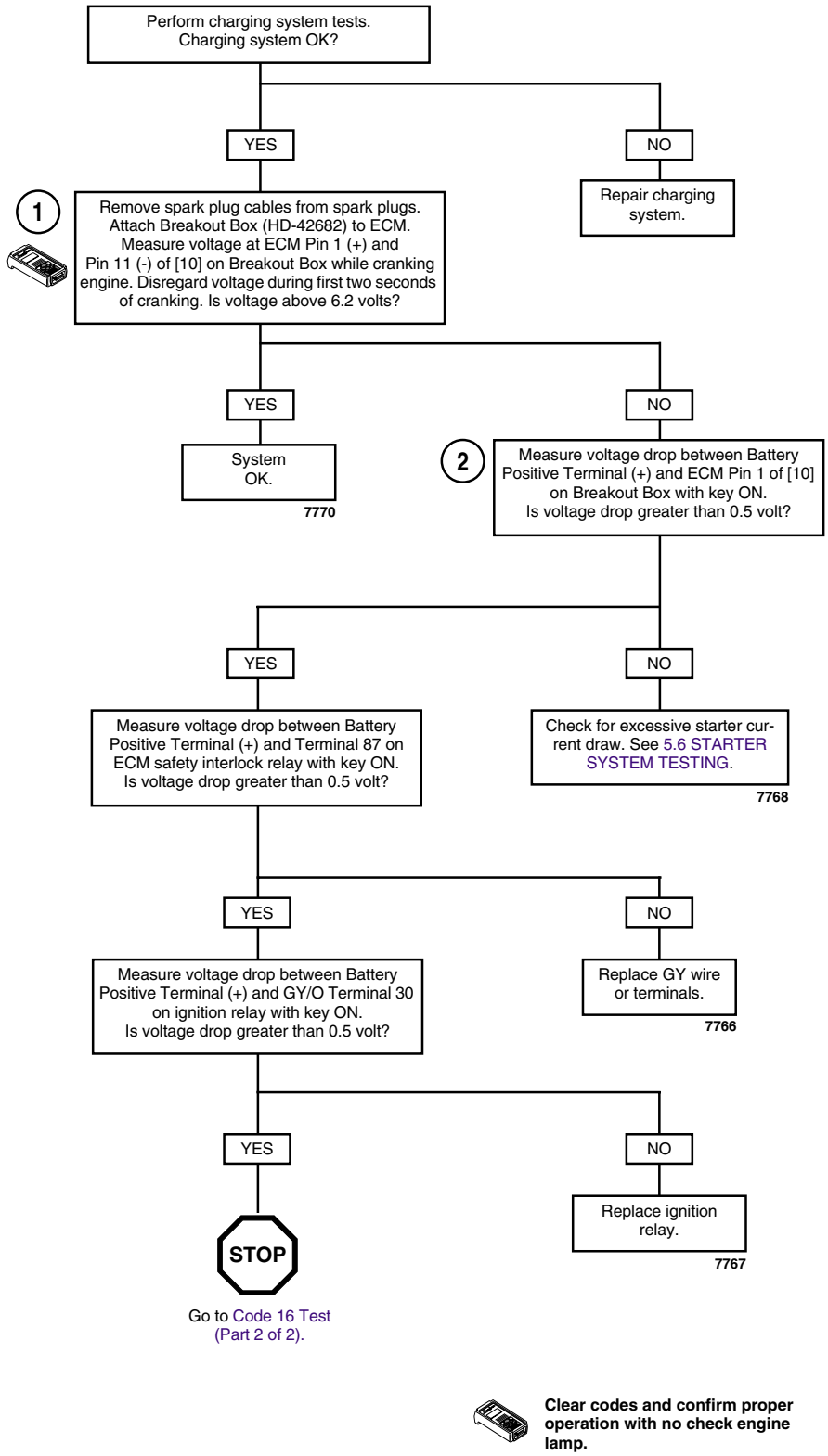


Figure 4-50. Battery Voltage Circuit

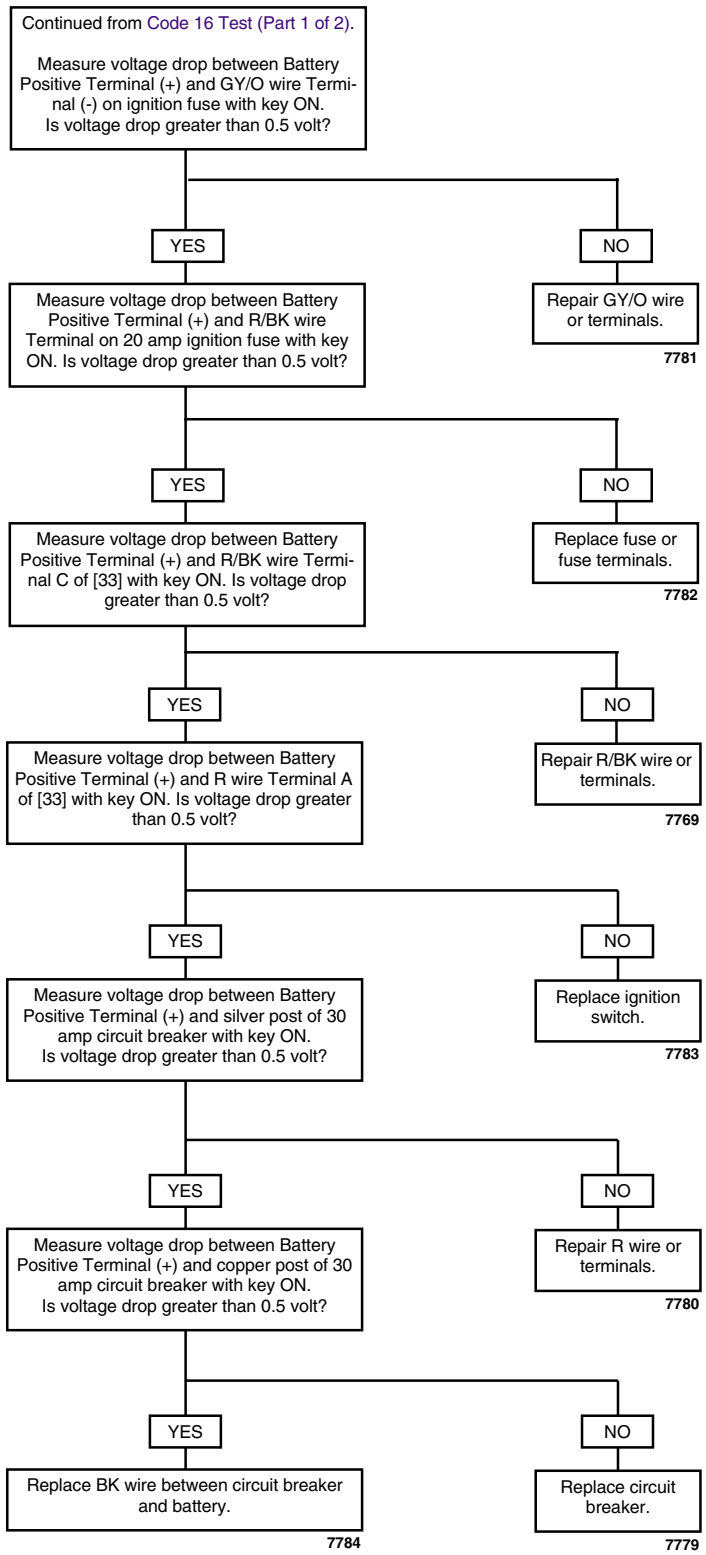
Table 4-20. Wire Harness Connectors in Figure 4-50.

NO.	DESCRIPTION	TYPE	LOCATION
[10]	ECM (black)	12-place Deutsch	under seat

Code 16 Test (Part 1 of 2)



Code 16 Test (Part 2 of 2)



Clear codes and confirm proper operation with no check engine lamp.

GENERAL

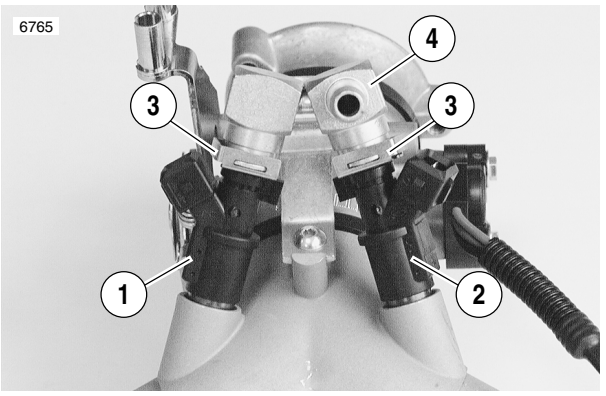
Front Fuel Injector (Code 23) And Rear Fuel Injector (Code 32)

See Figure 4-51. The fuel injectors (1, 2) are solenoids that allow pressurized fuel into the engine intake tract. The injectors are timed to the engine cycle and are triggered sequentially.

See Figure 4-52. The power for the injectors comes from the ignition relay. The ignition relay also provides power for fuel pump, ECM, bank angle sensor and the ignition coils. The ECM provides the path to ground to trigger the injectors.

NOTE

System fuse and ignition relay failures or wiring harness problems will cause 12 volt power to be lost to both injectors, ignition coils, ECM, bank angle sensor and fuel pump.



1. **Front Fuel Injector**
2. **Rear Fuel Injector**
3. **Clip (2)**
4. **Fuel Rail**

Figure 4-51. Fuel Injectors

Figure 4-52. Fuel Injector Connector

DIAGNOSTICS

Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 23/32 flow charts.

⚠WARNING

The gasoline in the fuel supply line downstream of the fuel pump is under high pressure (49 psi [338 kPa]). To avoid an uncontrolled discharge or spray of gasoline, always purge the system of high pressure gas before removing fuel tank. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

1. Purge fuel line and remove fuel tank. See 4.37 FUEL TANK.
2. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), purple pin probes and patch cord.
3. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.
4. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), purple pin probes and patch cord to BREAKOUT BOX (Part No. HD-42682) and gray socket probes and patch cord to FUEL INJECTOR TEST LAMP (Part No. HD-34730-2C).

Scanalyzer Notes

The Scanalyzer icon appears at those points in the flow chart where the Scanalyzer can be used. If a number is printed next to the icon, then refer to the Scanalyzer notes at the bottom of the flow chart.

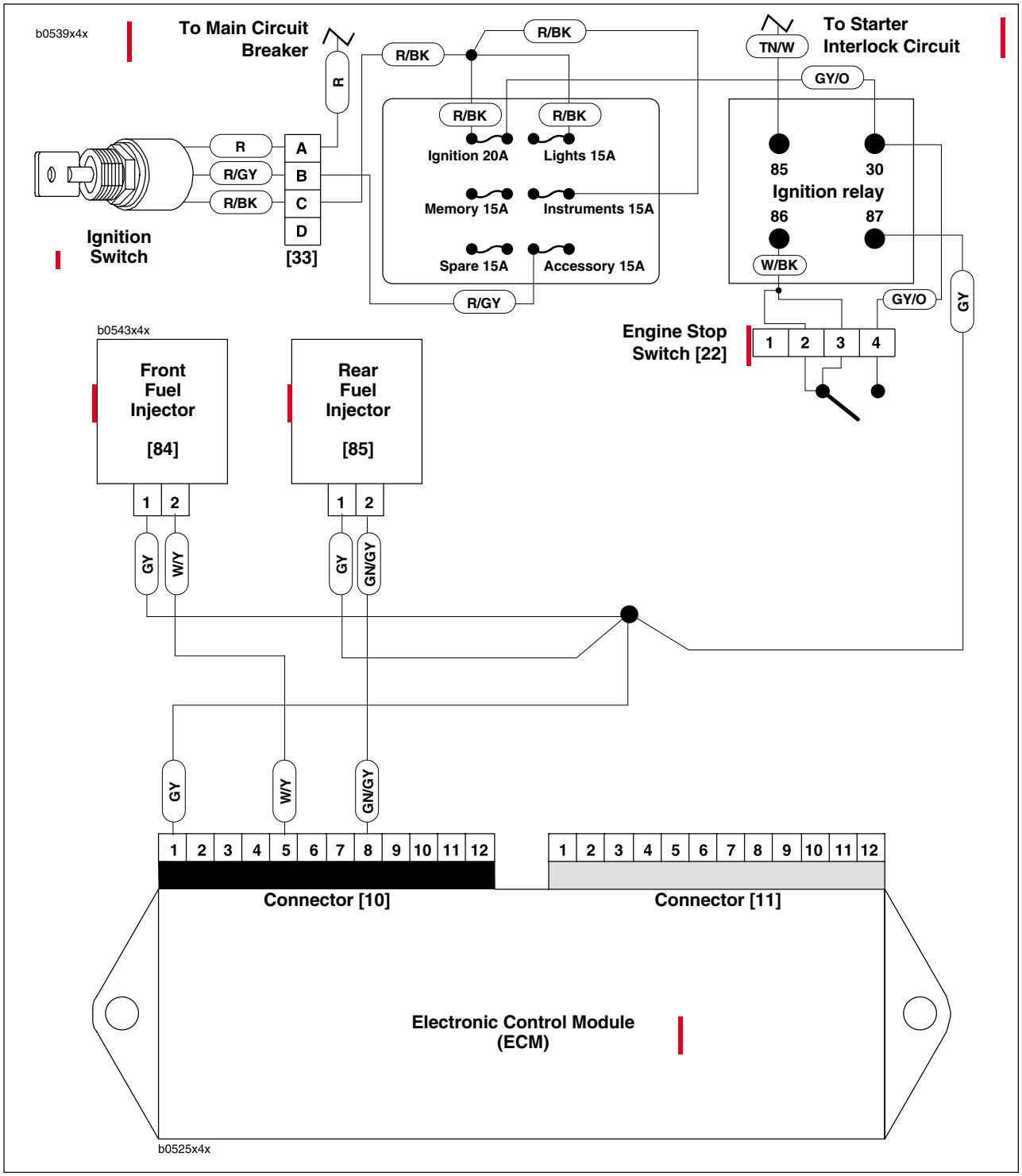
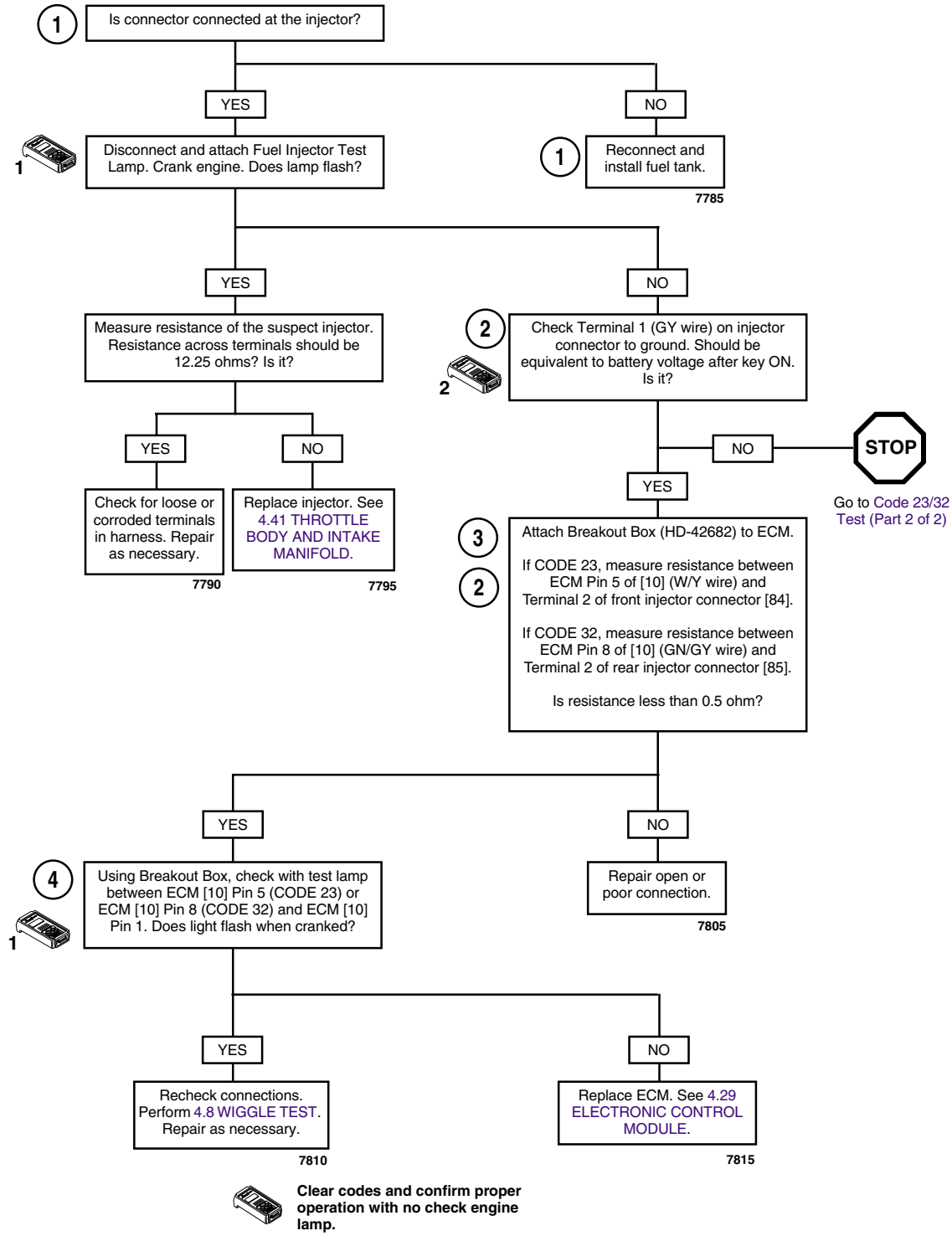


Figure 4-53. Fuel Injector Circuit

Table 4-21. Wire Harness Connectors in Figure 4-53.

NO.	DESCRIPTION	TYPE	LOCATION
[10]	ECM (black)	12-place Deutsch	under seat
[84]	Front injector	2-place	under fuel cell
[85]	Rear injector	2-place	under fuel cell

Code 23/32 Test (Part 1 of 2)

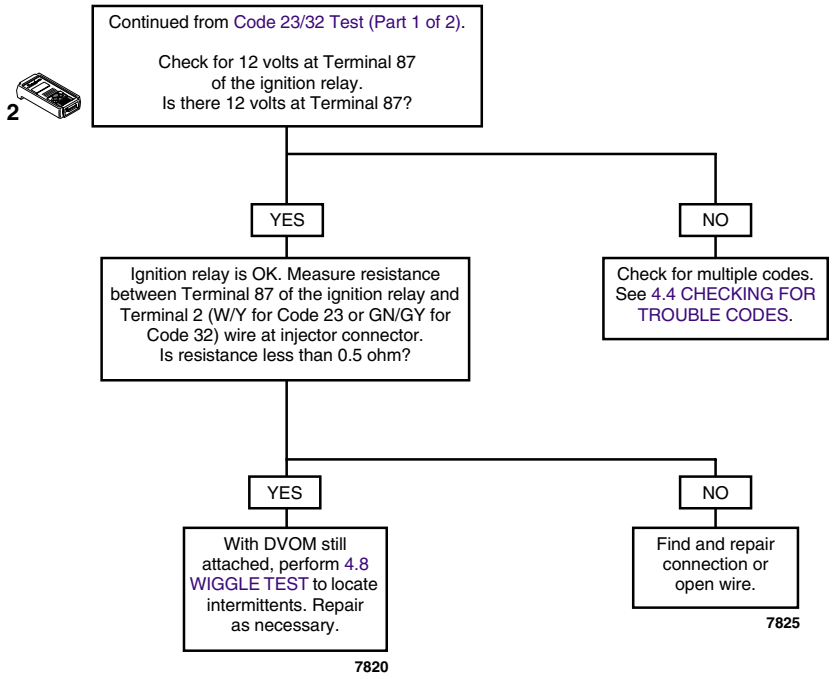


SCANALYZER NOTES

1 With the engine off, Scanalyzer (Active Diagnostic Test Mode) can be used to energize either the front or rear injector once each second for a total of five seconds.

2 With the engine off, Scanalyzer (Active Diagnostic Test Mode) can be used to turn fuel pump on for periods up to 30 seconds. Power to the pump also includes power to the fuel injectors and ignition coil.

Code 23/32 Test (Part 2 of 2)



Clear codes and confirm proper operation with no check engine lamp.

SCANALYZER NOTES

1 With the engine off, Scanalyzer (Active Diagnostic Test Mode) can be used to energize either the front or rear injector once each second for a total of five seconds.

2 With the engine off, Scanalyzer (Active Diagnostic Test Mode) can be used to turn fuel pump on for periods up to 30 seconds. Power to the pump also includes power to the fuel injectors and ignition coil.

GENERAL

Front Ignition Coil (Code 24) And Rear Ignition Coil (Code 25)

A Code 24 or 25 will set if the ignition coil rise time is out of range. This could occur if there is an open coil or loss of power to the coil. If both codes are set, it is likely a coil power failure or a coil failure.

See Figure 4-54. The coil receives power from the ignition relay at coil pin B (4) at the same time that the fuel pump and injectors are activated. The fuel pump is active for the first two seconds after the ignition switch is turned ON and then shuts off until RPM is detected from the cam position sensors, at which time it is reactivated.

DIAGNOSTICS

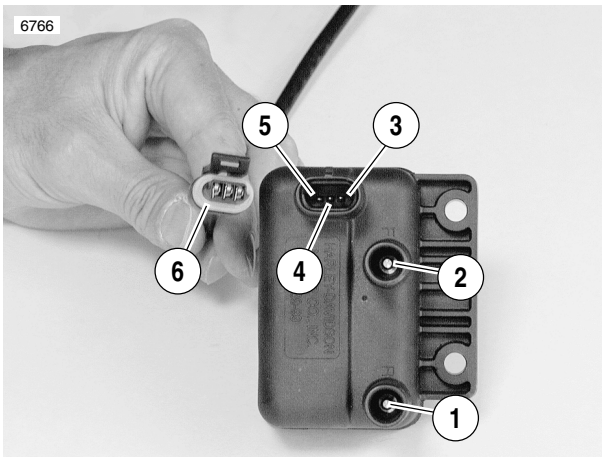
Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 24/25 flow charts.

1. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), purple pin probes and patch cord.
2. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.

Scanalyzer Notes

The Scanalyzer icon appears at those points in the flow chart where the Scanalyzer can be used. If a number is printed next to the icon, then refer to the Scanalyzer notes at the bottom of the flow chart.



1. **Rear Cylinder Spark Plug Cable**
2. **Front Cylinder Spark Plug Cable**
3. **Coil Pin A (Rear Cylinder)**
4. **Coil Pin B (12 VDC)**
5. **Coil Pin C (Front Cylinder)**
6. **Coil Connector [83]**

Figure 4-54. Ignition Coil

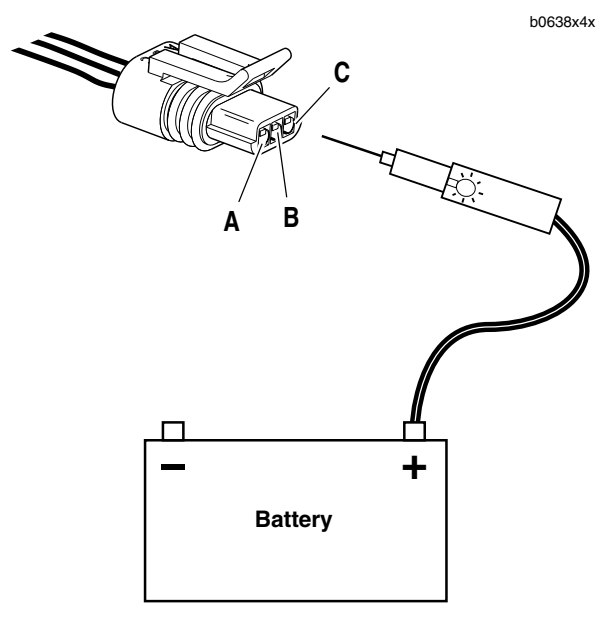


Figure 4-55. Testing Ignition Coil Connectors

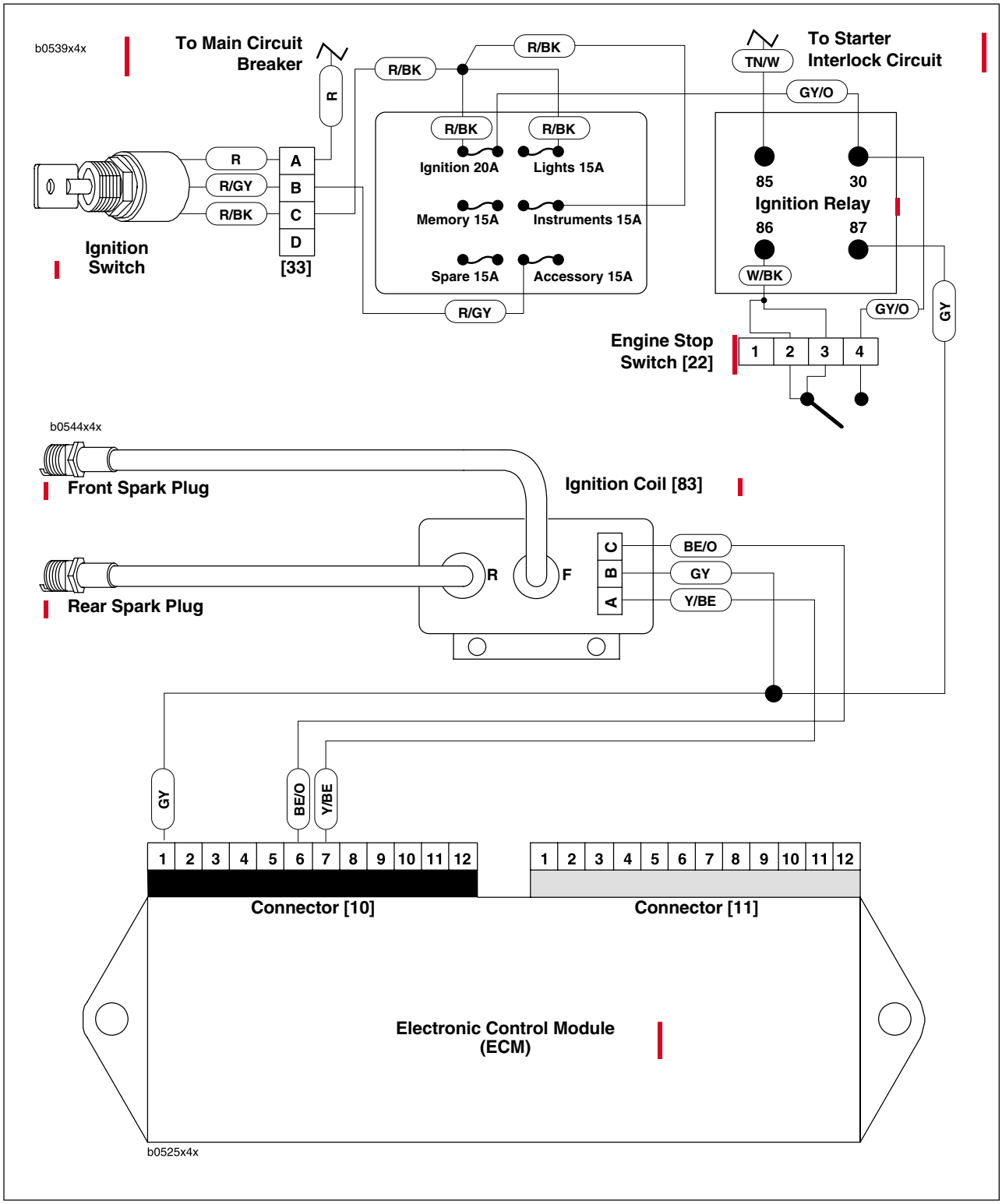
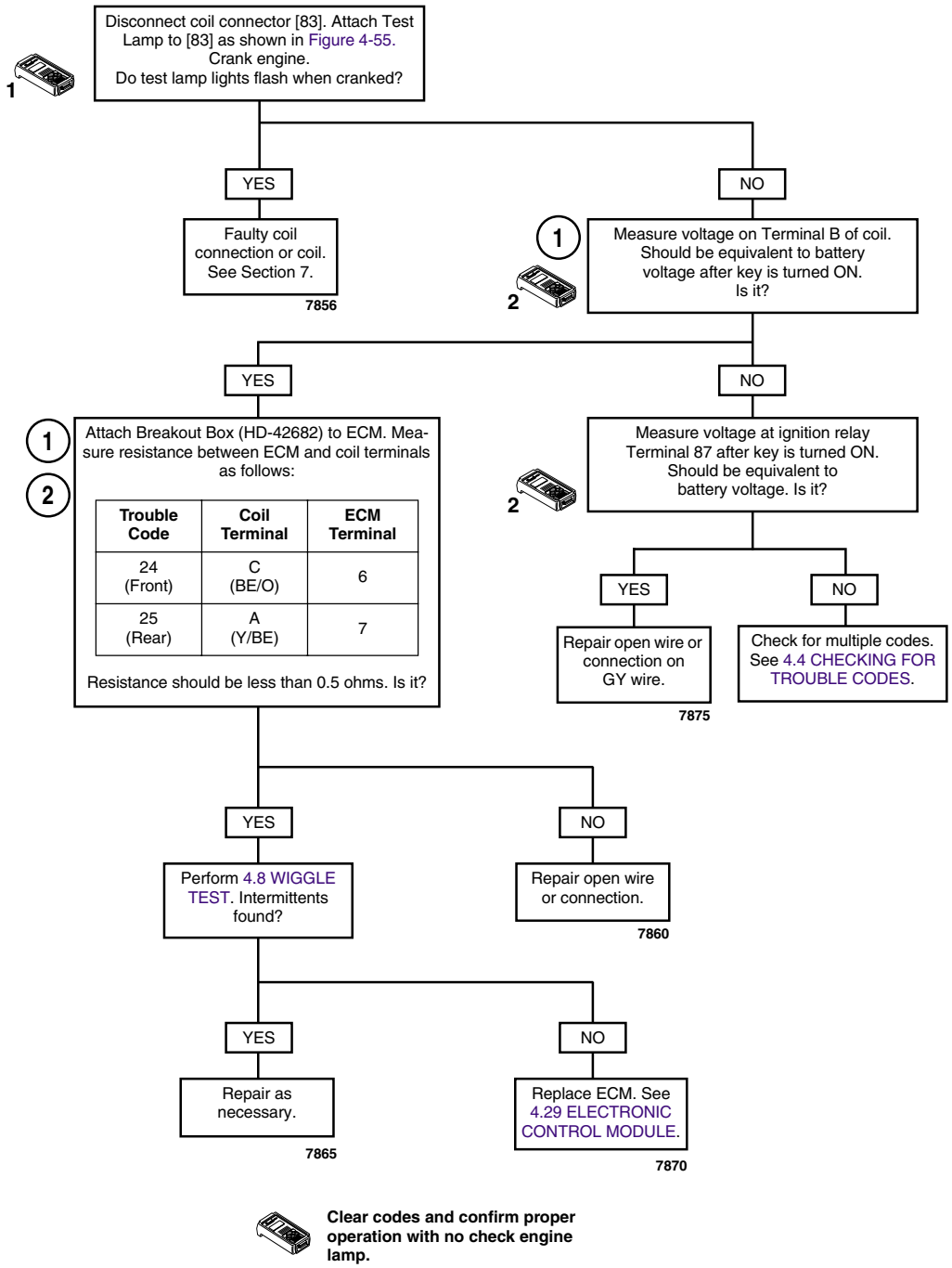


Figure 4-56. Ignition Coil Circuit

Table 4-22. Wire Harness Connectors in Figure 4-56.

NO.	DESCRIPTION	TYPE	LOCATION
[10]	ECM (black)	12-place Deutsch	under seat
[83]	Ignition coil connector	3-place Packard	under fuel cell, left side

Code 24/25 Test



SCANALYZER NOTES

1 With the engine off, Scanalyzer (Active Diagnostic Test Mode) can be used to energize either the front or rear injector once each second for a total of five seconds.

2 With the engine off, Scanalyzer (Active Diagnostic Test Mode) can be used to turn fuel pump on for periods up to 30 seconds. Power to the pump also includes power to the fuel injectors and ignition coil.

GENERAL

Fuel Pump

The fuel pump assembly is shown in Figure 4-57. ECM Pin 3 provides ground to the fuel pump. Code 33 will set if:

- BN/Y wire is shorted to 12 volts. This will also cause the ignition fuse to blow. See Figure 4-58.
- BN/Y wire is shorted to ground. This will cause the fuel pump to run continuously even when the motor is not running.
- Fuel pump motor stalls or spins without providing fuel pressure.

DIAGNOSTICS

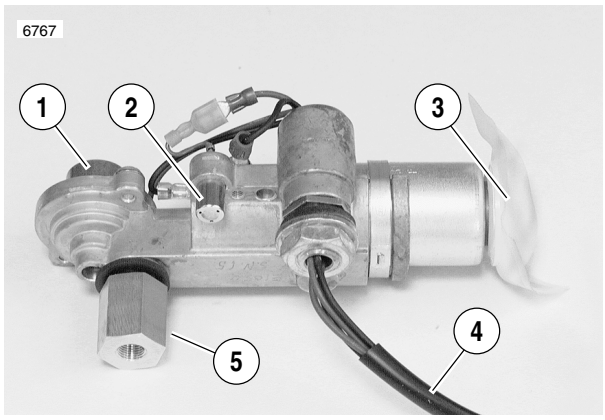
Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 33 flow chart.

1. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.
2. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), red pin probe and patch cord.
3. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), gray socket probe and patch cord.

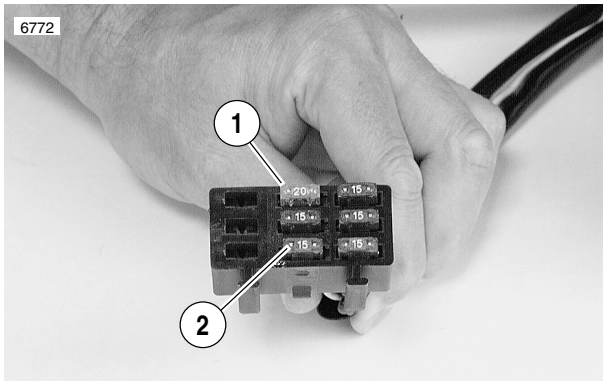
Scanalyzer Notes

The Scanalyzer icon appears at those points in the flow chart where the Scanalyzer can be used.



1. **Pressure Regulator**
2. **Low Fuel Level Sensor**
3. **Filter**
4. **Wiring Harness**
5. **Fuel Fitting Nut (Schraeder Valve not shown)**

Figure 4-57. Fuel Pump Assembly



1. **Ignition Fuse**
2. **Spare Fuse slot (may be 15 or 20 Amp)**

Figure 4-58. Ignition Fuse

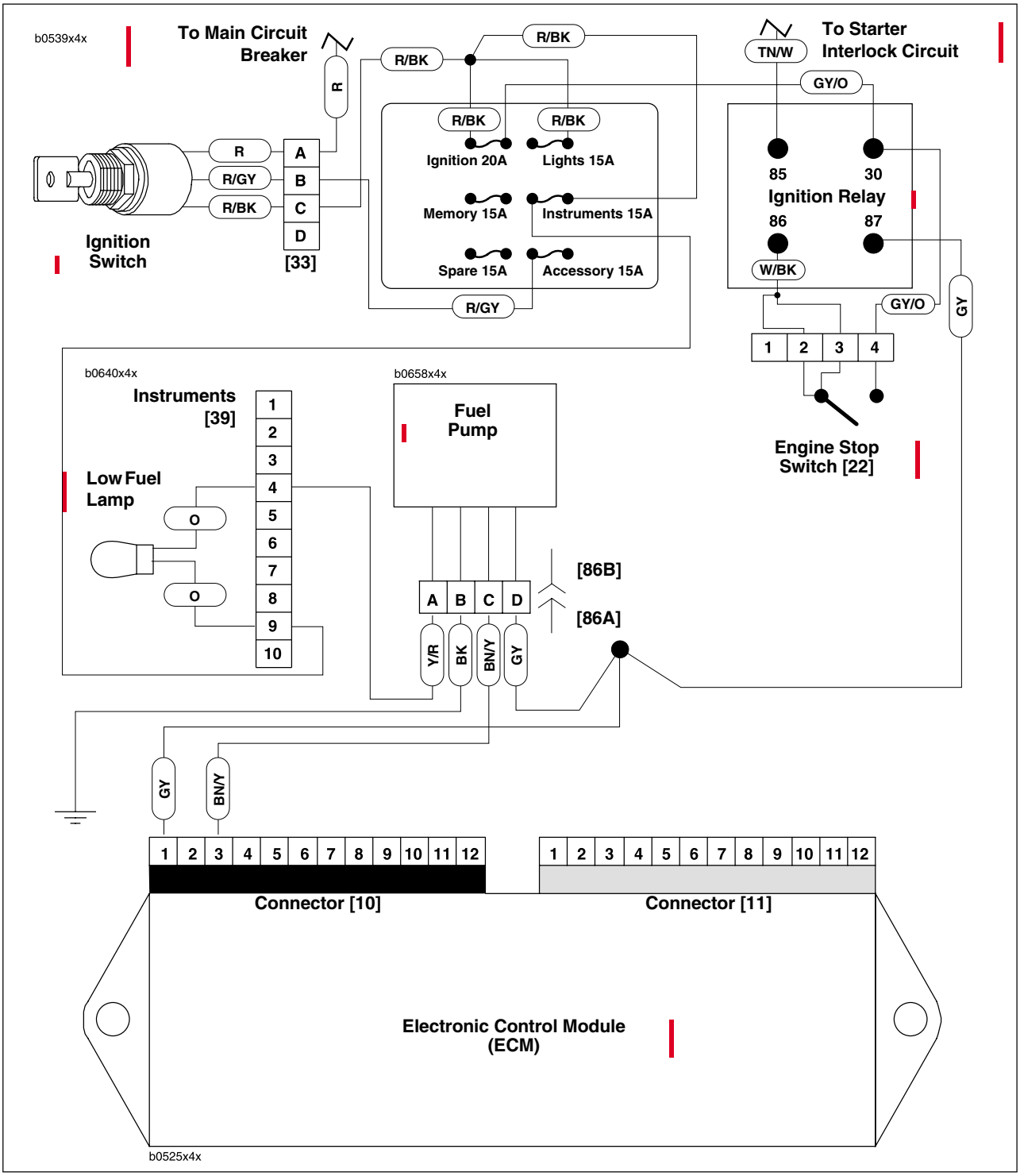
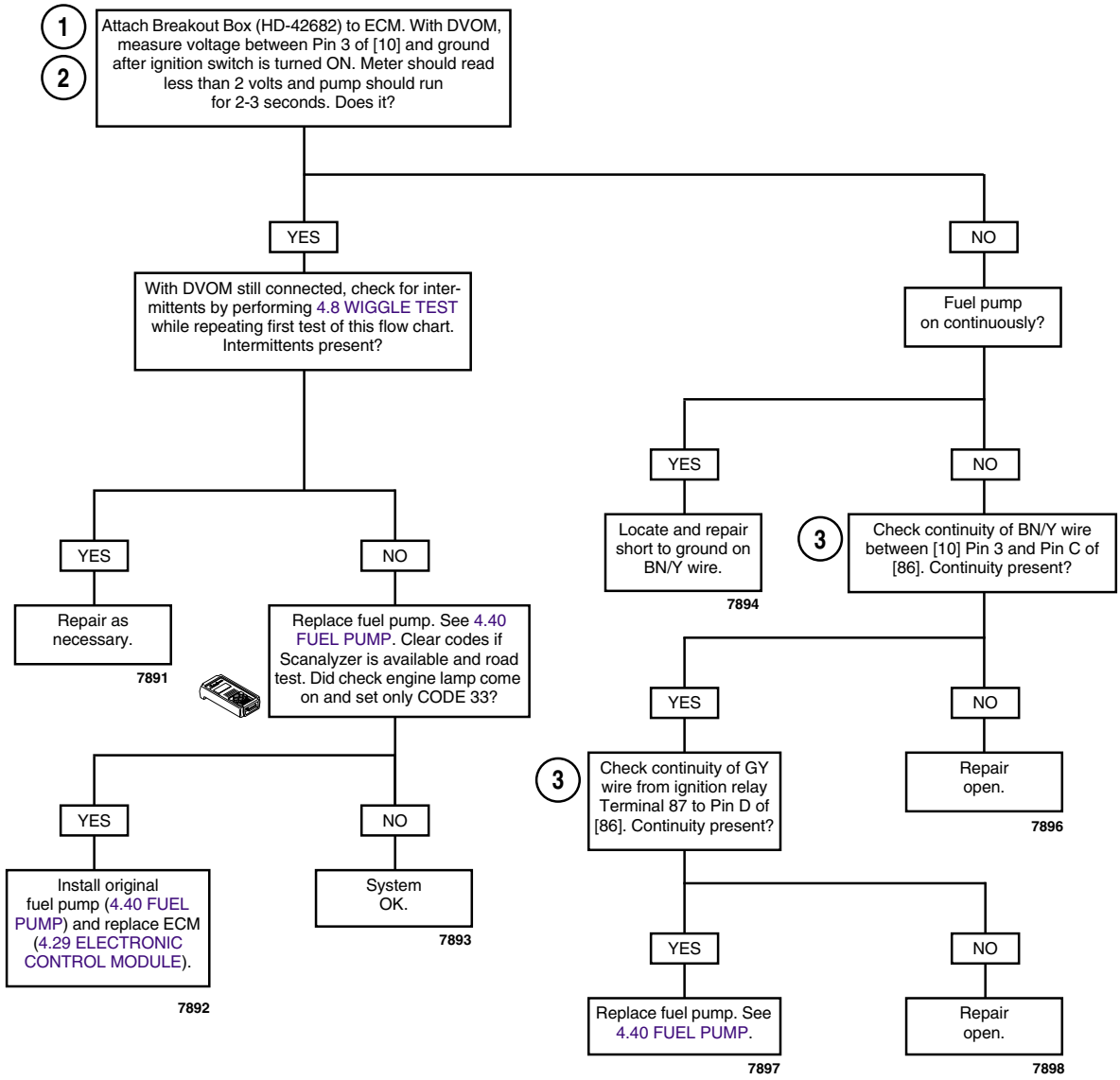


Figure 4-59. Fuel Pump Circuit

Table 4-23. Wire Harness Connectors in Figure 4-59.

NO.	DESCRIPTION	TYPE	LOCATION
[10]	ECM (black)	12-place Deutsch	under seat
[39]	Instruments	10-place Multilock	under fuel cell
[86]	Fuel pump	4-place Packard	above rear cylinder head, left side

Code 33 Test



Clear codes and confirm proper operation with no check engine lamp.

GENERAL

Tachometer

A Code 35 will set if the PK tachometer wire is shorted to power or ground.

DIAGNOSTICS

Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 35 flow chart.

1. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.

⚠WARNING

The gasoline in the fuel supply line downstream of the fuel pump is under high pressure (49 psi [338 kPa]). To avoid an uncontrolled discharge or spray of gasoline, always purge the system of high pressure gas before removing fuel tank. Gasoline is extremely flammable and highly explosive. Inadequate safety precautions could result in death or serious injury.

2. Purge fuel line and remove fuel tank to access instrument connector [39]. See 4.37 FUEL TANK.
3. Replace tachometer. See 7.18 TACHOMETER.

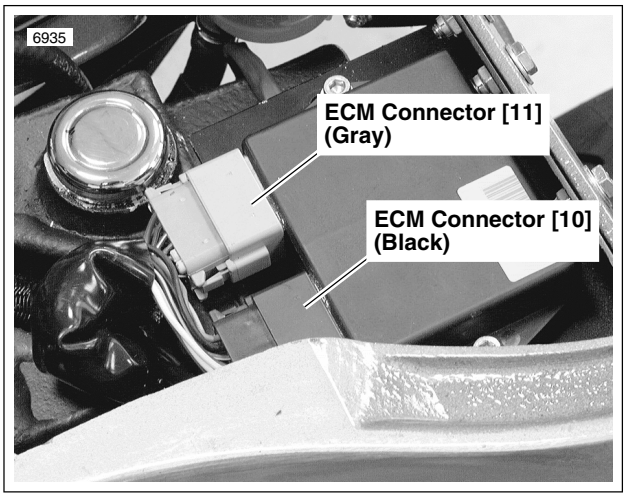


Figure 4-60. ECM Connectors

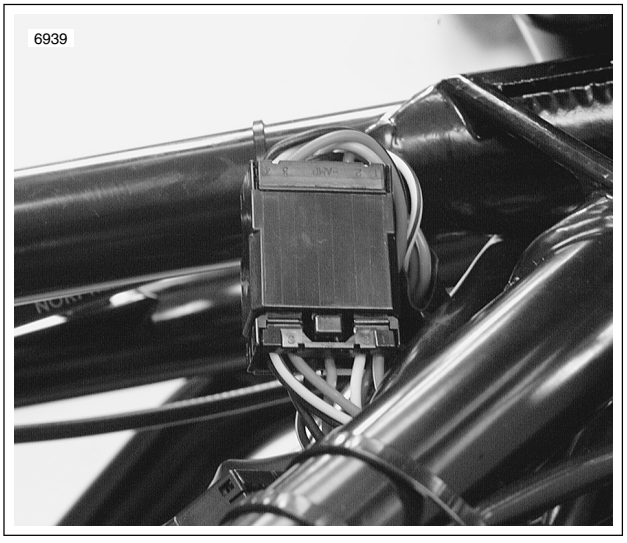


Figure 4-61. Speedometer/Tachometer Connector [39]

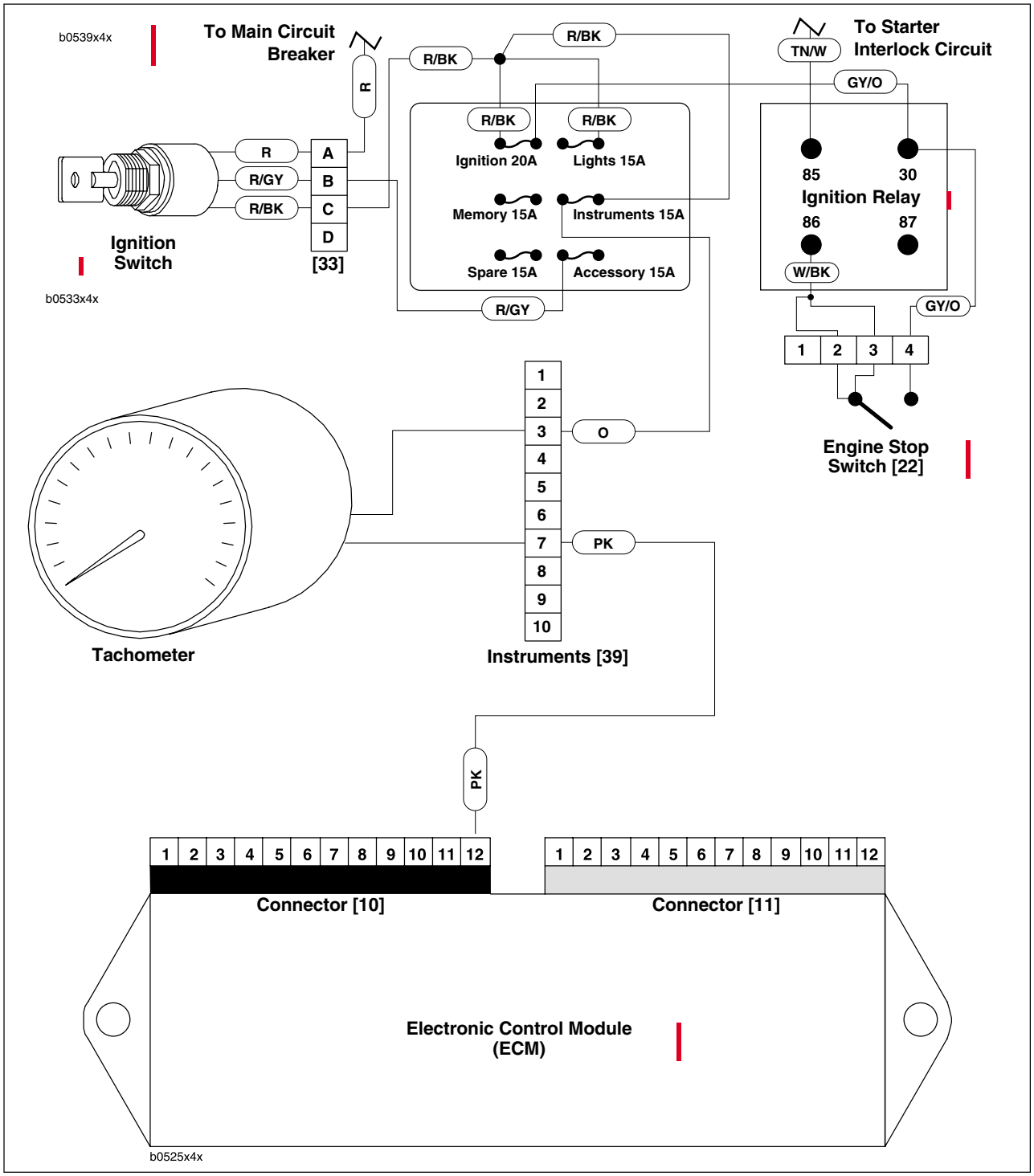
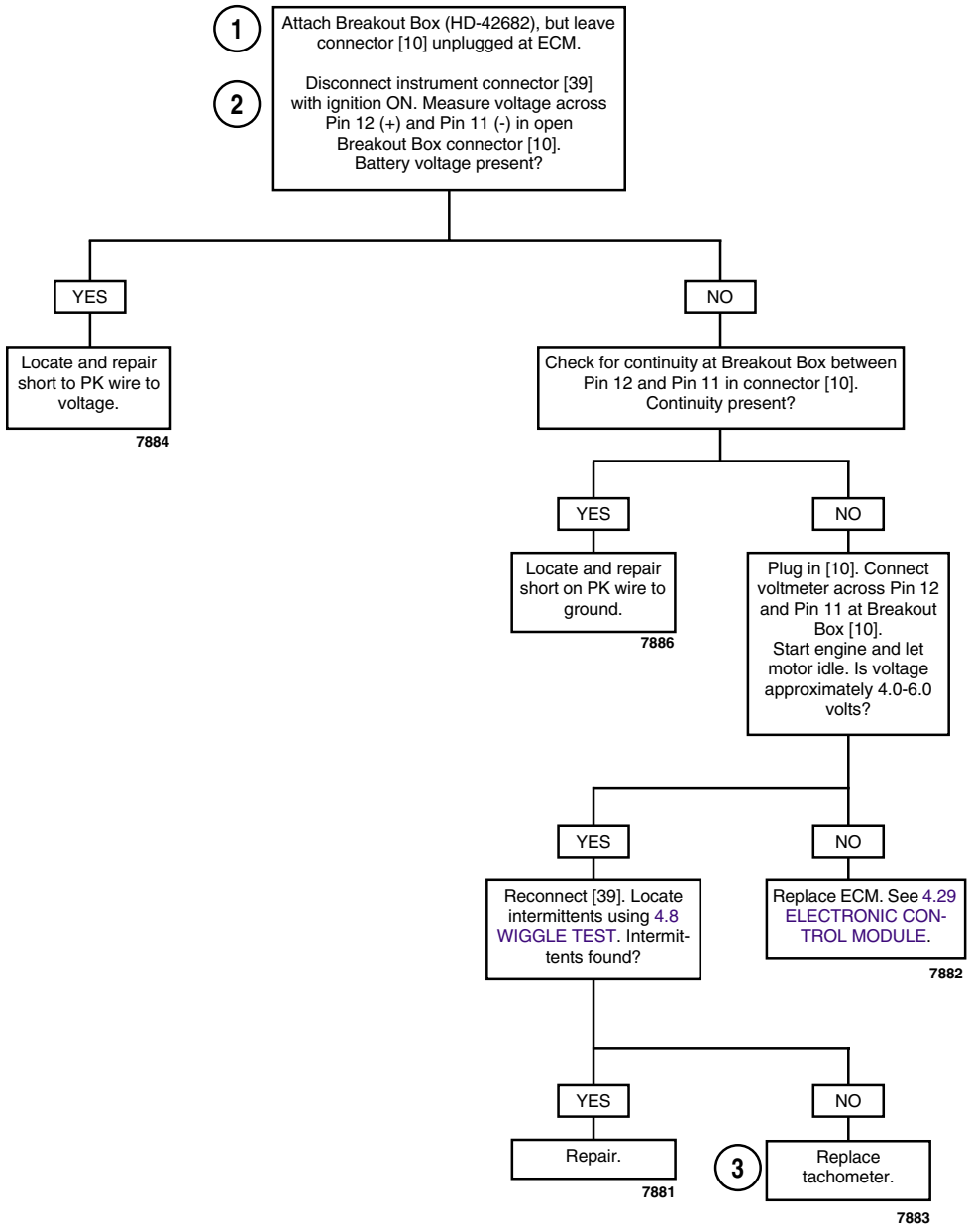


Figure 4-62. Tachometer Circuit

Table 4-24. Wire Harness Connectors in Figure 4-62.

NO.	DESCRIPTION	TYPE	LOCATION
[10]	ECM (black)	12-place Deutsch	under seat
[39]	Main harness to instruments	10-place Multilock	under fuel cell

Code 35 Test



Clear codes and confirm proper operation with no check engine lamp.

GENERAL

Bank Angle Sensor

See Figure 4-63. A Code 44 occurs when the bank angle sensor voltage is outside the normal operating range of 0.6-1.1 volts. This may be caused by:

- Short to ground in harness between sensor and electronic control module.
- Short to voltage in harness between sensor and electronic control module.
- Failed sensor.

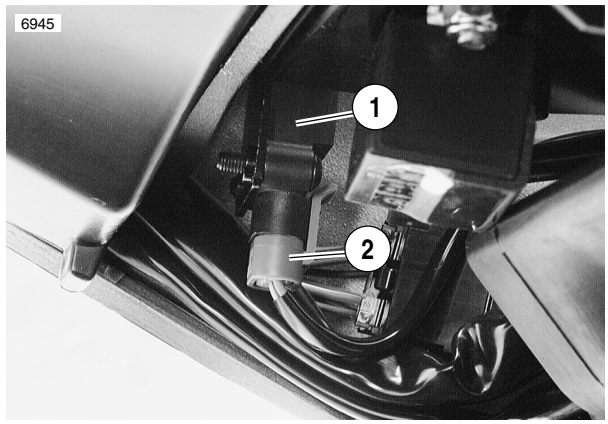
If this code occurs, the engine may stop running. The engine may still be restarted and ridden to the dealership for repair.

DIAGNOSTICS

Diagnostic Notes

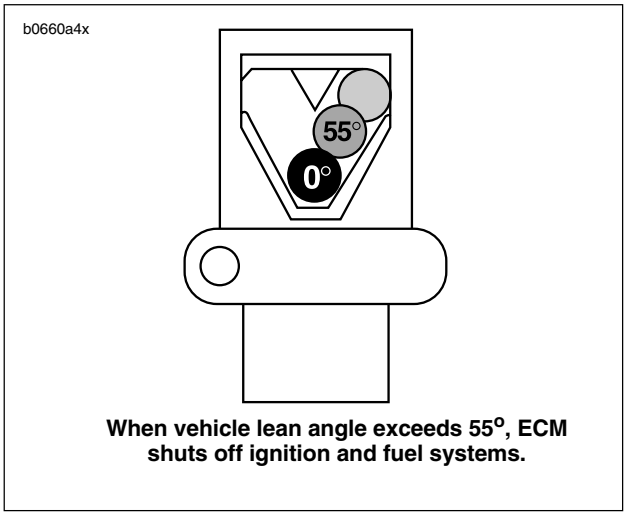
The reference numbers below correlate with the circled numbers on the Code 44 flow charts.

1. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), gray pin probes and patch cord.
2. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.



1. Bank Angle Sensor
2. Bank Angle Sensor Connector [134]

Figure 4-63. Bank Angle Sensor



When vehicle lean angle exceeds 55°, ECM shuts off ignition and fuel systems.

Figure 4-64. Bank Angle Sensor Operation

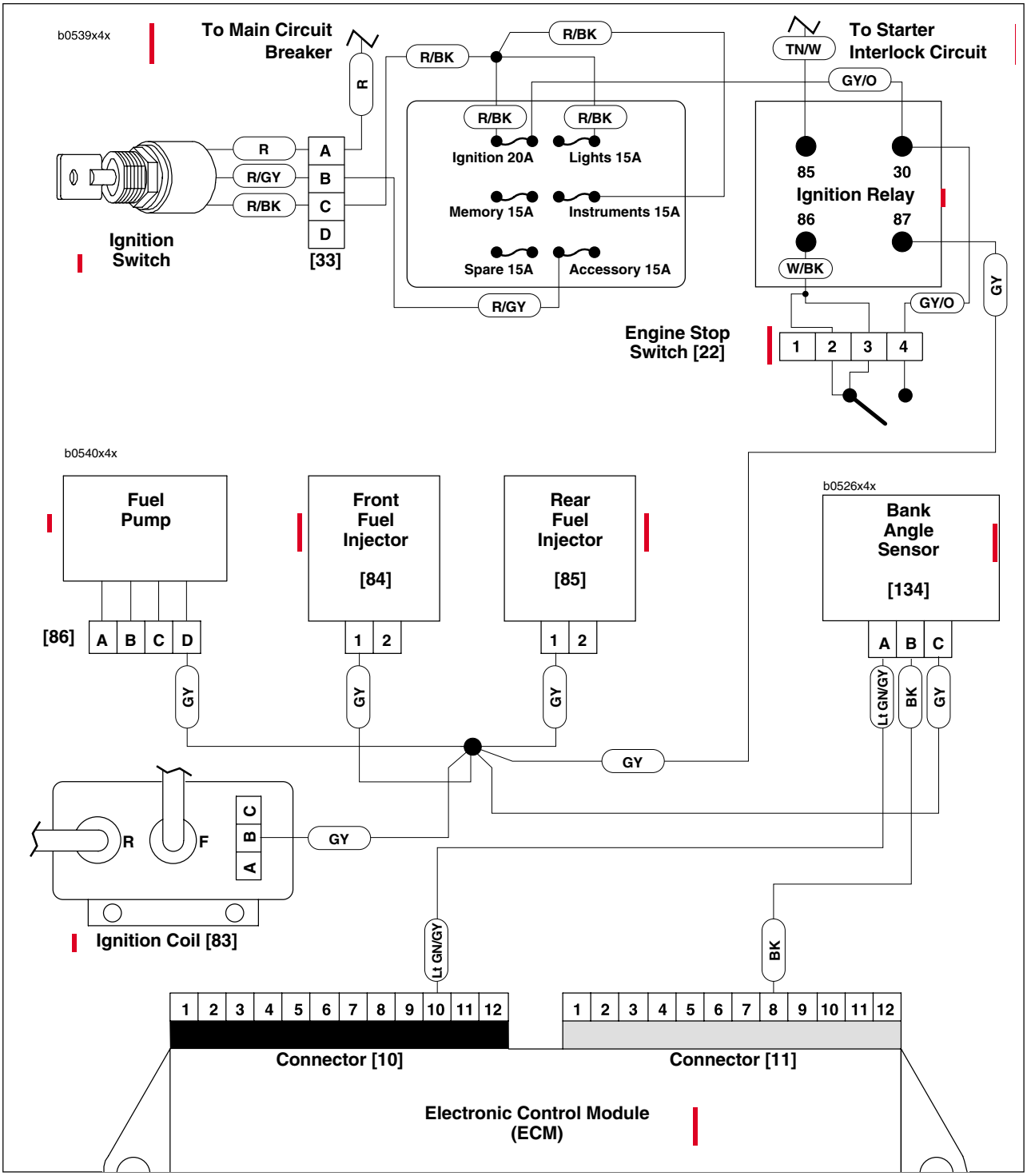
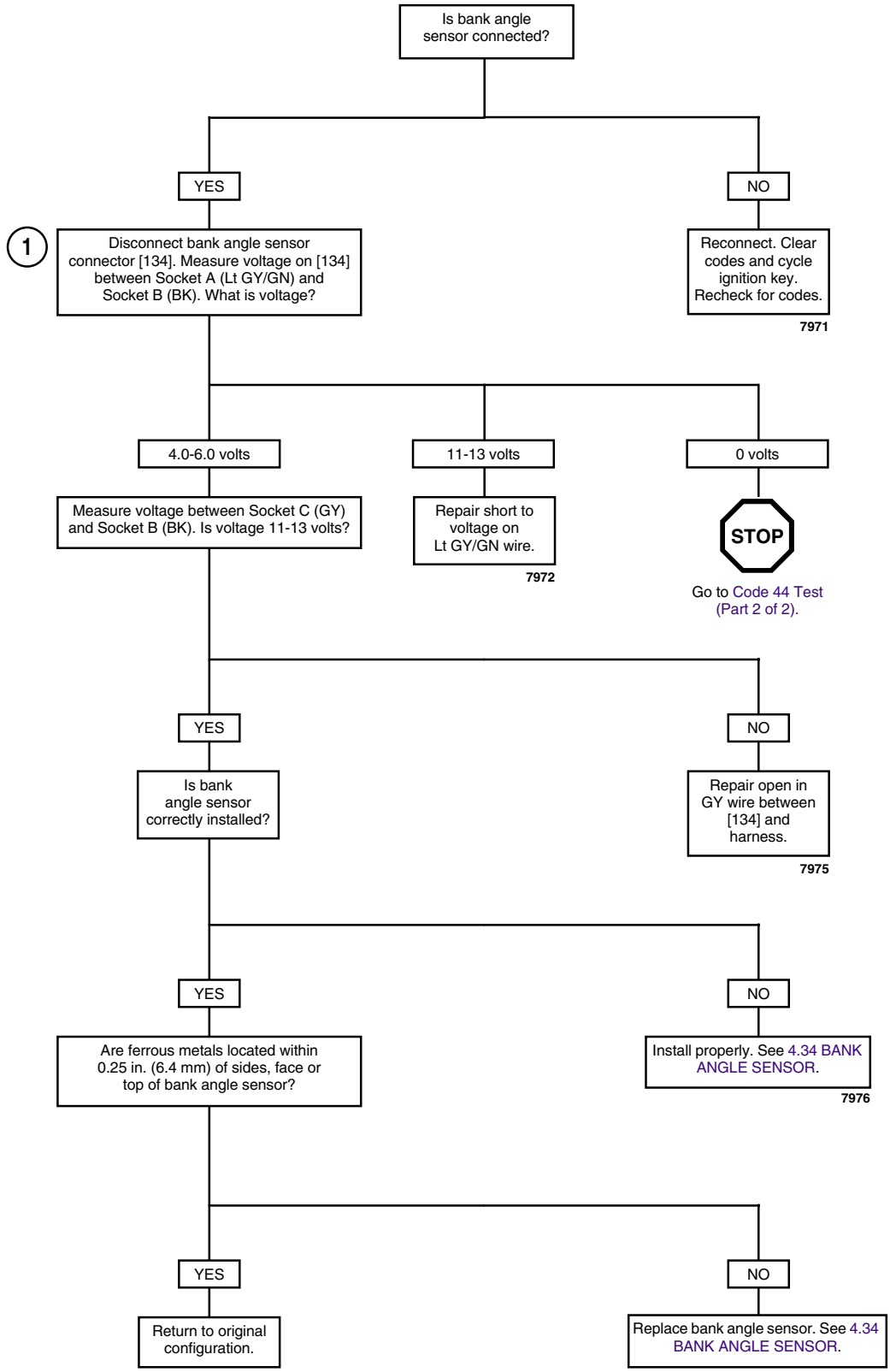


Figure 4-65. Bank Angle Sensor Circuit

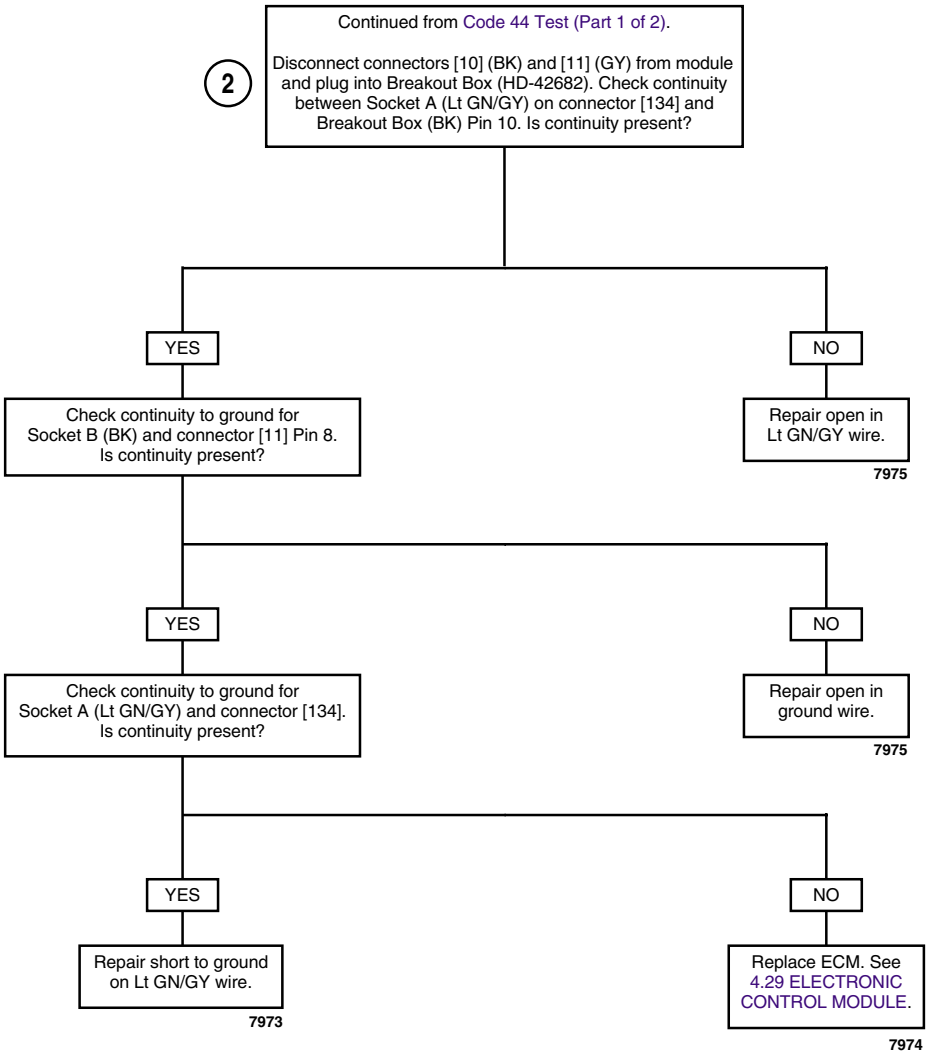
Table 4-25. Wire Harness Connectors in Figure 4-65.

NO.	DESCRIPTION	TYPE	LOCATION
[10]	ECM (black)	12-place Deutsch	under seat
[134]	Bank angle sensor	3-place Packard	under tail section, left side

Code 44 Test (Part 1 of 2)



Code 44 Test (Part 2 of 2)



Clear codes and confirm proper operation with no check engine lamp.

TROUBLE CODES 52, 53, 54 AND 55 4.27

GENERAL

ECM Failure

All of the following codes indicate a failure which requires replacement of the ECM. See 4.29 ELECTRONIC CONTROL MODULE.

- Code 52 - RAM failure.
- Code 53 - ROM failure.
- Code 54 - EE PROM failure.
- Code 55 - Microprocessor failure.

NOTE

*Dealership technicians filing warranty claims should use job/time code **7913** for all Code 52, 53, 54 and 55 ECM replacements.*

GENERAL

Cam Sync Failure

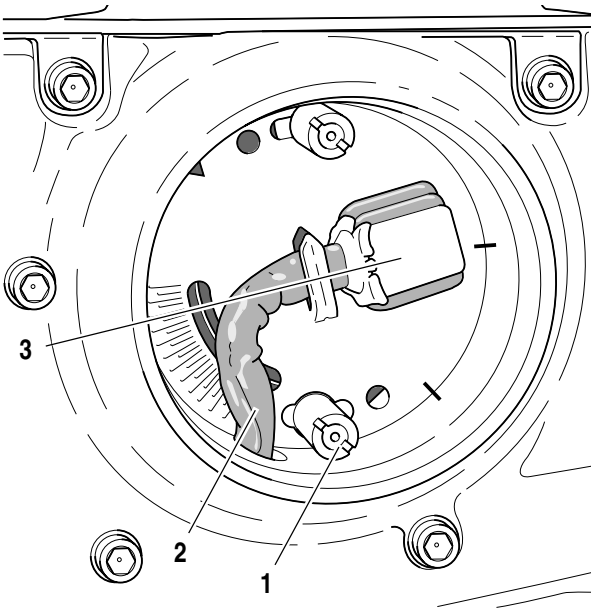
This code occurs only when the engine is running if the electronic control module either does not receive a signal from the cam position sensor or receives an unexpected signal. The motorcycle may continue to run, not run normally or stop running altogether.

DIAGNOSTICS

Diagnostic Notes

The reference numbers below correlate with the circled numbers on the Code 56 flow charts.

1. Connect BREAKOUT BOX (Part No. HD-42682) to ECM. See 4.7 BREAKOUT BOX.
2. Use HARNESS CONNECTOR TEST KIT (Part No. HD-41404), black pin probes and patch cord.
3. See 4.30 CAM POSITION SENSOR AND ROTOR.



1. **Timer Plate Stud (2)**
2. **Sensor Wiring**
3. **Cam Position Sensor**

Figure 4-66. Cam Position Sensor

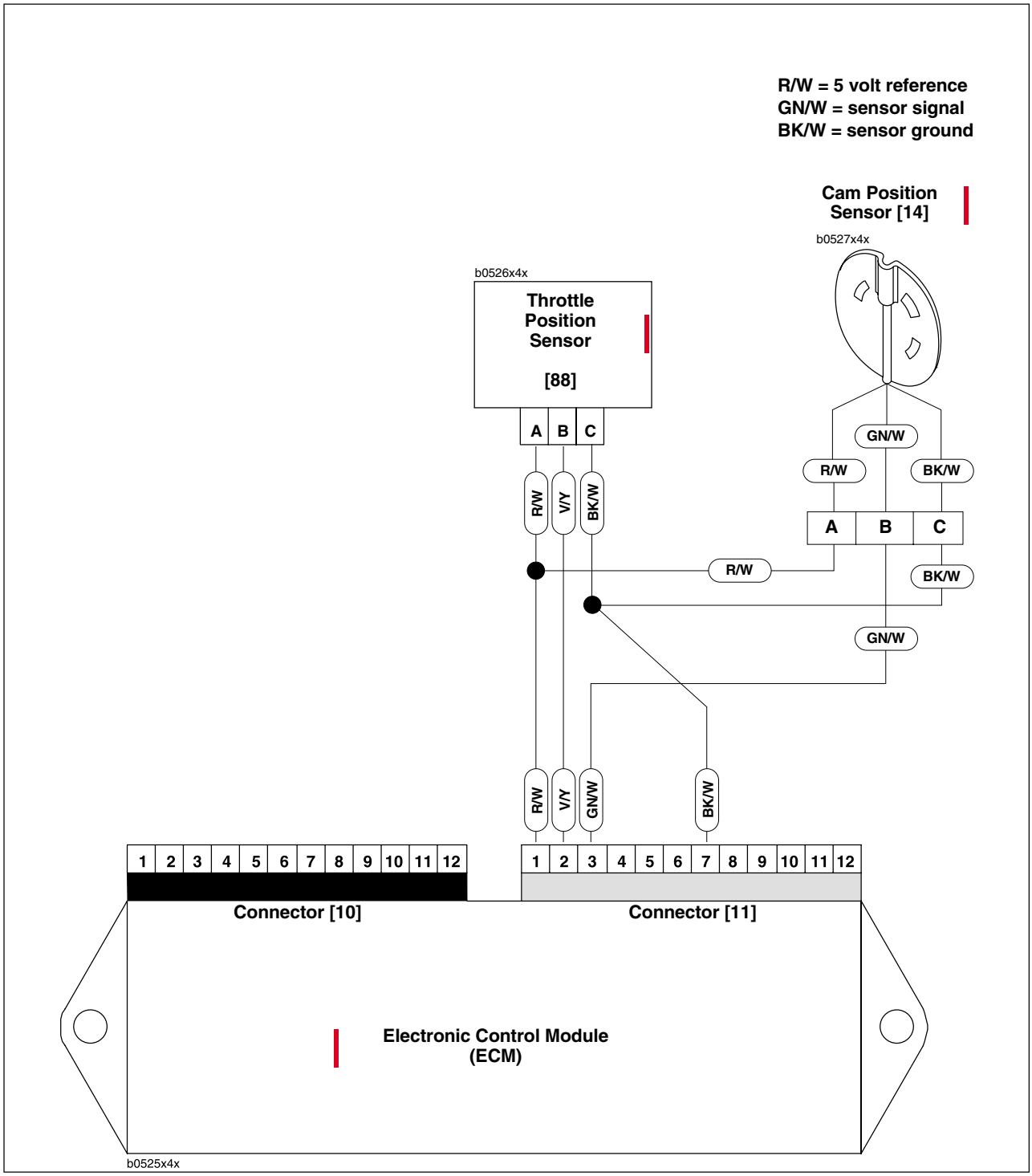
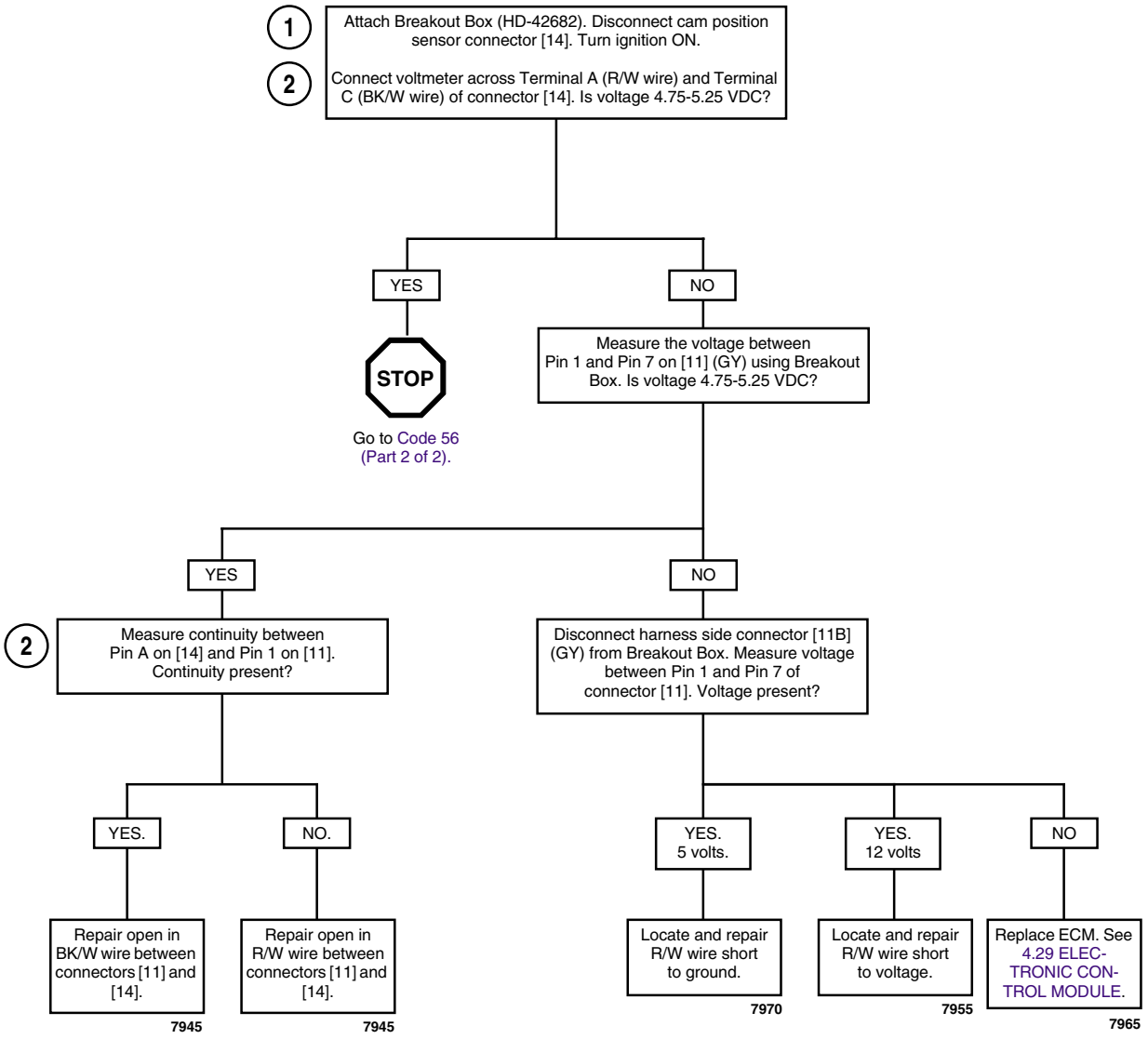


Figure 4-67. Cam Position Sensor Circuit

Table 4-26. Wire Harness Connectors in Figure 4-67.

NO.	DESCRIPTION	TYPE	LOCATION
[11]	ECM (gray)	12-place Deutsch	under seat
[14]	Cam position sensor	3-place Deutsch	near starter
[88]	TP sensor	3-place Packard	behind air cleaner backplate

Code 56 (Part 1 of 2)



Clear codes and confirm proper operation with no check engine lamp.

Code 56 (Part 2 of 2)