

2016 ACCESSORIES AND EQUIPMENT**Active Cruise Control (ACC) Module - Electrical Diagnostics - Chrysler 200****DIAGNOSTIC CODE INDEX****DIAGNOSTIC CODE INDEX**

DTC	Description
B222F-00	FLASH WRITE PERFORMANCE
C0063-9A	YAW RATE SENSOR - COMPONENT OR SYSTEM OPERATING CONDITIONS
C008E-00	ECU INTERNAL PERFORMANCE
C1240-00	STEERING ANGLE SENSOR ANGLE OVERTRAVEL PERFORMANCE
C127A-00	ESP DID NOT RESPOND TO DECELERATION REQUEST
C14A3-00	XBW RULE VIOLATION
C14A4-00	SENSOR ADJUSTMENT REQUIRED
C14A5-00	SENSOR BLINDED
C15D8-00	MISMATCH TIRE SIZE
C14A6-92	VEHICLE REACTION - PERFORMANCE OR INCORRECT OPERATION
C15DC-2A	FORWARD COLLISION WARNING CONTROL SWITCH-STUCK
C2129-16	BATTERY VOLTAGE - CIRCUIT VOLTAGE BELOW THRESHOLD
C2129-17	BATTERY VOLTAGE - CIRCUIT VOLTAGE ABOVE THRESHOLD
C212A-84	SYSTEM VOLTAGE - SIGNAL BELOW ALLOWABLE RANGE
C212A-85	SYSTEM VOLTAGE - SIGNAL ABOVE ALLOWABLE RANGE
C2206-00	VEHICLE CONFIGURATION MISMATCH
C2210-00	ECU OVERTEMPERATURE
C2212-00	ECU IN - PLANT MODE ACTIVE
C2225-00	PCM DISABLED ECU
C2226-00	TCM DISABLED ECU
C2227-00	ABS DISABLED ECU
C2318-76	FRONT CAMERA - WRONG MOUNTING POSITION
P0585-00	SPEED CONTROL SWITCH 1/2 CORRELATION
P1593-2A	SPEED CONTROL SWITCH 1/2 STUCK
P1666-00	CRUISE CONTROL MODULE INTERNAL
U0002-00	CAN C BUS OFF PERFORMANCE
U0100-00	LOST COMMUNICATION WITH ECM/PCM
U0101-00	LOST COMMUNICATION WITH TCM
U0102-00	LOST COMMUNICATION WITH TRANSFER CASE CONTROL MODULE / AWD
U0121-00	LOST COMMUNICATION WITH ANTI-LOCK BRAKE SYSTEM (ABS) CONTROL MODULE
U0128-00	LOST COMMUNICATION WITH PARK BRAKE CONTROL MODULE
U0131-00	LOST COMMUNICATION WITH ELECTRIC POWER STEERING CONTROL MODULE
U0140-00	LOST COMMUNICATION WITH BODY CONTROL MODULE
U0151-00	LOST COMMUNICATION WITH OCCUPANT RESTRAINT CONTROLLER (ORC)
U0155-00	LOST COMMUNICATION WITH CLUSTER-CCN
U0401-00	IMPLAUSIBLE DATA RECEIVED FROM ECM/PCM
U0402-00	IMPLAUSIBLE DATA RECEIVED FROM TCM
U0403-00	IMPLAUSIBLE DATA RECEIVED FROM T-CASE

INSTALLATION

INSTALLATION

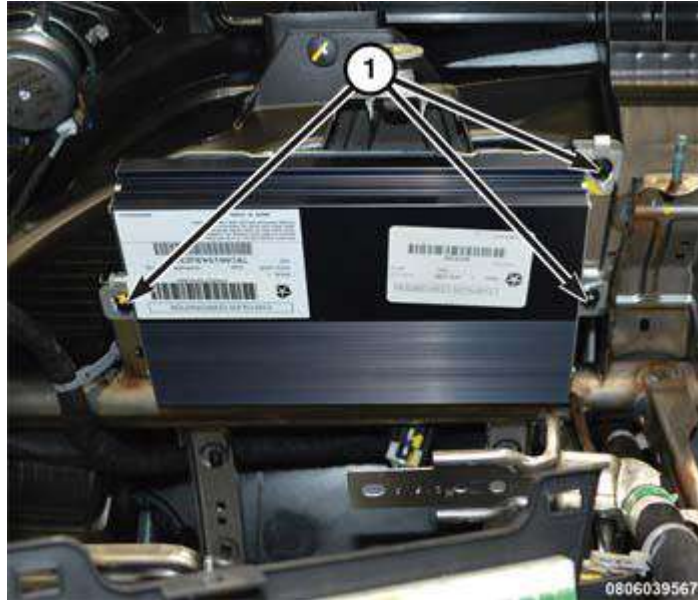


Fig. 4: Amplifier Mounting Fasteners
Courtesy of CHRYSLER GROUP, LLC

1. Position the amplifier to the mounting brackets.
2. Install and securely tighten the amplifier mounting fasteners (1).

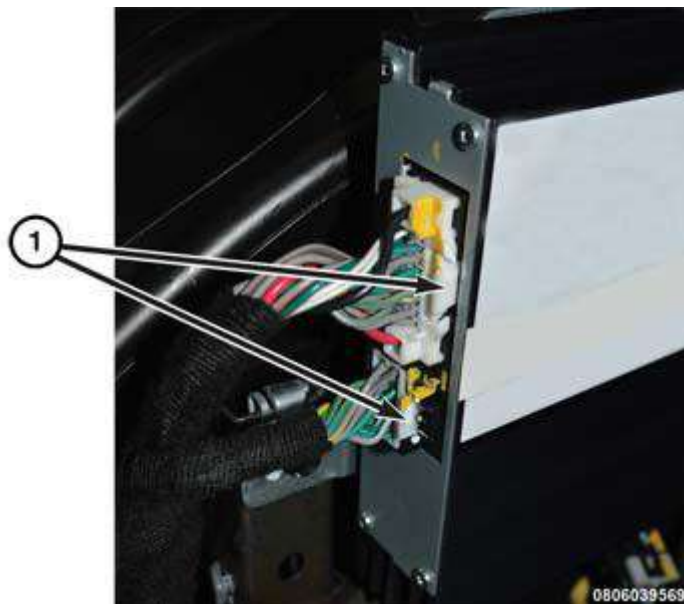


Fig. 5: Amplifier Wire Harness Connectors
Courtesy of CHRYSLER GROUP, LLC

3. Connect the wire harness connectors (1) to the amplifier.
4. Install the glove box. Refer to [GLOVE BOX, INSTRUMENT PANEL, INSTALLATION](#).
5. Connect the negative battery cable.

ANTENNA, SATELLITE, AUDIO

DESCRIPTION

DESCRIPTION

- Go To [3](#)

3. CHECK FOR LBSS DTCS

1. With the scan tool, read Left Blind Spot Sensor (LBSS) DTCs.

Are there any LBSS DTCs present?

Yes

- Refer to [DIAGNOSTIC CODE INDEX](#) and perform the appropriate diagnostic procedure.

No

- Go To [4](#)

4. CHECK OTHER MODULES FOR DTCS

1. With the scan tool, read DTCs.

Are there any other modules reporting implausible communication DTCs against the LBSS?

Yes

- Replace and program the Left Blind Spot Sensor (LBSS) in accordance with the Service Information. Refer to [SENSOR, BLIND SPOT, REMOVAL](#) .
- Perform the BODY VERIFICATION TEST. Refer to [BODY VERIFICATION TEST](#) .

No

- Using the schematics as a guide, check the IPC pins, terminals, and connectors for corrosion, damage, or terminal push out. Pay particular attention to all power and ground circuits. If no problems are found, replace the Instrument Cluster in accordance with the Service Information. Refer to [REMOVAL](#) .
- Perform the BODY VERIFICATION TEST. Refer to [BODY VERIFICATION TEST](#) .

5. CHECK THE WIRING AND CONNECTORS

1. The conditions necessary to set the DTC are not present at this time.
2. Using the schematics as a guide, inspect the wiring and connectors specific to this module. Wiggle the wiring and connectors while checking for shorted and open circuits.
3. Check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct pin tension.
4. Check Service Bulletins for any possible causes that may apply.

Were there any problems found?

Yes

- Repair as necessary.
- Perform the BODY VERIFICATION TEST. Refer to [BODY VERIFICATION TEST](#) .

No

- Test complete.

U1489-00-IMPLAUSIBLE DATA RECEIVED FROM RF HUB

For a complete wiring diagram, refer to appropriate **SYSTEM WIRING DIAGRAMS** article .

WHEN MONITORED

- Continuously with the ignition on.

5. With the scan tool, select "RFH", "Data" and scroll to "Passive Entry Function Carried Out".
6. Press the Lock button and observe "Passive lock at FRONT RIGHT door".
7. Grab the door handle and observe "Passive entry at FRONT RIGHT door".
8. Repeat steps 6 and 7 two more times.

Is the Module receiving the inputs on the screen as you do them?

Yes

- The condition or conditions that originally set this DTC are not present at this time. Using the wiring diagrams as a guide, check all related splices and connectors for signs of water intrusion, corrosion, pushed out or bent terminals, and correct pin tension and repair as necessary. If no problems are found, test complete.
- Perform the BODY VERIFICATION TEST. Refer to **BODY VERIFICATION TEST**.

No

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12. TEST FOR HANDLE OR CIRCUIT PROBLEM

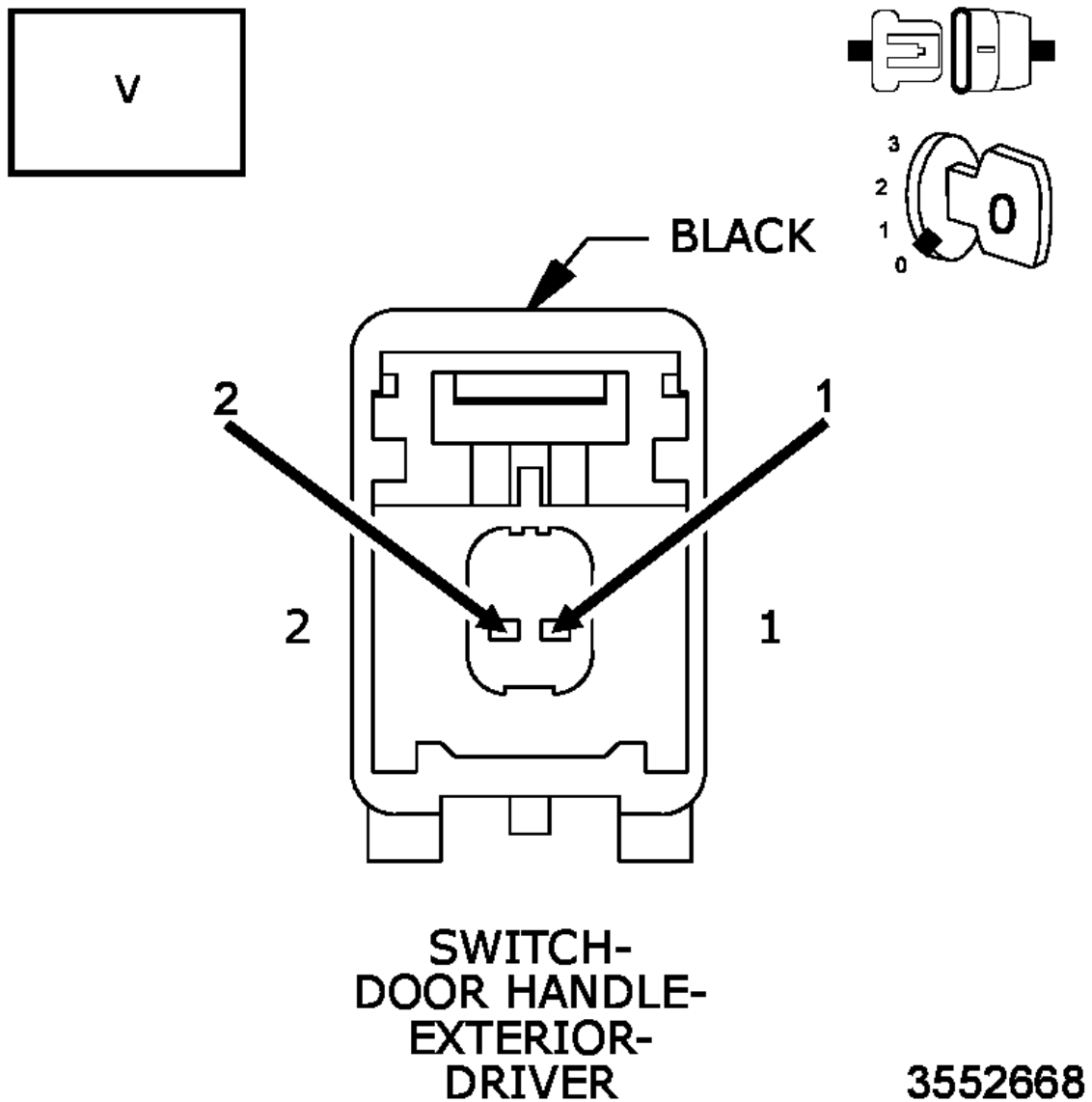


Fig. 35: Measuring Voltage Between Passenger Passive Handle Switch Return & Passenger Passive Handle Sense Circuits

Courtesy of CHRYSLER GROUP, LLC

1. While guiding the transmission past obstacles, jack (1) the transmission upward until the engine and the transmission are in line.
2. Push the bellhousing against the engine block until the guide pins engage.

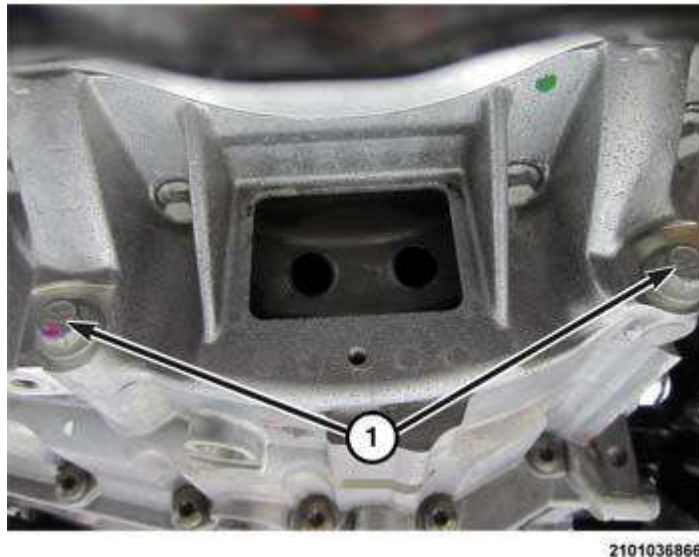


Fig. 211: Engine Block-To-Bellhousing Bolts
Courtesy of CHRYSLER GROUP, LLC

3. Install the bellhousing bolts (1) and tighten to the proper specification. Refer to **SPECIFICATIONS**.

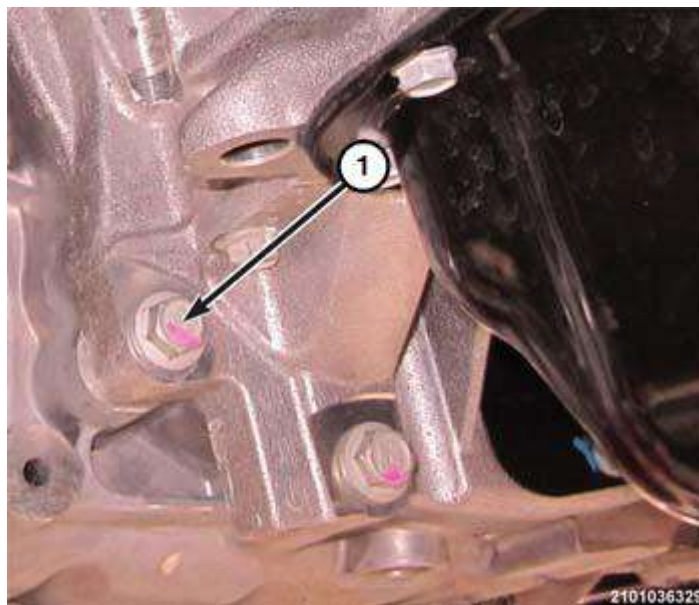


Fig. 212: Engine Block-To-Bellhousing Bolt Next To Differential Housing
Courtesy of CHRYSLER GROUP, LLC

4. Install the bellhousing bolt (1) near the differential and tighten to the proper specification. Refer to **SPECIFICATIONS**.

- Go To [5](#)

2. CHECK (T54) TRANSMISSION TEMPERATURE SIGNAL CIRCUIT OPERATION

1. Turn the ignition off.
2. Remove the Transmission Valve Body and disconnect the Transmission Temperature Sensor harness connector. Refer to [VALVE BODY, REMOVAL](#) .
3. Turn the ignition on.
4. Measure the voltage on the (T54) Transmission Temperature Signal circuit.

Is the voltage above 4.8 volts?

Yes

- Go To [4](#)

No

- Go To [3](#)

3. CHECK (T54) TRANSMISSION TEMPERATURE SENSOR CIRCUIT FOR A SHORT TO GROUND

1. Turn the ignition off.
2. Disconnect the TCM harness connector.
3. Check for continuity between ground and the (T54) Transmission Temperature Signal circuit at the TCM harness connector.

Is there continuity between ground and the (T54) Transmission Temperature Signal circuit?

Yes

- Repair (T54) Transmission Temperature Signal circuit for a short to ground.
- Perform the TRANSMISSION VERIFICATION TEST. Refer to [TRANSMISSION VERIFICATION TEST - 948RE 9HP48](#) .

No

NOTE: If this Electronic Control Unit (ECU) is being replaced with a new unit, a diagnostic scan tool **MUST** be used to align the PROXI configuration data into the new ECU. Follow the routine outlined in the diagnostic scan tool for PROXI Configuration Alignment under Body Control Module (BCM) Miscellaneous Functions menu.

- Using the schematics as a guide, check the Transmission Control Module (TCM) terminals and connectors for corrosion, damage or pushed out terminals. Pay particular attention to the power and ground circuits. If no problems are found, replace the TCM and perform programming and PROXI Configuration Alignment procedures. Refer to [MODULE, TRANSMISSION CONTROL, REMOVAL](#) .
- Perform TRANSMISSION VERIFICATION TEST. Refer to [TRANSMISSION VERIFICATION TEST - 948RE 9HP48](#) .

4. VERIFY TRANSMISSION TEMPERATURE SENSOR RESISTANCE / TEMPERATURE CORRELATION

1. Measure the resistance of the Transmission Temperature Sensor between the (T54) Transmission Temperature Signal terminal and the (T820) Sensor Ground terminal.

TYPICAL VALUES FOR TRANSMISSION TEMPERATURE SENSOR	
TEMPERATURE	APPROXIMATE RESISTANCE
-30 $\tilde{\text{A}}$, $\hat{\text{A}}$ $^{\circ}\text{C}$ (-22 $\tilde{\text{A}}$, $\hat{\text{A}}$ $^{\circ}\text{F}$)	44000 Ohms $\tilde{\text{A}}$, $\hat{\text{A}}$ \pm 6600
10 $\tilde{\text{A}}$, $\hat{\text{A}}$ $^{\circ}\text{C}$ (50 $\tilde{\text{A}}$, $\hat{\text{A}}$ $^{\circ}\text{F}$)	6455 Ohms $\tilde{\text{A}}$, $\hat{\text{A}}$ \pm 645
110 $\tilde{\text{A}}$, $\hat{\text{A}}$ $^{\circ}\text{C}$ (230 $\tilde{\text{A}}$, $\hat{\text{A}}$ $^{\circ}\text{F}$)	247 Ohms $\tilde{\text{A}}$, $\hat{\text{A}}$ \pm 16

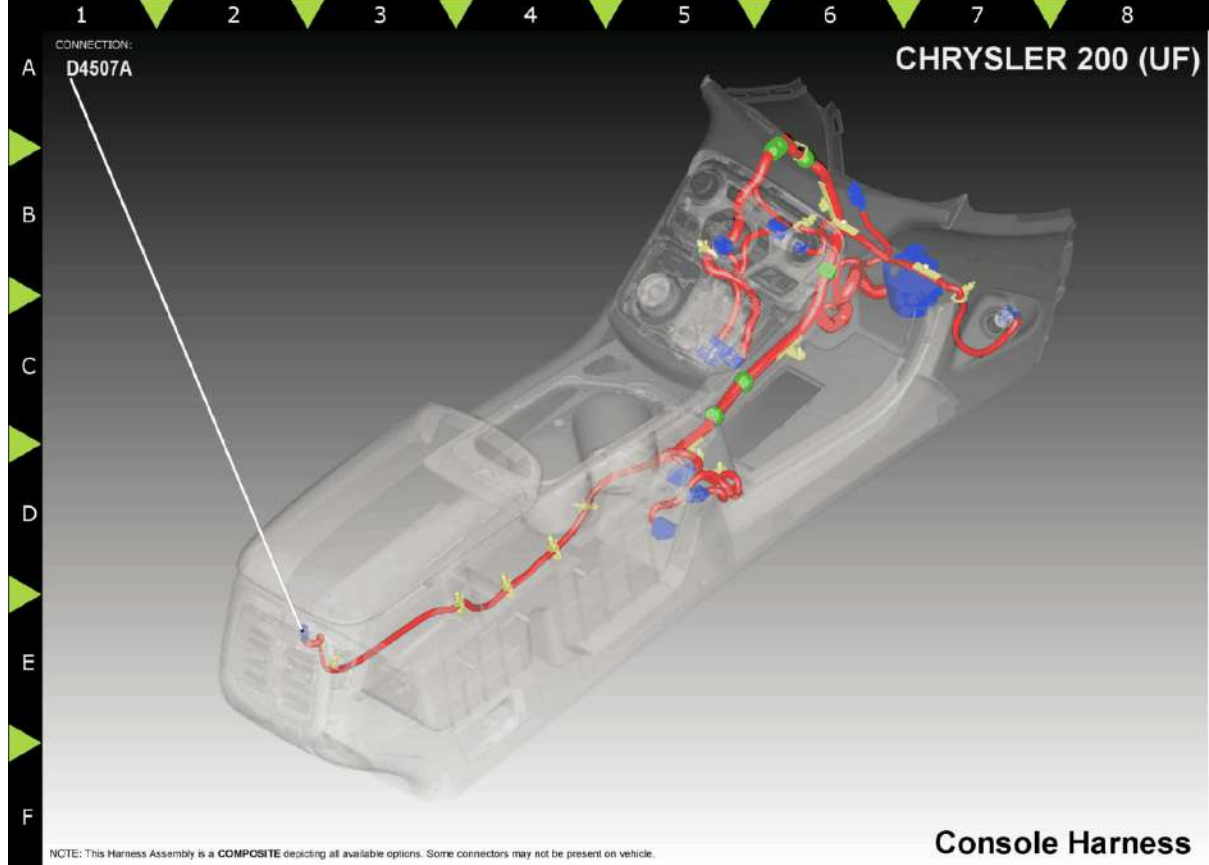


Fig. 399: Lamp-Console-Center Component Location
 Courtesy of CHRYSLER

Pin	Circuit	Wire Color	Gauge/Size	Function	Option
1	M59	YE/GN	.50	COURTESY LAMP FEED	N/A
2	Z912	BK	.50	GROUND	N/A

(1) Pins not listed are not used for this connector

LAMP-DOME-REAR (BASE)

Harness-Family: Headliner

Color: BLACK

Gender: FEMALE

Part Number: 12047781

Part Description: 3 WAY INSULATOR

Connector No: D4525A

Option: BASE

Repair Kit Part Number: 68057289AA

Cavity Count: 3



Fig. 81: Brake Rotor

Courtesy of CHRYSLER GROUP, LLC

6. Remove the brake rotor (1) from the hub and bearing.

REAR BRAKE ROTOR

NOTE: Before proceeding, refer to **CAUTION** and **WARNING**.

NOTE: Removal process is the same for both sides of the vehicle.

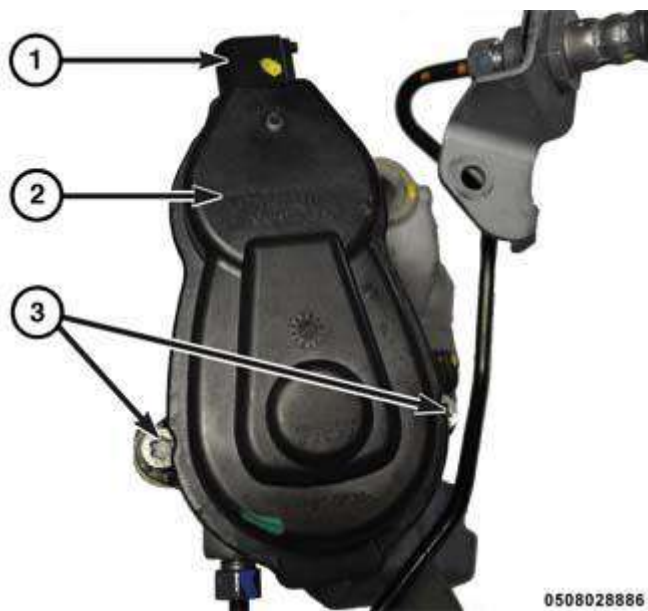


Fig. 82: Electric Park Brake Actuator (EPB) Connector, EPB & Fasteners

Courtesy of CHRYSLER GROUP, LLC

The electric park brake actuator (EPB) (2) must be retracted into Service Mode Position prior to removing the brake caliper assembly. This can be done in two ways:

- A diagnostic scan tool
- Through Uconnect or the cluster's EVIC display for vehicles without touchscreen radios (base radios).

CAUTION: If the electric park brake (EPB) switch is actuated with the caliper removed from the caliper bracket and still connected electrically, the EPB motor will fully extend causing damage to the caliper piston. Disconnect and isolate the negative battery cable before servicing any EPB component.

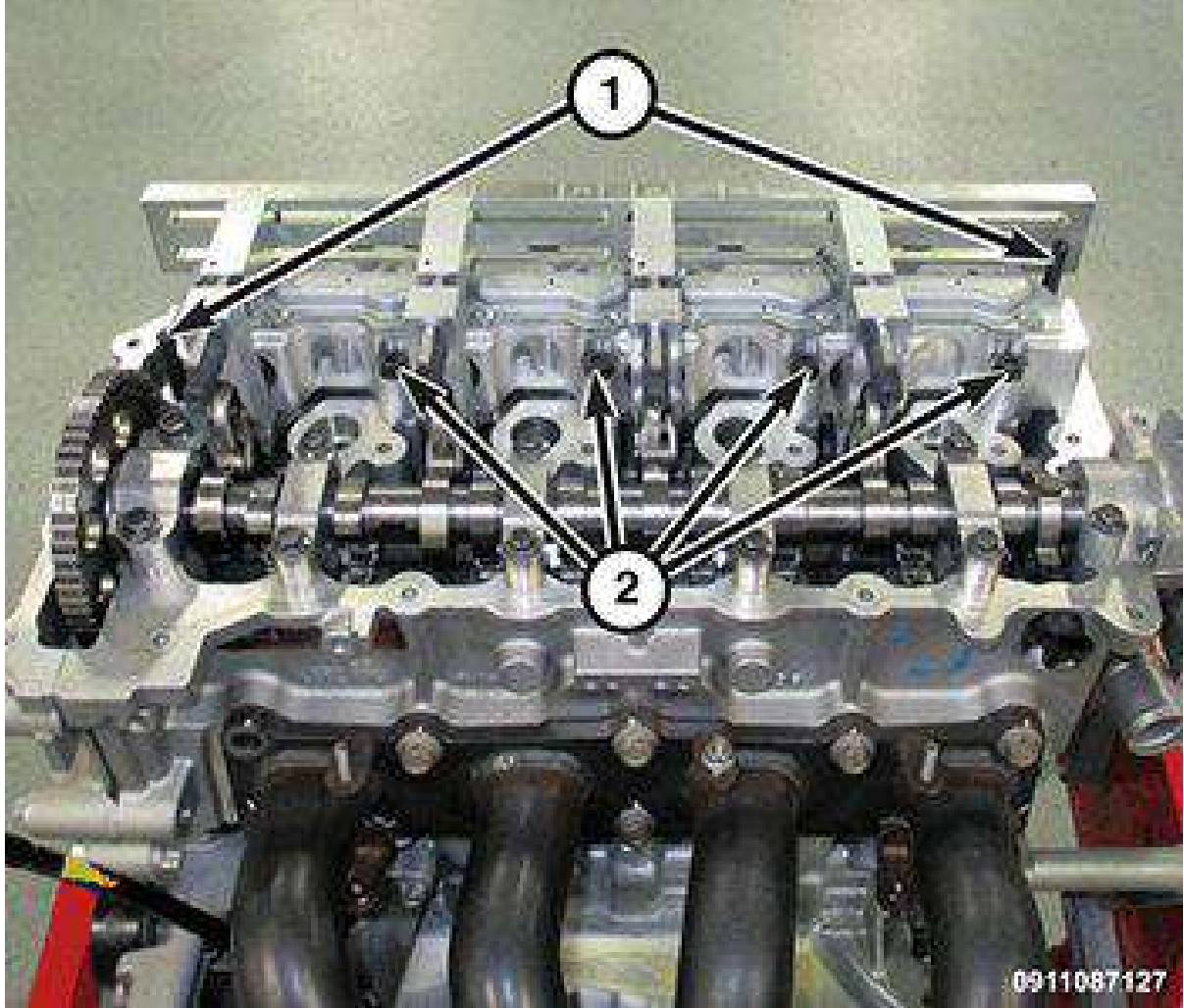


Fig. 166: Removing Bolts To Install Alignment Pins To Cylinder Head & Removing Variable Valve Actuation Assembly (VVAA)

Courtesy of CHRYSLER GROUP, LLC

9. Remove the two indicated bolts (1) and install the (special tool #2025300090, Alignment Pins, MultiAir to Cylinder Head) hand tight until seated on the cylinder head.
10. Remove the remaining four bolts (2) from the VVAA.
11. Remove the VVAA, with the 10259A/B MultiAir[®] Spring Compressor tool attached, from the cylinder head.

Is the DTC active or pending?

Yes

- Go To [2](#)

No

- Perform the INTERMITTENT CONDITION diagnostic Procedure. Refer to [INTERMITTENT CONDITION](#) .

2. CHECKING THE EXHAUST SYSTEM FOR LEAKS

1. Perform the CHECKING THE EXHAUST SYSTEM FOR LEAKS test procedure. Refer to [CHECKING THE EXHAUST SYSTEM FOR LEAKS](#) .

Were any exhaust leaks found?

Yes

- Repair or replace the leaking exhaust parts as necessary.
- Perform the POWERTRAIN VERIFICATION TEST. Refer to [POWERTRAIN VERIFICATION TEST](#) .

No

- Go To [3](#)

3. CHECK THE O2 SENSOR VOLTAGE READINGS

NOTE: This DTC will set due to poor engine performance as well as a faulty O2 Sensor. If the vehicle exhibits any fuel system or driveability issues, or has any other driveability DTCs present, repair those concerns before proceeding with this test.

NOTE: If the Powertrain Control Module detects an active open or short on any of the O2 Sensor 1/1 circuits, it will power down all of the O2 Sensor circuits to protect the O2 Sensor PCM internal ASIC from being damaged.

1. Back probe the O2 Sensor 1/1 connector, measure the voltages at the (K41) O2 Sensor Signal circuit and the (K902) O2 Sensor Return circuit at the Wide-band O2 Sensor connector.

NOTE: The (K902) O2 Sensor 1/1 Return circuit voltage should read approximately 3.8 volts and the (K41) O2 Sensor 1/1 Signal circuit should read between approximately 3.35 volts and 4.25 volts if operating normally with no opens or shorts.

Do the circuit voltages read as described?

Yes

- Perform the INTERMITTENT CONDITION diagnostic Procedure. Refer to [INTERMITTENT CONDITION](#) .

No

- Go To [4](#)

4. CHECK THE O2 SENSOR 1/1 CIRCUITS FOR A SHORT TO VOLTAGE

1. Turn the ignition off.
2. Disconnect the O2 Sensor 1/1 harness connector.
3. Turn the ignition on.

1. Using the wiring diagram schematic as a guide, inspect the wiring and connectors between the Throttle Body and the Powertrain Control Module (PCM).
2. Look for any chafed, pierced, pinched or partially broken wires.
3. Look for broken, bent, pushed out or corroded terminals. Verify that there is good pin to terminal contact in the Throttle Body and Powertrain Control Module connectors.
4. Perform any Service Bulletins that may apply.

Were there any problems found?

Yes

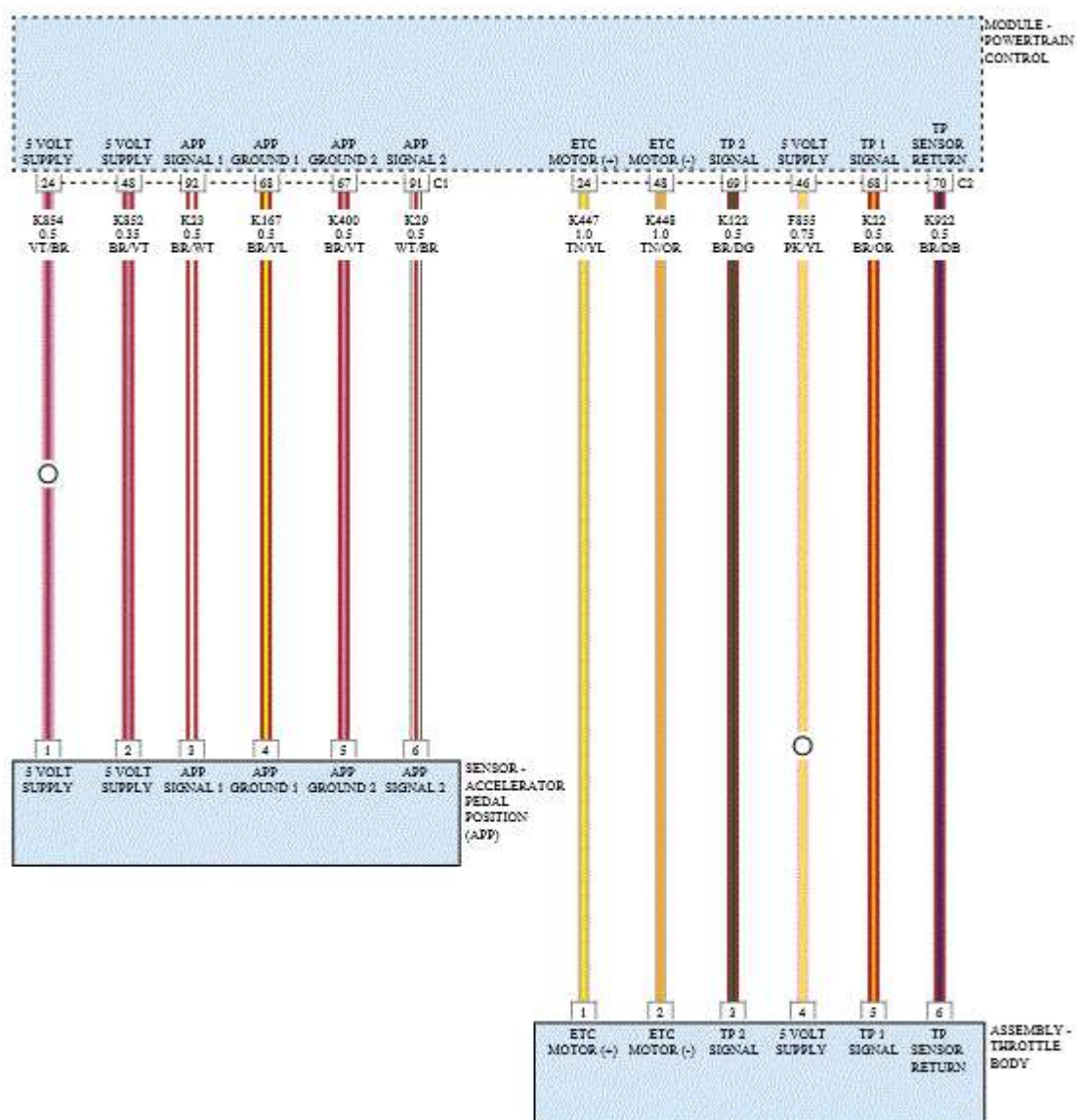
- Repair as necessary.
- Perform the POWERTRAIN VERIFICATION TEST. Refer to [POWERTRAIN VERIFICATION TEST](#).

No

- Replace and program the Powertrain Control Module in accordance with the Service Information. Refer to [MODULE, POWERTRAIN CONTROL, REMOVAL](#).
- Perform the POWERTRAIN VERIFICATION TEST. Refer to [POWERTRAIN VERIFICATION TEST](#).

P2101-ELECTRONIC THROTTLE CONTROL MOTOR PERFORMANCE - BANK 1

For a complete wiring diagram, refer to appropriate **SYSTEM WIRING DIAGRAMS** article.



Possible Causes

(F856) 5-VOLT SUPPLY CIRCUIT SHORTED TO VOLTAGE
(F856) 5-VOLT SUPPLY CIRCUIT OPEN
(F856) 5-VOLT SUPPLY CIRCUIT SHORTED TO GROUND
(K441) CMP SENSOR SIGNAL 1/2 CIRCUIT SHORTED TO VOLTAGE
(K441) CMP SENSOR SIGNAL 1/2 CIRCUIT OPEN
(K441) CMP SENSOR SIGNAL 1/2 CIRCUIT SHORTED GROUND
(K441) CMP SENSOR SIGNAL 1/2 CIRCUIT SHORTED TO THE (F856) 5-VOLT SUPPLY CIRCUIT
(K900) SENSOR GROUND CIRCUIT OPEN
CAMSHAFT POSITION SENSOR 1
CRANKSHAFT POSITION SENSOR
POWERTRAIN CONTROL MODULE (PCM)

Always perform the **PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE** before proceeding. Refer to **PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE** .

DIAGNOSTIC TEST

1. CHECK FOR AN ACTIVE DTC

- NOTE:** Diagnose and repair any 5-Volt Reference DTCs that are present before continuing with this test procedure.
- NOTE:** Diagnose and repair any Dual Stage Oil Pump or Oil Pressure related DTCs that are present before continuing with this test procedure.
- NOTE:** Diagnose & Repair any VVT related issues or faults before continuing with this test procedure. Anything that affects the engines VVT system may cause a CMP Sensor DTC to set. Verify that there are no engine mechanical issues that may be causing the fault to set such as but not limited to the timing chain, camshafts and sprockets, camshaft phasers, oil quality, level or oil pressure issues.

1. Turn the ignition on.
2. With the scan tool, read DTCs. Copy DTC and Freeze Frame information.
3. Start the engine and allow it to idle or crank the engine if it will not start. Attempt to operate vehicle under conditions similar to freeze frame data

WARNING: When the engine is operating, do not stand in direct line with the fan. Do not put your hands near the pulleys, belts or fan. Do not wear loose clothing. Failure to follow these instructions may result in possible serious or fatal injury.

4. With the scan tool, read the active DTCs.

Is the DTC active?

Yes

- Go To [2](#)

No

- Go To [11](#)

2. OTHER CAM SENSOR DTCS ACTIVE

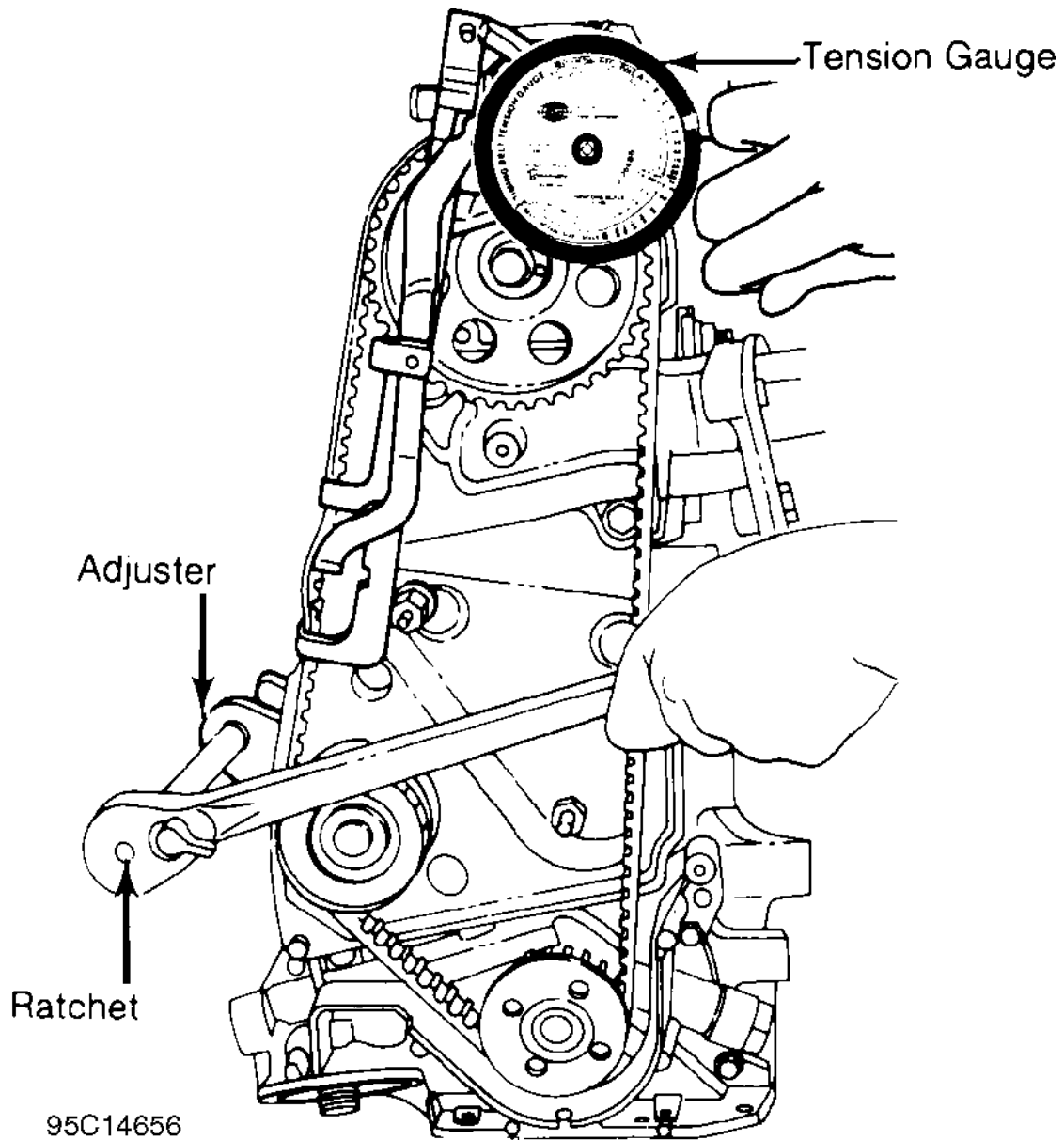


Fig. 26: Adjusting Typical Timing Belt Tension

TIMING GEARS

*** PLEASE READ THIS FIRST ***

NOTE: Examples used in this article are general in nature and do not necessarily relate to a specific engine or system. Illustrations and procedures have been chosen to guide mechanic through engine overhaul process. Descriptions of processes of cleaning, inspection, assembly and machine shop practice are included.

Always refer to appropriate engine overhaul article, if available, in the **ENGINES** section for complete overhaul procedures and specifications for the vehicle being repaired.

TIMING GEAR BACKLASH & RUNOUT

NOTE: Examples used in this article are general in nature and do not necessarily relate to a specific engine or system. Illustrations and procedures have been chosen to guide mechanic through engine overhaul process.

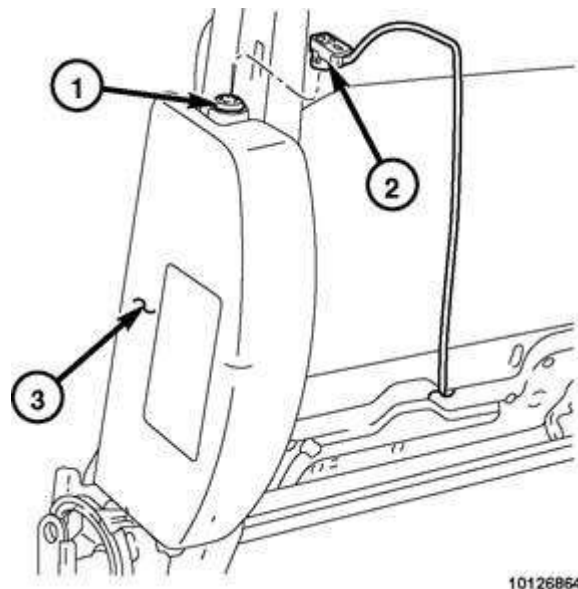
The ORC monitors the condition of the seat airbags through circuit resistance. If any fault is detected the ORC will illuminate the airbag indicator in the instrument cluster and store a Diagnostic Trouble Code (DTC). Proper diagnosis of the MGG SAB inflator and squib circuits requires the use of a diagnostic scan tool and may also require the use of the SRS Load Tool special tool along with the appropriate Load Tool Jumpers and Adapters. Refer to the appropriate diagnostic information.

REMOVAL

REMOVAL

WARNING: To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental Restraint System (SRS) before attempting any steering wheel, steering column, airbag, Occupant Classification System (OCS), seat belt tensioner, impact sensor or instrument panel component diagnosis or service. Disconnect and isolate the battery negative (ground) cable, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the SRS. Failure to follow these instructions may result in accidental airbag deployment.

WARNING: To avoid serious or fatal injury when removing a deployed airbag, rubber gloves, eye protection, and a long-sleeved shirt should be worn. There may be deposits on the airbag unit and other interior surfaces. In large doses, these deposits may cause irritation to the skin and eyes.



101268641

Fig. 33: Inflator Connector Receptacle, Jumper Wire Harness & Seat Airbag
Courtesy of CHRYSLER GROUP, LLC

NOTE: The following procedure is for replacement of an ineffective or damaged Seat AirBag (SAB). If the airbag is ineffective or damaged, but not deployed, review the recommended procedures for Handling Non-Deployed Supplemental Restraints. Refer to **STANDARD PROCEDURE**. If the SAB has been deployed, review the recommended procedures for Service After A Supplemental Restraint Deployment before removing the airbag from the vehicle. Refer to **STANDARD PROCEDURE**.

1. Position the front seat to its most forward position for easiest access to the front seat mounting hardware.
2. Disconnect and isolate the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the negative battery cable. Wait two minutes for the system capacitor to discharge before further service.
3. Remove the front seat from the vehicle. Refer to **SEAT, REMOVAL**.

CAUTION: During removal of the seat back trim cover, be certain not to tear or

Condition	Code	Procedure
Attaching hardware missing	C	Require replacement of hardware
Attaching hardware threads damaged	A	Require repair or replacement of hardware
Attaching hardware threads stripped (threads missing)	A	Require repair or replacement of hardware
Connector (Weatherpack type) leaking	A	Require repair or replacement
Connector broken	A	Require repair or replacement
Connector melted	A	Require repair or replacement
NOTE: Determine cause and correct prior to repair or replacement of part.		
Connector missing	C	Require replacement
Contaminated	A	Require repair or replacement
NOTE: Determine source of contamination, such as engine coolant, fuel, metal particles, or water. Require repair or replacement.		
Inoperative	A	Require repair or replacement. Further inspection required
NOTE: Inoperative includes intermittent operation. Some components may be serviceable; check for accepted cleaning procedure.		
Leaking	B	Require repair or replacement
Missing	C	Require replacement
Resistance out of specification	B	Require repair or replacement
Terminal broken	A	Require repair or replacement
Terminal burned, affecting performance	A	Require repair or replacement
NOTE: Determine cause and correct prior to repair or replacement of part.		
Terminal burned, not affecting performance	2	Suggest repair or replacement
Terminal corroded, affecting performance	A	Require repair or replacement
Terminal corroded, not affecting performance	2	Suggest repair or replacement
Terminal loose, affecting performance	B	Require repair or replacement
Terminal loose, not affecting performance	1	Suggest repair or replacement
Threads damaged	A	Require repair or replacement
Threads stripped (threads missing)	A	Require replacement
Wire lead conductors exposed	B	Require repair or replacement
Wire lead corroded	A	Require repair or replacement
Wire lead open	A	Require repair or replacement
Wire lead shorted	A	Require repair or replacement

PCV BREATHER ELEMENTS

Condition	Code	Procedure
At or beyond service interval	3	Suggest replacement to comply with vehicle's OEM recommended service intervals
Attaching hardware broken	A	Require repair or replacement of hardware
Attaching hardware missing	C	Require replacement of hardware