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1.0 INTRODUCTION

The procedures contained in this manual include all the specifications, instructions, and graphics needed to diagnose body system problems. The diagnostics in this manual are based on the failure condition or symptom being present at time of diagnosis.

Please follow the recommendations below when choosing your diagnostic path.

1. First make sure the DRBIII® is communicating with the appropriate modules; i.e., if the DRBIII® displays a "No Response" or "Bus +/- signal open" condition, you must diagnose that first.
2. Read DTC's (diagnostic trouble codes) with the DRBIII®.
3. If no DTC's are present, identify the customer complaint.
4. Once the DTC or customer complaint is identified, locate the matching test in the Table of Contents and begin to diagnose the symptom.

All component location views are in Section 8.0. All connector pinouts are in Section 9.0. All schematics are in Section 10.0.

An * placed before the symptom description indicates a customer complaint.

When repairs are required, refer to the appropriate service manual for the proper removal and repair procedure.

Diagnostic procedures change every year. New diagnostic systems may be added; carryover systems may be enhanced. READ THIS MANUAL BEFORE TRYING TO DIAGNOSE A VEHICLE DIAGNOSTIC TROUBLE CODE. It is recommended that you review the entire manual to become familiar with all new and changed diagnostic procedures.

This book reflects many suggested changes from readers of past issues. After using this book, if you have any comments or suggestions, please fill out the form in the back of this book and mail it back to us.

1.1 SYSTEM COVERAGE

This diagnostic procedures manual covers all 2005 PT27 and PT44 CRUISER VEHICLES.

1.2 SIX-STEP TROUBLESHOOTING PROCEDURE

Diagnosis of the body system is done in six basic steps:

- verification of complaint
- verification of any related symptoms
- symptom analysis
- problem isolation
- repair of isolated problem
- verification of proper operation

2.0 IDENTIFICATION OF SYSTEM

The vehicle systems that are part of the "body" system are:

- Airbag
- Audio
- Communication
- Instrument Cluster
- Power Convertible Top
- Power Door Lock/RKE
- Power Windows (PT27)
- Telecommunications - Hands Free Phone
- Vehicle theft security system (VTSS)

3.0 SYSTEM DESCRIPTION AND FUNCTIONAL OPERATION

The body system on the PT consists of a combination of modules that communicate over the PCI bus (Programmable Communication Interface multiplex system). Through the PCI bus, information about the operation of vehicle components and circuits is relayed quickly to the appropriate module(s). All modules receive all the information transmitted on the bus even though a module may not require all information to perform it's function. It will only respond to messages "addressed" to it through a binary coding process. This method of data transmission significantly reduces the complexity of the wiring in the vehicle and the size of wiring harnesses. All of the information about the functioning of all the systems is organized, controlled, and communicated by the PCI bus, which is described in the Vehicle Communication Section of this general information.

3.1 AIRBAG SYSTEM

The Airbag system is equipped with two types of Occupant Restraint Controller or ORC, base and premium. The ORC is a specific type of Airbag Control Module or ACM. The term Airbag Control Module or ACM will be used throughout the airbag diagnostic book and the Diagnostic Readout Box or DRB III®. The DRB III® is a scan tool use to interrogate the ACM to retrieve Diagnostic Trouble Codes or DTC′s and other system information.

The ACM is secured to a bracket on the floor panel transmission tunnel between the floor shifter

and parking brake. The ACM contains a microprocessor, impact sensor, and energy storage capacitors. The microprocessor contains the airbag system logic. The airbag system logic includes On-Board Diagnostics OBD capability, and communicates with the instrument cluster circuitry on the Programmable Communication Interface (PCI) data bus to control the airbag warning indicator. The microprocessor in the ACM monitors the internal and external circuits to determine the system readiness. If the ACM detects a monitored system fault, it sends messages to the Mechanical Instrument Cluster (MIC) over the PCI data bus to turn on the Airbag Warning Indicator and provides the electrical signal to deploy the airbag system components. The impact sensor is an accelerometer that senses the rate of vehicle deceleration, which provides verification of the direction and severity of an impact. The impact sensor is calibrated for the specific vehicle, and is only serviced as a unit with the ACM. The ACM also contains an energy-storage capacitor. This capacitor stores enough electrical energy to deploy the airbags if the initial impact has damaged or disconnected the battery, but not severe enough to deploy the airbags. The ACM cannot be repaired or adjusted and, if damaged or faulty, it must be replaced.

The Base ACM can be identified by the present of a single yellow 23 - way connector. This module supports the Driver and Passenger Seat Belt Tensioners and dual squib airbags.

The Premium ACM can be identified by the present of a two yellow 32 - way connectors and the presents of seat airbag. In addition to the base system components and DTC's the premium ACM supports the Side Impact Sensors, Side Seat Airbags to provide verification of the direction and severity of an impact from the front and both sides. In addition to the base ACM DTCs the premium ACM provides DTC's for the additional circuit and component.

WARNING: THE AIRBAG SYSTEM IS A SENSITIVE, COMPLEX ELECTROMECHANICAL UNIT. BEFORE ATTEMPTING TO DIAGNOSE OR SERVICE ANY AIRBAG SYSTEM OR RELATED STEERING WHEEL, STEERING COLUMN, OR INSTRUMENT PANEL COMPONENTS YOU MUST FIRST DISCONNECT AND ISOLATE THE BATTERY NEGATIVE (GROUND) CABLE. WAIT TWO MINUTES FOR THE SYSTEM CAPACITOR TO DISCHARGE BEFORE FURTHER SYSTEM SERVICE. THIS IS THE ONLY SURE WAY TO DISABLE THE AIRBAG SYSTEM. FAILURE TO DO THIS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND POSSIBLE PERSONAL INJURY. NEVER STRIKE OR KICK THE AIRBAG CONTROL MODULE, AS IT CAN DAMAGE THE IMPACT SENSOR OR AFFECT ITS CALIBRATION. IF AN OCCUPANT RESTRAINT CONTROLLER IS ACCIDENTALLY DROPPED DURING SERVICE, THE MODULE MUST BE SCRAPPED AND REPLACED WITH A NEW UNIT. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.

The Airbag Warning Indicator is the only point at which the customer can observe "symptoms" of a system malfunction. Whenever the ignition key is turned to the "run" or "start" position, the ACM performs a lamp check by turning the AIRBAG warning lamp on for 6 to 8 seconds. If the lamp remains off, it means that the ORC has checked the system and found it to be free of discernible malfunctions. If the indicator remains on, there could be an active fault in the ACM system.

3.1.1 DRIVER AIRBAG MODULE (DAB)

The airbag protective trim cover is the most visible part of the driver side airbag system. The module is mounted directly to the steering wheel. Located under the trim cover are the horn switch, the airbag cushion, and the airbag cushion supporting components. The airbag module includes a housing to which the cushion and inflator are attached and sealed. The airbag module cannot be repaired, and must be replaced if deployed or in any way damaged. The inflator assembly is mounted to the back of the airbag module. The inflator seals the hole in the airbag cushion so it can discharge the gas it produces directly into the cushion when supplied with the proper electrical signal. The protective trim cover is fitted to the front of the airbag module and forms a decorative cover in the center of the steering wheel. Upon airbag deployment, this cover will split at a predetermined breakout line.

WARNING: TO AVOID PERSONAL INJURY OR DEATH, THE AIRBAG MODULE INFLATOR ASSEMBLY CONTAINS SODIUM AZIDE AND POTASSIUM NITRATE. THESE MATERIALS ARE POISONOUS AND EXTREMELY FLAMMABLE. CONTACT WITH ACID, WATER, OR HEAVY METALS MAY PRODUCE HARMFUL AND IRRITATING GASES (SODIUM HYDROXIDE IS FORMED IN THE PRESENCE OF MOISTURE) OR COMBUSTIBLE COMPOUNDS. DO NOT PUNCTURE, INCINERATE, OR BRING INTO CONTACT WITH ELECTRICITY. DO NOT STORE AT TEMPERATURE EXCEEDING 93°C (200°F).

3.1.2 CLOCKSPRING

The clockspring is mounted on the steering column behind the steering wheel. This assembly consists of a plastic housing which contains a flat, ribbon-like, electrically conductive tape that winds and unwinds with the steering wheel rotation. The clockspring is used to maintain a continuous electrical circuit between the instrument panel wire harness and the driver side airbag module, the horn switch, and the vehicle speed control switches on vehicles that are so equipped. The clockspring must be properly centered when it is installed on the steering column following any service removal, or it will be damaged. The clockspring cannot be repaired, it must be replaced.

3.1.3 PASSENGER AIRBAG MODULE (PAB)

The airbag door in the instrument panel top cover above the glove box is the most visible part of the passenger side airbag system. Located under the airbag door is the airbag cushion and it's supporting components. The airbag module includes a housing to which the cushion and inflator are attached and sealed. The airbag module cannot be repaired, and must be replaced if deployed or in any way damaged. The inflator assembly is mounted to the back of the airbag module. The inflator includes a small canister of highly compressed argon gas. The inflator seals the hole in the airbag cushion so it can discharge the compressed gas it contains directly into the cushion when supplied with the proper electrical signal. The airbag door has a living hinge at the top, which is secured to the instrument panel top cover. The door also has predetermined breakout lines concealed beneath its decorative cover. Upon airbag deployment, the airbag door will split at the breakout lines and the door will pivot out of the way.

WARNING: THE PASSENGER AIRBAG MODULE CONTAINS ARGON GAS PRESSURIZED TO OVER 2500 PSI. DO NOT ATTEMPT TO DISMANTLE AN AIRBAG MODULE OR TAMPER WITH ITS INFLATOR. DO NOT PUNCTURE, INCINERATE, OR BRING INTO CONTACT WITH ELECTRICITY. DO NOT STORE AT TEMPERATURE EXCEEDING 93°C (200°F). REPLACE AIRBAG SYSTEM COMPONENTS ONLY WITH PARTS SPECIFIED IN THE CHRYSLER MOPAR PARTS CATALOG. SUBSTITUTE PARTS MAY APPEAR INTERCHANGEABLE, BUT INTERNAL DIFFERENCES MAY RESULT IN INFERIOR OCCUPANT PROTECTION. THE FASTENERS, SCREWS, AND BOLTS ORIGINALLY USED FOR THE AIRBAG SYSTEM COMPONENTS HAVE SPECIAL COATINGS AND ARE SPECIFICALLY DESIGNED FOR THE AIRBAG SYSTEM. THEY MUST NEVER BE REPLACED WITH ANY SUBSTITUTES. ANY TIME A NEW FASTENER IS NEEDED, REPLACE IT WITH THE CORRECT FASTENERS PROVIDED IN THE SERVICE PACKAGE OR SPECIFIED IN THE CHRYSLER MOPAR PARTS CATALOG. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.

3.1.4 IMPACT SENSORS

The impact sensors are electronic accelerometers that sense the rate of vehicle deceleration and when combined with the ACM Accelerometer provides verification of the direction and severity of a side impact. Each sensor also contains an electronic communication chip that allows the unit to communicate the sensor status as well as sensor fault information to the microprocessor in the Airbag Control Module. The ACM microprocessor continuously monitors all of the passive restraint system electrical circuits to determine the system readiness. If the ACM detects a system fault, it sets a Diagnostic Trouble Code and controls the airbag warning indicator operation accordingly. The impact sensors receive battery current and ground through dedicated driver and passenger sensor signal and ground circuits from the ACM. The impact sensors and the ACM communicate by modulating the current in the sensor signal circuit. If the sensor is dropped it must be replaced. Disconnect the battery or remove both airbag fuses before servicing impact sensors.

CAUTION: Do not remove or install the impact sensors while the sensor is attached to the vehicle wiring.

3.1.5 SEAT AIRBAGS

The Left and Right seat airbags are located in the outboard end of the front seat backs. The airbag module contains a bag, an inflator (a small canister of highly compressed argon gas) and a mounting bracket. The seat airbag module cannot be repaired and must be replaced if deployed or in any way damaged. When supplied with the proper electrical signal the inflator seals the hole in the airbag cushion so it can discharge the compressed gas it contains directly into the cushion. Upon deployment, the seat back trim cover will tear open and allow the seat airbag to fully deploy between the seat and the door.

NOTE: It will be necessary to remove the seat back trim to gain access to the seat airbag module connector when diagnosing the seat airbag system.

WARNING: THE CURTAIN AIRBAG CONTAINS AN INERT GAS PRESSURIZED TO 17236.89 Kpa (2500 PSI). DO NOT ATTEMPT TO DISMANTLE AN AIRBAG MODULE OR TAMPER WITH ITS INFLATOR. DO NOT PUNCTURE, INCINERATE, OR BRING INTO CONTACT WITH ELECTRICITY. DO NOT STORE AT TEMPERATURE EXCEEDING 93°C (200°F). REPLACE AIRBAG SYSTEM COMPONENTS ONLY WITH PARTS SPECIFIED IN THE CHRYSLER MOPAR PARTS CATALOG. SUBSTITUTE PARTS MAY APPEAR INTERCHANGEABLE, BUT INTERNAL DIFFERENCES MAY RESULT IN INFERIOR OCCUPANT PROTECTION. THE FASTENERS, SCREWS, AND BOLTS ORIGINALLY USED FOR THE AIRBAG SYSTEM COMPONENTS HAVE SPECIAL COATINGS AND ARE SPECIFICALLY DESIGNED FOR THE AIRBAG SYSTEM. THEY MUST NEVER BE REPLACED WITH ANY SUBSTITUTES. ANY TIME A NEW FASTENER IS NEEDED, REPLACE IT WITH THE CORRECT FASTENERS PROVIDED IN THE SERVICE PACKAGE OR SPECIFIED IN THE MOPAR PARTS CATALOG. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.

3.1.6 SEAT BELT TENSIONER

Front seat belt systems incorporate Tensioner Modules. At the onset of an impact event each tensioner uses a pyrotechnic device, which is triggered simultaneously with the airbags, to rapidly retract the seat belts. With the slack removed, the occupant's forward motion in an impact will be reduced as will the likelihood of contacting interior components. After an impact that deploys the airbag, the seat belt tensioner assembly must be replaced. The ACM module monitors the Seat Belt Tensioners circuit resistance and reports active and stored DTC's if any problem is found. When servicing the seat belt tensioners, follow all of the safety procedures in the service information.

3.1.7 SPECIAL TOOLS

Some airbag diagnostic tests use special tools, 8310 and 8443 airbag load tools, for testing squib circuits. The load tools contain fixed resistive loads, jumpers and adapters. The fixed loads are connected to cables and mounted in a storage case. The cables can be directly connected to some airbag system connectors. Jumpers are used to convert the load tool cable connectors to the other airbag system connectors. The adapters are connected to the module harness connector to open shorting clips and protect the connector terminal during testing. When using the load tool follow all of the safety procedures in the service information for disconnecting airbag system components. Inspect the wiring, connector and terminals for damage or misalignment. Substitute the airbag load tool in place of a Driver or Passenger Airbag, seat airbag, clockspring, or seat belt tensioner (use a load tool jumper if needed). Then follow all of the safety procedures in the service information for connecting airbag system components. Read the module active DTC's. If the module reports NO ACTIVE DTC's the defective components have removed from the system and should be replaced. If the DTC is still active, continue this process until all components in the circuit have been tested. Then disconnect the module connector and connect the matching adapter to the module connector. With all airbags disconnected and the adapter installed the squib wiring can be tested for open and shorted conditions.

3.1.8 DIAGNOSTIC TROUBLE CODES

Airbag diagnostic trouble codes consist of active and stored codes. If more than one code exists, diagnostic priority should be given to the active codes. Each diagnostic trouble code is diagnosed by following a specific testing procedure. The diagnostic test procedures contain step-by-step instructions for determining the cause of the trouble codes. It is not necessary to perform all of the tests in this book to diagnose an individual code. Active diagnostic trouble codes for the airbag system are not permanent and will change the moment the reason for the code is corrected. In certain test procedures within this manual, diagnostic trouble codes are used as a diagnostic tool.

3.1.8.1 ACTIVE CODES

The code becomes active as soon as the malfunction is detected or key-off, whichever occurs first. An active trouble code indicates an on-going malfunction or has occurred in that ignition cycle. This means that the malfunction is currently there every time the control module checks that circuit/function. It is impossible to erase an active code; active codes automatically erase by themselves when the reason for the code has been corrected or not present in the subsequent ignition cycle. With the exception of the warning lamp trouble codes or malfunctions, when a malfunction is detected, the airbag lamp remains lit for a minimum of 12 seconds or as long as the malfunction is present.

3.1.8.2 STORED CODES

Airbag codes are automatically stored in the ACM's memory as soon as the malfunction is detected. A "stored" code indicates there was an active code present at some time. However, the code currently may not be present as an active code. When a trouble code occurs, the airbag warning lamp illuminates for 12 seconds minimum (even if the problem existed for less than 12 seconds). The code is stored, along with the time in minutes it was active, and the number of times the ignition has been cycled since the problem was last detected. The minimum time shown for any code will be one minute, even if the code was actually present for less than one minute. Thus, the time shown for a code that was present for two minutes 13 seconds, for example, would be three minutes. If a malfunction is detected a diagnostic trouble code is stored and will remain stored as long as the malfunction exists. When and if the malfunction ceases to exist, an ignition cycle count will be initiated for that code. If the ignition cycle count reaches 100 without a reoccurrence of the same malfunction, the diagnostic trouble code is erased and that ignition cycle counter is reset to zero. If the malfunction reoccurs before the count reaches 100, then the ignition cycle counter will be reset and the diagnostic trouble code will continue to be a stored code.

If a malfunction is not active while performing a diagnostic test, the active code diagnostic test will not locate the source or the condition. In this case, the stored code can indicate an area to inspect. The following procedure may uncover a malfunction that is difficult to locate:

WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING INSPECTION:

If no obvious problems are found:

- Erase the stored codes
- Place the ignition in the Run position
- Wiggle the wire harness and connectors
- Rotate the steering wheel from stop to stop

3.2 AUDIO SYSTEM

The audio system on the PT consists of a radio that communicates over the PCI Bus. Each radio system comes equipped with a standard premium 6 speaker system. The speakers are located in the instrument panel, the front doors and the rear "D" pillars. The instrument panel speakers are a tweeter type speaker for high frequency. The front door speakers are a woofer/midrange type speaker. The rear "D" pillar speakers are a full range type speaker. If one of the speaker circuits experiences a short, the other speakers on that channel will also shut down until the circuit is repaired. The radio will also set a trouble code, which the DRBIII® can display.

3.2.1 NAVIGATION RADIO

The optional navigation radio system receives GPS signals from up to eight satellites to display the position and direction of the vehicle. Map information is supplied through a DVD-ROM. An electronic gyrosensor and the vehicle's speed sensor enable the system to display the present vehicle position even in locations where GPS signals may be blocked.

When a destination is selected, the navigation system uses information from the map to quickly calculate a route. As the vehicle is driven along the chosen route, the operator is guided with pictorial displays and voice prompts. For complete operating instructions, refer to the manual included with the vehicle.

3.2.2 SATELLITE RADIO (SDARS)

To use the satellite radio, the radio must be in satellite mode. The satellite antenna must have an unobstructed view of the satellite. The vehicle must be outside to receive proper reception. Poor reception may be experienced in large down town areas where tall buildings are present. The satellite network is still under development, and this could be the cause of poor reception in certain areas. Use a known good system to verify network performance in these areas.

Once in satellite mode, the radio head is used to change stations. The Radio must be in Satellite mode to communicate to the Satellite Receiver Module with the DRBIII®. The Radio head communicates to the Satellite Receiver Module via the PCI bus and the private Audio bus. The Audio bus functions just like the PCI bus, but its use is restricted to the Radio and the Satellite Receiver Module.

The Satellite Receiver Module processes signals it receives from the satellite antenna. That information is then sent to the Radio where it is processed and sent out to the speakers. The Satellite Receiver Module has the ability to detect and store fault code information, which may be retrieved with the DRBIII®. Refer to the service manual for additional information on the SDAR system and its related components.

3.3 COMPASS/TEMPERATURE MODULE (CTM)

DESCRIPTION

The overhead console houses the Compass/ Temperature Module display and two reading and courtesy lamps. This display provides the outside temperature and one of eight compass readings to indicate the direction the vehicle is facing. The ambient temperature sensor (ATS) monitors outside temperature and is hardwired to the Compass/ Temperature Module.

There is a STEP button for the compass/ temperature display located forward of the power sunroof switch (if equipped), between the lamps.

OPERATION

The STEP button is used to toggle the compass/ temperature display to select either F°, C°, or OFF. When the vehicle is first turned ON, you may select:

- Blank display
- Compass/Temperature displayed in Fahrenheit (F°)
- Compass/Temperature displayed in Celsius (C°)

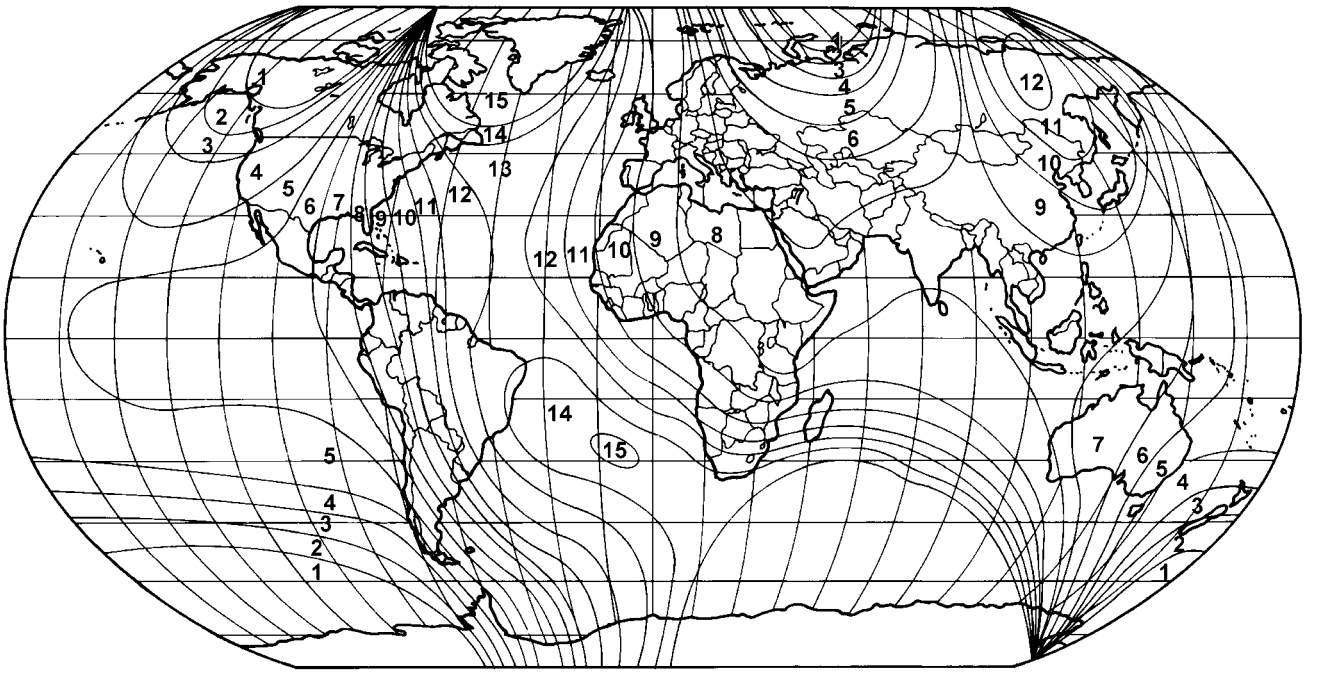
Depress and release the STEP button to cycle through the above display modes.

3.3.1 SETTING MAGNETIC ZONE VARIANCE

Variance is the difference between magnetic North and geographic North. For proper compass function, the correct variance zone must be set. Refer to the Zone Variance map for the correct zone.

Follow these steps to check or change the variance zone:

- The ignition switch must be in the ON position and the Compass/Temperature Module display must not be blank.
- Depress and hold the STEP button for 5 - 10 seconds until ZONE appears in the display, then release the STEP button. The number displayed is the variance zone currently stored in the compass memory.
- To change the zone, depress the STEP button to scroll through the zone numbers 1 through 15, until the desired zone is displayed.
- After selecting the zone, wait approximately 15 seconds until the display returns to normal.



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3.3.2 COMPASS CALIBRATION

NOTE: Upon installation of a new overhead console, with the ignition ON, "CAL" will be illuminated in the display but the compass will not calibrate for 30 ignition cycles or 15 starts, OR until manually calibrated. For this reason, manual calibration of the compass is recommended after any replacement or appearance of the compass/temp display being "locked-up."

MANUAL CALIBRATION

After any replacement or the appearance of a "locked-up" condition, you must calibrate the compass. Follow these instructions in order to ensure correct compass calibration:

- Drive the vehicle to an area away from any large metal objects or overhead power lines.
- Ensure that the proper variance zone is selected. See "Setting Magnetic Zone Variance."
- With the engine running, depress and hold the STEP button for 10 - 15 seconds.
- ZONE will appear in display, then CAL.
- Release the STEP button within 2 seconds of CAL illuminating.
- CAL is displayed.
- Drive slowly, less than 5 MPH (8 KPH) in 3 complete 360 degree circles.
- CAL will stay illuminated to alert the driver that the Compass/Temperature Module is in the calibration mode.
- After calibration, the CAL will turn off.

AUTO CALIBRATION MODE

During normal vehicle operation, the Compass/ Temperature Module will continuously update the compass calibration to compensate for changes in the vehicle's magnetic field. If the Compass/ Temperature Module appears to be "locked- up" or the compass displays false indications, the vehicle may need to be demagnetized. Refer to Demagnetizing Procedure in the Service Manual.

3.3.3 OUTSIDE TEMPERATURE

NOTE: Engine temperature or the vehicle experiencing a "hot soak" condition can increase the temperature near the ambient temperature sensor. The displayed temperature may appear to update slowly until the vehicle is driven and the compass performs directional updates.

The displayed outside temperature information is stored within the compass/temp module. When the Compass/Temperature Module is first powered up, it retrieves the temperature data from the module memory. The memory temperature is compared with the temperature received from the ambient temperature sensor (ATS). The colder of the two temperatures is displayed.

TEMPERATURE UPDATE - WARM

On power up, when the outside temperature sensed by the ATS is warmer than the temperature stored in the module memory, the Compass/ Temperature Module will update the displayed tem-

perature to the outside air temperature within 30 seconds after it has detected that the vehicle has been moving for 2 minutes.

TEMPERATURE UPDATE - COLD

On power up, when the outside air temperature sensed by the ATS is colder than the stored memory temperature, the Compass/Temperature Module will update the displayed temperature to the outside temperature at a rate of -1°F every 2 seconds, regardless if the vehicle is moving or not.

EXTREME TEMPERATURE / OPEN OR SHORT CIRCUIT CONDITION

If the measured outside temperature is more than 60°C (140°F) or the ATS sense circuit is shorted to ground, the temp display will be 60°C (140°F) to indicate a short circuit condition.

If the measured outside temperature is less than -45°C (-49°F) or the ATS sense circuit is open, the temp display will be -45°C (-49°F) to indicate an open circuit condition.

3.3.4 AMBIENT TEMPERATURE SENSOR

DESCRIPTION

The ambient air temperature is monitored and displayed by the Compass/Temp Module. The Compass/Temperature Module receives a hardwire input from the ambient temperature sensor (ATS). The ATS is mounted on the center support brace in front of the A/C condenser, behind the front grille.

The ATS cannot be adjusted or repaired and, if faulty or damaged, it must be replaced.

OPERATION

The ATS is a variable resistor that operates on a 5-volt reference signal circuit hardwired from the Compass/Temperature Module. The resistance in the ATS changes as the outside temperature rises or falls. The Compass/Temperature Module senses the change in reference voltage through the ATS resistor. Based on the resistance of the ATS, the Compass/Temperature Module is programmed to correspond to a specific temperature. The Compass/Temperature Module then displays the proper ambient temperature.

3.3.5 DIAGNOSIS AND TESTING

SELF-CHECK DIAGNOSTICS

1. With the ignition switch in the OFF position, depress and hold the STEP button.
2. Turn the ignition switch to the ON position and release the STEP button.
3. All of the VFD segments will illuminate for 2-4 seconds. Check for segments that do not illuminate or illuminate all the time.
4. The self-check is complete when an F (FAIL), or a P (PASS) is displayed. If an F is displayed, the overhead console must be replaced. The Compass/Temperature Module will not display an F for a VF segment that does not illuminate.
5. To exit the self-check mode, depress the STEP button or cycle the ignition switch and the Compass/Temperature Module will return to normal operation.

AMBIENT TEMPERATURE SENSOR

The outside temperature function is supported by the ambient temperature sensor (ATS), a signal and ground circuit hardwired to the compass/temp module, and the display.

If the display indicates 60°C (140°F) or the ATS sense circuit is shorted to ground, the temp display will be 60°C (140°F) to indicate a SHORT circuit condition.

If the display indicates -45°C (-49°F) or the ATS sense circuit is open, the temp display will be -45°C (-49°F) to indicate an OPEN circuit condition.

If there is an OPEN or SHORT circuit condition, it must be repaired before the VF display can be tested.

The ATS can be diagnosed using the following Sensor Test. Test the ATS circuits using the diagnostics in the Body Diagnostic Procedures Manual. If the ATS and the circuits are confirmed to be OK, but the temperature display is inoperative or incorrect, replace the Compass/Temperature Module.

AMBIENT TEMPERATURE SENSOR TEST

1. Turn the ignition OFF.
2. Disconnect and isolate the battery negative cable (Fig. 3).
3. Disconnect the ATS harness connector.
4. Measure the resistance of the ATS using the following min/max values:
   - 0° C (32° F)
     Sensor Resistance = 29.33 - 35.99 Kilohms
   - 10° C (50° F)
     Sensor Resistance = 17.99 - 21.81 Kilohms
   - 20° C (68° F)
     Sensor Resistance = 11.37 - 13.61 Kilohms
   - 25° C (77° F)
     Sensor Resistance = 9.12 - 10.86 Kilohms
   - 30° C (86° F)
     Sensor Resistance = 7.37 - 8.75 Kilohms
   - 40° C (104° F)
     Sensor Resistance = 4.90 - 5.75 Kilohms

The sensor resistance should read between these min/max values. If the resistance values are not OK, replace the Sensor.

3.4 COMPASS/TEMPERATURE MIRROR

DESCRIPTION

The optional Compass/Temperature Mirror has a vacuum fluorescent (VF) display that is integrated into the rear view mirror. The Compass/Temp Mirror includes the compass/temperature display and two map/reading lamps. This display provides the outside temperature and one of eight compass headings to indicate the direction the vehicle is facing. The Compass/Temp Mirror displays the compass heading and the outside temperature at the same time. The Ambient Temperature Sensor monitors the outside temperature and is hardwired to the PCM. The Compass/Temp Mirror also receives and transmits data on the PCI Bus.

OPERATION

The Compass/Temp Mirror incorporates 2 reading lamp buttons with the STEP button and the Zone/Calibration button features activated by holding a button for a specified time period. The STEP button provides the selections between English and Metric. The Zone/Cal button provides the selection to change the compass zone or to calibrate the compass. The reading lamp buttons also cycle the reading lamps on or off.

The STEP button (right reading lamp button) operates a momentary contact switch which provides input to the Compass/Temp Mirror in one of the following four modes:

- To toggle the right reading lamp on and off upon release of the button.
- To select degrees in F (Fahrenheit) for the temperature display.
- To select degrees in C (Celsius) for the temperature display.
- To turn off the compass/temperature display.

ENGLISH / METRIC / OFF MODE

With the ignition in the ON position, pressing and holding the STEP button (right reading lamp button) for 5-10 seconds will toggle the display between English and Metric. The Compass/Temp Mirror stores the selected display mode in memory upon releasing the button during the 5-10 seconds.

Pressing and holding the STEP button for 10-15 seconds will turn the display OFF upon releasing the button during the 10-15 seconds.

Each time the temperature mode is changed to F° or C°, the Compass/Temp Mirror stores the new mode in memory. The selected English or Metric mode is recalled after the ignition is cycled. The display OFF mode is not recalled after the ignition is cycled. The Compass/Temp Mirror will power up and display the temperature mode (F° or C°) that was last selected.

CALIBRATION / ZONE MODE

Refer to the Zone Variance Map. With the ignition in the ON position, pressing and holding the Zone/Cal button (left reading lamp button) for 5-10 seconds will illuminate ZONE in the display. Releasing the button while ZONE is illuminated will enter the compass into the Zone Setting mode. The Compass/Temp Mirror will illuminate the Zone Variance number 1 to 15 that is stored in memory. While ZONE is displayed; momentarily pressing the Zone/Cal button advances the zone to the next higher zone. When the desired zone number is displayed, do not press the Zone/Cal button again. After 5 seconds, the Zone Variance number will be stored in the module memory.

With the ignition in the ON position, pressing and holding the Zone/Cal button for 10-15 seconds will toggle the CAL (calibration) mode between on and off. Releasing the button while CAL is displayed enters the compass into the calibration mode. See “First Time Calibration”, “Manual Calibration”, and “Continuous Calibration”.

Pressing and holding the Zone/Cal button for 15-20 seconds and then releasing will exit the CAL mode and toggle the display to the current state of compass/temperature mirror use; OFF, Compass/Temperature F°, or Compass/Temperature C°.

Pressing and holding the Zone/Cal button for 20-25 seconds will enter the CTM into the self-check diagnostic mode upon releasing the button.

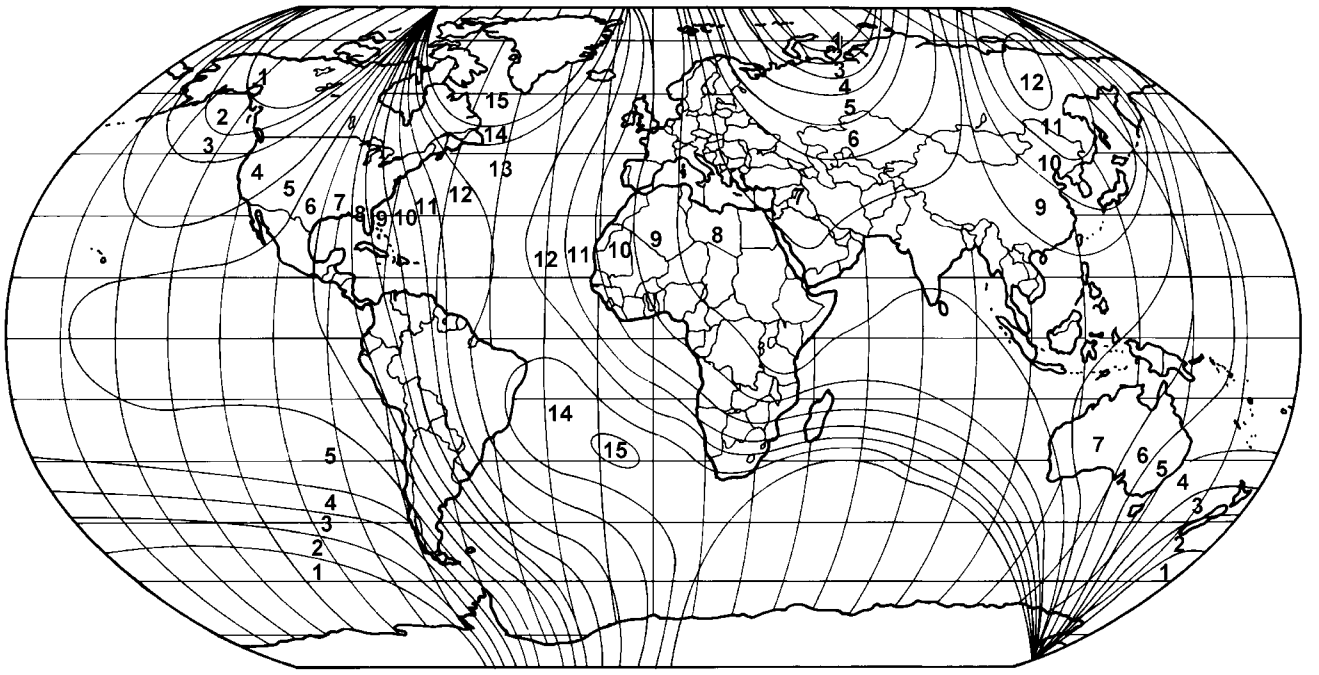
Holding the Zone/Cal button for longer than 25 seconds will cause the display to return to its current state with no changes.

SETTING COMPASS ZONE

The compass has a default zone of 8. Refer to the Zone Variance Map to determine the correct zone number. The correct compass Zone selection is critical to proper compass operation. With the ignition in the ON position, pressing the Zone/Cal button (left reading lamp button) for 5-10 seconds and then releasing while ZONE is illuminated enters the compass into the Zone display mode. In the Zone display mode, ZONE will be illuminated instead of the temperature. The current Zone number, 1 through 15 will be displayed. While ZONE is illuminated; momentarily pressing the Zone/Cal button advances the zone to the next higher zone. When the desired zone number is displayed, do not press the Zone/Cal button again. After 5 seconds, the Zone Variance number will be stored in the module memory.

FIRST TIME CALIBRATION

A new Compass/Temp Mirror is shipped in a first time calibration mode. CAL is illuminated when the Compass/Temp Mirror is first powered up. The first time calibration mode can not be exited until the



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first time calibration process is completed. The CAL icon will remain illuminated to alert the driver that the Compass/Temp Mirror is operating in the CAL mode. Move the vehicle to an area away from large metallic objects or overhead power lines. While CAL is illuminated in the display the vehicle must be driven in 3 complete 360 degree circles at less than 5 MPH (8 KPH). The compass will calibrate; CAL will turn off, and then resume normal operation.

MANUAL CALIBRATION

With the ignition in the ON position, pressing and holding the Zone/Cal button (left reading lamp button) for 10-15 seconds will toggle the display to CAL. Releasing the button within the 10-15 second duration will enter the compass into the calibration mode. CAL will remain illuminated until the calibration is complete or is toggled off by pressing the Zone/Cal button. Move the vehicle to an area away from large metallic objects or overhead power lines. While CAL is illuminated in the display the vehicle must be driven in 3 complete 360 degree circles at less than 5 MPH (8 KPH). The compass will calibrate; CAL will turn off, and then resume normal operation.

CONTINUOUS CALIBRATION

During normal operation, the Compass/Temp Mirror will continuously update the compass calibration to adjust for gradual changes in the vehicle's magnetic remnant field. If the vehicle is subjected to high magnetic influences, the compass may appear to indicate false headings or appear unable to be calibrated. If this occurs the vehicle may need to be demagnetized. Refer to Demagnetizing Procedure in the Service Manual.

SELF- CHECK DIAGNOSTICS

With the ignition ON, the Compass/Temp Mirror can perform a diagnostic self-check by pressing and holding the Zone/Cal button (left reading lamp button) for 20-25 seconds. The internal diagnostics will sequence the following five tests:

1. VF segment display- Illuminates the segment patterns one at a time for 1 second each as follows: CAL; ZONE; N; NE; E; SE; S; SW; W; NW; 0 through 9; C°; F°
2. CTM memory- ROM Checksum
3. CTM memory- RAM
4. CTM memory- EEPROM
5. Compass Test

During the self-check, if any of the internal tests fail, the Compass/Temp Mirror will display an "F" and the number of the test that failed. If more than one test fails "FO" will be displayed. P- Pass or F- Fail will be displayed until the Zone/Cal button (left reading lamp button) is pressed and released or the ignition is cycled. If all of the tests pass, the Compass/Temp Mirror will display "P". A VF segment that fails to illuminate will not cause the Compass/Temp Mirror to display an "F". If any segment fails to illuminate or the Compass/Temp Mirror displays "F", the Compass/Temp Mirror must be replaced.

To exit self-check diagnostics, press and release the Zone/Cal button or cycle the ignition to return to normal compass/temp operation.

OUTSIDE TEMPERATURE

The Compass/Temp Mirror utilizes vehicle speed and engine temperature data received on the PCI Bus to accurately display the outside temperature to avoid “hot soak” condition readings. The displayed outside temperature information is stored within the memory of the compass/temp mirror. When the Compass/Temp Mirror is first powered up, it retrieves the temperature data from the module memory. The memory temperature is compared with the temperature received from the ambient temperature sensor. The colder of the two temperatures is displayed.

TEMPERATURE UPDATE - WARM

On power up, when the outside temperature sensed by the ambient temperature sensor is warmer than the temperature stored in the module memory, the Compass/Temp Mirror will update the displayed temperature in relation to vehicle speed and engine temperature data received on the PCI Bus.

TEMPERATURE UPDATE - COLD

On power up, when the outside air temperature sensed by the ambient temperature sensor is colder than the stored memory temperature, the Compass/Temp Mirror will update the displayed temperature to the outside temperature at a rate of -1°F every 2 seconds, regardless if the vehicle is moving or not.

EXTREME TEMPERATURE / OPEN OR SHORT CONDITION

If the measured outside temperature is more than 60°C (140°F) or the ambient temperature sensor sense circuit is shorted to ground, the temp display will be 60°C (140°F) to indicate a short circuit condition.

If the measured outside temperature is less than -45°C (-49°F) or the ambient temperature sensor sense circuit is open, the temp display will be -45°C (-49°F) to indicate an open circuit condition.

AMBIENT TEMPERATURE SENSOR

DESCRIPTION

The Ambient Temperature Sensor is hardwired to the PCM. The ambient air temperature is monitored and displayed by the Compass/Temp Mirror.

The ambient temperature sensor cannot be adjusted or repaired and, if faulty or damaged, it must be replaced.

OPERATION

The resistance in the ambient temperature sensor changes as the outside temperature rises or falls. The PCM senses the change in reference voltage through the ambient temperature sensor resistor. Based on the resistance of the ambient temperature sensor, the PCM is programmed to correspond to a specific temperature. The Compass/Temp Mirror then displays the proper ambient temperature.

AMBIENT TEMPERATURE SENSOR DIAGNOSTICS

The outside temperature function is supported by the ambient temperature sensor, a signal and ground circuit hardwired to the PCM and the Compass/Temp Mirror display.

If the Compass/Temp Mirror display indicates 60°C (140°F) or the ambient temperature sensor sense circuit is shorted to ground, the temp display will be 60°C (140°F) to indicate a SHORT circuit condition.

If the Compass/Temp Mirror display indicates -45°C (-49°F) or the ambient temperature sensor sense circuit is open, the temp display will be -45°C (-49°F) to indicate an OPEN circuit condition.

If there is an OPEN or SHORT circuit condition, it must be repaired before the Compass/Temp Mirror VF display can be tested.

The ambient temperature sensor can be diagnosed using the following Sensor Test. If there are no codes stored in the PCM and the ambient temperature sensor and the circuits are confirmed to be OK, but the temperature display is inoperative or incorrect, replace the Compass/Temp Mirror.

AMBIENT TEMPERATURE SENSOR TEST

1. Turn the ignition OFF.
2. Disconnect and isolate the battery negative cable.
3. Disconnect the ambient temperature sensor harness connector.
4. Measure the resistance of the ambient temperature sensor using the following values:
   - 0° C (32° F) Sensor Resistance = 29.33 – 35.99 Kilohms
   - 10° C (50° F) Sensor Resistance = 17.99 – 21.81 Kilohms
   - 20° C (68° F) Sensor Resistance = 11.37 – 13.61 Kilohms
   - 25° C (77° F) Sensor Resistance = 9.12 – 10.86 Kilohms
   - 30° C (86° F) Sensor Resistance = 7.37 – 8.75 Kilohms
   - 40° C (104° F) Sensor Resistance = 4.90 – 5.75 Kilohms

The sensor resistance should read between these min/max values. If the resistance value is OK, refer to the Wiring Diagrams to rest the Signal and Ground circuits. If the resistance values are not OK, replace the Sensor.

3.5 INSTRUMENT CLUSTER

The instrument cluster for the PT is referred to as an ElectroMechanical Instrument Cluster (EMIC). The EMIC provides the following standard functions:

- Analog gauges: Speedometer, Tachometer, Fuel Level, and Engine Coolant Temperature
- Warning and Status Indicators
- Courtesy Lamp Output Control
- Instrument Panel Illumination Sensing and Output Dimming Control (Radio, HVAC, Switches)
- Parade/Funeral Mode Vacuum Fluorescent Display (VFD) Illumination
- Daytime Running Lights (DRL) Output
- Cluster Diagnostic Support
- VF Display for features such as Odometer, Trip, P-Codes, Messages and Autostick PRNDL (if equipped)
- Fuel Sensing and Broadcasting onto the PCI Bus
- Broadcast Vehicle Status onto the PCI Bus such as: Door Ajars, Liftgate Ajar, IOD, and Key in Ignition

All of the Warning/Status indicators except the High Beam are light emitting diodes (LED) and are not serviceable. The High Beam indicator is a serviceable incandescent bulb. The gauges are not individually serviceable, requiring the complete replacement of the EMIC if any LED indicator or any gauge is defective or inoperative.

Some of the indicators will illuminate briefly as a Bulb Check when the ignition is cycled from the Off to the Run position. The Oil indicator will illuminate with the ignition in the Run position and the engine is off. The Seatbelt indicator will illuminate for approximately 6 seconds with the ignition in the Run position or will remain illuminated until the driver seatbelt is buckled.

All of the analog gauges are oil-damped to ensure smooth pointer needle movement. All of the gauges, except the Fuel gauge, receive and position the pointer needles based upon information received via the PCI data bus. The Fuel Level Sensor is hardwired to the EMIC. The EMIC senses fuel level by applying voltage to the fuel level sensor resistor and interpreting the resulting voltage drop to ground through the sensor. The EMIC uses an internal microprocessor algorithm to determine the pointer needle position and also broadcasts the fuel level on the PCI data bus. The EMIC microprocessor uses an adaptive learning process to provide a more precise fuel level indication to the vehicle operator.

In the event that the EMIC detects communication loss with all other modules on the PCI data bus, the EMIC will illuminate "no bus" in the VFD. If the EMIC does not detect voltage on the battery B(+) circuit, the message "FUSE" will alternate with the odometer/trip odometer display when the ignition is in the Run position and will continue to flash until the vehicle is moved or voltage is restored to the circuit.

3.5.1 AUTOSTICK FEATURE

If equipped, the EMIC may incorporate the AutoStick PRNDL feature. When the ignition is cycled from the Off to the Unlock position, the EMIC will transmit the AutoStick information to the EATX via the PCI data bus. This message is sent continuously every second whenever the cluster is awake in order to communicate the PRNDL type to the EATX. The EATX then learns if it is in an Autostick (A/S) vehicle from the message.

AUTOSTICK MODE

During the AutoStick mode the cluster will turn off all PRNDL gear positions (boxes). The PRND graphic will remain illuminated. The EMIC will illuminate and display the current AutoStick gear position, (Example: PRND4). The EMIC will not display skipped gears while in the AutoStick mode. The EMIC will only display the current AutoStick gear positions (unlike the Non- AutoStick mode). AutoStick equipped vehicles with the Cruise feature incorporate an LED "CRUISE" indicator. If the EMIC does not receive valid gear information for 5 seconds, it will illuminate all PRND boxes, cancel the AutoStick function, and record a DTC.

NON -AUTOSTICK MODE

The EMIC will display all valid gear information transmitted by the EATX. If consecutive PCI data bus PRNDL messages are received with gears that are not adjacent, the cluster shall scroll from the previous gear, through the skipped gears and to the present gear. For example, if consecutive PRNDL messages are gears Park and Drive, the EMIC will immediately display R, then display N, and then display D. Non- AutoStick equipped vehicles with the Cruise feature incorporate the word "CRUISE" in the VFD.

3.5.2 SELF TEST

The EMIC Self Test is initiated by holding the trip reset knob while rotating the ignition switch from the Off position to the Run/Start Position or by using the DRBIII®. The self test will be terminated when the tachometer is greater than 300 rpm, the ignition switch is turned Off or the self test is complete.

3.5.2.1 TEST ROUTINE

The Self Test will perform the following procedure (at 2 second intervals with a short pause between VF messages):

1. Chime once.
2. Count all digits from 0 to 9 (with decimal on) in approximately 3 seconds.
3. Display the last 6 digits of the Vehicle Identification Number (VIN).
4. Display Application Code Level (for example FL0002).
5. Display EEPROM version (for example EE 02).
6. Display Boot Loader version (for example bL 01).
7. Display Speedometer Calibration Points.
8. Display the Fuel Gauge Calibration Points.
9. Display the Temperature Calibration Points: min, normal, mid, temp high, and temp critical.
10. Display the Tachometer Calibration Points.
11. Illuminate all learned and standard indictors (Telltale and VF indicators) for approximately 5 seconds.

For complete Description, Operation and service of the EMIC, refer to the PT Service Manual Instrument Cluster section. For Instrument Cluster diagnostics, refer to the PT Body Diagnostics Procedures manual.

3.6 REMOTE KEYLESS ENTRY MODULE

The Remote Keyless Entry module controls the Power Door Locks and the Vehicle Theft Security System (VTSS). It also wakes up the Instrument Cluster to turn on the illuminated entry when it senses a signal from the RKE transmitter. The module communicates with other modules via the PCI bus circuit.

The RKE module monitors the Occupant Restraint Controller messages for the purpose of monitoring the deployment of the airbag. Upon receiving that message along with the verification that the ignition is on and the vehicle speed is zero, it will provide the “enhanced accident response feature”. This feature will cause the module to unlock all doors immediately and the instrument cluster to turn the courtesy lamps on when the vehicle reaches 0 MPH.

The RKE module communicates with the Powertrain Control Module to receive vehicle speed information to activate the rolling door lock feature, receive the “okay to lock” message, and receive body style information. Two transmitters are supplied with the vehicle but a total of 4 can be programmed to the module. The horn chirp on vehicle lock command is customer programmable.

To limit the amount of battery drain during storage, the IOD fuse may be removed.

3.6.1.1 VEHICLE THEFT SECURITY SYSTEM

When the VTSS is armed, it monitors the status of the ignition switch and ajar switches for the vehicle doors and liftgate. If the alarm is tripped, it will sound the vehicles horn, flash the exterior lamps and the VTSS indicator located in the instrument cluster.

Arming the system is accomplished by locking the doors with the door lock switch following a normal exit sequence of opening the door, pressing the power lock button and closing the door, by using a cylinder lock switch or by pressing the RKE lock button. After all the doors are closed, the VTSS indicator will flash quickly for sixteen seconds indicating the pre-arm process, after which it will flash at a slower rate indicating the system is armed. If during the pre-arm process a door is opened, the ignition is turned to the Run/Start position, or if the RKE module receives an unlock request, the system will automatically be disarmed.

Disarming can be accomplished with a RKE unlock, turning the ignition on with a valid Sentry key or unlocking the vehicle with a cylinder lock switch. All of the switches for the VTSS system can be monitored using the DRBIII®. The DRBIII® is also useful to determine the cause of a customer complaint of the alarm going off with no apparent reason.

3.6.1.2 VEHICLE THEFT SECURITY SYSTEM (EXPORT ONLY)

The VTSS is available in either a base or premium configuration. Both systems will monitor the ignition switch status, ajar switches for the vehicle doors, liftgate and hood. In addition to this the premium system will monitor the interior of the vehicle for movement via an intrusion sensor. When tripped to the alarming state, the exterior lights and VTSS indicator will flash along with cycling of the vehicle horn for the base system while the premium version uses a battery backed siren for the audible alert.

Arming the system is accomplished by locking the doors with the door lock switch following a normal exit sequence of opening the door, pressing the power lock button and closing the door, or by using any cylinder lock switch, or by pressing the RKE lock button. After all the doors are closed, the VTSS indicator will flash quickly for sixteen seconds indicating the pre-arm process, after which it will flash at a slower rate indicating the system is armed. If during the pre-arm process a door is opened, the ignition is turned to the Run/Start position, or if the RKE module receives an unlock request, the system will automatically be disarmed.

If the VTSS indicator stays on steady during pre-arm, it is an indication of the hood ajar circuit being shorted (hood opened). Defeating the intrusion sensor feature for vehicles so equipped can be done by three additional lock requests within five seconds of each other during the pre-arming process to the RKE module from either the RKE fob or a cylinder lock switch.

Disarming is done by either a RKE unlock or turning the ignition on with a valid Sentry key or from any cylinder lock switch for certain markets. All of the switches for the VTSS system can be monitored using the DRBIII®. The DRBIII® is also useful to determine the cause of a customer complaint of the alarm going off with no apparent reason.

3.6.1.3 PANIC MODE (IF EQUIPPED)

Upon activation of the panic function the head lamps and park lamps flash in an alternating manner, the horn pulses every second and the courtesy lamps are turned on. The panic mode allows normal night time driving by allowing the headlamps and park lamps to be on steady when the headlamp switch is in the on position Panic mode is activated immediately by pressing the panic button once. It does not disarm the VTSS or unlock the doors. It is canceled by pressing the button a second time, reaching a vehicle speed greater than 15 mph (24 kph), or after 3 minutes has elapsed in panic mode. Once panic mode has been activated there is a 2-second delay before it will turn off. Once it is cancelled there is a 2-second delay before it can be reactivated. This is to avoid the problem of deactivating and immediate reactivating due to multiple button presses.

3.6.2 POWER DOOR LOCKS

3.6.2.1 CENTRAL LOCKING (W/VTSS ONLY)

This feature allows the customer to lock/unlock all vehicle doors with the key from the front door or liftgate cylinder lock switch. The customer can choose to program this feature to unlock all doors with one turn of the key or open the driver door only with the first turn of the key and open the other doors with the second turn. Altering the operation of the unlock function via the key cylinder switch from one turn to two turns will also alter the operation of the RKE transmitter from one press to two presses.

3.6.2.2 ROLLING (AUTOMATIC) DOOR LOCKS

All vehicle doors (including liftgate) are locked automatically once the vehicle reaches a speed of 15 mph (24 kph) and all doors (including liftgate) are closed. This feature can also be enabled/disabled by the customer.

3.6.2.3 DOOR LOCK INHIBIT

This feature disables the door lock command from the interior door lock switch whenever the driver door is open and the key is in the ignition. This prevents the driver from locking the keys in the ignition when using the power door locks. This feature is inoperable if the IOD fuse is not installed.

3.7 SENTRY KEY IMMOBILIZER SYSTEM (SKIS)

The SKIS is an immobilizer system designed to prevent unauthorized vehicle operation. The system consists of a Sentry Key Immobilizer Module (SKIM) and ignition key(s) called Sentry Key(s) which are equipped with a transponder chip. The SKIM communicates over the Programmable Communication Interface multiplex system (PCI) bus network to the instrument cluster, Powertrain Control Module (PCM), and the DRBIII® scan tool.

The SKIM sends messages to the instrument cluster over the PCI bus to control the VTSS indicator lamp. The SKIM sends a message to the instrument cluster to turn the lamp on for about three seconds when the ignition is turned to the Run/Start position as a bulb test. If the indicator lamp comes on and stays on after the bulb test, it indicates that the SKIM has detected a system malfunction and/or that the SKIS has become inoperative. If an invalid key is detected in the ignition key cylinder with the ignition switch in the Run/Start position the SKIM will flash the VTSS indicator lamp on and off.

For additional information on the SKIS, refer to the Powertrain Diagnostic Procedures manual.

3.8 COMMUNICATION

The Programmable Communication Interface or PCI Bus is a single wire multiplexed network capable of supporting binary encoded messages shared between multiple modules. The PCI bus circuit is identified as D25 and is violet with a yellow tracer. The modules are wired in parallel. Connections are made in the harness using splices. The following modules are used on the PT:

- Airbag Control Module
- Amplifier
- Antilock Brake Module
- Compass/Temperature Mirror Module
- Powertrain Control Module (Gas only)
- Engine Control Module (Diesel only)
- Remote Keyless Entry Module
- Sentry Key Immobilizer Module
- Radio
- Mechanical Instrument Cluster
- Hands Free Module (if equipped)

- Satellite Radio Receiver (if equipped)
- Window Regulator Modules (PT27) - Driver and passenger

Each module provides its own bias and termination in order to transmit and receive messages. The bus voltage is at zero volts when no modules are transmitting and is pulled up to about seven and a half volts when modules are transmitting.

The bus messages are transmitted at a rate averaging 10,800 bits per second. Since there is only voltage present when the modules transmit and the message length is only about 500 milliseconds, it is ineffective to try and measure the bus activity with a conventional voltmeter. The preferred method is to use the DRBIII® lab scope. The 12v square wave selection on the 20-volt scale provides a good view of the bus activity. Voltage on the bus should pulse between zero and about seven and a half volts. Refer to the figure for some typical displays.

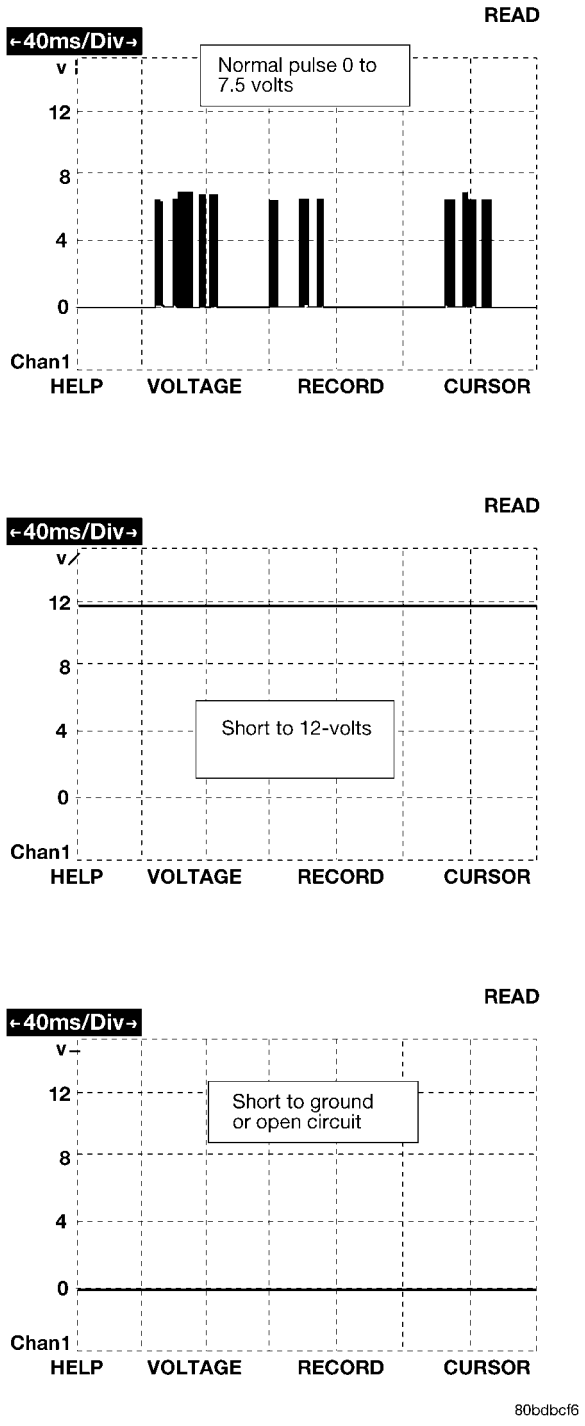
The PCI Bus failure modes are broken down into two categories. PCI Bus Communication Failure and individual module no response. Causes of a PCI Bus Communication Failure include a short to ground or battery on the PCI circuit. Individual module no response can be caused by an open circuit at the module, or an open battery or ground circuit to the affected module.

Symptoms of a PCI Bus Communication Failure would include but are not limited to:

- All gauges on the EMIC stay at zero
- All telltales on EMIC illuminate
- EMIC backlighting at full intensity
- No response received from any module on the PCI bus (except PCM/ECM)
- No start (if equipped with Sentry Key Immobilizer)

Symptoms of individual module failure could include any one or more of the above. The difference would be that at least one or more modules would respond to the DRBIII®.

Diagnosis starts with symptom identification. If a PCI Bus Communication Failure is suspected, begin by identifying which modules the vehicle is equipped with and then attempt to get a response from the modules with the DRBIII®. If any modules are responding, the failure is not related to the total bus, but can be caused by one or more modules PCI circuit or power supply and ground circuits. The DRBIII® may display “BUS +/- SIGNAL OPEN” or “NO RESPONSE” to indicate a communication problem. These same messages will be displayed if the vehicle is not equipped with that particular module. The CCD error message is a default message used by the DRBIII® and in no way indicates whether or not the PCI Bus is operational. The message is only an indication that a module is either not responding or the vehicle is not equipped.



NOTE: Communication over the bus is essential to the proper operation of the vehicles on-board diagnostic systems and the DRBIII®. Problems with the operation of the bus or DRBIII® must be corrected before proceeding with diagnostic testing. If there is a problem, refer to the Communications category of this manual.

NOTE: For this model year, some vehicles will integrate the Transmission Control Module and Powertrain Control Module into a single control module. This module is the Next Generation Controller for DaimlerChrysler and will be referred to as the Powertrain Control Module (PCM). The Transmission Control System is part of the Powertrain Control Module.

Diagnostic procedures and DTC numbers are some of the changes you will see which reflect the new combined module technology. The PCM will have four color coded connectors C1 through C4, (C1-BLK, C2-ORANGE, C3-WHITE, C4-GREEN), each PCM connector will have 38 pins each. Two new tools are used for probing and repairing the PCM connectors. A New tool to release the pins from the PCM connectors Miller #3638 is introduced, you must use the Miller tool #3638 to release the connector pins or harness and connector damage will occur. Also a New tool for probing connectors Miller #8815 is introduced, you must use the Miller tool #8815 to probe the PCM pins or harness and connector damage will occur. There is also a new Verification test and module replacement procedure for the PCM.

3.9 TELECOMMUNICATIONS

3.9.1 HANDS FREE PHONE

OVERVIEW

The vehicle telecommunications sytem consists of a Hands Free Module, Rear view Mirror, and a Blue-tooth Hands Free Profile enabled cell phone. The system allows vehicle occupants to use voice recognition technology to make, receive and screen phone calls without physically handling a cell phone. The system has a programmable phone book that can prevent the vehicle operator from becoming distracted searching for a specific number. Seven different wireless phones can be programmed to operate each individual system. Each of the seven phones is given a rank of priority when programmed.

OPERATION

Incoming phone messages are transmitted to the vehicle occupants through the vehicles audio system when the ignition is on and the wireless phone is on. Upon receiving the signal from an incoming phone call, the vehicle audio system will fade out the current CD/DVD or radio output. The vehicle occupants are then directed to accept or reject the call. Outgoing audio messages are received through the microphone located in the rearview mirror then transmitted via hardwire to the Hands Free Module and finally transmitted through the wireless phone. Volume of the voice prompts and incoming conversation is controlled using the vehicles' radio audio controls and steering wheel controls if equipped. The rear view mirror contains a Phone Switch, Voice Recognition Switch and a microphone. The rear view mirror transmits these inputs via hardwired circuits to the Hands Free Module.

3.10 WINDOW REGULATOR MODULES (PT27 ONLY)

In each door of the PT27 there is a window regulator module directly connected to each of the front door window regulator motors. The modules control window motor operation, smart glass functions and the convertible top operations (driver window module). Each module will enter sleep mode if there is no ignition switch voltage and the respective door is closed for 1 minute or longer. The module will enter wait mode if there is no ignition switch voltage for 1 minute or longer but the respective door is open. After being in wait mode for 12 hours, then with door open, the module will go to sleep mode. At this time the module will wake up only if the ignition is turned on. Under normal circumstances the module will wake up if it receives a door ajar switch sense, a window drop switch sense or an ignition switch voltage. When software changes are necessary, the modules can be flashed by using the DRBIII. Each module is capable of setting trouble codes to aid in the diagnosis when a malfunction occurs. When a module must be replaced it is necessary to replace the entire regulator assembly because of possible damage to the hall effect sensor in the module.

3.10.1 CONVERTIBLE TOP

The convertible top switch is hard wired to both window regulator modules by the Power Top Switch Mux circuit. When a top operation input is received by the driver window module, it will ground the respective relay control circuit which in turn will

operate the motor. If the convertible top switch is pressed and held to the down position second detent, it will command both modules to drop all windows to the fully down position. The windows cannot be raised when the convertible top switch is in the top down position. When the switch is held in the top up position and all four windows are fully up, the modules will lower the respective front window 40mm, lower the respective rear window for 0.52 seconds (approx. 55mm) and the driver window module will ground the top up relay control circuit. Once the top is back up, the windows will not raise automatically. When the top switch is pressed in either position, the driver window regulator module will ground the respective relay control circuit for a maximum of 30 seconds. The window regulator module monitors vehicle speed and if the speed is over 15 mph the top will not operate.

3.10.2 POWER WINDOWS

The window switches are hard wired by a mux circuit to the respective window regulator module. The respective rear window motor is hard wired to the module. The front window motor is directly attached to the module. Both front door window switches have the express down feature. The module will cease lowering the front glass when a fully down position is sensed through the hall effect sensor. The module will cease lowering or raising the rear glass when a high stall current is detected for more than 400ms.

3.10.3 SMART GLASS

When a door is opened, the respective module will receive a signal from the door ajar switch or the window drop switch. The window drop switch is directly controlled by both the interior and the exterior door handle switches. The drop switch is part of the door latch. This switch is faster than the door ajar switch to signal an open door operation. At that point the module will drop the front door glass 10mm. However, if the window drop switch should fail, the door ajar sense would also drop the window 10mm and the module would set a trouble code. If the module receives a door ajar switch open (door closed) it would raise the window 10mm. The module knows the position of the window by counting the motor rotation through the hall effect sensor in the module. If a door window is raised while that door is open, the module will raise the glass up, but when the door is closed it will raise the glass 10mm further up.

When the convertible top down switch is pressed to the first detent, the input is received by the window regulator modules which will lower the door windows approximately 40mm, lower the rear window glass for approximately 0.52 seconds (approx. 55mm), and after a 200ms delay, energize the power top down relay to lower the convertible top.

The window regulator module monitors ambient temperature from the engine control module. At cold temperatures the stall time for the rear window motors is increased because of the possibility of ice or frost.

3.11 USING THE DRBIII®

Refer to the DRBIII® user guide for instructions and assistance with reading trouble codes, erasing trouble codes, and other DRBIII® functions.

3.11.1 DRBIII® ERROR MESSAGES AND BLANK SCREEN

Under normal operation, the DRBIII® will display one of only two error messages:
-User Requested WARM Boot or User-Requested COLD Boot

If the DRBIII® should display any other error message, record the entire display and call the STAR Center for information and assistance. This is a sample of such an error message display:

```
ver:2.14
date: 26 Jul 93
file: key _iff.cc
date: Jul26 1993
line: 548
err: Oxi
User-Requested COLD boot

Press MORE to switch between this display
and the application screen.
Press F4 when done noting information.
```

3.11.2 DRBIII® DOES NOT POWER UP

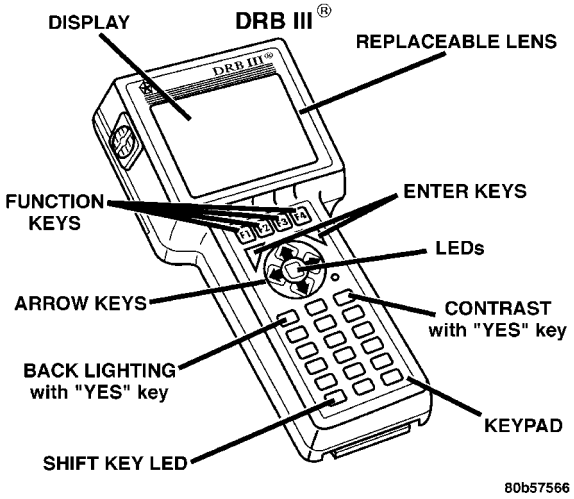
If the LED's do not light or no sound is emitted at start up, check for loose cable connections or a bad cable. Check the vehicle battery voltage (data link connector cavity 16). A minimum of 11 volts is required to adequately power the DRBIII®

If all connections are proper between the DRBIII® and the vehicle or other devices, and the vehicle battery is fully charged, an inoperative DRBIII® may be the result of a faulty cable or vehicle wiring.

3.11.3 DISPLAY IS NOT VISIBLE

Low temperatures will affect the visibility of the display. Adjust the contrast to compensate for this condition.

4.0 DISCLAIMERS, SAFETY, WARNINGS



4.1 DISCLAIMERS

All information, illustrations, and specifications contained in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

4.2 SAFETY

4.2.1 TECHNICIAN SAFETY INFORMATION

WARNING: WHEN OPERATING, ENGINES PRODUCE AN ODORLESS GAS CALLED CARBON MONOXIDE. INHALING CARBON MONOXIDE GAS CAN RESULT IN SLOWER REACTION TIMES AND CAN LEAD TO PERSONAL INJURY OR DEATH. WHEN THE ENGINE IS OPERATING, KEEP SERVICE AREAS WELL VENTILATED OR ATTACH THE VEHICLE EXHAUST SYSTEM TO THE SHOP EXHAUST REMOVAL SYSTEM.

Set the parking brake and block the wheels before testing or repairing the vehicle. It is especially important to block the wheels on front-wheel drive vehicles; the parking brake does not hold the drive wheels.

When servicing a vehicle, always wear eye protection, and remove any metal jewelry such as rings, watchbands or bracelets that might make an inadvertent electrical contact.

When diagnosing a body system problem, it is important to follow approved procedures where applicable. These procedures can be found in this General Information Section or in service manual procedures. Following these procedures is very important to the safety of individuals performing diagnostic tests.

4.2.2 VEHICLE PREPARATION FOR TESTING

Make sure the vehicle being tested has a fully charged battery. If it does not, false diagnostic codes or error messages may occur.

4.2.3 SERVICING SUB-ASSEMBLIES

Some components of the body system are intended to be serviced as an assembly only. Attempting to remove or repair certain system subcomponents may result in personal injury and/or improper system operation. Only those components with approved repair and installation procedures in the service manual should be serviced.

4.2.4 DRBIII® SAFETY INFORMATION

WARNING: EXCEEDING THE LIMITS OF THE DRBIII® MULTIMETER IS DANGEROUS. READ ALL DRBIII® INSTRUCTIONS BEFORE USING THE MULTIMETER. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN PERSONAL INJURY OR DEATH.

- Follow the vehicle manufacturer's service specifications at all times.
- Do not use the DRBIII® if it has been damaged.
- Do not use the test leads if the insulation is damaged or if metal is exposed.
- To avoid electrical shock, do not touch the test leads, tips, or the circuit being tested.
- Choose the proper range and function for the measurement. Do not try voltage or current measurements that may exceed the rated capacity.
- Do not exceed the limits shown in the table below:

FUNCTION	INPUT LIMIT
Volts	0 - 500 peak volts AC 0 - 500 volts DC
Ohms (resistance)*	0 - 1.12 megohms
Frequency Measured Frequency Generated	0 - 10 kHz
Temperature	-58 - 1100°F -50 - 600°C

* Ohms cannot be measured if voltage is present. Ohms can be measured only in a non-powered circuit.

- Voltage between any terminal and ground must not exceed 500v DC or 500v peak AC.

- Use caution when measuring voltage above 25v DC or 25v AC.
- Use the low current shunt to measure circuits up to 10A. Use the high current clamp to measure circuits exceeding 10A.
- When testing for the presence of voltage or current, make sure the meter is functioning correctly. Take a reading of a known voltage or current before accepting a zero reading.
- When measuring current, connect the meter in series with test lead.
- Disconnect the live test lead before disconnecting the common test lead.
- When using the meter function, keep the DRBIII® away from spark plug or coil wires to avoid measuring error from outside interference.

4.3 WARNINGS

4.3.1 VEHICLE DAMAGE WARNINGS

Before disconnecting any control module, make sure the ignition is "off". Failure to do so could damage the module.

When testing voltage or continuity at any control module, use the terminal side (not the wire end) of the connector. Do not probe a wire through the insulation, this will damage it and eventually cause it to fail because of corrosion. Be careful when performing electrical tests so as to prevent accidental shorting of terminals. Such mistakes can damage fuses or components. Also, a second code could be set, making diagnosis of the original problem more difficult.

4.3.2 ROAD TESTING A COMPLAINT VEHICLE

Some complaints will require a test drive as part of the repair verification procedure. The purpose of the test drive is to try to duplicate the diagnostic code or symptom condition.

WARNING: REASSEMBLE ALL COMPONENTS BEFORE ROAD TESTING A VEHICLE. DO NOT TRY TO READ THE DRBIII® SCREEN OR OTHER TEST EQUIPMENT DURING A TEST DRIVE. DO NOT HANG THE DRBIII® OR OTHER TEST EQUIPMENT FROM THE REARVIEW MIRROR DURING A TEST DRIVE. HAVE AN ASSISTANT AVAILABLE TO OPERATE THE DRBIII® OR OTHER TEST EQUIPMENT. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN PERSONAL INJURY OR DEATH.

5.0 REQUIRED TOOLS AND EQUIPMENT

DRBIII® (diagnostic read-out box)
Jumper Wires
Ohmmeter
Voltmeter
Sentry Key Tester
Test Light
8310 Airbag Load Tool
8443 SRS Airbag System Load Tool

6.0 GLOSSARY OF TERMS

ABS	antilock brake system
ACM	airbag control module
BUX	built up export
CAB	controller antilock brake
CTM	compass/temperature module
DAB	driver airbag
DLC	data link connector
DTC	diagnostic trouble code
ECM	engine control module
HFM	hands free module
LHD	left hand drive
MIC	mechanical instrument cluster
NAV	navigation
NGC	Next Generation Controller
ORC	occupant restraint controller (ACM)
ORS	occupant restraint system
PAB	passenger airbag
PCI	Programmable Communication Interface (vehicle communication bus)
PCM	powertrain control module
PDC	power distribution center
PWM	pulse width modulated
RHD	right hand drive
RKE	remote keyless entry
SBT	seat belt tensioner
SCI	serial communication interface
SDAR	satellite digital audio receiver
SKIM	sentry key immobilizer module
SKIS	sentry key immobilizer system
SQUIB	also called initiator (located in rear of airbag module)
TCM	transmission control module
VFD	vacuum fluorescent display
VTSS	vehicle theft security system
WRM	window regulator module

NOTES

7.0

DIAGNOSTIC INFORMATION AND PROCEDURES

Symptom List:

ACCELEROMETER 1
INTERNAL 1
INTERNAL 2
INTERNAL 3
INTERNAL 4
OUTPUT DRIVER 1
OUTPUT DRIVER 2
STORED ENERGY FIRING 1

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be ACCELEROMETER 1.

When Monitored and Set Condition:

ACCELEROMETER 1

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

INTERNAL 1

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

INTERNAL 2

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

INTERNAL 3

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

INTERNAL 4

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

ACCELEROMETER 1 — Continued

OUTPUT DRIVER 1

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

OUTPUT DRIVER 2

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

STORED ENERGY FIRING 1

When Monitored: With the ignition on, the module on board diagnostics continuously performs internal circuit tests.

Set Condition: This DTC will set if the module identifies an out of range internal circuit.

POSSIBLE CAUSES
AIRBAG CONTROL MODULE - ACM

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** Select the appropriate module and DTC type combination: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 2 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

Symptom List:

AIRBAG WARNING INDICATOR DRIVER
AIRBAG WARNING INDICATOR OPEN
AIRBAG WARNING INDICATOR SHORT

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be AIRBAG WARNING INDICATOR DRIVER.

When Monitored and Set Condition:

AIRBAG WARNING INDICATOR DRIVER

When Monitored: With ignition on the ACM monitors the PCI Bus for a message from the MIC containing the airbag warning indicator status. The ACM request the warning lamp status from the MIC once every second.

Set Condition: This DTC will set if the ACM receives a bus message indicating that the airbag lamp driver has failed.

AIRBAG WARNING INDICATOR OPEN

When Monitored: With ignition on the ACM monitors the PCI Bus for a message from the MIC containing the airbag warning indicator status. The ACM request the warning lamp status from the MIC once every second.

Set Condition: This DTC will set immediately if the indicator status is OPEN.

AIRBAG WARNING INDICATOR SHORT

When Monitored: With ignition on the ACM monitors the PCI Bus for a message from the MIC containing the airbag warning indicator status. The ACM request the warning lamp status from the MIC once every second.

Set Condition: This DTC will set immediately if the indicator status is SHORT.

POSSIBLE CAUSES
MIC, COMMUNICATION FAILURE
WARNING INDICATOR
ACM, WARNING INDICATOR
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

AIRBAG WARNING INDICATOR DRIVER — Continued

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Ensure the battery is fully charged. **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	With the DRBIII®, ensure PCI Bus communications with the Instrument Cluster. Is the Instrument Cluster communicating on the PCI Bus? Yes → Go To 3 No → Refer to category COMMUNICATION CATEGORY and select the related symptom NO RESPONSE or INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	With the DRBIII® select PASSIVE RESTRAINTS, AIRBAG and MONITOR DISPLAY. Using the DRBIII®, read the WARNING LAMP MONITOR screen. Select the LAMP STATUS displayed on the DRB monitors screen. Observe the Lamp Driver State and Actual Lamp State. Is the LAMP DRIVER and ACTUAL LAMP STATE: OK? YES Go To 4 NO Replace Instrument Cluster. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

AIRBAG WARNING INDICATOR DRIVER — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
CALIBRATION MISMATCH

When Monitored and Set Condition:

CALIBRATION MISMATCH

When Monitored: With ignition on, the ACM monitors the PCI Bus for the VIN message containing the body style. Note: The VIN message should match the vehicle VIN plate.

Set Condition: If the Body style stored in ACM does not exactly match the vehicle body style indicated by the PCM for 2 consecutive VIN messages, then the fault shall be set.

POSSIBLE CAUSES
PCM, PCI COMMUNICATION FAILURE
PCM VEHICLE IDENTIFICATION NUMBERS INCORRECT OR MISSING
ACM CALIBRATION MISMATCH
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** Connect the DRB to the data link connector and select PASSIVE RESTRAINTS, AIRBAG, SYSTEM TEST. With the DRBIII®, read the system test. Does the DRB show PCM Active on the Bus:? Yes → Go To 3 No → Refer to category COMMUNICATION CATEGORY and select the related symptom. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

CALIBRATION MISMATCH — Continued

TEST	ACTION	APPLICABILITY
3	With the DRB select ENGINE MISCELLANEOUS, select MISC FUNCTION, and then CHECK VIN to read the Vehicle Identification Number in the Powertrain Control Module. Compare the VIN displayed on the DRB screen and the Vehicle VIN plate. Does the VIN plate and the PCM VIN match? Yes → Go To 4 No → Replace the Powertrain Control Module and program with the correct vehicle identification number. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
CLUSTER MESSAGE MISMATCH

When Monitored and Set Condition:

CLUSTER MESSAGE MISMATCH

When Monitored: After the MIC bulb test is completed, the ACM compares the Lamp Request by ACM, On or Off, and the Lamp on by MIC, On or Off, PCI Bus messages. Each message is transmitted one time per second or when a change in the lamp state occur.

Set Condition: If the Lamp Request by ACM, On or Off, and the Lamp on by MIC, On or Off, messages do not match, the code will set.

POSSIBLE CAUSES
MIC DIAGNOSTIC CODES
CLUSTER MESSAGE MISMATCH
STORED CODE OR INTERMITTENT CONDITION
ACM, CLUSTER MESSAGE MISMATCH
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Ensure the battery is fully charged. **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Turn the ignition on. With the DRBIII®, read the MIC DTCs. Does the DRBIII® display any active Diagnostic Codes? Yes → Refer to symptom list for problems related to Instrument Cluster. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 3	All

CLUSTER MESSAGE MISMATCH — Continued

TEST	ACTION	APPLICABILITY
3	With the DRBIII® select PASSIVE RESTRAINTS, AIRBAG, MONITOR DISPLAY and WARNING LAMP STATUS. Cycle the ignition key and observe the LAMP ON BY MIC and LAMP REQ BY ACM monitors after the 6 to 8 second indicator test. Does the LAMP ON BY MIC and LAMP REQ BY ACM monitors match? YES Go To 4 NO Replace Mechanical Instrument Cluster. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SEAT BELT TENSIONER CIRCUIT OPEN

When Monitored and Set Condition:

DRIVER SEAT BELT TENSIONER CIRCUIT OPEN

When Monitored: With the ignition on the ACM monitors the resistance of the Driver Seat Belt Tensioner circuits.

Set Condition: The ACM has detected an open circuit or high resistance on the Driver Seat Belt Tensioner circuits.

POSSIBLE CAUSES
DRIVER SEAT BELT TENSIONER CIRCUITS OPEN
DRIVER SEAT BELT TENSIONER LINE 1 OR LINE 2 CIRCUIT OPEN
ACM, DRIVER SEAT BELT TENSIONER CIRCUIT OPEN
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**NOTE: Ensure the battery is fully charged.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Driver Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® display DRIVER SBT CIRCUIT OPEN? Yes → Go To 3 No → Replace Driver Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Seat Belt Tensioner connector. Disconnect the Airbag Control Module Connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance of the Driver SBT Line 1 and Line 2 circuits between the Load Tool Adapter and the Driver SBT connector. Is the resistance below 1.0 ohms on both circuit? Yes → Go To 4 No → Repair open or high resistance in Driver Seat Belt Tensioner Line 1 Line 2 circuits. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT, PERSONAL INJURY OR DEATH, .** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SEAT BELT TENSIONER CIRCUIT SHORT

When Monitored and Set Condition:

DRIVER SEAT BELT TENSIONER CIRCUIT SHORT

When Monitored: With the ignition on the ACM monitors the resistance of the Driver Seat Belt Tensioner circuits

Set Condition: The ACM has detected low resistance in the Driver Seat Belt Tensioner circuits.

POSSIBLE CAUSES
DRIVER SEAT BELT TENSIONER SHORT
DRIVER SEAT BELT TENSIONER LINE 1 SHORT TO LINE 2
ACM, DRIVER SEAT BELT TENSIONER CIRCUIT SHORT
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Driver Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® display DRIVER SEAT BELT TENSIONER CIRCUIT SHORT? Yes → Go To 3 No → Replace Driver Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Seat Belt Tensioner connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance between the Driver SBT Line 1 and Line 2 circuit at the Driver SBT connector. Is the resistance below 10K Ohms? Yes → Repair Driver Seat Belt Tensioner Line 1 circuit short to Driver Seat Belt Tensioner Line 2 circuit. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SEAT BELT TENSIONER SHORT TO BATTERY

When Monitored and Set Condition:

DRIVER SEAT BELT TENSIONER SHORT TO BATTERY

When Monitored: With the ignition on the ACM monitors the voltage of the Driver Seat Belt Tensioner circuits.

Set Condition: The ACM has detected high voltage on the Driver Seat Belt Tensioner circuits.

POSSIBLE CAUSES
DRIVER SEAT BELT TENSIONER SHORT TO BATTERY
DRIVER SBT LINE 1 OR LINE 2 SHORT TO BATTERY
ACM, DRIVER SEAT BELT TENSIONER SHORT TO BATTERY
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Driver Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH,TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® display DRIVER SEAT BELT TENSIONER SHORT TO BATTERY? Yes → Go To 3 No → Replace Driver Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Seat Belt Tensioner connector. Disconnect the Airbag Control Module Connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Driver SBT Line 1 and Line 2 circuits between the Driver SBT connector and ground. Is there any voltage present? Yes → Repair Driver Seat Belt Tensioner Line 1 or Line 2 circuit short to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SEAT BELT TENSIONER SHORT TO GROUND

When Monitored and Set Condition:

DRIVER SEAT BELT TENSIONER SHORT TO GROUND

When Monitored: With the ignition on the ACM monitors the voltage of the Driver Seat Belt Tensioner circuits.

Set Condition: When the ACM detects a short to ground in either Driver Seat Belt Tensioner circuits.

POSSIBLE CAUSES
DRIVER SEAT BELT TENSIONER SHORT TO GROUND
DRIVER SEAT BELT LINE 1 OR LINE 2 SHORT TO GROUND
ACM, DRIVER SEAT BELT TENSIONER SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Driver Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® display DRIVER SEAT BELT TENSIONER SHORT TO GROUND? Yes → Go To 3 No → Replace the Driver Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Seat Belt Tensioner connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance of the Driver SBT Line 1 and Line 2 circuits between the Driver SBT connector and ground. Is the resistance below 10K ohms on either circuit? Yes → Repair Driver Seat Belt Tensioner Line 1 or Line 2 circuits short to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SEAT BELT TENSIONER SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SQUIB 1 CIRCUIT OPEN

When Monitored and Set Condition:

DRIVER SQUIB 1 CIRCUIT OPEN

When Monitored: With the ignition on, the ACM monitors the resistance of the Driver Squib 1 circuits.

Set Condition: The ACM detects an open circuit or high resistance in the Driver Squib 1 circuits.

POSSIBLE CAUSES
DRIVER AIRBAG SQUIB 1 CIRCUIT OPEN
CLOCKSPRING SQUIB 1 CIRCUIT OPEN
DRIVER SQUIB 1 LINE 1 OR LINE 2 CIRCUITS OPEN
ACM, DRIVER SQUIB 1 CIRCUIT OPEN
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 6 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

DRIVER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Airbag Squib connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the appropriate Load Tool to the Driver Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT OPEN? Yes → Go To 3 No → Replace the Driver Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Airbag connector(s). Disconnect the Clockspring connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Clockspring connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT OPEN? Yes → Go To 4 No → Replace the Clockspring in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Clockspring connector(s). Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool Adaptor to the Airbag Control Module connector(s). Measure the resistance of the Driver Squib 1 Line 1 and Line 2 circuits between the ACM Adaptor and the Clockspring connector(s). Is the resistance below 1.0 ohm on both circuits? Yes → Go To 5 No → Repair open or high resistance in the Driver Squib 1 Line 1 or Line 2 circuits. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
6	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SQUIB 1 CIRCUIT SHORT

When Monitored and Set Condition:

DRIVER SQUIB 1 CIRCUIT SHORT

When Monitored: With the ignition on, the ACM monitors the resistance of the Driver Squib 1 circuits.

Set Condition: The ACM has detected low resistance on the Driver Squib 1 circuits.

POSSIBLE CAUSES
DRIVER AIRBAG SQUIB 1 CIRCUIT SHORT
CLOCKSPRING, DRIVER SQUIB 1 CIRCUITS SHORT
DRIVER AIRBAG SQUIB 1 LINE 1 SHORT TO LINE 2
ACM, DRIVER SQUIB LINE 1 SHORT TO LINE 2
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 6 **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

DRIVER SQUIB 1 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the appropriate Load Tool to the Driver Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT SHORT? Yes → Go To 3 No → Replace the Driver Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Airbag connector(s). Disconnect the Clockspring connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Clockspring connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT SHORT? Yes → Go To 4 No → Replace the Clockspring in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Clockspring connector(s). Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool Adaptor to the Airbag Control Module connector(s). Measure the resistance between the Driver Squib 1 Line 1 and Line 2 at the Clockspring connector. Is the resistance below 10K ohms? Yes → Repair the Driver Squib 1 Line 1 circuit shorted to Driver Squib 1 Line 2 circuit. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 5	All

DRIVER SQUIB 1 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
5	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
6	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SQUIB 1 SHORT TO BATTERY

When Monitored and Set Condition:

DRIVER SQUIB 1 SHORT TO BATTERY

When Monitored: With the ignition on, the ACM monitors the voltage of the Driver Squib 1 circuits.

Set Condition: The ACM has detected high voltage on the Driver Squib 1 circuits.

POSSIBLE CAUSES
DRIVER AIRBAG SQUIB 1 SHORT TO BATTERY
CLOCKSPRING, DRIVER SQUIB 1 SHORT TO BATTERY
DRIVER SQUIB 1 LINE 1 OR LINE 2 SHORT TO BATTERY
ACM, DRIVER SQUIB 1 SHORT TO BATTERY
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED ACM DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

DRIVER SQUIB 1 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Airbag Squib connector(s). **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Driver Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 SHORT TO BATTERY? Yes → Go To 3 No → Replace the Driver Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Airbag connector(s). Disconnect the Clockspring connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Clockspring connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 SHORT TO BATTERY ? Yes → Go To 4 No → Replace the Clockspring in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

DRIVER SQUIB 1 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Disconnect the Load Tool from the Clockspring connector(s). Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool Adaptor to the Airbag Control Module connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage on the Driver Squib 1 Line 1 and Line 2 circuits between the Clockspring connector and ground. Is there any voltage present? Yes → Repair the Driver Squib 1 Line 1 or Line 2 circuits shorted to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
DRIVER SQUIB 1 SHORT TO GROUND

When Monitored and Set Condition:

DRIVER SQUIB 1 SHORT TO GROUND

When Monitored: With the ignition on, the ACM monitors the resistance of the Driver Squib 1 circuits.

Set Condition: When the ACM detects a short to ground in either Driver Squib 1 circuits.

POSSIBLE CAUSES
DRIVER AIRBAG SQUIB 1 SHORT TO GROUND
CLOCKSPRING, DRIVER SQUIB 1 SHORT TO GROUND
DRIVER SQUIB 1 LINE 1 OR LINE 2 SHORTED TO GROUND
ACM, DRIVER SQUIB 1 SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 6 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

DRIVER SQUIB 1 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Driver Airbag Squib connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the appropriate Load Tool to the Driver Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 SHORT TO GROUND? Yes → Go To 3 No → Replace the Driver Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Driver Airbag connector(s). Disconnect the Clockspring connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Clockspring connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show DRIVER SQUIB 1 SHORT TO GROUND? Yes → Go To 4 No → Replace the Clockspring in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Clockspring connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool Adaptor to the Airbag Control Module connector. Measure the resistance of the Driver Squib 1 Line 1 and Line 2 circuits between Clockspring connector and ground. Is the resistance below 10K ohms on either circuit? Yes → Repair Driver Squib 1 Line 1 or Line 2 circuits shorted to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 5	All

DRIVER SQUIB 1 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
5	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT, PERSONAL INJURY OR DEATH, .** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
6	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
LEFT CURTAIN OR SEAT SQUIB CIRCUIT OPEN

When Monitored and Set Condition:

LEFT CURTAIN OR SEAT SQUIB CIRCUIT OPEN

When Monitored: With the ignition on, the ACM monitors the resistance of the Left Seat Squib circuits.

Set Condition: When the ACM detects an open circuit or high resistance on the Left Seat Squib circuits.

POSSIBLE CAUSES
LEFT CURTAIN OR SEAT SQUIB CIRCUIT OPEN
LEFT CURTAIN OR SEAT SQUIB LINE 1 OR LINE 2 CIRCUIT OPEN
ACM, LEFT CURTAIN OR SEAT SQUIB CIRCUIT OPEN
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure that the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

LEFT CURTAIN OR SEAT SQUIB CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool to the Left Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** **NOTE: Check connectors - Clean and repair as necessary.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® show LEFT CURTAIN OR SEAT SQUIB SEAT OPEN? Yes → Go To 3 No → Replace Left Curtain or Seat Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Airbag Load Tool from the Left Curtain or Seat Airbag connector. Disconnect the Airbag Control Module Connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adapter to the Airbag Control Module connector(s). Measure the resistance of the Curtain or Seat Squib Line 1 and Line 2 circuits between the Load Tool ACM adaptor and the Curtain or Seat Airbag connector. Is the resistance below 1.0 ohms on both circuits? Yes → Go To 4 No → Repair open or high resistance in the Left Curtain or Seat Squib Line 1 or Line 2 circuits. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LEFT CURTAIN OR SEAT SQUIB CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
LEFT CURTAIN OR SEAT SQUIB CIRCUIT SHORT

When Monitored and Set Condition:

LEFT CURTAIN OR SEAT SQUIB CIRCUIT SHORT

When Monitored: With the ignition on, the ACM monitors the resistance between the Left Seat Squib circuits.

Set Condition: When the ACM detects a low resistance between the Left Seat Squib circuits.

POSSIBLE CAUSES
LEFT CURTAIN OR SEAT SQUIB CKT SHORT
LEFT CURTAIN OR SEAT SQUIB LINE 1 SHORTED TO LINE 2
ACM, LEFT CURTAIN OR SEAT SQUIB CIRCUIT SHORT
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure that the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

LEFT CURTAIN OR SEAT SQUIB CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Curtain or Seat Airbag connector. **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool to the Left Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® display LEFT CURTAIN OR SEAT SQUIB CIRCUIT SHORT? Yes → Go To 3 No → Replace the Left Curtain or Seat Airbag in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Disconnect the Load Tool from the Left Curtain or Seat Airbag connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM adaptor to the ACM connector(s). Measure the resistance of the Left Curtain or Seat Squib Line 1 and Line 2 circuits at the Left Curtain or Seat Airbag connector. Is the resistance below 10K ohms? Yes → Repair Left Curtain or Seat Squib Line 1 shorted to Line 2. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LEFT CURTAIN OR SEAT SQUIB CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
LEFT CURTAIN OR SEAT SQUIB SHORT TO BATTERY

When Monitored and Set Condition:

LEFT CURTAIN OR SEAT SQUIB SHORT TO BATTERY

When Monitored: With the ignition on, the ACM monitors the voltage of the Left Seat Squib circuits.

Set Condition: When the ACM detects voltage on the Left Seat Squib circuits.

POSSIBLE CAUSES
LEFT CURTAIN OR SEAT SQUIB SHORT TO BATTERY
LEFT CURTAIN OR SEAT SQUIB LINE 1 OR LINE 2 SHORT TO BATTERY
ACM, LEFT CURTAIN OR SEAT SQUIB SHORT TO BATTERY
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure that the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

LEFT CURTAIN OR SEAT SQUIB SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Curtain or Seat Airbag connector. **NOTE: Check connectors - Clean repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool to the Left Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® show LEFT CURTAIN OR SEAT SQUIB SHORT TO BATTERY? Yes → Go To 3 No → Replace Left Curtain or Seat Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Disconnect the Airbag Load Tool from the Left Curtain or Seat Airbag connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adapter to the ACM connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, THEN RECONNECT THE BATTERY.** Measure the voltage on the Left Curtain or Seat Squib Line 1 and Line 2 circuits between the Left Curtain or Seat Airbag connector and ground. Is there any voltage on either circuit? Yes → Repair Left Curtain or Seat Squib Line 1 or Line 2 circuits short to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LEFT CURTAIN OR SEAT SQUIB SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
LEFT CURTAIN OR SEAT SQUIB SHORT TO GROUND

When Monitored and Set Condition:

LEFT CURTAIN OR SEAT SQUIB SHORT TO GROUND

When Monitored: With the ignition on, the ACM monitors the resistance of the Left Seat Squib circuits.

Set Condition: When the ACM detects low resistance in either Left Seat Squib circuits.

POSSIBLE CAUSES
LEFT CURTAIN OR SEAT SQUIB SHORT TO GROUND
LEFT SEAT SQUIB LINE 1 OR LINE 2 SHORTED TO GROUND
ACM, LEFT CURTAIN OR SEAT SQUIB SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure that the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

LEFT CURTAIN OR SEAT SQUIB SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Curtain or Seat Airbag connector. **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool to the Left Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® display LEFT CURTAIN OR SEAT SQUIB SHORT TO GROUND? Yes → Go To 3 No → Replace the Left Curtain or Seat Airbag in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Disconnect the Load Tool from the Left Curtain or Seat Airbag connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM adaptor to the ACM connector(s). Measure the resistance of the Left Curtain or Seat Squib Line 1 and Line 2 circuits between the Left Curtain or Seat Airbag connector and ground. Is the resistance below 10K ohms on either circuit? Yes → Repair Left Seat Squib Line 1 or Line 2 shorted to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LEFT CURTAIN OR SEAT SQUIB SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
LEFT SIDE IMPACT SENSOR 1 INTERNAL 1

When Monitored and Set Condition:

LEFT SIDE IMPACT SENSOR 1 INTERNAL 1

When Monitored: At ignition on, the Left Side Impact Sensor 1 is equipped with onboard diagnostics to monitor the sensors internal circuits. If a problem is identified the sensor sends the Left Side Impact Sensor 1 internal 1 message to the ACM.

Set Condition: The code will set, if the ACM receives an Impact Sensor Internal 1 message from the Left Side Impact Sensor 1.

POSSIBLE CAUSES
ACM, LEFT SIDE IMPACT SENSOR 1
REPAIR IS COMPLETE
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 4 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Replace the Left Side Impact Sensor 1. Reconnect the vehicle wire harness to the impact sensor. Remove any special tools or jumper wires and reconnect all previously disconnected components - except the Battery. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Connect the DRB to the Data Link Connector - use the most current software available. Use the DRB III and erase the stored codes in all airbag system modules. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On. Wait one minute, and read active codes and if there are none present read the stored codes. DID the active Left Side Impact Sensor 1 DTC return? Yes → Go To 3 No → Repair is complete. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LEFT SIDE IMPACT SENSOR 1 INTERNAL 1 — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
LOSS OF IGNITION RUN - START

When Monitored and Set Condition:

LOSS OF IGNITION RUN - START

When Monitored: With the ignition in the Run-Start position the ACM monitors the Fused Ignition Switch Output Run-Start circuit for proper system voltage.

Set Condition: If the voltage on the Fused Ignition Switch Output Run-Start circuit drops below approximately 6.0 volts, the code will set.

POSSIBLE CAUSES
FUSED IGNITION SW OUTPUT RUN-START SHORT TO GROUND
IGNITION SWITCH RUN - START CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT RUN-START CIRCUIT OPEN
ACM, FUSED IGNITION OUTPUT RUN-START CIRCUIT OPEN
ACM, RUN - START SHORTED TO GROUND
FUSED IGNITION SWITCH OUTPUT RUN - START CIRCUIT SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Ensure the battery is fully charged. Turn the ignition on. **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** DETERMINE ACTIVE OR STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 8 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Turn Ignition off. Remove and inspect the Airbag Run - Start Fuse. **NOTE: Check connectors - Clean and repair as necessary.** Is the Fuse open? Yes → Go To 3 No → Go To 5	All

LOSS OF IGNITION RUN - START — Continued

TEST	ACTION	APPLICABILITY
3	Measure the resistance of the Fused Ignition Switch Output Run-Start circuit between the Airbag Run - Start Fuse and ground. Is the resistance below 10.0 ohms? Yes → Go To 4 No → Replace Airbag Run - Start Fuse. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Disconnect the Airbag Control Module connector **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance of the Fused Ignition Switch Output Run-Start circuit between the ACM Adaptor and ground. Is the resistance below 10K ohms? Yes → Repair the Fused Ignition Switch Output Run - Start circuit short to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
5	Turn the ignition on. Measure the voltage of the Ignition Switch Output circuit at the Airbag Run - Start fuse. Is the voltage above approximately 6.0 volts? Yes → Go To 6 No → Repair the open Ignition Switch Output Run - Start circuit. Perform __AIRBAG VERIFICATION TEST - VER 1. **NOTE: Reinstall the fuse after performing this test.**	All

LOSS OF IGNITION RUN - START — Continued

TEST	ACTION	APPLICABILITY
6	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Disconnect the Airbag Control Module connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Reinstall the previously removed Airbag Run-Start Fuse. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Fused Ignition Switch Output Run - Start Circuit at the ACM Adaptor. Is the voltage above approximately 6.0 volts? Yes → Go To 7 No → Repair open Fused Ignition Switch Output Run-Start circuit. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
7	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LOSS OF IGNITION RUN - START — Continued

TEST	ACTION	APPLICABILITY
8	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
LOSS OF IGNITION RUN ONLY

When Monitored and Set Condition:

LOSS OF IGNITION RUN ONLY

When Monitored: With the ignition in the run position the module monitors the Run Only circuit for proper system voltage.

Set Condition: If the voltage on the Run Only circuit drops below 6.0 volts, the code will set.

POSSIBLE CAUSES
IGNITION SWITCH OUTPUT RUN CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT RUN CIRCUIT OPEN
ACM, FUSED IGNITION OUTPUT RUN CIRCUIT OPEN
CHECKING FOR A SHORTED RUN CIRCUIT
FUSED IGNITION SWITCH OUTPUT RUN CIRCUIT SHORT TO GROUND
ACM, FUSED IGNITION RUN CIRCUIT SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Ensure the battery is fully charged. **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** DETERMINE ACTIVE OR STORED DTC: ACM - ACTIVE DTC: Go To 2 ACM - STORED DTC Go To 9 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Turn the ignition off. Remove and inspect the Airbag Run circuit fuse. Is the Fuse open? Yes → Go To 3 No → Go To 6	All

LOSS OF IGNITION RUN ONLY — Continued

TEST	ACTION	APPLICABILITY
3	Remove the Airbag Run fuse. **NOTE: Check connectors - Clean and repair as necessary.** Measure the resistance of the Fused Ignition Switch Output Run circuit between the Run Fuse and ground. Is the resistance below 10.0 ohms? Yes → Go To 4 No → Replace the defective fuse. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Airbag Control Module connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance of the Fused Ignition Switch Output Run circuit between the ACM connector and ground. Is the resistance below 10K ohms? Yes → Repair the Fused Ignition Switch Output Run circuit for a short to ground and replace Airbag Run Fuse. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 5	All
5	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions and replace the Run Only Fuse. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
6	Turn the ignition on. Measure the voltage of the Ignition Switch Output Run circuit between the Airbag Run circuit fuse and ground. Is the voltage above approximately 6.0 volts? Yes → Go To 7 No → Repair the open Ignition Switch Output Run circuit. Then reinstall the Ignition Switch Output Run fuse. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LOSS OF IGNITION RUN ONLY — Continued

TEST	ACTION	APPLICABILITY
7	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Airbag Control Module connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Reinstall the airbag Run fuse. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Fused Ignition Switch Output Run circuit at the Airbag Control Module connector. Is the voltage above approximately 6.0 volts? Yes → Go To 8 No → Repair the open or high resistance in the Fused Ignition Switch Output Run circuit. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
8	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

LOSS OF IGNITION RUN ONLY — Continued

TEST	ACTION	APPLICABILITY
9	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
NO CLUSTER MESSAGE

When Monitored and Set Condition:

NO CLUSTER MESSAGE

When Monitored: With ignition on, the ACM monitors the PCI Bus for a message from the MIC containing the airbag warning indicator status. The MIC transmits the message one time at ignition on, lamp state change, or in response to the ACM message.

Set Condition: If the MIC message is not received for 10 consecutive seconds, the code will set.

POSSIBLE CAUSES
MIC, COMMUNICATION FAILURE
ACM, NO CLUSTER MESSAGES
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 4 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Turn the ignition on. With the DRBIII®, ensure PCI Bus communications with the Instrument Cluster. Is the Instrument Cluster communicating on the PCI Bus? Yes → Go To 3 No → Refer to category COMMUNICATION CATEGORY and select the related symptom NO RESPONSE or INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

NO CLUSTER MESSAGE — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, TO AVOID PERSONAL INJURY OR DEATH, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1. **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
NO LEFT SIDE IMPACT SENSOR 1 COMMUNICATION

When Monitored and Set Condition:

NO LEFT SIDE IMPACT SENSOR 1 COMMUNICATION

When Monitored: The ACM continuously communicates with the Left Side Impact Sensor 1 over the sensor signal circuit. The sensor communication and onboard diagnostics are powered by the ACM signal.

Set Condition: The code will set, if the ACM and Left Side Impact Sensor 1 do not establish and maintain valid data communications.

POSSIBLE CAUSES
SIGNAL CIRCUIT SHORTED TO BATTERY
SIGNAL CIRCUIT SHORT TO GROUND
LEFT SIDE SENSOR CIRCUITS SHORTED TOGETHER
GROUND CIRCUIT OPEN
SIGNAL CIRCUIT OPEN
ACM, LEFT SIDE IMPACT SENSOR
REPAIR IS COMPLETE
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 9 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

NO LEFT SIDE IMPACT SENSOR 1 COMMUNICATION — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Side Impact Sensor connector. Disconnect the Airbag Control Module connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Left Side Impact Sensor Signal circuit and sensor ground circuit at the Left Side Sensor connector and ground. Is there any voltage present? Yes → Repair the Left Side Impact Sensor circuits shorted to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 3	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the resistance of the Left Side Impact Sensor Signal circuit between the Left Side Impact Sensor connector and ground. Is the resistance below 100K ohms? Yes → Repair the Left Side Impact Sense signal circuit shorted for a short to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	Measure the resistance between the Left Side Impact Sensor Signal and Sensor Ground circuits at the Left Side Impact Sensor connector. Is the resistance below 100K ohms? Yes → Repair the Left Side Impact Sensor circuits shorted together. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 5	All
5	Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector. Measure the resistance of the Left Side Impact Sensor Ground circuit between the Left Side Impact Sensor connector and the Load Tool ACM Adaptor. Is the resistance below 1 ohm? Yes → Go To 6 No → Repair the Left Side Impact Sensor Ground circuit open or high resistance. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
6	Measure the resistance of the Left Side Impact Sensor Signal circuit between the Left Side Impact Sensor connector and the Load Tool ACM Adaptor. Is the resistance below 1 ohm? Yes → Go To 7 No → Repair the Left Side Impact Sensor Signal circuit open or high resistance. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

NO LEFT SIDE IMPACT SENSOR 1 COMMUNICATION — Continued

TEST	ACTION	APPLICABILITY
7	Replace the Left Side Impact Sensor. Reconnect the vehicle body harness to the impact sensor. Remove any special tools or jumper wires and reconnect all previously disconnected components - except the Battery. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Connect the DRB to the Data Link Connector - use the most current software available. Use the DRB III and erase the stored codes in all airbag system modules. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On. Wait one minute, and read active codes and if there are none present read the stored codes. DID the active Left Side Impact Sensor DTC return? Yes → Go To 8 No → Repair is complete. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
8	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

NO LEFT SIDE IMPACT SENSOR 1 COMMUNICATION — Continued

TEST	ACTION	APPLICABILITY
9	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
NO ODOMETER MESSAGE

When Monitored and Set Condition:

NO ODOMETER MESSAGE

When Monitored: With ignition on, the ACM monitors the PCI Bus for the Odometer message from the Body Control Module. The PCM transmits the odometer message at 1 second intervals.

Set Condition: The code will set, if the ACM does not see the odometer message for 10 seconds.

POSSIBLE CAUSES
PCM, PCI COMMUNICATION FAILURE
NO ODOMETER MESSAGE
STORED CODE OR INTERMITTENT CONDITION
ACM, NO ODOMETER MESSAGE
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure that the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** Turn the ignition on. SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Connect the DRBIII® to the data link connector and select PASSIVE RESTRAINTS, AIRBAG, SYSTEM TEST. With the DRBIII®, read the PCM Active on the Bus:. Does the DRB show PCM ACTIVE ON THE BUS? Yes → Go To 3 No → Refer to category ″ COMMUNICATION CATEGORY″ and select the related symptom. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

NO ODOMETER MESSAGE — Continued

TEST	ACTION	APPLICABILITY
3	With the DRB select ENGINE, MISCELLANEOUS, SELECT MISC FUNCTION, and then CHECK VIN to read the Vehicle Identification Number in the Powertrain Control Module. Compare the VIN displayed on the DRB screen and the Vehicle VIN plate. Does the VIN plate and the PCM VIN match? Yes → Go To 4 No → Replace the Powertrain Control Module and program with the correct vehicle identification number. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1. **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

NO ODOMETER MESSAGE — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
NO PCI TRANSMISSION

When Monitored and Set Condition:

NO PCI TRANSMISSION

When Monitored: With the ignition on and the module transmitting information on the BUS.

Set Condition: The code will set immediately if the onboard diagnostic cannot detect the module transmitting information on the BUS. NOTE: Any Bus Failure will may cause a stored code to set.

POSSIBLE CAUSES
AIRBAG CONTROL MODULE - ACM
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** From the list below, select the appropriate module and DTC type for the this diagnostic trouble code. DETERMINE ACTIVE OR STORED DTC ACM - ACTIVE Go To 2 ACM - STORED Go To 3 **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRE-CAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

NO PCI TRANSMISSION — Continued

TEST	ACTION	APPLICABILITY
3	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
NO RIGHT SIDE IMPACT SENSOR 1 COMMUNICATION

When Monitored and Set Condition:

NO RIGHT SIDE IMPACT SENSOR 1 COMMUNICATION

When Monitored: The ACM continuously communicates with the Right Side Impact Sensor 1 over the sensor signal circuit. The sensor communication and onboard diagnostics are powered by the ACM signal.

Set Condition: The code will set, if the ACM and Right Side Impact Sensor 1 do not establish and maintain valid data communications.

POSSIBLE CAUSES
SIGNAL CIRCUIT SHORTED TO BATTERY
SIGNAL CIRCUIT SHORT TO GROUND
RIGHT SIDE SENSOR CIRCUITS SHORTED TOGETHER
GROUND CIRCUIT OPEN
SIGNAL CIRCUIT OPEN
ACM, RIGHT SIDE IMPACT SENSOR
REPAIR IS COMPLETE
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 9 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

NO RIGHT SIDE IMPACT SENSOR 1 COMMUNICATION — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Side Impact Sensor connector. Disconnect the Airbag Control Module connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Right Side Impact Sensor Signal circuit and sensor ground at the Right Side Impact Sensor connector. Is there any voltage present? Yes → Repair the Right Side Impact Sensor Signal circuit shorted to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 3	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the resistance of the Right Side Impact Sensor Signal circuit between the Right Side Impact Sensor connector and ground. Is the resistance below 100K ohms? Yes → Repair the Right Side Sense signal circuit shorted for a short to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	Measure the resistance between the Right Side Impact Sensor Signal and Sensor Ground circuits at the Right Side Impact Sensor connector. Is the resistance below 100K ohms? Yes → Repair the Right Side Impact Sensor circuits shorted together. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 5	All
5	Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector. Measure the resistance of the Right Side Impact Sensor Ground circuit between the Right Side Impact Sensor connector and the Load Tool adaptor. Is the resistance below 1 ohm? Yes → Go To 6 No → Repair the Right Side Impact Sensor Ground circuit open or high resistance. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
6	Measure the resistance of the Right Side Impact Sensor Signal circuit between the Right Side Impact Sensor connector and the Load Tool adaptor. Is the resistance below 1 ohm? Yes → Go To 7 No → Repair the Right Side Impact Sensor Signal circuit open or high resistance. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

NO RIGHT SIDE IMPACT SENSOR 1 COMMUNICATION — Continued

TEST	ACTION	APPLICABILITY
7	Replace the Right Side Impact Sensor. Reconnect the vehicle body harness to the impact sensor. Remove any special tools or jumper wires and reconnect all previously disconnected components - except the Battery. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Connect the DRB to the Data Link Connector - use the most current software available. Use the DRB III and erase the stored codes in all airbag system modules. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On. Wait one minute, and read active codes and if there are none present read the stored codes. DID the active Right Side Impact Sensor DTC return? Yes → Go To 8 No → Repair is complete. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
8	**WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

NO RIGHT SIDE IMPACT SENSOR 1 COMMUNICATION — Continued

TEST	ACTION	APPLICABILITY
9	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SEAT BELT TENSIONER CIRCUIT OPEN

When Monitored and Set Condition:

PASSENGER SEAT BELT TENSIONER CIRCUIT OPEN

When Monitored: With the ignition on, the ACM monitors the resistance of the Passenger Seat Belt Tensioner circuits.

Set Condition: When the ACM detects an open circuit or high resistance in the Passenger Seat Belt Tensioner circuits.

POSSIBLE CAUSES
PASSENGER SEAT BELT TENSIONER CIRCUIT OPEN
PASSENGER SEAT BELT TENSIONER LINE 1 OR LINE 2 CIRCUIT OPEN
ACM, PASSENGER SEAT BELT TENSIONER CIRCUIT OPEN
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Passenger Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® display PASSENGER SBT CIRCUIT OPEN? Yes → Go To 3 No → Replace the Passenger Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SEAT BELT TENSIONER CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger SBT connector. Disconnect the Airbag control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector. Measure the resistance of the Passenger Seat Belt Tensioner Line 1 and Line 2 circuits between the Load Tool Adaptor and the Passenger SBT connector. Is the resistance below 1.0 ohms on either circuit ? Yes → Go To 4 No → Repair open or high resistance in Passenger Seat Belt Tensioner Line 1 or Line 2 circuits. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SEAT BELT TENSIONER CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SEAT BELT TENSIONER CIRCUIT SHORT

When Monitored and Set Condition:

PASSENGER SEAT BELT TENSIONER CIRCUIT SHORT

When Monitored: With the ignition on, the ACM monitors the resistance between the Passenger Seat Belt Tensioner circuits.

Set Condition: When the ACM detects low resistance in the Passenger Seat Belt Tensioner circuits.

POSSIBLE CAUSES
PASSENGER SEAT BELT TENSIONER LINE 1 SHORT TO LINE 2
PASSENGER SEAT BELT TENSIONER CIRCUIT SHORT
ACM, PASSENGER SEAT BELT TENSIONER CIRCUIT SHORT
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Passenger Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show PASSENGER SEAT BELT TENSIONER CIRCUIT SHORT? Yes → Go To 3 No → Replace the Passenger Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SEAT BELT TENSIONER CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger Seat Belt Tensioner connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance between the Passenger SBT Line 1 and line 2 circuit at the Passenger Seat Belt Tensioner connector. Is the resistance below 10K ohms? Yes → Repair the Passenger Seat Belt Tensioner Line 1 short to Line 2 circuit. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SEAT BELT TENSIONER CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SEAT BELT TENSIONER SHORT TO BATTERY

When Monitored and Set Condition:

PASSENGER SEAT BELT TENSIONER SHORT TO BATTERY

When Monitored: When the ignition is on, the ACM monitors the voltage of the Passenger Seat Belt Tensioner circuits.

Set Condition: When the ACM detects voltage on the Passenger Seat Belt Tensioner circuits.

POSSIBLE CAUSES
PASSENGER SEAT BELT TENSIONER SHORT TO BATTERY
PASSENGER SEAT BELT TENSIONER LINE 1 OR LINE 2 SHORT TO BATTERY
ACM, PASSENGER SBT SHORT TO BATTERY
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Passenger Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® display PASSENGER SBT SHORT TO BATTERY? Yes → Go To 3 No → Replace the Passenger Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SEAT BELT TENSIONER SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger Seat Belt Tensioner connector. Disconnect the Airbag Control Module Connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Passenger SBT Line 1 and Line 2 circuits between the Passenger Seat Belt Tensioner connector and ground. Is there any voltage on either circuit? Yes → Repair the Passenger Seat Belt Tensioner Line 1 or Line 2 short to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SEAT BELT TENSIONER SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SEAT BELT TENSIONER SHORT TO GROUND

When Monitored and Set Condition:

PASSENGER SEAT BELT TENSIONER SHORT TO GROUND

When Monitored: With the ignition on, the ACM monitors the resistance of the Passenger Seat Belt Tensioner circuits.

Set Condition: When the ACM detects la short to ground in either Passenger Seat Belt Tensioner circuits.

POSSIBLE CAUSES
PASSENGER SEAT BELT TENSIONER SHORT TO GROUND
PASSENGER SEAT BELT TENSIONER LINE 1 OR LINE 2 SHORTED TO GROUND
ACM, PASSENGER SBT SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 4 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Seat Belt Tensioner connector. **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool to the Passenger Seat Belt Tensioner connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® display PASSENGER SBT SHORT TO GROUND? Yes → Go To 3 No → Replace the Passenger Seat Belt Tensioner in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SEAT BELT TENSIONER SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger Seat Belt Tensioner connector. Disconnect the Airbag Control Module Connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance of the Passenger Seat Belt Tensioner Line 1 and Line 2 circuits between the Passenger SBT connector and ground. Is the resistance below 10K Ohms on either circuit? Yes → Repair the Passenger Seat Belt Tensioner Line 1 or Line 2 short to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Replace the Airbag Control Module in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SQUIB 1 CIRCUIT OPEN

When Monitored and Set Condition:

PASSENGER SQUIB 1 CIRCUIT OPEN

When Monitored: With the ignition on, the ACM monitors the resistance of the Passenger Squib 1 circuits.

Set Condition: When the ACM detects an open circuit or high resistance on the Passenger Squib 1 circuits.

POSSIBLE CAUSES
PAB SQUIB 1 CIRCUIT OPEN
PAB SQUIB 1 LINE 1 OR LINE 2 CIRCUIT OPEN
ACM, PAB SQUIB 1 CIRCUIT OPEN
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

PASSENGER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the Load Tool to the Passenger Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show PASSENGER SQUIB 1 CIRCUIT OPEN? Yes → Go To 3 No → Replace the Passenger Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger Airbag connector(s). Disconnect the Airbag Control module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the Load Tool ACM Adaptor to the Airbag Control Module connector(s). Measure the resistance of the Passenger Squib 1 Line 1 and Line 2 circuit between the ACM Adaptor and the Passenger Airbag connector. Is the resistance below 1.0 ohms on both circuits? Yes → Go To 4 No → Repair open or high resistance in Passenger Squib 1 Line 1 or Line 2 circuits. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SQUIB 1 CIRCUIT SHORT

When Monitored and Set Condition:

PASSENGER SQUIB 1 CIRCUIT SHORT

When Monitored: With the ignition on, the ACM monitors the resistance between the Passenger Squib 1 circuits.

Set Condition: When the ACM detects low resistance in the Passenger Squib 1 circuits.

POSSIBLE CAUSES
PAB SQUIB 1 CIRCUIT SHORT
PAB SQUIB 1 LINE 1 SHORT TO LINE 2
ACM, PAB SQUIB 1 CIRCUIT SHORT
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

PASSENGER SQUIB 1 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the appropriate Load Tool to the Passenger Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show PASSENGER SQUIB 1 CIRCUIT SHORT? Yes → Go To 3 No → Replace the Passenger Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger Airbag connector(s). Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool Adapter to the Airbag Control Module connector(s). Measure the resistance between Passenger Squib 1 Line 1 and Line 2 circuits at the Passenger Airbag connector. Is the resistance below 10K ohms? Yes → Repair Passenger Squib 1 Line 1 circuit short to Passenger Squib 1 Line 2 circuit. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SQUIB 1 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SQUIB 1 SHORT TO BATTERY

When Monitored and Set Condition:

PASSENGER SQUIB 1 SHORT TO BATTERY

When Monitored: With the ignition on, the ACM monitors the voltage on the Passenger Squib 1 circuits.

Set Condition: When the ACM detects voltage on the Passenger Squib 1 circuits.

POSSIBLE CAUSES
PAB SQUIB 1 CIRCUITS SHORT TO BATTERY
PAB SQUIB 1 LINE 1 OR LINE 2 SHORT TO BATTERY
ACM, PAB SQUIB 1 CIRCUIT SHORT TO BATTERY
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

PASSENGER SQUIB 1 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the appropriate Load Tool to the Passenger Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show PASSENGER SQUIB 1 CIRCUIT SHORT TO BATTERY? Yes → Go To 3 No → Replace Passenger Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger Airbag connector(s). Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool Adaptor to the Airbag Control Module connector(s). **WARNING: AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage on the Passenger Squib 1 Line 1 and Line 2 circuits between the Passenger Airbag connector and ground. Is there any voltage present? Yes → Repair Passenger Squib 1 Line 1 or Line 2 circuit short to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SQUIB 1 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
PASSENGER SQUIB 1 SHORT TO GROUND

When Monitored and Set Condition:

PASSENGER SQUIB 1 SHORT TO GROUND

When Monitored: With the ignition on, the ACM monitors the resistance of the Passenger Squib 1 circuits.

Set Condition: When the ACM detects a short to ground in either Passenger Squib 1 circuits.

POSSIBLE CAUSES
PAB SQUIB 1 CIRCUITS SHORT TO GROUND
PAB SQUIB 1 LINE 1 OR LINE 2 SHORT TO GROUND
ACM, PAB SQUIB 1 SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

PASSENGER SQUIB 1 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Passenger Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the appropriate Load Tool to the Passenger Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active Airbag Control Module DTC's. Does the DRBIII® show PASSENGER SQUIB 1 SHORT TO GROUND? Yes → Go To 3 No → Replace the Passenger Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Passenger Airbag connector(s). Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean repair as necessary.** Connect the appropriate Load Tool Adaptor to the Airbag Control Module connector. Measure the resistance of the Passenger Squib 1 Line 1 or Line 2 circuit between the Passenger Airbag Module Connector and ground. Is the resistance below 10K ohms on either circuit? Yes → Repair Passenger Squib 1 Line 1 and Line 2 circuits for a short to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

PASSENGER SQUIB 1 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
POWER SUPPLY VOLTAGE LOW

When Monitored and Set Condition:

POWER SUPPLY VOLTAGE LOW

When Monitored: The ACM continuously monitors the Ignition Run - Start and Run Only circuits to guarantee that the Side Impact Sensors will have sufficient voltage to function properly.

Set Condition: Once both ignition feeds into the ACM are determined to be below 7.4 volts, with at least one above 5.5 volts. The code will remain set until at least one ignition circuit is above 8.0 volts.

POSSIBLE CAUSES
RUN OR RUN - START ACTIVE TROUBLE CODES
RUN AND RUN - START CIRCUITS VOLTAGE LOW
ACM, LOW SUPPLY VOLTAGE
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Ensure the battery is fully charged. **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** Repair all Ignition Run and Run-Start circuit DTCs before performing this test. SELECT ACTIVE OR STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	With the DRBIII®, read the active DTCs. **NOTE: A Diagnostic trouble code will set if the voltage on the Ignition Run or Run - Start circuits is less than 5.5 volts** Verify that all Ignition Run and Run - Start circuits DTCs have been repaired before performing the ACTIVE Power Supply Voltage Low DTC. Any active Run or Run - Start codes? Yes → Refer to symptom list for problems related to Fused Ignition Switch Output Run and Run - Start circuits. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 3	All

POWER SUPPLY VOLTAGE LOW — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Using a 12-volt test light connected to ground, check the Run and Run - Start circuits at the ACM adaptor. The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery. Does the test light illuminate brightly on both circuits? Yes → Go To 4 No → Repair the open or high resistance in the Fused Ignition Switch Output Run and Run - Start circuits. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

POWER SUPPLY VOLTAGE LOW — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:

RIGHT CURTAIN OR SEAT SQUIB CIRCUIT OPEN

When Monitored and Set Condition:

RIGHT CURTAIN OR SEAT SQUIB CIRCUIT OPEN

When Monitored: With the ignition on, the ACM monitors the resistance of the Right Seat Squib circuits.

Set Condition: When the ACM detects an open circuit or high resistance on the Right Seat Squib circuits.

POSSIBLE CAUSES
RIGHT CURTAIN OR SEAT SQUIB CIRCUIT OPEN
RIGHT CURTAIN OR SEAT SQUIB LINE 1 OR LINE 2 CIRCUIT OPEN
ACM, RIGHT CURTAIN OR SEAT SQUIB CIRCUIT OPEN
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 IACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

RIGHT CURTAIN OR SEAT SQUIB CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Curtain or Seat Airbag connector. **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool to the Right Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® show RIGHT CURTAIN OR SEAT SQUIB CIRCUIT OPEN? Yes → Go To 3 No → Replace Right Curtain or Seat Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Airbag Load Tool from the Right Curtain or Seat Airbag connector. Disconnect the Airbag Control Module Connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the Airbag Control Module connector. Measure the resistance of the Right Curtain or Seat Squib Line 1 and Line 2 circuits between the Load Tool ACM adaptor and the Right Curtain or Seat Airbag connector. Is the resistance below 1.0 ohms on both circuits? Yes → Go To 4 No → Repair open or high resistance in the Right Curtain or Seat Squib Line 1 or Line 2 circuits. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with the Service information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

RIGHT CURTAIN OR SEAT SQUIB CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
RIGHT CURTAIN OR SEAT SQUIB CIRCUIT SHORT

When Monitored and Set Condition:

RIGHT CURTAIN OR SEAT SQUIB CIRCUIT SHORT

When Monitored: With the ignition on, the ACM monitors the resistance between the Right Seat Squib circuits.

Set Condition: When the ACM detects a low resistance between the Right Seat Squib circuits.

POSSIBLE CAUSES
RIGHT SEAT SQUIB CIRCUIT SHORT
RIGHT CURTAIN OR SEAT SQUIB LINE 1 SHORT TO LINE 2
ACM, RIGHT CURTAIN OR SEAT SQUIB CIRCUIT SHORT
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

RIGHT CURTAIN OR SEAT SQUIB CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Curtain or Seat Airbag connector. **NOTE: Check connectors - Clean repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool to the Right Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® show RIGHT CURTAIN OR SEAT SQUIB CIRCUIT SHORT? Yes → Go To 3 No → Replace Right Seat Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Load Tool from the Right Curtain or Seat Airbag connector(s). Disconnect the Airbag Control Module connector **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool ACM Adaptor to the ACM connector(s). Measure the resistance between the Right Curtain or Seat Squib Line 1 and Line 2 circuits at the Right Curtain or Seat Airbag connector. Is the resistance below 10K ohms? Yes → Repair Right Curtain or Seat Squib Line 1 short to Line 2 circuit. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

RIGHT CURTAIN OR SEAT SQUIB CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
RIGHT CURTAIN OR SEAT SQUIB SHORT TO BATTERY

When Monitored and Set Condition:

RIGHT CURTAIN OR SEAT SQUIB SHORT TO BATTERY

When Monitored: With the ignition on, the ACM monitors the voltage of the Right Seat Squib circuits.

Set Condition: When the ACM detects voltage on the Right Seat Squib circuits.

POSSIBLE CAUSES
RIGHT CURTAIN OR SEAT AIRBAG SHORT TO BATTERY
RIGHT CURTAIN OR SEAT SQUIB LINE 1 OR LINE 2 SHORTED TO BATTERY
ACM, RIGHT SEAT SQUIB SHORT TO BATTERY
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

RIGHT CURTAIN OR SEAT SQUIB SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Curtain or Seat Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED, AND COULD RESULT IN SERIOUS OR FATAL INJURY.** Connect the appropriate Load Tool to the Right Curtain or Seat Airbag connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® display RIGHT CURTAIN OR SEAT SQUIB SHORT TO BATTERY? Yes → Go To 3 No → Replace Right Curtain or Seat Airbag in accordance with the Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Airbag Load Tool from the Right Curtain or Seat Squib connector. Disconnect the Airbag Control Module connector(s). **NOTE: Check connectors - Clean and repair as necessary.** Connect the appropriate Load Tool ACM Adaptor to the ACM connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Right Curtain or Seat Squib Line 1 and Line 2 circuits between the Right Curtain or Seat Airbag connector and ground. Is any voltage present on either circuit? Yes → Repair Right Curtain or Seat Squib Line 1 or Line 2 short to battery. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

RIGHT CURTAIN OR SEAT SQUIB SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
RIGHT CURTAIN OR SEAT SQUIB SHORT TO GROUND

When Monitored and Set Condition:

RIGHT CURTAIN OR SEAT SQUIB SHORT TO GROUND

When Monitored: With the ignition on, the ACM monitors the resistance of the Right Seat Squib circuits.

Set Condition: When the ACM detects low resistance in either Right Seat Squib circuits.

POSSIBLE CAUSES
RIGHT CURTAIN OR SEAT SQUIB SHORT TO GROUND
RIGHT CURTAIN OR SEAT SQUIB LINE 1 OR LINE 2 SHORT TO GROUND
ACM, RIGHT CURTAIN OR SEAT SQUIB SHORT TO GROUND
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

RIGHT CURTAIN OR SEAT SQUIB SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
2	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Curtain or Seat Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool to the Right Curtain or Seat Airbag connector(s). **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read active Airbag Control Module DTC's. Does the DRBIII® display RIGHT CURTAIN OR SEAT SQUIB SHORT TO GROUND? Yes → Go To 3 No → Replace the Right Curtain or Seat Airbag in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Airbag Control Module connector(s). Disconnect the Load Tool from the Right Curtain or Seat Airbag connector(s). **NOTE: Check connectors - Clean and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, DO NOT PLACE AN INTACT UNDEPLOYED CURTAIN AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Connect the appropriate Load Tool ACM Adaptor to the ACM connector(s). Measure the resistance of the Right Curtain or Seat Squib Line 1 and Line 2 circuits between the Right Curtain or Seat Squib connector and ground. Is the resistance below 10K ohms on either circuit? Yes → Repair Right Curtain or Seat Squib Line 1 or Line 2 short to ground. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Go To 4	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair: Replace the Airbag Control Module in accordance with Service Information. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

RIGHT CURTAIN OR SEAT SQUIB SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
RIGHT SIDE IMPACT SENSOR INTERNAL 1

When Monitored and Set Condition:

RIGHT SIDE IMPACT SENSOR INTERNAL 1

When Monitored: At ignition on, the Right Side Impact Sensor 1 is equipped with onboard diagnostics to monitor the sensors internal circuits. If a problem is identified the sensor sends the Right Side Impact Sensor 1 internal 1 message to the ACM.

Set Condition: The code will set, if the ACM receives an Impact Sensor Internal 1 message from the right Side Impact Sensor 1.

POSSIBLE CAUSES
ACM, RIGHT SIDE IMPACT SENSOR 1
REPAIR IS COMPLETE
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Ensure the battery is fully charged.** **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 4 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Replace the Right Side Impact Sensor 1. Reconnect the vehicle body harness to the impact sensor. Remove any special tools or jumper wires and reconnect all previously disconnected components - except the Battery. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** Connect the DRB to the Data Link Connector - use the most current software available. Use the DRB III and erase the stored codes in all airbag system modules. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On. Wait one minute, and read active codes and if there are none present read the stored codes. DID the active Right Side Impact Sensor 1 Internal 1 DTC return? Yes → Go To 3 No → Test Complete.	All

RIGHT SIDE IMPACT SENSOR INTERNAL 1 — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
VEHICLE BODY STYLE MISMATCH

When Monitored and Set Condition:

VEHICLE BODY STYLE MISMATCH

When Monitored: When the ignition is on, the ACM monitors the PCI Bus for the VIN message containing the vehicle body style from the Powertrain Control Module. The PCM transmits the VIN message every 14 seconds.

Set Condition: With ignition on, If the ACM does not receive 2 consecutive matching (vehicle Body Style) VIN messages on the bus the code will set.

POSSIBLE CAUSES
PCM, PCI COMMUNICATION FAILURE
VEHICLE BODY STYLE MISMATCH
ACM, VEHICLE BODY STYLE MISMATCH
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Ensure the battery is fully charged. **NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.** SELECT ACTIVE or STORED DTC: ACM - ACTIVE DTC Go To 2 ACM - STORED DTC Go To 5 **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	Turn the ignition on. Connect the DRBIII® to the data link connector and select PASSIVE RESTRAINTS, AIRBAG, SYSTEM TEST. With the DRBIII®, read the PCM Active on the Bus:. Does the DRB show PCM ACTIVE ON THE BUS:? Yes → Go To 3 No → Refer to category COMMUNICATION CATEGORY and select the related symptom. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

VEHICLE BODY STYLE MISMATCH — Continued

TEST	ACTION	APPLICABILITY
3	With the DRB select ENGINE, MISCELLANEOUS, SELECT MISC FUNCTION, and then CHECK VIN to read the Vehicle Identification Number in the Powertrain Control Module. Compare the VIN displayed on the DRB screen and the Vehicle VIN plate. Does the VIN plate and the PCM VIN match? Yes → Go To 4 No → Replace the Powertrain Control Module and program with the correct vehicle identification number. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	**WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. FAILURE TO TAKE THE PROPER PRECAUTIONS COULD RESULT IN ACCIDENTAL AIRBAG DEPLOYMENT AND PERSONAL INJURY OR DEATH.** If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1. **NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

VEHICLE BODY STYLE MISMATCH — Continued

TEST	ACTION	APPLICABILITY
5	With the DRBIII®, record and erase all DTC's from all Airbag modules. If equipped with Passenger Airbag On - Off switch, read the DTC's in all switch positions. If any ACTIVE codes are present they must be resolved before diagnosing any stored codes. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals. The following additional checks may assist you in identifying a possible intermittent problem. Reconnect any disconnected components and harness connector. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII® monitor active codes as you work through the following steps. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, MAINTAIN A SAFE DISTANCE FROM ALL AIRBAGS WHILE PERFORMING THE FOLLOWING STEPS.** Wiggle the wiring harness and connectors of the related airbag circuit or component. If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop. IF only stored codes return continue the test until the problem area has been isolated In the previous steps you have attempted to recreate the conditions responsible for setting active DTC in question. Are any ACTIVE DTCs present? Yes → Select appropriate symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
*AIRBAG INDICATOR ON WITHOUT ACTIVE TROUBLE CODES

POSSIBLE CAUSES
AIRBAG WARNING INDICATOR ON WITHOUT ACTIVE TROUBLE CODES
INSTRUMENT CLUSTER PROBLEMS

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure the battery is fully charged.** Turn the ignition on. Make sure that all active DTC's have been repaired before performing this procedure. With the DRBIII® select the PASSIVE RESTRAINTS, AIRBAG, MONITOR DISPLAY and read the WARNING LAMP STATES. With no active DTCs, Does the LAMP REQ by ACM monitor show ON? Yes → Replace the Airbag Control Module in accordance with Service Instructions. Perform __AIRBAG VERIFICATION TEST - VER 1. No → Refer to INSTRUMENT CLUSTER CATEGORY symptom list for problems related to Instrument Cluster. Perform __AIRBAG VERIFICATION TEST - VER 1. **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

Symptom:
ALL OUTPUTS SHORT

When Monitored and Set Condition:

ALL OUTPUTS SHORT

When Monitored: Ignition in RUN and IOD fuse installed.

Set Condition: The radio has sensed a short on the output for more than 10 seconds.

POSSIBLE CAUSES
DETERMINE FAULT
FRONT SHORTED SPEAKER
I/P SHORTED SPEAKER
REAR SHORTED SPEAKER
(+) CIRCUIT SHORTED TO GROUND
(-) CIRCUIT SHORTED TO GROUND
SPEAKER (+) & (-) CIRCUITS SHORTED TOGETHER
SPEAKER SECTION OF RADIO

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Turn the Radio on. With the DRBIII®, erase the audio DTC's. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read the audio DTC's. Does the DRBIII® display ALL OUTPUTS SHORT? Yes → Go To 2 No → Refer to the wiring diagrams located in the service information to help isolate a possible intermittent short. Perform BODY VERIFICATION TEST - VER 1.	All

ALL OUTPUTS SHORT — Continued

TEST	ACTION	APPLICABILITY
2	Turn the ignition off. **NOTE: Perform this procedure after disconnecting each front speaker connector.** Disconnect each front speaker harness connector one at a time. Turn the ignition on. Turn the radio on. With the DRBIII®, erase the audio DTCs. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read DTC's. Does the DRBIII® display ALL OUTPUTS SHORT with all the front speakers disconnected? Yes → Go To 3 No → Replace the Speaker that when disconnected the DTC did not reset. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. **NOTE: Perform this procedure after disconnecting each I/P speaker connector.** Disconnect each I/P speaker harness connector one at a time. Turn the ignition on. Turn the radio on. With the DRBIII®, erase the audio DTCs. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read DTC's. Does the DRBIII® display ALL OUTPUTS SHORT with all the I/P speakers disconnected? Yes → Go To 4 No → Replace the Speaker that when disconnected the DTC did not reset. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. **NOTE: Perform this procedure after disconnecting each rear speaker connector.** Disconnect each rear speaker harness connector one at a time. Turn the ignition on. Turn the radio on. With the DRBIII®, erase the audio DTCs. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read DTC's. Does the DRBIII® display ALL OUTPUTS SHORT with all the rear speakers disconnected? Yes → Go To 5 No → Replace the Speaker that when disconnected the DTC did not reset. Perform BODY VERIFICATION TEST - VER 1.	All

ALL OUTPUTS SHORT — Continued

TEST	ACTION	APPLICABILITY
5	Turn the ignition off. Disconnect each front, I/P and rear speaker harness connector. Disconnect the Radio harness connector. Measure the resistance between ground and each speaker (+) circuit. Is the resistance below 1000.0 (1K) ohms? Yes → Repair the speaker (+) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect each front, I/P and rear speaker harness connector. Disconnect the Radio harness connector. Measure the resistance between ground and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms? Yes → Repair the speaker (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Disconnect each front, I/P and rear speaker harness connector. Disconnect the Radio harness connector. Measure the resistance between each speaker (+) circuit and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms for any of the measurements? Yes → Repair the speaker circuits shorted together. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All
8	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
ANTENNA HARDWARE FAILURE - SDARS

When Monitored and Set Condition:

ANTENNA HARDWARE FAILURE - SDARS

When Monitored: With radio turned on.

Set Condition: If the antenna is connected, and the antenna has an internal failure.

POSSIBLE CAUSES
INTERNAL ANTENNA FAILURE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. **NOTE: Disconnect the Satellite Receiver harness connector and check the related wiring terminals for corrosion, damage or terminal push out. Repair as necessary.** **NOTE: Disconnect the Satellite Receiver Antenna connector and check the related wiring 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. Check the Antenna assembly for physical damage. If there are no other possible causes, view repair. Repair Replace Antenna in accordance with service information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
ANTENNA NOT CONNECTED - SDARS

When Monitored and Set Condition:

ANTENNA NOT CONNECTED - SDARS

When Monitored: With the radio turned on.

Set Condition: When either of the antenna cables is not connected.

POSSIBLE CAUSES
SATELLITE SIGNAL CIRCUIT OPEN
TERR SIGNAL OPEN
TERR SIGNAL CIRCUIT SHORTED TO GROUND
SATELLITE SIGNAL CIRCUIT SHORTED TO GROUND
ANTENNA INTERNAL FAILURE
SATELLITE RADIO RECEIVER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Satellite Receiver Antenna connector. Disconnect the Satellite Radio Receiver harness connector. Measure the resistance of the TERR Signal circuit between the Satellite Receiver Antenna connector and the Satellite Radio Receiver connector. Is the resistance below 5.0 ohms? Yes → Go To 2 No → Repair the TERR Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Satellite Receiver Antenna connector. Disconnect the Satellite Radio Receiver harness connector. Measure the resistance between ground and the TERR Signal circuit. Is the resistance below 5.0 ohms? Yes → Repair the TERR Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Satellite Receiver Antenna connector. Disconnect the Satellite Radio Receiver harness connector. Measure the resistance of the Satellite Signal circuit between the Satellite Receiver Antenna connector and the Satellite Radio Receiver connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Satellite Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

ANTENNA NOT CONNECTED - SDARS — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Satellite Receiver Antenna connector. Disconnect the Satellite Radio Receiver harness connector. Measure the resistance between ground and the Satellite Signal circuit. Is the resistance below 5.0 ohms? Yes → Repair the Satellite Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Check the antenna for physical damage. Disconnect the Satellite Receiver Antenna connector. Disconnect the Satellite Radio Receiver harness connector. **NOTE: Check the related wiring 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. Replace the Satellite Receiver Antenna in accordance with the service information. Turn the ignition and the radio on and place the radio in Satellite mode. Does the DTC return? Yes → Go To 6 No → Repair is complete. Perform BODY VERIFICATION TEST - VER 1.	All
6	**NOTE: Disconnect the Satellite Radio Receiver harness connectors and check the related wiring 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. If there are no possible causes remaining, view repair. Repair Replace the Satellite Radio Receiver in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

BUS BUSY - SDARS

When Monitored and Set Condition:

BUS BUSY - SDARS

When Monitored: With the ignition in run, and the IOD fuse installed.

Set Condition: Anytime the module detects a short to battery on the PCI Bus circuit.

POSSIBLE CAUSES
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	**NOTE: For this code to be active, the DRB will not be able to communicate with any modules on the vehicle (except the PCM).** **NOTE: Clear the code. If this code continues to set and the DRB can still communicate with the module, it will be necessary to replace the module.** **NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the complete bus failure condition. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
BUS LOW - SDARS

When Monitored and Set Condition:

BUS LOW - SDARS

When Monitored: With the ignition in the run position, and the IOD fuse installed.

Set Condition: Anytime the module detects a short to ground on the PCI Bus circuit.

POSSIBLE CAUSES
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	**NOTE: For this code to be active, the DRB will not be able to communicate with any modules on the vehicle (except the PCM).** **NOTE: Clear the code. If this code continues to set and the DRB can still communicate with the module, it will be necessary to replace the module.** **NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the complete bus failure condition. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

CASSETTE PLAYER INOP
CD MECHANICAL FAILURE
NO PCI TRANSMISSION
***AM/FM SWITCH INOPERATIVE**
***ANY STATION PRESET SWITCH INOPERATIVE**
***BALANCE INOPERATIVE**
***CD EJECT SWITCH INOPERATIVE**
***EQUALIZER INOPERATIVE**
***FADER INOPERATIVE**
***FF/RW SWITCH INOPERATIVE**
***HOUR/MINUTE SWITCHES INOPERATIVE**
***PAUSE/PLAY SWITCH INOPERATIVE**
***PWR SWITCH INOPERATIVE**
***SCAN SWITCH INOPERATIVE**
***SEEK SWITCH INOPERATIVE**
***SET SWITCH INOPERATIVE**
***TAPE EJECT SWITCH INOPERATIVE**
***TIME SWITCH INOPERATIVE**
***TUNE SWITCH INOPERATIVE**

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be CASSETTE PLAYER INOP.

When Monitored and Set Condition:

CASSETTE PLAYER INOP

When Monitored: Continuously with the ignition and radio turned on.

Set Condition: The code will set if the radio detects a internal cassette failure.

CD MECHANICAL FAILURE

When Monitored: Continuously with the ignition and CD player turned on.

Set Condition: The code will set if the radio detects a CD mechanical failure.

POSSIBLE CAUSES
INTERNAL FAILURE

CASSETTE PLAYER INOP — Continued

TEST	ACTION	APPLICABILITY
1	**NOTE: If a DTC is set, erase the DTC and attempt to reset the DTC. If DTC resets, follow this test.** This is an internal radio failure. View repair Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
CD PLAY FAILURE

When Monitored and Set Condition:

CD PLAY FAILURE

When Monitored: Continuously with the ignition and the radio CD player turned on.

Set Condition: The code will set if a CD that is not formatted as a music CD or is scratched, dirty so the radio can not play the CD.

POSSIBLE CAUSES
CD PLAY FAILURE

TEST	ACTION	APPLICABILITY
1	Replace the problem CD with a good, clean, unscratched, music CD. Turn the radio CD player on. With the DRBIII®, read DTC's. Does the DRBIII® display CD PLAY FAILURE? Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
CD READ FAILURE

When Monitored and Set Condition:

CD READ FAILURE

When Monitored: Continuously with the ignition and the radio CD player turned on.

Set Condition: The code will set if a CD that is not formatted as a music CD is installed in the radio CD player.

POSSIBLE CAUSES
CD READ FAILURE

TEST	ACTION	APPLICABILITY
1	Replace the problem CD with a good, clean, unscratched, music CD. Turn the radio CD player on. With the DRBIII®, read DTC's. Does the DRBIII® display CD READ FAILURE? Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
CD TEMPERATURE HIGH

When Monitored and Set Condition:

CD TEMPERATURE HIGH

When Monitored: Continuously with the ignition and the radio CD player turned on.

Set Condition: The code will set if the temperature inside the radio CD player is above +85° C (+185° F).

POSSIBLE CAUSES
HIGH TEMPERATURE FAILURE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase the audio DTC's. Start the engine and allow the engine to reach normal operating temperature. If the vehicle has been in the hot sunlight or extreme cold move the vehicle indoors and open the doors to allow the inside temperature to stabilize. The radio CD player will operate between -30° C and 85° C (-22° F and +185° F). With the DRBIII®, read DTC's. Does the DRBIII® display CD TEMPERATURE HIGH? Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
GPS ANTENNA NOT CONNECTED

When Monitored and Set Condition:

GPS ANTENNA NOT CONNECTED

When Monitored: With the ignition on and the radio in navigation mode.

Set Condition: The radio does not detect a GPS antenna connection.

POSSIBLE CAUSES
BAD ANTENNA CONNECTION
ANTENNA
RADIO

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the GPS Antenna connector. Inspect the GPS Antenna connection. Was the Antenna connection clean and tight? Yes → Go To 2 No → Repair Antenna connection as needed. Perform BODY VERIFICATION TEST - VER 1.	All
2	Refer to the Audio System in the service information and test the Antenna in accordance with the service procedure. Is the Antenna ok? Yes → Go To 3 No → Repair or replace the Antenna assembly as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
3	**NOTE: Reconnect all previously disconnected components.** **NOTE: Move vehicle outside approximately 30ft from any structure.** Turn the ignition and Radio on. With the DRBIII®, erase the audio DTC's and operate the navigation system. With the DRBIII®, read the audio DTC's. Did this DTC reset? Yes → Replace the Radio in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
INTERNAL FAILURE - SDARS

When Monitored and Set Condition:

INTERNAL FAILURE - SDARS

When Monitored: Ignition key in accessory or run position.

Set Condition: Internal bus communication failure between processors.

POSSIBLE CAUSES
INTERNAL SDARS FAILURE

TEST	ACTION	APPLICABILITY
1	The Satellite Radio Receiver is reporting internal errors, view repair to continue. Repair Replace the Satellite Radio Receiver in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
INTERNAL RECEIVER FAILURE - SDARS

When Monitored and Set Condition:

INTERNAL RECEIVER FAILURE - SDARS

When Monitored: Ignition key in accessory or run position.

Set Condition: Internal failure is detected.

POSSIBLE CAUSES
INTERNAL RECEIVER FAILURE

TEST	ACTION	APPLICABILITY
1	The Satellite Radio Receiver is reporting internal errors, view repair to continue. Repair Replace the Satellite Radio Receiver in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
LOW VOLTAGE LEVEL

When Monitored and Set Condition:

LOW VOLTAGE LEVEL

When Monitored:

Set Condition: The radio detects lower than normal voltage.

POSSIBLE CAUSES
CHECK CHARGING SYSTEM
CHECK VOLTAGE LEVEL AT RADIO
RADIO

TEST	ACTION	APPLICABILITY
1	Check the charging system in accordance with the service information. Is the charging system operating properly? Yes → Go To 2 No → Refer to the appropriate service information and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Radio harness connector. Start the engine. Measure the voltage of each Fused B+ circuit and the Fused Ignition Switch Output circuit. Is the voltage above or approximately 14 volts for each measurement? Yes → Go To 3 No → Repair the circuit for high resistance. Perform BODY VERIFICATION TEST - VER 1.	All
3	**Note: Reconnect all previously disconnected components.** Turn the ignition and Radio on. With the DRBIII®, erase the audio DTC's. Start the engine. With the DRBIII®, read the audio DTC's. Did this DTC reset? Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
NO ANTENNA CONNECTION

When Monitored and Set Condition:

NO ANTENNA CONNECTION

When Monitored: With the ignition on and the radio in seek up/down mode.

Set Condition: With the radio in seek or scan mode for two minutes and the radio does not detect an antenna connection or does not receive a radio station signal.

POSSIBLE CAUSES
BAD ANTENNA CONNECTION
TEST ANTENNA
RADIO

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Radio Antenna connector. Inspect the Radio Antenna connection. Was the Antenna connection clean and tight? Yes → Go To 2 No → Repair Antenna connection as needed. Perform BODY VERIFICATION TEST - VER 1.	All
2	Refer to the Audio System in the service information and test the Antenna in accordance with the service procedure. Is the Antenna ok? Yes → Go To 3 No → Repair or replace the Antenna assembly as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
3	**NOTE: Reconnect all previously disconnected components.** Turn the ignition and Radio on. **NOTE: Move vehicle outside approximately 30ft from any structure.** With the DRBIII®, erase the audio DTC's, put the radio in seek up and seek down mode for approximately 2 minutes before proceeding. With the DRBIII®, read the audio DTC's. Did this DTC reset? Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
NO COMMUNICATION WITH SDARS

POSSIBLE CAUSES
BUS MESSAGE NOT RECEIVED DTC PRESENT
INTERMITTENT CONDITION
SATELLITE RADIO RECEIVER

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, attempt to communicate with the SDAR module. Was the DRBIII® able to I/D or communicate with the Module? Yes → Go To 2 No → Refer to Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTCs. Cycle the ignition, wait approximately 1 minute. With the DRBIII®, read DTCs. Did the DTC reset? Yes → Visually inspect the Satellite Radio Receiver connector and wiring harness. If OK, replace the Satellite Radio Receiver in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Visually inspect the related wiring harness, connectors, and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
NO J1850 COMMUNICATION - SDARS

POSSIBLE CAUSES
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	**NOTE: For this code to be active, the DRB will not be able to communicate with any modules on the vehicle (except the PCM).** **NOTE: Clear the code. If this code continues to set and the DRB can still communicate with the module, it will be necessary to replace the module.** **NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the complete bus failure condition. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
POWER AMP SHUTDOWN

When Monitored and Set Condition:

POWER AMP SHUTDOWN

When Monitored: Ignition in RUN and IOD fuse installed.

Set Condition: The radio has sensed a short on the output for more than 10 seconds.

POSSIBLE CAUSES
DETERMINE FAULT
FRONT SHORTED SPEAKER
I/P SHORTED SPEAKER
REAR SHORTED SPEAKER
(+) CIRCUIT SHORTED TO GROUND
(-) CIRCUIT SHORTED TO GROUND
SPEAKER (+) & (-) CIRCUITS SHORTED TOGETHER
SPEAKER SECTION OF RADIO

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Turn the Radio on. With the DRBIII®, erase the audio DTC's. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read the audio DTC's. Does the DRBIII® display POWER AMP SHUTDOWN? Yes → Go To 2 No → Refer to the wiring diagrams located in the service information to help isolate a possible intermittent short. Perform BODY VERIFICATION TEST - VER 1.	All

POWER AMP SHUTDOWN — Continued

TEST	ACTION	APPLICABILITY
2	Turn the ignition off. **NOTE: Perform this procedure after disconnecting each front speaker connector.** Disconnect each front speaker harness connector one at a time. Turn the ignition on. Turn the radio on. With the DRBIII®, erase the audio DTCs. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read DTC's. Does the DRBIII® display POWER AMP SHUTDOWN with all the front speakers disconnected? Yes → Go To 3 No → Replace the Speaker that when disconnected the DTC did not reset. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. **NOTE: Perform this procedure after disconnecting each I/P speaker connector.** Disconnect each I/P speaker harness connector one at a time. Turn the ignition on. Turn the radio on. With the DRBIII®, erase the audio DTCs. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read DTC's. Does the DRBIII® display POWER AMP SHUTDOWN with all the I/P speakers disconnected? Yes → Go To 4 No → Replace the Speaker that when disconnected the DTC did not reset. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. **NOTE: Perform this procedure after disconnecting each rear speaker connector.** Disconnect each rear speaker harness connector one at a time. Turn the ignition on. Turn the radio on. With the DRBIII®, erase the audio DTCs. Cycle the ignition switch from off to on and wait 10 seconds. With the DRBIII®, read DTC's. Does the DRBIII® display POWER AMP SHUTDOWN with all the rear speakers disconnected? Yes → Go To 5 No → Replace the Speaker that when disconnected the DTC did not reset. Perform BODY VERIFICATION TEST - VER 1.	All

POWER AMP SHUTDOWN — Continued

TEST	ACTION	APPLICABILITY
5	Turn the ignition off. Disconnect each front, I/P and rear speaker harness connector. Disconnect the Radio harness connector. Measure the resistance between ground and each speaker (+) circuit. Is the resistance below 1000.0 (1K) ohms? Yes → Repair the speaker (+) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect each front, I/P and rear speaker harness connector. Disconnect the Radio harness connector. Measure the resistance between ground and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms? Yes → Repair the speaker (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Disconnect each front, I/P and rear speaker harness connector. Disconnect the Radio harness connector. Measure the resistance between each speaker (+) circuit and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms for any of the measurements? Yes → Repair the speaker circuits shorted together. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All
8	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
RADIO AND NAV GPS ANTENNA NOT CONNECTED

POSSIBLE CAUSES
BAD ANTENNA CONNECTION
ANTENNA
RADIO

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Antenna connectors. Inspect the Antenna connections. Was the Antenna connections clean and tight? Yes → Go To 2 No → Repair the Antenna connections as needed. Perform BODY VERIFICATION TEST - VER 1.	All
2	Refer to the Audio System in the service information and test the Antennas in accordance with the service procedure. Are the Antennas ok? Yes → Go To 3 No → Repair or replace the Antenna assemblies as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
3	**NOTE: Reconnect all previously disconnected components.** **NOTE: Move vehicle outside approximately 30ft from any structure.** Turn the ignition and Radio on. With the DRBIII®, erase the audio DTC's and operate the radio and the navigation system. With the DRBIII®, read the audio DTC's. Did this DTC reset? Yes → Replace the Radio in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
*INOP NO FAULT CODES - SDARS

POSSIBLE CAUSES
SDARS SUBSCRIPTION
FUSED B+ CIRCUIT
IGNITION RUN/ACC SIGNAL CIRCUIT
GROUND CIRCUIT OPEN
SATELLITE RADIO RECEIVER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, read the SDARS subscription status. Does the subscription status read ″subscribed?″ Yes → Go To 2 No → Customer has not subscribed to this feature. No repair at this time. Perform BODY VERIFICATION TEST - VER 1.	All
2	**NOTE: Diagnose and repair any DTCs before continuing.** Disconnect the Satellite Radio Receiver harness connectors. Turn the ignition on and the radio on. Using a 12-volt test light connected to ground, probe the Fused B+ circuit. Does the test light illuminate brightly? Yes → Go To 3 No → Repair the Fused B+ circuit for an open. Note: If vehicle is equipped with the Hands Free Phone feature, check the Hands Free Module. This module is a pass through for the Satellite Radio Receiver circuits. Perform BODY VERIFICATION TEST - VER 1.	All
3	Disconnect the Satellite Radio Receiver harness connectors. Turn the ignition and the radio on. Using a 12-volt test light connected to ground, probe the Ignition Run/Acc Signal circuit. Does the test light illuminate brightly? Yes → Go To 4 No → Repair the Ignition Run/Acc Signal circuit for an open. Note: If vehicle is equipped with the Hands Free Phone feature, check the Hands Free Module. This module is a pass through for the Satellite Radio Receiver circuits. Perform BODY VERIFICATION TEST - VER 1.	All

*INOP NO FAULT CODES - SDARS — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Satellite Radio Receiver harness connectors. Using a 12-volt test light connected to 12-volts, probe the Ground circuit. Does the test light illuminate brightly? Yes → Go To 5 No → Repair the Ground circuit for an open. Note: If vehicle is equipped with the Hands Free Phone feature, check the Hands Free Module. This module is a pass through for the Satellite Radio Receiver circuits. Perform BODY VERIFICATION TEST - VER 1.	All
5	If there are no other possible causes remaining, view repair. Repair Replace Satellite Radio Receiver in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*POOR RECEPTION - SDARS

POSSIBLE CAUSES
*POOR SDARS RECEPTION

TEST	ACTION	APPLICABILITY
1	**NOTE: At times SDARS reception will better than FM radio, and other times FM radio reception will be better than SDARS.** **NOTE: The Satellite Radio system is still under development and there are areas where reception may be lost.** **NOTE: To check SDARS reception, vehicle must be outside the shop.** **NOTE: The SDARS antenna must be be free of damage and not be covered by any objects.** **NOTE: Large buildings in downtown areas can block the satellite signal and cause poor reception.** **NOTE: Check DTC's and record them. Repair any DTC's prior to continuing with test.** Inspect SDARS antenna for damage. Drive vehicle outside of shop and attempt to verify poor reception complaint. Verify good reception in your area with know good SDARS system. Is there any physical damage to the SDARS antenna? Yes → Replace SDARS antenna. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
*NO RESPONSE FROM AIRBAG CONTROL MODULE

POSSIBLE CAUSES
CHECKING FOR VOLTAGE AT ACM
GROUND CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
AIRBAG CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Ensure that the battery is fully charged. **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the ACM harness connector (C2 connector on premium). Connect the appropriate Load Tool ACM Adapter to the ACM connector. Turn the ignition on and then reconnect the Battery. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output (Run) Circuit and the Fused Ignition Switch Output (Run/Start) Circuit. NOTE: One open circuit will not cause a NO RESPONSE condition. Is the test light illuminated on both circuits? Yes → Go To 2 No → Repair the Fused Ignition Switch Output (Run) and Fused Ignition Switch Output (Run/Start) circuits for an open. Perform __AIRBAG VERIFICATION TEST - VER 1. **NOTE: When reconnecting airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**Ensure that the battery is fully charged.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the ACM harness connector (C2 connector on premium). Connect the appropriate Load Tool ACM Adapter to the ACM connector. Using a 12-volt test light connected to 12-volts, probe the ground circuit. **NOTE: Make sure test light is connected to the Battery positive terminal.** Is the test light illuminated? Yes → Go To 3 No → Repair the Ground circuit for an open. Perform __AIRBAG VERIFICATION TEST - VER 1. **NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

*NO RESPONSE FROM AIRBAG CONTROL MODULE — Continued

TEST	ACTION	APPLICABILITY
3	**Note: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** **WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the ACM harness connector (C2 connector on premium). Connect the appropriate Load Tool ACM Adapter to the ACM connector. Turn the ignition on and then reconnect the Battery. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Go To 4 No → Repair the PCI Bus circuit for an open. Perform __AIRBAG VERIFICATION TEST - VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Airbag Control Module (ORC) in accordance with the Service lnformation. WARNING: To avoid personal injury or death, make sure the battery is disconnected and wait 2 minutes before proceeding. Perform __AIRBAG VERIFICATION TEST - VER 1.	All

Symptom:

***NO RESPONSE FROM AMPLIFIER**

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE RADIO
GROUND CIRCUIT OPEN
FUSED B(+) CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
AMPLIFIER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, attempt to communicate with the radio. Was the DRBIII® able to I/D or communicate with the Radio? Yes → Go To 2 No → Refer to the symptom list for problems related to no communication with the Radio Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Amplifier harness connector. Using a 12-volt test light connected to 12-volts, probe each ground circuit. Is the test light illuminated for each circuit? Yes → Go To 3 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Amplifier harness connector. Using a 12-volt test light connected to ground, probe each Fused B(+) circuit. Is the test light illuminated for each circuit? Yes → Go To 4 No → Repair the Fused B+ circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM AMPLIFIER — Continued

TEST	ACTION	APPLICABILITY
4	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Amplifier harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Amplifier connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace the Amplifier in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*NO RESPONSE FROM ANTILOCK BRAKE MODULE

POSSIBLE CAUSES
NO RESPONSE FROM ABS
GROUND CIRCUIT OPEN
OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT
OPEN PCI BUS CIRCUIT
ANTILOCK BRAKE MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **Note: As soon as one or more module communicates with the DRB, answer the question.** With the DRB, attempt to communicate with the Airbag Control Module. With the DRB, attempt to communicate with the Instrument Cluster (MIC). Was the DRB able to I/D or establish communications with either of the modules? Yes → Go To 2 No → Refer to the Communications category and perform the symptom PCI Bus Communication Failure. Perform ABS VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Antilock Brake Module harness connector. Using a 12-volt test light connected to 12-volts, probe both ground circuits. Is the test light illuminated for both circuits? Yes → Go To 3 No → Repair the ground circuit(s) for an open. Perform ABS VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Antilock Brake Module harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit. Is the test light illuminated? Yes → Go To 4 No → Repair the Fused Ignition Switch Output circuit for an open. Perform ABS VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM ANTILOCK BRAKE MODULE — Continued

TEST	ACTION	APPLICABILITY
4	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Antilock Brake Module harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Antilock Brake Module connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Go To 5 No → Repair the PCI Bus circuit for an open. Perform ABS VERIFICATION TEST - VER 1.	All
5	If there are no possible causes remaining, view repair. Repair Replace the Antilock Brake Module in accordance with the Service Information. Perform ABS VERIFICATION TEST - VER 1.	All

Symptom:

*NO RESPONSE FROM ECM (PCI BUS) - DIESEL ONLY

POSSIBLE CAUSES
ECM PCI NO RESPONSE
PCI BUS CIRCUIT OPEN
ENGINE CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: As soon as one or more module communicates with the DRB, answer the question.** With the DRB, enter Anti-Lock Brakes. With the DRB, enter Body then Electro/Mechanical Cluster (MIC). With the DRB, enter Passive Restraints then Airbag. Were you able to establish communications with any of the modules? Yes → Go To 2 No → Refer to symptom PCI Bus Communication Failure in the Communications category. Perform ROAD TEST VERIFICATION - VER-2.	All
2	With the DRB read ECM Diagnostic Trouble Codes. This is to ensure power and grounds to the ECM are operational. **NOTE: If the DRB will not read ECM DTCs, follow the NO RESPONSE TO ECM (SCI only) symptom path.** Turn the ignition off. Disconnect the ECM harness connectors. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to ground. Connect the Red lead to the PCI Bus circuit in the ECM connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace and program the Engine Control Module in accordance with the Service Information. Perform ROAD TEST VERIFICATION - VER-2. No → Repair the PCI Bus circuit for an open. Perform ROAD TEST VERIFICATION - VER-2.	All

Symptom:

*NO RESPONSE FROM ECM (SCI ONLY) - DIESEL ONLY

POSSIBLE CAUSES
CHECK ECM POWERS AND GROUNDS
SCI TRANSMIT CIRCUIT SHORTED TO GROUND
SCI TRANSMIT CIRCUIT SHORTED TO VOLTAGE
SCI TRANSMIT CIRCUIT OPEN
ENGINE CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Perform the symptom Checking ECM Power and Ground Circuits in the Driveability category. Did the vehicle pass this test? Yes → Go To 2 No → Repair as necessary. Perform ROAD TEST VERIFICATION - VER-2.	All
2	Turn the ignition off. Disconnect the ECM harness connectors. Disconnect the DRB from the DLC. Measure the resistance between ground and the SCI Transmit circuit. Is the resistance below 5.0 ohms? Yes → Repair the SCI Transmit circuit for a short to ground. Perform ROAD TEST VERIFICATION - VER-2. No → Go To 3	All
3	Turn the ignition off. Disconnect the ECM harness connectors. Disconnect the DRB from the DLC. Turn the ignition on. Measure the voltage of the SCI Transmit circuit. Is the voltage above 1.0 volt? Yes → Repair the SCI Transmit circuit for a short to voltage. Perform ROAD TEST VERIFICATION - VER-2. No → Go To 4	All
4	Turn the ignition off. Disconnect the ECM harness connectors. Disconnect the DRB from the DLC. Measure the resistance of the SCI Transmit circuit between the ECM connector and the DLC. Is the resistance below 5.0 ohms? Yes → Replace and program the Engine Control Module in accordance with the Service Information. Perform ROAD TEST VERIFICATION - VER-2. No → Repair the SCI Transmit circuit for an open. Perform ROAD TEST VERIFICATION - VER-2.	All

Symptom:

***NO RESPONSE FROM HANDS FREE MODULE**

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE RADIO
GROUND CIRCUIT OPEN
FUSED B(+) CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
HANDS FREE MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, attempt to communicate with the radio. Was the DRBIII® able to I/D or communicate with the Radio? Yes → Go To 2 No → Refer to the symptom list for problems related to no communication with the Radio Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Hands Free Module C1 harness connector. Using a 12-volt test light connected to 12-volts, probe the ground circuit. Is the test light illuminated? Yes → Go To 3 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Hands Free Module C1 harness connector. Using a 12-volt test light connected to ground, probe the Fused B(+) circuit. Is the test light illuminated? Yes → Go To 4 No → Repair the Fused B+ circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM HANDS FREE MODULE — Continued

TEST	ACTION	APPLICABILITY
4	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Hands Free Module C1 harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Hands Free Module connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*NO RESPONSE FROM INSTRUMENT CLUSTER

POSSIBLE CAUSES
OPEN GROUND CIRCUIT
OPEN FUSED B+ CIRCUIT
OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT
OPEN PCI BUS CIRCUIT
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. **NOTE: Check fuses before continuing.** Turn all lights off. Disconnect the Instrument Cluster C1 harness connector. Using a 12-volt test light connected to 12-volts, probe each ground circuit. Is the test light illuminated for each circuit? Yes → Go To 2 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Using a 12-volt test light connected to ground, probe the Fused B+ circuit. Is the test light illuminated? Yes → Go To 3 No → Repair the Fused B+ circuit for an open. Refer to the wiring diagrams in the service information. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit. Is the test light illuminated? Yes → Go To 4 No → Repair the Fused Ignition Switch Output circuit for an open. Refer to the wiring diagrams in the service information. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM INSTRUMENT CLUSTER — Continued

TEST	ACTION	APPLICABILITY
4	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Instrument Cluster C1 harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Instrument Cluster connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace the Instrument Cluster in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***NO RESPONSE FROM OVERHEAD CONSOLE (COMPASS/ TEMPERATURE MIRROR MODULE)**

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE INSTRUMENT CLUSTER
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
FUSED B(+) CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
COMPASS/TEMPERATURE MIRROR MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, enter Body then Electro/Mech Cluster (MIC). Was the DRB able to I/D or communicate with the Instrument Cluster? Yes → Go To 2 No → Refer to the symptom list for problems related to no communication with the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Compass/Temperature Mirror Module harness connector. Using a 12-volt test light connected to 12-volts, probe each Ground circuit. Is the test light illuminated for each circuit? Yes → Go To 3 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Compass/Temperature Mirror Module harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit. Is the test light illuminated? Yes → Go To 4 No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Compass/Temperature Mirror Module harness connector. Using a 12-volt test light connected to ground, probe the Fused B(+) circuit. Is the test light illuminated? Yes → Go To 5 No → Repair the Fused B+ circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM OVERHEAD CONSOLE (COMPASS/ TEMPERATURE MIRROR MODULE) — Continued

TEST	ACTION	APPLICABILITY
5	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Compass/Temperature Mirror Module harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Compass/Temperature Mirror Module harness connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace and Compass/Temperature Mirror Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*NO RESPONSE FROM PCM (PCI BUS) - 1.6L

POSSIBLE CAUSES
PCM PCI NO RESPONSE
PCI BUS CIRCUIT OPEN
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: As soon as one or more module communicates with the DRB, answer the question.** With the DRB, enter Anti-Lock Brakes. With the DRB, enter Body then Electro/Mechanical Cluster (MIC). With the DRB, enter Passive Restraints then Airbag. Were you able to establish communications with any of the modules? Yes → Go To 2 No → Refer to symptom PCI Bus Communication Failure in the Communications category. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L.	All
2	With the DRB read PCM Diagnostic Trouble Codes. This is to ensure power and grounds to the PCM are operational. **NOTE: If the DRB will not read PCM DTC's, follow the NO RESPONSE TO PCM (SCI only) symptom path.** **NOTE: If the vehicle will not start and the DRBIII® displays a no response message, refer to the appropriate symptom in the powertrain diagnostic procedures.** Turn the ignition off. Disconnect the PCM harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the PCM ground. Connect the Red lead to the PCI Bus circuit in the PCM connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace and program the Powertrain Control Module in accordance with the Service Information. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L. No → Repair the PCI Bus circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L.	All

Symptom:

*NO RESPONSE FROM PCM (PCI BUS) - NGC

POSSIBLE CAUSES
PCM PCI NO RESPONSE
POWERTRAIN CONTROL MODULE
PCI BUS CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: As soon as one or more module communicates with the DRB, answer the question.** With the DRB, enter Anti-Lock Brakes. With the DRB, enter Electro/Mechanical Cluster (MIC). With the DRB, enter Passive Restraints then Airbag. Were you able to establish communications with any of the modules? Yes → Go To 2 No → Refer to symptom PCI Bus Communication Failure in the Communications category. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC.	All
2	With the DRB read the Powertrain DTC's. This is to ensure power and grounds to the PCM are operational. **NOTE: If the DRB will not read PCM DTC's, follow the NO RESPONSE TO PCM (PCM SCI only) symptom path.** Turn the ignition off. Disconnect the PCM harness connectors. **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.** Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the appropriate terminal of special tool #8815. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace and program the Powertrain Control Module in accordance with the Service Information. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC. No → Repair the PCI Bus circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC.	All

Symptom:

*NO RESPONSE FROM PCM (PCM SCI ONLY) - NGC

POSSIBLE CAUSES
CHECK PCM POWERS AND GROUNDS
PCM SCI TRANSMIT CIRCUIT SHORTED TO VOLTAGE
PCM SCI RECEIVE CIRCUIT SHORTED TO VOLTAGE
PCM SCI CIRCUITS SHORTED TOGETHER
PCM SCI TRANSMIT CIRCUIT SHORTED TO GROUND
PCM SCI RECEIVE CIRCUIT SHORTED TO GROUND
PCM SCI RECEIVE CIRCUIT OPEN
PCM SCI TRANSMIT CIRCUIT OPEN
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Perform the symptom Checking PCM Power and Ground Circuits in the Driveability category. **NOTE: With the DRBIII® in the generic scan tool mode, attempt to communicate with the PCM.** **NOTE: If the DRBIII® can communicate with the PCM in the generic scan tool mode, it may not be necessary to perform this step.** Did the vehicle pass this test? Yes → Go To 2 No → Repair as necessary. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC.	All
2	Turn the ignition off. Disconnect the DRBIII® from the DLC. Disconnect the PCM harness connectors. Turn the ignition on. Measure the voltage of the PCM SCI Transmit circuit at the Data Link harness connector (cav 7). Is the voltage above 1.0 volt? Yes → Repair the PCM SCI Transmit circuit for a short to voltage. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC. No → Go To 3	All
3	Turn the ignition off. Disconnect the DRBIII® from the DLC. Disconnect the PCM harness connectors. Turn the ignition on. Measure the voltage of the PCM SCI Receive circuit at the Data Link harness connector (cav 12). Is the voltage above 1.0 volt? Yes → Repair the PCM SCI Receive circuit for a short to voltage. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC. No → Go To 4	All

*NO RESPONSE FROM PCM (PCM SCI ONLY) - NGC — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the DRBIII® from the DLC. Disconnect the PCM harness connectors. Measure the resistance between the PCM SCI Transmit circuit and the PCM SCI Receive circuit at the Data Link harness connector (cavs 7 and 12). Is the resistance below 5.0 ohms? Yes → Repair the short between the PCM SCI Transmit and the PCM SCI Receive circuits. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC. No → Go To 5	All
5	Turn the ignition off. Disconnect the PCM harness connectors. Disconnect the DRBIII® from the DLC. Measure the resistance between ground and the PCM SCI Transmit circuit at the Data Link harness connector (cav 7). Is the resistance below 5.0 ohms? Yes → Repair the PCM SCI Transmit circuit for a short to ground. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC. No → Go To 6	All
6	Turn the ignition off. Disconnect the PCM harness connector. Disconnect the DRBIII® from the DLC. Measure the resistance between ground and the PCM SCI Receive circuit in the Data Link harness connector (cav 12). Is the resistance below 5.0 ohms? Yes → Repair the PCM SCI Receive circuit for a short to ground. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC. No → Go To 7	All
7	Turn the ignition off. Disconnect the PCM harness connector. Disconnect the DRBIII® from the DLC. **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 PCM SCI Receive circuit from the Data Link harness connector (cav 12) to the appropriate terminal of special tool #8815. Is the resistance below 5.0 ohms? Yes → Go To 8 No → Repair the PCM SCI Receive circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC.	All

*NO RESPONSE FROM PCM (PCM SCI ONLY) - NGC — Continued

TEST	ACTION	APPLICABILITY
8	Turn the ignition off. Disconnect the PCM harness connector. Disconnect the DRBIII® from the DLC. **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 PCM SCI Transmit circuit from the Data Link harness connector (cav 7) to the appropriate terminal of special tool #8815. Is the resistance below 5.0 ohms? Yes → Go To 9 No → Repair the PCM SCI Transmit circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC.	All
9	If there are no possible causes remaining, view repair. Repair Replace and program the Powertrain Control Module in accordance with the Service Information. Perform POWERTRAIN VERIFICATION TEST VER - 1 - NGC.	All

Symptom:

*NO RESPONSE FROM PCM (SCI ONLY) - 1.6L

POSSIBLE CAUSES
CHECK PCM POWERS AND GROUNDS
SCI TRANSMIT CIRCUIT SHORTED TO VOLTAGE
SCI RECEIVE CIRCUIT SHORTED TO VOLTAGE
SCI CIRCUITS SHORTED TOGETHER
SCI TRANSMIT CIRCUIT SHORTED TO GROUND
SCI RECEIVE CIRCUIT SHORTED TO GROUND
SCI RECEIVE CIRCUIT OPEN
SCI TRANSMIT CIRCUIT OPEN
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Perform the symptom Checking PCM Power and Ground Circuits in the Driveability category. **NOTE: With the DRBIII® in the generic scan tool mode, attempt to communicate with the PCM.** **NOTE: If the DRBIII® can communicate with the PCM in the generic scan tool mode, it may not be necessary to perform this step.** Did the vehicle pass this test? Yes → Go To 2 No → Repair as necessary. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L.	All
2	Turn the ignition off. Disconnect the DRBIII® from the DLC. Disconnect the PCM harness connector. Turn the ignition on. Measure the voltage of the SCI Transmit circuit at the DLC connector. Is the voltage above 1.0 volt? Yes → Repair the SCI Transmit circuit for a short to voltage. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L. No → Go To 3	All
3	Turn the ignition off. Disconnect the DRBIII® from the DLC. Disconnect the PCM harness connector. Turn the ignition on. Measure the voltage of the SCI Receive circuit at the DLC connector. Is the voltage above 1.0 volt? Yes → Repair the SCI Receive circuit for a short to voltage. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L. No → Go To 4	All

*NO RESPONSE FROM PCM (SCI ONLY) - 1.6L — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the DRBIII® from the DLC. Disconnect the PCM harness connector. Measure the resistance between the SCI Transmit circuit and the SCI Receive circuit at the PCM connector. Is the resistance below 5.0 ohms? Yes → Repair the short between the SCI Transmit and the SCI Receive circuits. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L. No → Go To 5	All
5	Turn the ignition off. Disconnect the PCM harness connector. Disconnect the DRBIII® from the DLC. Measure the resistance between ground and the SCI Transmit circuit. Is the resistance below 5.0 ohms? Yes → Repair the SCI Transmit circuit for a short to ground. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L. No → Go To 6	All
6	Turn the ignition off. Disconnect the PCM harness connector. Disconnect the DRBIII® from the DLC. Measure the resistance between ground and the SCI Receive circuit. Is the resistance below 5.0 ohms? Yes → Repair the SCI Receive circuit for a short to ground. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L. No → Go To 7	All
7	Turn the ignition off. Disconnect the PCM harness connector. Disconnect the DRBIII® from the DLC. Measure the resistance of the SCI Receive circuit between the PCM connector and the DLC. Is the resistance below 5.0 ohms? Yes → Go To 8 No → Repair the SCI Receive circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L.	All
8	Turn the ignition off. Disconnect the PCM harness connector. Disconnect the DRBIII® from the DLC. Measure the resistance of the SCI Transmit circuit between the PCM connector and the DLC. Is the resistance below 5.0 ohms? Yes → Replace and program the Powertrain Control Module in accordance with the Service Information. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L. No → Repair the SCI Transmit circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER-1 - 1.6L.	All

Symptom:
*NO RESPONSE FROM RADIO

POSSIBLE CAUSES
NO RESPONSE FROM RADIO
OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT
OPEN FUSED B+ CIRCUIT
RADIO GROUND CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
RADIO

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **NOTE: Check fuses before continuing.** **NOTE: As soon as one or more module communicates with the DRB, answer the question.** With the DRB, attempt to communicate with the Airbag Control Module. With the DRB, attempt to communicate with the Instrument Cluster (MIC). Was the DRB able to I/D or establish communications with either of the modules? Yes → Go To 2 No → Refer to the Communications category and perform the symptom PCI Bus Communication Failure. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Radio C1 harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit. Is the test light illuminated? Yes → Go To 3 No → Check Fuse Block fuse for an open. If ok, repair the Fused Ignition Switch Output circuit for an open or short. Refer to the wiring diagrams located in the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Radio C1 harness connector. Using a 12-volt test light connected to ground, probe each Fused B+ circuit. Is the test light illuminated for each circuit? Yes → Go To 4 No → Repair the Fused B+ circuit for an open or short. Refer to the wiring diagrams located in the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM RADIO — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Radio C1 harness connector. Using a 12-volt test light connected to 12-volts, probe each ground circuit. Is the test light illuminated for each circuit? Yes → Go To 5 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
5	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Radio C1 harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Radio connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Go To 6 No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	If there are no possible causes remaining, view repair. Repair Replace the Radio in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***NO RESPONSE FROM RKE**

POSSIBLE CAUSES
OPEN GROUND CIRCUIT
OPEN FUSED B+ CIRCUIT
OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT
OPEN PCI BUS CIRCUIT
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Turn all lights off. Disconnect the RKE Module harness connector. Using a 12-volt test light connected to 12-volts, probe both ground circuits. Is the test light illuminated for both ground circuits? Yes → Go To 2 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the RKE Module harness connector. Using a 12-volt test light connected to ground, probe each Fused B+ circuit. Is the test light illuminated for each Fused B+ circuit? Yes → Go To 3 No → Check the fuses that feed the Fused B+ circuits for an open. If ok, repair the Fused B+ circuit that did not illuminate the test light for an open. Refer to the wiring diagrams in the service information. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the RKE Module harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit. Is the test light illuminated? Yes → Go To 4 No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM RKE — Continued

TEST	ACTION	APPLICABILITY
4	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the RKE Module harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the RKE Module connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace the Remote Keyless Entry Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*NO RESPONSE FROM SATELLITE RADIO RECEIVER

POSSIBLE CAUSES
SDARS WIRING HARNESS
PCI BUS CIRCUIT OPEN
IGNITION RUN/ACC SIGNAL CIRCUIT OPEN
RADIO GROUND CKT OPEN
SATELLITE RADIO RECEIVER MODULE

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure the DRBIII® can communicate with the Radio, if not refer to the appropriate symptom.** Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Satellite Radio Receiver Module harness connector. Visually inspect the connectors for damage. Check for open circuits in the wiring harness between the Radio and the Satellite Radio Receiver Module. Measure the resistance of the each circuit between the Radio C2 connector and the Satellite Radio Receiver Module connector. Check for shorted circuits in the wiring harness between the Radio and the Satellite Radio Receiver Module. Measure the resistance between each circuit at the Radio C2 connector. **NOTE: If vehicle is equipped with the Hands Free Phone feature, check connectors on the Hands Free Module. This devise is a pass through for the satellite radio receiver module circuits.** Are any of the circuits shorted together or open? Yes → Replace/repair the SDARS wiring harness. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All

*NO RESPONSE FROM SATELLITE RADIO RECEIVER — Continued

TEST	ACTION	APPLICABILITY
2	Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Disconnect the Satellite Radio Receiver Module harness connector. **NOTE: If vehicle is equipped with the Hands Free Phone feature, check connectors on the Hands Free Module. This devise is a pass through for the satellite radio receiver module circuits.** Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Satellite Radio Receiver Module connector. Reconnect the Radio C2 harness connector. Turn the ignition on. Turn the Radio on and place the radio in the Satellite mode. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Go To 3 No → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Satellite Radio Receiver Module harness connector. **NOTE: If vehicle is equipped with the Hands Free Phone feature, check connectors on the Hands Free Module. This devise is a pass through for the satellite radio receiver module circuits.** Turn the ignition on. Turn the Radio on and place the radio in the Satellite mode. Using a 12-volt test light connected to ground, probe the Ignition Run/Acc Signal circuit. Is the test light illuminated? Yes → Go To 4 No → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Satellite Radio Receiver Module harness connector. **NOTE: If vehicle is equipped with the Hands Free Phone feature, check connectors on the Hands Free Module. This devise is a pass through for the satellite radio receiver module circuits.** Using a 12-volt test light connected to 12-volts, probe the ground circuit. Is the test light illuminated? Yes → Replace the Satellite Radio Receiver Module in accordance with the service information Perform BODY VERIFICATION TEST - VER 1. No → Repair the ground circuit for an open. If OK, replace the radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***NO RESPONSE FROM SENTRY KEY IMMOBILIZER MODULE**

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE INSTRUMENT CLUSTER
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
FUSED B(+) CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
SENTRY KEY IMMOBILIZER MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, enter Body then Electro/Mech Cluster (MIC). Was the DRB able to I/D or communicate with the Instrument Cluster? Yes → Go To 2 No → Refer to the symptom list for problems related to no communication with the Instrument Cluster. Perform SKIS VERIFICATION.	All
2	Turn the ignition off. Disconnect the SKIM harness connector. Using a 12-volt test light connected to 12-volts, probe the Ground circuit. Is the test light illuminated? Yes → Go To 3 No → Repair the ground circuit for an open. Perform SKIS VERIFICATION.	All
3	Turn the ignition off. Disconnect the SKIM harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit. Is the test light illuminated? Yes → Go To 4 No → Repair the Fused Ignition Switch Output circuit for an open. Perform SKIS VERIFICATION.	All
4	Turn the ignition off. Disconnect the SKIM harness connector. Using a 12-volt test light connected to ground, probe the Fused B(+) circuit. Is the test light illuminated? Yes → Go To 5 No → Repair the Fused B+ circuit for an open. Perform SKIS VERIFICATION.	All

*NO RESPONSE FROM SENTRY KEY IMMOBILIZER MODULE — Continued

TEST	ACTION	APPLICABILITY
5	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the SKIM harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the SKIM connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Go To 6 No → Repair the PCI Bus circuit for an open. Perform SKIS VERIFICATION.	All
6	If there are no possible causes remaining, view repair. Repair Replace and program the Sentry Key Immobilizer Module in accordance with the Service Information. Perform SKIS VERIFICATION.	All

Symptom:

*NO RESPONSE FROM TRANSMISSION CONTROL MODULE - NGC

POSSIBLE CAUSES
NO RESPONSE FROM TRANSMISSION CONTROL MODULE
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
FUSED B(+) CIRCUIT OPEN
GROUND CIRCUIT(S) OPEN
PCI BUS CIRCUIT OPEN
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **Note: As soon as one or more module communicates with the DRB, answer the question.** With the DRB, attempt to communicate with the Instrument Cluster. With the DRB, attempt to communicate with the Airbag Control Module. Was the DRB able to I/D or establish communications with both of the modules? Yes → Go To 2 No → Refer to the Communications category and perform the appropriate symptom. Perform 40/41TE (NGC) TRANSMISSION VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the PCM harness connectors. **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.** Turn the ignition on. Using a 12-volt test light connected to ground, probe both Fused Ignition Switch Output circuits (cavs 11 and 12) in the appropriate terminal of special tool #8815. **NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.** Is the test light illuminated for both circuits? Yes → Go To 3 No → Repair the Fused Ignition Switch Output circuit for an open. Refer to the wiring diagrams located in the Service Information. Perform 40/41TE (NGC) TRANSMISSION VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM TRANSMISSION CONTROL MODULE - NGC — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the PCM harness connectors. **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.** Using a 12-volt test light connected to ground, probe the Fused B(+) circuit in the appropriate terminal of special tool #8815. **NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.** Is the test light illuminated? Yes → Go To 4 No → Repair the Fused B(+) circuit for an open. Refer to the wiring diagrams located in the Service Information. Perform 40/41TE (NGC) TRANSMISSION VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the PCM harness connectors. **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.** Using a 12-volt test light connected to 12-volts, probe each ground circuit in the appropriate terminal of special tool #8815. **NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.** Is the light illuminated at all ground circuits? Yes → Go To 5 No → Repair the Ground circuit(s) for an open. Check the main ground connection to engine block and/or chassis. Refer to the wiring diagrams located in the Service Information. Perform 40/41TE (NGC) TRANSMISSION VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM TRANSMISSION CONTROL MODULE - NGC — Continued

TEST	ACTION	APPLICABILITY
5	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the PCM harness connectors. **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.** Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the appropriate terminal of special tool #8815. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Go To 6 No → Repair the PCI Bus circuit for an open. Perform 40/41TE (NGC) TRANSMISSION VERIFICATION TEST - VER 1.	All
6	Using the schematics as a guide, inspect the wiring and connectors. Repair as necessary. Pay particular attention to all power and ground circuits. If there are no possible causes remaining, view repair. Repair Replace and program the Powertrain Control Module in accordance with the service information. WITH THE DRBIII® PERFORM QUICK LEARN AND REPROGRAM PINION FACTOR. Perform 40/41TE (NGC) TRANSMISSION VERIFICATION TEST - VER 1.	All

Symptom:

*NO RESPONSE FROM WINDOW REGULATOR MODULE - PT27

POSSIBLE CAUSES
OPEN GROUND CIRCUIT
OPEN FUSED B+ CIRCUIT
OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT
OPEN PCI BUS CIRCUIT
WINDOW REGULATOR MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Turn all lights off. Disconnect the Window Regulator Module harness connector. Using a 12-volt test light connected to 12-volts, probe each ground circuit. Is the test light illuminated for each ground circuit? Yes → Go To 2 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Window Regulator Module harness connector. Using a 12-volt test light connected to ground, probe each Fused B+ circuit. Did the test light illuminated for each Fused B+ circuit? Yes → Go To 3 No → Check the fuses that feed the Fused B+ circuits for an open. If ok, repair the Fused B+ circuit that did not illuminate the test light for an open. Refer to the wiring diagrams in the service information. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Window Regulator Module harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit. Is the test light illuminated? Yes → Go To 4 No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM WINDOW REGULATOR MODULE - PT27 — Continued

TEST	ACTION	APPLICABILITY
4	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Window Regulator Module harness connector. Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRB. Attach the red and black leads and the cable to probe adapter to the scope input cable. With the DRBIII® select Pep Module Tools. Select lab scope. Select Live Data. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Window Regulator Module connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Replace the Window Regulator Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*PCI BUS COMMUNICATION FAILURE

POSSIBLE CAUSES
WIRING HARNESS INTERMITTENT
OPEN PCI BUS CIRCUIT AT THE DATA LINK CONNECTOR (DLC)
PCI BUS CIRCUIT SHORTED TO VOLTAGE
MODULE SHORT TO VOLTAGE
PCI BUS CIRCUIT SHORTED TO GROUND
MODULE SHORT TO GROUND

TEST	ACTION	APPLICABILITY
1	**Note: Determine which modules this vehicle is equipped with before beginning.** **Note: When attempting to communicate with any of the modules on this vehicle, the DRB will display 1 of 2 different communication errors: a NO RESPONSE message or a BUS +/- SIGNALS OPEN message.** Turn the ignition on. Using the DRB, attempt to communicate with the following control modules: Airbag Control Module SKIM (SENTRY KEY IMMOBILIZER) MIC (INSTRUMENT CLUSTER) Was the DRBIII® able to communicate with one or more Module(s)? Yes → Go To 2 No → Go To 3	All
2	Turn the ignition off. **Note: Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires.** **Note: Visually inspect the related wire harness connectors. Look for broken, bent, pushed out, or corroded terminals.** **Note: If the DRB can not communicate with a single module, refer to the category list for the related symptom.** Were any problems found? Yes → Repair wiring harness/connectors as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

*PCI BUS COMMUNICATION FAILURE — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the PCM/ECM harness connector. Note: If equipped with NGC follow the caution below. **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.** Disconnect the DRB from the Data Link Connector (DLC). Disconnect the negative battery cable. Measure the resistance of the PCI Bus circuit between the Data Link Connector (DLC) and the PCM/ECM harness connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
4	**NOTE: Reconnect the PCM/ECM harness connector and the negative battery cable.** Turn the ignition on. Measure the voltage of the PCI Bus circuit at the Data Link Connector (DLC). Is the voltage above 7.0 volts? Yes → Go To 5 No → Go To 6	All
5	Turn the ignition off. Using a voltmeter, connect one end to the PCI Bus circuit at the DLC, and the other end to ground. **Note: When performing the next step turn the ignition off (wait one minute) before disconnecting any module. When the module is disconnected turn the ignition on to check for a short to voltage.** Turn the ignition on. While monitoring the voltmeter, disconnect each module the vehicle is equipped with one at a time. Is the voltage steadily above 7.0 volts with all the modules disconnected? Yes → Repair the PCI Bus circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Replace the module that when disconnected the short to voltage was eliminated. Perform BODY VERIFICATION TEST - VER 1.	All

*PCI BUS COMMUNICATION FAILURE — Continued

TEST	ACTION	APPLICABILITY
6	Turn the ignition off. Disconnect the negative battery cable. Using a ohmmeter, connect one end to the PCI Bus circuit at the DLC, and the other end to ground. While monitoring the ohmmeter, disconnect each module the vehicle is equipped with one at a time. **NOTE: Total bus resistance to ground thru all of the modules is typically between 350 to 1000 ohms. The more modules on the bus, the lower the total bus resistance will be.** Is the resistance below 150.0 ohms with all the modules disconnected? Yes → Repair the PCI Bus circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the module that when disconnected the short to ground was eliminated. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom List:

ABS INDICATOR CIRCUIT OPEN
AIRBAG INDICATOR CIRCUIT OPEN

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be ABS INDICATOR CIRCUIT OPEN.

POSSIBLE CAUSES
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: The Instrument Cluster performs internal tests on the ABS and Airbag indicators each ignition cycle. These indicator LEDs are not replaceable.** With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 1 minute. Did the ABS or Airbag indicator DTC reset? Yes → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

ABS MESSAGE NOT RECEIVED
ACM MESSAGE NOT RECEIVED
EATX MESSAGE NOT RECEIVED
NO PCI TRANSMISSION
SBEC MESSAGE NOT RECEIVED
SKIM MESSAGE NOT RECEIVED

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be ABS MESSAGE NOT RECEIVED.

POSSIBLE CAUSES
BUS MESSAGE NOT RECEIVED DTC PRESENT
INTERMITTENT CONDITION
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, attempt to communicate with the ABS, ACM, EATX, SBEC, or SKIM module. Was the DRBIII® able to I/D or communicate with the Module in question? Yes → Go To 2 No → Refer to Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTCs. Cycle the ignition, wait approximately 1 minute. With the DRBIII®, read DTCs. Did the DTC reset? Yes → Visually inspect the Instrument Cluster connector and wiring harness. If OK, replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Visually inspect the related wiring harness, connectors, and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

EATX MESSAGE MISMATCH

POSSIBLE CAUSES
EATX BUS MESSAGE DTC PRESENT
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, read DTCs. Does the DRBIII® display ″EATX Bus Message Not Received″? Yes → Refer to Communication for the related symptom. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

EEPROM CHECKSUM FAILURE

POSSIBLE CAUSES
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 1 minute. With the DRBIII®, read DTCs. Did this DTC reset? Yes → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
FUEL LEVEL SENSOR OPEN

When Monitored and Set Condition:

FUEL LEVEL SENSOR OPEN

When Monitored: With the ignition on.

Set Condition: The Instrument Cluster monitors the Fuel Level Sensor signal circuit for a resistance value between approximately 25 ohms to 2500 ohms. If the cluster detects a resistance greater than 2500 ohms, the fault is recorded.

POSSIBLE CAUSES
INTERMITTENT CONDITION
FUEL LEVEL SENSOR SIGNAL CIRCUIT SHORT TO VOLTAGE
FUEL LEVEL SENSOR SIGNAL CIRCUIT OPEN
FUEL PUMP MODULE GROUND CIRCUIT OPEN
FUEL LEVEL SENSOR
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTC's. Cycle the ignition off and then back on. With the DRBIII®, read DTC's. Does the DRBIII® display ″Fuel Level Sensor Open″? No → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Visually inspect the related wiring harness, connectors, and connector terminals. Perform BODY VERIFICATION TEST - VER 1. Yes → Go To 2	All
2	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Disconnect the Instrument Cluster C2 harness connector. Turn the ignition on. Measure the voltage between the Fuel Level Sensor Signal circuit and ground. Is there any voltage present? Yes → Repair the Fuel Level Sensor Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

FUEL LEVEL SENSOR OPEN — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Check connectors - Clean/repair as necessary. Connect a jumper wire between the Fuel Level Sensor Signal circuit and ground. Turn the ignition on. With the DRBIII® in Sensors, read the Fuel Sender Resistance. Does the DRBIII® display 0 (zero) ohms? Yes → Go To 4 No → Repair the Fuel Level Sensor Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Check connectors - Clean/repair as necessary. Measure the resistance between ground and the Fuel Level Sensor Ground circuit. Is the resistance above 5.0 ohms? Yes → Repair the Fuel Pump Module Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Check connectors - Clean/repair as necessary. Measure the resistance of the Fuel Level Sensor between the Sensor Signal circuit pin and the Sensor Ground circuit pin. Is the resistance above 2500 ohms? Yes → Replace the Fuel Level Sender in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
FUEL LEVEL SENSOR SHORT

When Monitored and Set Condition:

FUEL LEVEL SENSOR SHORT

When Monitored: With the ignition on.

Set Condition: The Instrument Cluster monitors the Fuel Level Sensor signal circuit for a resistance value between approximately 25 ohms to 2500 ohms. If the cluster detects a resistance less than 25 ohms, the fault is recorded.

POSSIBLE CAUSES
INTERMITTENT CONDITION
FUEL LEVEL SENSOR
FUEL LEVEL SENSOR SIGNAL CIRCUIT SHORT TO SENSOR GROUND CIRCUIT
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Turn the ignition on, wait for one minute. With the DRBIII®, read DTC's. Does the DRBIII® display Fuel Level Sensor Short? No → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Visually inspect the related wiring harness, connectors, and connector terminals. Perform BODY VERIFICATION TEST - VER 1. Yes → Go To 2	All
2	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Check connectors - Clean/repair as necessary. Measure the resistance of the Fuel Level Sensor between the Sensor Signal circuit pin and the Sensor Ground circuit pin (sensor side). Is the resistance below 50.0 ohms? Yes → Replace the Fuel Level Sensor in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

FUEL LEVEL SENSOR SHORT — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Instrument Cluster C2 harness connector. Disconnect the Fuel Pump Module harness connector. Check connectors - Clean/repair as necessary. Measure the resistance of the Fuel Level Sensor Signal circuit to ground. Is the resistance below 10,000 (10 K) ohms? NOTE: it should be infinite. Yes → Repair the Fuel Level Sensor Signal circuit for a short to the Sensor Ground circuit. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
FUEL LEVEL SENSOR STUCK

When Monitored and Set Condition:

FUEL LEVEL SENSOR STUCK

When Monitored: With the ignition on.

Set Condition: The Instrument Cluster monitors the Fuel Level Sensor Signal circuit for a resistance value between approximately 25 ohms to 2500 ohms. If the Instrument Cluster senses non-varying resistance for more than 50 miles (80 kilometers), this code will set.

POSSIBLE CAUSES
FUEL LEVEL SENSOR
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: Do not clear this DTC until repairs are complete. Clearing the code will cause the cluster to reset the mileage at which it begins to monitor Fuel Level Sensor change over miles.** Perform the Instrument Cluster Self Test. Turn the ignition off. Press and hold the Trip Reset button. Turn the ignition on. Observe the Fuel Gauge during the Self Test. The Fuel Gauge should position the indicator needle at the following calibration points: Off Position: Empty Stop Cal Point #1: E Cal Point #2: 1/8 Cal Point #3: 1/2 Cal Point #4: F Cal Point #5: Full Stop **NOTE: Acceptable needle variation is approximately 2 degrees (1 pointer width) of calibration point.** Did the Fuel Gauge operate correctly during the self test? Yes → Replace the Fuel Level Sensor in accordance with the Service Information. With the DRBIII®, erase DTCs. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. With the DRBIII®, erase DTCs. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
PANEL DIMMER OPEN

When Monitored and Set Condition:

PANEL DIMMER OPEN

When Monitored: When the Instrument Cluster detects voltage on the Headlamp Switch output circuit.

Set Condition: The Instrument Cluster detects Panel Dimmer resistance is greater than 30K ohms for 5 seconds.

POSSIBLE CAUSES
INTERMITTENT CONDITION
PANEL LAMPS DIMMER SIGNAL CIRCUIT OPEN
MULTI- FUCTION SWITCH
MULTI- FUCTION SWITCH GROUND CIRCUIT OPEN
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Turn the Park Lamps on. Rotate the Panel Lamps Dimmer Switch through the full range of adjustment. **NOTE: Wait at least 10 seconds at each dimmer switch detent before reading DTC's.** With the DRBIII®, read DTC's. Does the DRBIII® display Panel Dimmer Open? Yes → Go To 2 No → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Instrument Cluster C2 harness connector. Disconnect the Multi-Function Switch harness connector. Check connectors - Clean/repair as necessary. Measure the resistance of the Panel Lamps Dimmer Signal circuit. Is the resistance above 5.0 ohms? Yes → Repair the Panel Lamps Dimmer Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3 **NOTE: Reconnect the Multi-Function Switch harness connector before proceeding.**	All

PANEL DIMMER OPEN — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Multi-Function Switch harness connector. Check connectors - Clean/repair as necessary. Measure the resistance of the Multi- Function Switch Ground circuit to a known good ground. Does the resistance measure more than 5.0 ohms? Yes → Repair the Multi-Function Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Disconnect the Instrument Cluster harness connector. Ensure the Multi-Function Switch is connected before proceeding. Measure the resistance of the Panel Lamps Dimmer Signal circuit from the Instrument Cluster harness connector to ground. Move the Instrument Panel Dimmer Switch through the entire range of adjustment while observing the ohmmeter. Did the resistance increment smoothly between approximately 0.0 ohms to approximately 3,500 ohms? Yes → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Multi-Function Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
PANEL DIMMER SHORTED

When Monitored and Set Condition:

PANEL DIMMER SHORTED

When Monitored: When the Instrument Cluster detects voltage at the Headlamp Switch Output circuit.

Set Condition: The Instrument Cluster detects Panel Dimmer resistance is less than 20 ohms for 5 seconds.

POSSIBLE CAUSES
INTERMITTENT CONDITION
PANEL LAMPS DIMMER SIGNAL CIRCUIT SHORT TO GROUND
MULTI-FUNCTION SWITCH
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display ″Panel Dimmer Shorted″? Yes → Go To 2 No → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Multi- Function Switch harness connector. Disconnect the Instrument Cluster C2 harness connector. Measure the resistance between ground and the Panel Lamps Dimmer Signal circuit. Is the resistance below 5.0 ohms? Yes → Repair the Panel Lamps Dimmer Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

PANEL DIMMER SHORTED — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Multi- Function Switch harness connector. Measure the resistance of the Panel Lamps Dimmer circuit between the Signal circuit terminal pin and the Ground circuit terminal pin of the Multi- Function Switch. Is the resistance below 80 ohms? Yes → Replace the Multi-Function Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL GAUGES INOPERATIVE**

POSSIBLE CAUSES
NO RESPONSE - PCI BUS
NO RESPONSE - PCI BUS - POWERTRAIN CONTROL MODULE
NO RESPONSE - PCI BUS - INSTRUMENT CLUSTER
IGNITION SWITCH OUTPUT CIRCUIT SHORT TO GROUND
IGNITION SWITCH OUTPUT CIRCUIT OPEN
INSTRUMENT CLUSTER GROUND CIRCUIT OPEN
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, select System Monitors, then J1850 Module Scan. Does the DRBIII® display MIC PRESENT on the BUS? Yes → Go To 2 No → Refer to the COMMUNICATION category and perform the appropriate symptom. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition on. With the DRBIII®, select Body, MIC, SYSTEM TESTS, PCM Monitor. Does the DRBIII® display PCM INACTIVE ON THE BUS? Yes → Refer to the symptom list for problems related to *NO RESPONSE FROM THE POWERTRAIN CONTROL MODULE. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition on. With the DRBIII®, select Body, MIC, MODULE DISPLAY. Does the DRBIII® display NO RESPONSE from MIC? Yes → Refer to the symptom list for problems related to *NO RESPONSE FROM THE INSTRUMENT CLUSTER. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Inspect the #10 Fuse in the Fuse Block (#11 Fuse BUX vehicles). If the fuse is open, replace with proper rated fuse. Turn the ignition on for one minute. Turn the ignition off. Inspect the #10 Fuse in the Fuse Block (#11 Fuse BUX vehicles). Is the fuse open? Yes → Repair the Ignition Switch Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All

*ALL GAUGES INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
5	Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Turn the ignition on. Measure the voltage between the Ignition Switch Output circuit and ground. Is the voltage above 10.5 volts? Yes → Go To 6 No → Repair the Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Measure the resistance between ground and the Instrument Cluster Ground circuit. Is the resistance below 5.0 ohms? Yes → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Instrument Cluster Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*ANY PCI BUS INDICATOR INOPERATIVE

POSSIBLE CAUSES
INTERMITTENT CONDITION
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: Refer to the Service Information: Diagnosis and Testing - Instrument Cluster Lamps for complete list of Indicators that will illuminate during the Self Test.** **NOTE: Ensure that the Instrument Cluster communicates on the PCI Bus.** **NOTE: Diagnose and repair any PCM, ACM, ABS, RKE, or SKIM DTCs before proceeding with this test.** Perform the Instrument Cluster self test. Turn the ignition off. Press and hold the Trip Reset button. Turn the ignition on. Did the LED in question illuminate? Yes → The condition is intermittent. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*BRAKE WARNING INDICATOR ALWAYS ON

POSSIBLE CAUSES
PARK BRAKE SWITCH
BRAKE WARNING INDICATOR DRIVER CIRCUIT SHORT TO GROUND (PARK BRAKE SWITCH)
BRAKE WARNING INDICATOR (FLUID LEVEL) SWITCH
RED BRAKE WARNING INDICATOR DRIVER CIRCUIT SHORT TO GROUND (FLUID LEVEL SWITCH)
INSTRUMENT CLUSTER
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Ensure that the Parking Brake is disengaged. With the DRBIII® in Inputs/Outputs, read the Parking Brake Switch state. Does the DRBIII® display ″Closed″ with the Parking Brake disengaged? Yes → Go To 2 No → Go To 4	All
2	Turn the ignition off. Disconnect the Park Brake Switch harness connector. Turn the ignition on. With the DRBIII® in Inputs/Outputs, read the Parking Brake Switch state. Does the DRBIII® display ″Open″? Yes → Replace the Park Brake Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Park Brake Switch harness connector. Disconnect the Instrument Cluster C1 harness connector. Measure the resistance between ground and the Brake Warning Indicator Driver circuit. Is the resistance below 10,000 ohms (should be infinite)? Yes → Repair the Brake Warning Indicator Driver circuit for a short to ground (between the Park Brake Switch and the Instrument Cluster). Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

*BRAKE WARNING INDICATOR ALWAYS ON — Continued

TEST	ACTION	APPLICABILITY
4	**NOTE: Ensure that the brake fluid is properly filled to the correct level, and the Base Brake system operates properly.** Turn the ignition on. With the DRBIII® in Miscellaneous Engine Status #1, read the Brake Low Fluid Switch state. Disconnect the Brake Low Fluid Switch harness connector. With the DRBIII®, read the Brake Low Fluid Switch state. Did the DRBIII® Brake Low Fluid Switch input change states? Yes → Replace the Brake Warning Indicator (Fluid Level) Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Brake Warning Indicator (Fluid Level) Switch harness connector. Disconnect the PCM C2 harness connector. Measure the resistance between ground and the Red Brake Warning Indicator Driver circuit. Is the resistance below 10,000 ohms (should be infinite)? Yes → Repair the Red Brake Warning Indicator Driver circuit for a short to ground between the Brake Warning Indicator (Fluid Level) Switch and the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Powertrain Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*BRAKE WARNING INDICATOR INOPERATIVE

POSSIBLE CAUSES
PARK BRAKE SWITCH
RED BRAKE WARNING INDICATOR DRIVER CIRCUIT OPEN (PARK BRAKE SWITCH)
INTERMITTENT CONDITION
BRAKE WARNING INDICATOR (FLUID LEVEL) SWITCH
BRAKE WARNING INDICATOR (FLUID LEVEL) SWITCH GROUND CIRCUIT OPEN
RED BRAKE WARNING INDICATOR DRIVER CIRCUIT OPEN (FLUID LEVEL SWITCH)
INSTRUMENT CLUSTER
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	**NOTE: The Brake Warning Indicator should illuminate during the bulb check cycle, and will also illuminate during the Self Test.** Observe the Brake Warning Indicator during the bulb check or Instrument Cluster Self Test. Did the indicator illuminate? Yes → Go To 2 No → Go To 8	All
2	**NOTE: The Brake Warning Indicator illuminates with the Park Brake engaged or with low Brake Fluid Level.** Is the Brake Warning Indicator inoperative with the use of the Park brake? Yes → Go To 3 No → Go To 5	All
3	Turn the ignition off. Disconnect the Park Brake Switch harness connector. Connect a jumper wire between the Red Brake Warning Indicator circuit and ground. Turn the ignition on and observe the Brake Warning Indicator. Does the Indicator illuminate? Yes → Replace the Park Brake Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

*BRAKE WARNING INDICATOR INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Disconnect the Park Brake Switch harness connector. Measure the resistance of the Red Brake Warning Indicator Driver circuit between the Switch and the Instrument Cluster. Is the resistance below 5.0 ohms? Yes → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Red Brake Warning Indicator Driver circuit between the Park Brake Switch and the Instrument Cluster for an open. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition on. With the DRBIII® in Miscellaneous Engine Status #1, read the Brake Low Fluid Reservoir Switch state. Disconnect the Brake Warning Indicator (Fluid Level) Switch harness connector. Connect a jumper wire between cavity A and cavity B of the Brake Warning Indicator Switch harness connector. With the DRBIII®, observe the Brake Low Fluid input. Did the Brake Low Fluid input change state? Yes → Replace the Brake Warning Indicator (Fluid Level) Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect the Brake Warning Indicator (Fluid Level) Switch harness connector. Measure the resistance of the Brake Warning Indicator Switch ground circuit. Is the resistance above 5.0 ohms? Yes → Repair the Brake Warning Indicator (Fluid Level) Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Disconnect the PCM C2 harness connector. Disconnect the Brake Warning Indicator (Fluid Level) Switch harness connector. Measure the resistance of the Red Brake Warning Indicator Driver circuit between the Switch and the PCM. Is the resistance above 5.0 ohms? Yes → Repair the Red Brake Warning Indicator Driver circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Powertrain Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

*BRAKE WARNING INDICATOR INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
8	Perform the Instrument Cluster self test. Turn the ignition off. Press and hold the Trip Reset button. Turn the ignition on. Observe the Brake Warning Indicator during the self test. Did the Brake Warning Indicator illuminate? Yes → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*FRONT FOG LAMP INDICATOR INOPERATIVE

POSSIBLE CAUSES
INTERMITTENT CONDITION
FRONT FOG LAMP INDICATOR CIRCUIT OPEN
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure that the Fog Lamps operate properly before proceeding with this test. If not, select "Service Information" from the menu and repair as necessary.** Disconnect the Instrument Cluster C2 harness connector. Turn the Headlamps on. Turn the Fog Lamps on. **NOTE: Ensure that the battery is fully charged.** Measure the voltage between the Fog Lamp Switch Output circuit and ground. Is the voltage greater than 10.0 volts? Yes → Go To 2 No → Repair the Front Fog Lamp Switch Output circuit for an open.. Perform BODY VERIFICATION TEST - VER 1.	All
2	Perform the Instrument Cluster Self Test. Turn the ignition off. Press and hold the Trip Reset button. Turn the ignition on. Did the Front Fog Lamp indicator illuminate? Yes → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*FUEL GAUGE INACCURATE

POSSIBLE CAUSES
FUEL LEVEL SENSOR DTC PRESENT
FUEL LEVEL SENSOR
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: Diagnose and repair any Fuel Level DTCs before proceeding with this test.** With the DRBIII®, read DTCs. Does the DRBIII® display ″Fuel Level Sensor Open″ or ″Fuel Level Sensor Short″? Yes → Refer to symptom list for problems related to Fuel Level Sensor DTCs. No → Go To 2	All
2	Perform the Instrument Cluster Self Test. Depress and hold the Trip Odometer button while turning the ignition on. Observe the Fuel Gauge calibration points during the Self Test. The Fuel Gauge indicator needle should pause at the following positions: Off: Empty Stop below ″E″ Calibration Point 1: ″E″ Calibration Point 2: ″1/8″ Calibration Point 3: ″1/2″ Calibration Point 4: ″F″ Calibration Point 5: Full Stop above ″F″ **NOTE: Acceptable needle variation is approximately 2 degrees (1 pointer width) of calibration point.** Did the Fuel Gauge needle pause at the correct calibration points? Yes → Go To 3 No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
3	With the DRBIII®, select Body, MIC, then Sensors. Read the Fuel Sender Resistance. Compare the Resistance displayed by the DRBIII® to the Fuel Gauge pointer position using the following values: Approximately 109 - 167 Ohms of Fuel Sensor Resistance= ″E″ Approximately 185 - 254 Ohms of Fuel Sensor Resistance= ″1/8″ Approximately 489 - 610 Ohms of Fuel Sensor Resistance= ″1/2″ Approximately 740 Ohms of Fuel Sensor Resistance= ″3/4″ Approximately 950 Ohms of Fuel Sensor Resistance= ″F″ Is the displayed Fuel Tank Level Resistance correct? Yes → Test Complete. No → Replace the Fuel Level Sensor in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*HIGH BEAM INDICATOR INOPERATIVE

POSSIBLE CAUSES
HIGH BEAM INDICATOR CIRCUIT OPEN
HIGH BEAM INDICATOR BULB
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure that the High Beam headlamps operate properly before proceeding with this test.** Turn the ignition off. Disconnect the Instrument Cluster C2 harness connector. Turn on the headlamps and actuate the High Beams. Using a 12-volt test light connected to ground, check the High Beam Indicator circuit. Does the test light illuminate brightly? Yes → Go To 2 No → Repair the High Beam Indicator circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Remove the Instrument Cluster. Remove and inspect the High Beam Indicator bulb. Is the bulb open? Yes → Replace the High Beam Indicator bulb in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*INSTRUMENT CLUSTER DIMMING INOPERATIVE

POSSIBLE CAUSES
DTC PRESENT
HEADLAMP SWITCH OUTPUT CIRCUIT OPEN
ILLUMINATION BULB
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display Panel Dimmer Open? Yes → Refer to the Symptom list for ″Panel Dimmer Open″. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	**NOTE: Ensure that the Park Lamps operate properly before proceeding with this test.** Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Turn the Park Lamps on. Using a 12-volt test light connected to ground, check the Headlamp Switch Output circuit. Does the test light illuminate brightly? Yes → Go To 3 No → Repair the Headlamp Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Remove the Instrument Cluster. Remove and inspect the Illumination Bulb in question. Is the Illumination Bulb filament open? Yes → Replace the Illumination Bulb in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*LOW OIL PRESSURE INDICATOR ALWAYS ON

POSSIBLE CAUSES
ENGINE OIL PRESSURE SWITCH
INTERMITTENT CONDITION
ENGINE OIL PRESSURE SWITCH SENSE CIRCUIT SHORT TO GROUND
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure that Engine oil pressure is within normal operating range. Refer to the Service Information for specifications.** Allow the engine to idle. With the DRBIII® in Sensors, read the Engine Oil Pressure Switch voltage. Does the Engine Oil Pressure Switch voltage read 5 volts? Yes → Go To 2 No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Engine Oil Pressure Switch harness connector. With the DRBIII® in Sensors, read the Engine Oil Pressure Switch voltage. Does the Engine Oil Pressure Switch voltage read 5 volts? Yes → Go To 3 No → Replace the Engine Oil Pressure Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Engine Oil Pressure Switch harness connector. Disconnect the PCM C1 harness connector. Measure the resistance between ground and the Engine Oil Pressure Switch Sense circuit. Is the resistance below 5.0 ohms? Yes → Repair the Engine Oil Pressure Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*LOW OIL PRESSURE INDICATOR INOPERATIVE

POSSIBLE CAUSES
ENGINE OIL PRESSURE SWITCH
ENGINE OIL PRESSURE SWITCH SENSE CIRCUIT OPEN
INTERMITTENT CONDITION
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Perform the Instrument Cluster Self Test. Press and hold the Trip Odometer reset button. Turn the ignition on. Observe the Low Oil Pressure Indicator during the Self Test. Did the Low Oil Pressure Indicator illuminate? Yes → Go To 2 No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition on. With the DRBIII® in Sensors, read the Oil Pressure Switch state. Disconnect the Engine Oil Pressure Switch harness connector. With the DRBIII® in Sensors, read the Oil Pressure Switch state. Did the Engine Oil Pressure Switch change states? Yes → Replace the Engine Oil Pressure Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Engine Oil Pressure Switch harness connector. Disconnect the PCM C1 harness connector. Measure the resistance of the Engine Oil Pressure Switch Sense circuit. Is the resistance below 5.0 ohms? Yes → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Engine Oil Pressure Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*ONE GAUGE INOPERATIVE

POSSIBLE CAUSES
POWERTRAIN CONTROL MODULE DTCS
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. With the DRBIII®, read DTCs. **NOTE: The PCM will not store any DTCs regarding Oil Pressure concerns.** **NOTE: If oil pressure is in question and the Low Oil Pressure Indicator tests good, a mechanical oil pressure gauge must be attached to the engine.** Does the DRBIII® display any PCM DTCs? Yes → Refer to the DRIVEABILITY category and perform the apropriate symptom. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Perform the Instrument Cluster Self Test. Turn the ignition off. Press and hold the Trip Reset button. Turn the ignition on. Observe the gauge in question while the Instrument Cluster performs the Self Test. The gauges should position at the following calibration points: Speedometer: 20mph (40km/h BUX), 55mph (80km/h BUX), 75mph (120km/h BUX), 120mph (240 km/h BUX) Tachometer: 2000, 6000 (2000, 4000 Diesel) Fuel: E, 1/8, 1/2, Full Temperature: Lo, Mid Lo, High **NOTE: Acceptable needle variation is approximately 2 degrees (1 pointer width) of calibration point.** Did the gauge in question operate properly? Yes → Test Complete. No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*PRND OR AUTOSTICK DISPLAY INOPERATIVE OR INACCURATE

POSSIBLE CAUSES
DTC PRESENT
INTERMITTENT CONDITION
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure that there is communication between the MIC, PCM, and the TCM before proceeding with this test.** **NOTE: Diagnose and repair any DTCs before proceeding with this test.** **NOTE: Ensure that the TCM passes the Shift Lever Test with the DRBIII® before proceeding with this test.** Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display any MIC, PCM, or TCM DTCs? Yes → Refer to symptom list for problems related to DTC's. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Perform the Instrument Cluster Self Test. Turn the ignition off. Press and hold the Trip Reset button. Turn the ignition on. Observe the PRND / AutoStick VF display during the Self Test. Did any part of the VF display (except ″SET″ which is inactive on all models) fail to illuminate? Yes → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

***REAR FOG LAMP INDICATOR INOPERATIVE - BUX ONLY**

POSSIBLE CAUSES
REAR FOG LAMP INDICATOR CIRCUIT OPEN
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Instrument Cluster C2 harness connector. Turn the Rear Fog Lamp switch on. Using a 12-volt test light connected to ground, check the Rear Fog Lamp Indicator circuit. Does the test light illuminate brightly? Yes → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Rear Fog Lamp Indicator circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***SEAT BELT INDICATOR NOT OPERATING PROPERLY**

POSSIBLE CAUSES
INTERMITTENT CONDITION
SEAT BELT SWITCH SENSE CIRCUIT OPEN
SEAT BELT SWITCH GROUND OPEN
SEAT BELT SWITCH
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Perform the Instrument Cluster Self Test. Press and hold the Trip Reset button. Turn the ignition on. Observe the Seat Belt Indicator during the Self Test. Did the Seat Belt Indicator illuminate? Yes → Go To 2 No → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Disconnect the Seat Belt Switch harness connector. Measure the resistance of the Seat Belt Switch Sense circuit. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Seat Belt Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Seat Belt Switch harness connector. Measure the resistance between ground and the Seat Belt Switch Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Seat Belt Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*SEAT BELT INDICATOR NOT OPERATING PROPERLY — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Seat Belt Switch harness connector. Measure the resistance of the Seat Belt Switch between the Switch Sense circuit pin and the Ground circuit pin. Is the resistance below 5.0 ohms? Yes → The condition is not present at this time. Monitor DRBIII® parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Seat Belt Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*VF DISPLAY INOPERATIVE

POSSIBLE CAUSES
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Ensure that the Instrument Cluster communicates on the PCI Bus. **NOTE: The Instrument Cluster must be operational for the result of this test to be valid.** The Instrument Cluster Odometer/PRND vacuum fluorescent (VF) Display is not a repairable or replaceable item. If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*COURTESY LAMPS INOPERATIVE - ALL LAMPS

POSSIBLE CAUSES
FUSED B+ CIRCUIT OPEN
INSTRUMENT CLUSTER - COURTESY LAMP OPEN
COURTESY LAMP DRIVER CIRCUIT OPEN
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	Remove the dome lamp lens. Remove and ensure the bulb is good. Using a 12-volt test light connected to ground, check the Fused B+ circuit. Does the test light illuminate brightly? Yes → Go To 2 No → Repair the open Fused B+ Circuit. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Instrument Cluster. Connect a jumper wire between the Courtesy Lamp Driver Circuit and ground. Observe the Dome Lamp. Does the test light illuminate brightly? Yes → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Remove the dome lamp bulb. Disconnect the Instrument Cluster. Connect a jumper wire between the Courtesy Lamp Driver Circuit in the Instrument Cluster connector and ground. Measure the resistance of the Courtesy Lamp Driver Circuit from the Dome Lamp to the Instrument Cluster connector. Is the resistance below 5.0 ohms? Yes → The condition that caused this symptom is currently not present. Inspect the related wiring for a possible intermittent condition. Look for any chafed, pierced, pinched or partially broken wires. Perform BODY VERIFICATION TEST - VER 1. No → Repair the open Courtesy Lamp Driver Circuit. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***COURTESY LAMPS ON AT ALL TIMES**

POSSIBLE CAUSES
COURTESY LAMP DRIVER SHORTED
DRIVERS DOOR AJAR SWITCH
DRIVERS DOOR AJAR SWITCH SENSE WIRE SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - IF EQUIPPED
INSTRUMENT CLUSTER
DOOR AJAR SWITCHES
REMOTE KEYLESS ENTRY MODULE
PASSENGER DOOR AJAR/RKE SENSE CIRCUIT SHORT TO GROUND
INSTRUMENT CLUSTER
LIFTGATE AJAR SWITCH
REMOTE KEYLESS ENTRY MODULE
LIFTGATE AJAR SWITCH SENSE CIRCUIT SHORT TO GROUND
INSTRUMENT CLUSTER
INSTRUMENT CLUSTER
PANEL LAMPS DIMMER SIGNAL CIRCUIT SHORT TO GROUND
MULTIFUNCTION SWITCH

TEST	ACTION	APPLICABILITY
1	Close all doors and liftgate. Turn the Panel Lamps Dimmer Switch to the MID position. With the DRBIII®, read the Electro/Mech Cluster, I/O's. Observe the: Drv Door Ajar Sw, Dome Lamp, Pass Door Ajar Sw Output and the Liftgate Ajar Sw. Does the DRBIII® read as follows? Drv Door Ajar: CLOSED Go To 2 Pass Door Ajar SW: CLOSED Go To 5 Liftgate Ajar SW: CLOSED Go To 8 Dome Lamp Output: ON Go To 11 NO Replace the Instrument Cluster - Courtesy Lamps Driver shorted. Perform BODY VERIFICATION TEST - VER 1.	All

*COURTESY LAMPS ON AT ALL TIMES — Continued

TEST	ACTION	APPLICABILITY
2	Open the Drivers door. Disconnect the Driver Door Ajar Switch connector. With the DRBIII® select: Body, Electro/Mech Cluster, Input/Output. Read the: Drv Door Ajar Sw - state. Does the DRBIII® show: Open? Yes → Replace the Drivers Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Driver Door Ajar Switch connector. Disconnect the Instrument Cluster connector. Disconnect the RKE Module connector - If Equipped. Measure the resistance of the Driver Door Ajar Switch Sense Circuit from the door ajar switch connector to ground. Is the resistance below 100.0 ohms? Yes → Repair the Drivers Door Ajar Switch Sense Wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Ensure the Instrument Cluster is connected. Disconnect the RKE Module connector. With the DRBIII® select: Body, Electro/Mech Cluster, Input/Output. Read the: Drv Door Ajar Sw - state Does the DRBIII® show: Drv Door Ajar Sw:Open? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
5	Close all passenger doors. With the DRBIII® select: Body, Electro/Mech Cluster, Input/Output. Read the Pas Door Ajar Sw state. Remove each passenger door ajar switch and observe the DRBIII®. When removing the door ajar switches did the DRBIII® read: Pas Door Ajar Sw Open, Left Rear Door Ope Yes → Replace the applicable Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Remove all 3 passenger door ajar switches. With the DRBIII® select: Body, Electro/Mech Cluster, Input/Output Read the Pas Door Ajar Sw state. Disconnect the RKE Module connector while observing the DRBIII®. When the RKE Module was disconnected, did the DRBIII® show:Pas Door Ajar Sw Open? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All

*COURTESY LAMPS ON AT ALL TIMES — Continued

TEST	ACTION	APPLICABILITY
7	Turn the ignition off. Disconnect all 3 passenger door ajar switches. Disconnect the RKE Module connector. Disconnect the Instrument Cluster connector. Measure the resistance of the Passenger Door Ajar circuit in the Passenger Door Ajar Switch connector. Is the resistance below 100.0 ohms? Yes → Repair the Passenger Door Ajar/RKE Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All
8	Open the Liftgate. Disconnect the Liftgate Ajar Switch connector. With the DRBIII® select: Body,Electro/Mech Cluster-Input/Output. Read the Liftgate Ajar Switch state. Does the DRBIII® show: Open? Yes → Replace the Liftgate Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All
9	Disconnect the Liftgate Ajar Switch. Disconnect the RKE Module connector. With the DRBIII® select: Body,Electro/Mech Cluster-Input/Output. Read the Liftgate Ajar Switch state. Does the DRBIII® show Liftgate Ajar Sw: Open? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	Turn the ignition off. Disconnect the Liftgate Ajar Switch connector. Disconnect the Instrument Cluster connector. Disconnect the RKE Module connector. Measure the resistance between ground and the Liftgate Ajar Switch Sense circuit. Is the resistance below 100.0 ohms? Yes → Repair the Liftgate Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
11	Turn the Panel Lamps Dimmer Switch to the MID position. Remove the Instrument Cluster. Measure the resistance between ground and the Panel Lamps Dimmer Signal circuit in the C2 connector. Is the resistance below 100.0 ohms? Yes → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. No → Go To 12	All

*COURTESY LAMPS ON AT ALL TIMES — Continued

TEST	ACTION	APPLICABILITY
12	Disconnect the Instrument Cluster. Disconnect the Multifunction switch connector. Measure the resistance between ground and the Panel Lamps Dimmer Signal circuit. Is the resistance below 200.0 ohms? Yes → Repair the Panel Lamps Dimmer Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*COMPASS/TEMP MODULE DOES NOT CALIBRATE

POSSIBLE CAUSES
CALIBRATION PROCEDURE
COMPASS/TEMPERATURE MODULE

TEST	ACTION	APPLICABILITY
1	Perform the Compass/Temp Module Self-Check. Turn the ignition off. Depress and hold the STEP button. Turn the ignition on and then release the STEP button. **NOTE: The Compass/Temp Module will illuminate all of the VF segments and then display an ″F″ or ″P″.** Exit the self-check by depressing the STEP button or cycling the ignition. Did the Compass/Temp Module display an ″F″ during the self-check? Yes → Replace the Compass/Temp Module in accordance with the Service Information. NOTE: After replacing the CTM, it must be calibrated to operate properly. Refer to Overhead Console in the Service Information or ″CTM Does Not Calibrate″ in this section. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All

*COMPASS/TEMP MODULE DOES NOT CALIBRATE — Continued

TEST	ACTION	APPLICABILITY
2	**NOTE: Ensure that the vehicle has been properly demagnetized before attempting to calibrate the compass. Refer to Overhead Console in the Service Manual.** **NOTE: The compass must be calibrated after any replacement or display ″lock-up″.** Calibrate the compass using the following steps: Drive the vehicle to an area away from any large metal objects or overhead power lines. Ensure that the proper magnetic variance zone is stored in the compass memory. Turn the ignition on and ensure that the compass display is not blank. Depress and hold the STEP button for 5-10 seconds until ″ZONE″ appears in the display, then release the STEP button. The number displayed is the variance zone stored in the compass memory. If necessary, refer to the Variance Map in Overhead Console in the Service Manual. To change the variance zone, depress the STEP button to scroll through the zone numbers 1-15 until the desired zone is displayed. After selecting the proper zone, wait approximately 5 seconds for the compass display to return to normal. With the engine running, depress and hold the STEP button for 5-10 seconds, ″ZONE″ will appear, then ″CAL″, after 10-15 seconds. Release the STEP button within 2 seconds of ″CAL″ illuminating. With ″CAL″ displayed, drive slowly, less than 5 MPH (8 kPH) in 3 complete 360 degree circles. ″CAL″ will turn off and the compass will be calibrated. Did the compass calibrate? Yes → Test Complete. No → Ensure that all calibration instructions have been followed carefully. Attempt to re-calibrate the compass, if unsuccessful, replace the Compass/Temp Module in accordance with the Service Instructions. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*COMPASS/TEMP MODULE INOPERATIVE

POSSIBLE CAUSES
FUSED B(+) CKT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
CTM GROUND CIRCUIT OPEN
COMPASS/TEMPERATURE MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Overhead Console harness connector. Measure the voltage between the Fused B(+) circuit and ground. Is the voltage above 10.5 volts? Yes → Go To 2 No → Repair the Fused B(+) circuit for an open. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Overhead Console harness connector. Turn the ignition on. Measure the voltage between the Fused Ignition Switch Output circuit and ground. Is the voltage above 10.5 volts? Yes → Go To 3 No → Repair the Fused Ignition Switch Output circuit for an open. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Overhead Console harness connector. Measure the resistance between ground and the CTM Ground circuit. Is the resistance below 5.0 ohms? Yes → Replace the Compass/Temp Module in accordance with the Service Information. NOTE: After replacing the CTM, it must be calibrated to operate properly. Refer to Overhead Console in the Service Information or ″CTM Does Not Calibrate″ in this section. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Compass/Temp Module Ground circuit for an open. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*COMPASS/TEMP MODULE VF SEGMENT INOPERATIVE

POSSIBLE CAUSES
COMPASS/TEMP MODULE

TEST	ACTION	APPLICABILITY
1	**NOTE: The Compass/Temp Module VF display is not repairable.** Perform the Compass/Temp Module Self-Check. Turn the ignition off. Depress and hold the STEP button. Turn the ignition on and release the STEP button. All of the VF display segments will illuminate for 2-4 seconds. The self-check is complete when an F or a P is displayed. If an F is displayed, the CTM must be replaced. To exit the self-check mode, depress the STEP button or cycle the ignition to return to normal operation. Did any of the VF display segments fail to illuminate? Yes → Replace the Compass/Temp Module in accordance with the Service Information. NOTE: After replacing the CTM, it must be calibrated to operate properly. Refer to Overhead Console in the Service Information or ″CTM Does Not Calibrate″ in this section. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

*TEMPERATURE DISPLAY INOPERATIVE OR WRONG

POSSIBLE CAUSES
AMBIENT TEMPERATURE SENSOR
AMBIENT TEMPERATURE SENSOR SIGNAL CIRCUIT SHORT TO VOLTAGE
AMBIENT TEMPERATURE SENSOR SIGNAL CIRCUIT OPEN
AMBIENT TEMPERATURE SENSOR SIGNAL CIRCUIT SHORT TO GROUND
AMBIENT TEMPERATURE SENSOR SIGNAL CIRCUIT SHORT TO SENSOR GROUND CIRCUIT
AMBIENT TEMPERATURE SENSOR GROUND CIRCUIT OPEN
COMPASS/TEMPERATURE MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Ambient Temperature Sensor harness connector. Measure the resistance of the Ambient Temperature Sensor using the following values: 10°C (50°F) Sensor Resistance = 17.99 - 21.81 Kilohms 20°C (68°F) Sensor Resistance = 11.37 - 13.61 Kilohms 25°C (77°F) Sensor Resistance = 9.12 - 10.88 Kilohms 30°C (86°F) Sensor Resistance = 7.37 - 8.75 Kilohms 40°C (104°F) Sensor Resistance = 4.90 - 5.75 Kilohms 50°C (122°F) Sensor Resistance = 3.33 - 3.88 Kilohms Does the Ambient Temperature Sensor resistance measure between the min/max specifications at the giv Yes → Go To 2 No → Replace the Ambient Temperature Sensor in accordance with the Service Information. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the Overhead Console harness connector. Turn the ignition on. Measure the voltage between the Ambient Temperature Sensor Signal circuit and ground. Is there any voltage present? Yes → Repair the Ambient Temperature Sensor Signal circuit for a short to voltage. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

*TEMPERATURE DISPLAY INOPERATIVE OR WRONG — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect and isolate the Battery negative cable. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the Overhead Console harness connector. Measure the resistance of the Ambient Temperature Sensor Signal circuit between the Sensor connector and the Overhead Console connector. Is the resistance above 5.0 ohms? Yes → Repair the Ambient Temperature Sensor Signal circuit for an open. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the Overhead Console harness connector. Measure the resistance between ground and the Ambient Temperature Sensor Signal circuit. Is the resistance below 5.0 ohms? Yes → Repair the Ambient Temperature Sensor Signal circuit for a short to ground. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect and isolate the Battery negative cable. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the Overhead Console harness connector. Measure the resistance between the Ambient Temperature Sensor Ground circuit and the Sensor Signal circuit. Is the resistance below 10,000 ohms? Yes → Repair the Ambient Temperature Sensor Signal circuit for a short to the Sensor Ground circuit. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All

*TEMPERATURE DISPLAY INOPERATIVE OR WRONG — Continued

TEST	ACTION	APPLICABILITY
6	Turn the ignition off. Disconnect and isolate the Battery negative cable. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the Overhead Console harness connector. Measure the resistance of the Ambient Temperature Sensor Ground circuit between the Sensor connector and the Overhead Console connector. Is the resistance above 5.0 ohms? Yes → Repair the Ambient Temperature Sensor Ground circuit for an open. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven for more than 2 minutes to update the CTM display. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Compass/Temp Module in accordance with the Service Information. NOTE: After replacing the CTM, it must be calibrated to operate properly. Refer to Overhead Console in the Service Information or ″CTM Does Not Calibrate″ in this section. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
BODY STYLE MISMATCH

When Monitored and Set Condition:

BODY STYLE MISMATCH

When Monitored: When the ignition is in the run position during Remote Keyless Entry Module configuration.

Set Condition: Once the body style configuration is complete, the RKE compares its configuration information with the PCI bus message transmitted by the Powertrain Control Module pertaining to body style. A miscomparison will result in setting the trouble code.

POSSIBLE CAUSES
BODY STYLE MISMATCH

TEST	ACTION	APPLICABILITY
1	The RKE module configuration does not agree withe PCM message as to body style. Press Repair. Repair With the DRBIII select: ″Theft Alarm″, ″Miscellaneous″, ″Configure Module″ and follow instructions on the screen. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
DRIVER DOOR SWITCH FAILURE

When Monitored and Set Condition:

DRIVER DOOR SWITCH FAILURE

When Monitored: Whenever the RKE module is connected and battery voltage is above 10.0 volts.

Set Condition: When a lock or unlock input from the drivers door switch mux circuit to the RKE module is present for more than 8 seconds.

POSSIBLE CAUSES
DTC PRESENT
REMOTE KEYLESS ENTRY MODULE - SHORTED
DOOR LOCK SWITCH SHORTED
CYLINDER LOCK SWITCH SHORTED
LIFTGATE CYLINDER LOCK SWITCH SHORTED
DRIVERS DOOR SWITCH MUX CIRCUIT SHORT TO GROUND.

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times from the left door lock switch and the cylinder lock switch if VTSS equipped.. With the DRBIII®, read DTCs. Does the DRBIII® display: DRIVER DOOR SWITCH FAILURE? Yes → Go To 2 No → The causes for setting this code are not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Remote Keyless Entry module connector. Turn the ignition off. Measure the resistance between ground and the drivers Door Switch Mux circuit (Cavity 10) in the RKE module connector Is the resistance below 8000.0 ohms? Yes → Go To 3 No → Replace the Remote Keyless Entry module. Perform BODY VERIFICATION TEST - VER 1.	All

DRIVER DOOR SWITCH FAILURE — Continued

TEST	ACTION	APPLICABILITY
3	**NOTE: This test is for vehicles with VTSS. If this vehicle is not equipped with VTSS, answer YES to the question and continue.** Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Remove the driver door inner trim panel. Disconnect the Cylinder Lock Switch connector. Measure the resistance between ground and the Door Switch Mux circuit. Is the resistance below 8000.0 ohms? Yes → Go To 4 No → Replace the Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Door Lock Switch connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the driver Door Switch Mux circuit. Is the resistance below 8000.0 ohms? Yes → Go To 5 No → Replace the Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All
5	Is this a Right Hand Drive vehicle? Yes → Go To 6 No → Repair the Door Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Disconnect the Liftgate Cylinder Lock Switch connector. Measure the resistance between ground and the Right Door Switch Mux circuit. Is the resistance below 8000.0 ohms? Yes → Repair the Door Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

INCORRECT MODULE TYPE CONFIGURATION FOR PART NUMBER

When Monitored and Set Condition:

INCORRECT MODULE TYPE CONFIGURATION FOR PART NUMBER

When Monitored: When the ignition is in the run position during Remote Keyless Entry Module configuration.

Set Condition: When the operator attempts to choose a configuration which is not compatible with the part number. Example: Selecting BUX RKE when the module is a Domestic part number, The RKE frequencies are not compatible.

POSSIBLE CAUSES
INCORRECT MODULE TYPE CONFIGURATION FOR PART NUMBER

Repair Instructions:

INCORRECT MODULE TYPE CONFIGURATION FOR PART NUMBER

Replace the Remote Keyless Entry Module with the correct part number.

Perform BODY VERIFICATION TEST - VER 1.

Symptom:

MODULE NOT CONFIGURED FOR RKE

When Monitored and Set Condition:

MODULE NOT CONFIGURED FOR RKE

When Monitored: When the ignition is in the run position during Remote Keyless Entry transmitter programming.

Set Condition: When the operator attempts to program a transmitter and the RKE module is not configured for RKE.

POSSIBLE CAUSES
MODULE NOT CONFIGURED FOR RKE

TEST	ACTION	APPLICABILITY
1	The RKE transmitter will not program because the module is not configured for RKE. View repair. Repair Using the DRBIII®, configure the module for Remote Keyless Entry. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

NO AIRBAG MESSAGES RECEIVED

When Monitored and Set Condition:

NO AIRBAG MESSAGES RECEIVED

When Monitored: With the ignition on or in the run position.

Set Condition: The RKE Module does not receive any airbag messages for 12 seconds.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE ACM
RKE MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, attempt to communicate with the ACM. Was the DRB able to I/D or communicate with the ACM? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRB, erase DTC's. Turn the ignition on and wait approximately 1 minute. With the DRB, read DTC's. Did this DTC reset? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
NO PCM MESSAGES RECEIVED

When Monitored and Set Condition:

NO PCM MESSAGES RECEIVED

When Monitored: With the ignition on or in the run position.

Set Condition: The RKE Module does not receive any PCM messages for 12 seconds.

POSSIBLE CAUSES
NO PCM MESSAGES RECEIVED
ATTEMPT TO COMMUNICATE WITH THE PCM
PCI BUS CIRCUIT OPEN
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, enter SYSTEM MONITORS then J1850 MODULE SCAN. Is the PCM present on the bus? Yes → With the DRB, erase DTCs. Cycle the ignition switch and check for DTCs. If DTC resets, replace the RKE Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition on. With the DRB, attempt to communicate with the PCM. Was the DRB able to communicate with the PCM? Yes → Go To 3 No → Refer to the communication category and perform the appropriate symptom. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the PCM harness connectors. Disconnect the RKE Module harness connector. Measure the resistance of the PCI Bus circuit between the RKE Module connector and the PCM connector. Is the resistance below 5.0 ohms? Yes → Replace the Powertrain Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

NO SKIM MESSAGES RECEIVED

When Monitored and Set Condition:

NO SKIM MESSAGES RECEIVED

When Monitored: With the ignition on or in the run position.

Set Condition: The RKE Module does not receive any SKIM messages for 12 seconds.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE SKIM
RKE MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, attempt to communicate with the SKIM. Was the DRB able to I/D or communicate with the SKIM? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRB, erase DTC's. Turn the ignition on and wait approximately 1 minute. With the DRB, read DTC's. Did this DTC reset? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

PASSENGER DOOR OR LIFTGATE SWITCH FAILURE - PT44

When Monitored and Set Condition:

PASSENGER DOOR OR LIFTGATE SWITCH FAILURE - PT44

When Monitored: Whenever the RKE module is connected and battery voltage is above 10.0 volts.

Set Condition: When a lock or unlock input from the passengers door switch mux circuit to the RKE module is present for more than 8 seconds.

POSSIBLE CAUSES
DTC PRESENT
REMOTE KEYLESS ENTRY MODULE - SHORTED
DOOR LOCK SWITCH SHORTED
LIFTGATE CYLINDER LOCK SWITCH SHORTED
RIGHT CYLINDER LOCK SWITCH SHORTED (EXPORT ONLY)
RIGHT DOOR SWITCH MUX CIRCUIT SHORT TO GROUND.

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times from the passenger door lock switch, liftgate cylinder lock switch (if LHD) and the cylinder lock switch (if equipped). With the DRBIII®, read DTCs. Does the DRBIII® display: PASSENGER DOOR OR LIFTGATE SWITCH FAILURE? Yes → Go To 2 No → The causes for setting this code are not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Remote Keyless Entry module connector. Turn the ignition off. Measure the resistance between ground and the Right Door Switch Mux circuit (cavity 11) in the RKE module connector Is the resistance below 8000.0 ohms? Yes → Go To 3 No → Replace the Remote Keyless Entry module. Perform BODY VERIFICATION TEST - VER 1.	All
3	Is this a Right Hand Drive vehicle? Yes → Go To 4 No → Go To 5	All

PASSENGER DOOR OR LIFTGATE SWITCH FAILURE - PT44 — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Remove the right door inner trim panel. Disconnect the right Cylinder Lock Switch connector. Measure the resistance between ground and the Right Door Switch Mux circuit. Is the resistance below 8000.0 ohms? Yes → Go To 5 No → Replace the Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the right Door Lock Switch connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the Right Door Switch Mux circuit. Is the resistance below 8000.0 ohms? Yes → Go To 6 No → Replace the Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Disconnect the Liftgate Cylinder Lock Switch connector. Measure the resistance between ground and the Right Door Switch Mux circuit. Is the resistance below 8000.0 ohms? Yes → Repair the Right Door Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*** ALL DOORS (EXCEPT DRIVER)FAIL TO LOCK**

POSSIBLE CAUSES
DOOR LOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - LOCK RELAY

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the Door Lock Relay Output circuit. Is the resistance below 5000.0 ohms? Yes → Repair the Door Lock Relay Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*** ALL DOORS (EXCEPT DRIVER)FAIL TO LOCK AND UNLOCK**

POSSIBLE CAUSES
DOOR UNLOCK RELAY OUTPUT SHORT TO DOOR LOCK RELAY OUTPUT
RKE MODULE - OPEN DOOR UNLOCK RELAY OUTPUT
DOOR UNLOCK RELAY OUTPUT WIRE OPEN
DOOR LOCK RELAY OUTPUT WIRE OPEN
OPEN MOTORS

TEST	ACTION	APPLICABILITY
1	Disconnect the Remote Keyless Entry module connector. Lower the passenger door window. Connect a jumper wire between the Door Lock Relay Output ckt and the Ground ckt in the RKE module connector. Connect a jumper wire to the Door Unlock Relay Output ckt and momentarily touch it to the Fused B(+) ckt and observe the passenger door locks. Reverse the jumper wires to drive the motors in the opposite direction. Did the passenger doors Lock and Unlock? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Door Unlock Relay Output circuit and the Door Lock Relay Output in the RKE module connector.. Is the resistance below 1.5 ohms? Yes → Repair the Door Unlock Relay Output circuit for a short to the Door Lock Relay Output circuit (possibly a motor). Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Remove the passenger door inner trim panel to gain access to the door lock motor connector. Disconnect the Passenger Door Lock Motor/Ajar Switch connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Door Unlock Relay Output circuit between the RKE module connector and the Door Lock Motor/Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Door Unlock Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

* ALL DOORS (EXCEPT DRIVER)FAIL TO LOCK AND UNLOCK — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Remove the passenger door inner trim panel to gain access to the door lock motor connector. Disconnect the Passenger Door Lock Motor/Ajar Switch connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Door Lock Relay Output circuit between the RKE module connector and the Door Lock Motor/Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair the Door Lock Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
5	If there are no possible causes remaining, view repair. Repair Replace the Door Lock Motors as necessary. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*** ALL DOORS (EXCEPT DRIVER)FAIL TO UNLOCK**

POSSIBLE CAUSES
DOOR UNLOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - UNLOCK RELAY

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the Door Unlock Relay Output circuit. Is the resistance below 5000.0 ohms? Yes → Repair the Door Unlock Relay Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL DOOR LOCKS INOPERATIVE**

POSSIBLE CAUSES
FUSED B(+) CIRCUIT OPEN
FUSED B(+) WIRE SHORT TO GROUND.
GROUND CIRCUIT OPEN
DOOR LOCK RELAY OUTPUT CIRCUIT OPEN
DRIVER DOOR UNLOCK RELAY OUTPUT SHORT TO THE DOOR LOCK RELAY OUTPUT
DRIVER DOOR UNLOCK RELAY OUTPUT SHORT TO THE DRIVER DOOR LOCK RELAY OUTPUT
DRIVER DOOR UNLOCK RELAY OUTPUT WIRE SHORT TO GROUND
DRIVER DOOR LOCK RELAY OUTPUT WIRE SHORT TO GROUND
DOOR LOCK RELAY OUTPUT WIRE SHORT TO GROUND
DOOR UNLOCK RELAY OUTPUT WIRE SHORT TO GROUND
DOOR UNLOCK RELAY OUTPUT SHORT TO DOOR LOCK RELAY OUTPUT
DEFECTIVE FUSE #3
RKE MODULE
RKE MODULE - B(+) SHORT TO GROUND
RKE MODULE - RELAYS OPEN
RKE MODULE - SHORTED

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure there is communication with the RKE module (with the DRB III select ″Vehicle Theft″) before proceeding. If not, refer to the ″COMMUNICATION″ category.** Test Fuse #3 in the fuse block. Is the fuse open? Yes → Go To 2 No → Go To 13	All
2	Turn ignition off. Remove Fuse #3 in the Fuse Block. Measure the resistance of the Fused B(+) circuit from the fuse output cavity to ground. Is the resistance below 100.0 ohms? Yes → Go To 3 No → Go To 4	All

*ALL DOOR LOCKS INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
3	Turn ignition off. Remove Fuse #3 in the Fuse Block. Disconnect the RKE Module connector. Measure the resistance of the fused B(+) circuit (cavity #3) in the RKE connector to ground. Is the resistance below 100.0 ohms? Yes → Repair Fused B(+) wire for a short to ground and replace blown fuse. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
4	Replace fuse #3 Operate all the door locks several times. Did the system operate properly without blowing the fuse? Yes → Test complete. If Fuse #3 blows again, check with the customer as to when it blew and rerun this test. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Unlock Relay Output circuit in the RKE module connector to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Unlock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	**NOTE: If this vehicle is a PT 27 (convertible) answer No to the question and continue.** Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Lock Relay Output circuit in the RKE module connector to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Lock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Lock Relay Output circuit in the RKE module connector to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Lock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All

*ALL DOOR LOCKS INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
8	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Unlock Relay Output circuit in the RKE module connector to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All
9	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Door Unlock Relay Output circuit and the Door Lock Relay Output in the RKE module connector.. Is the resistance below 1.5 ohms? Yes → Repair the Door Unlock Relay Output circuit for a short to the Door Lock Relay Output circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	IS THIS VEHICLE A PT27 (CONVERTIBLE)? Yes → Go To 11 No → Go To 12	All
11	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Driver Door Unlock Relay Output circuit and the Door Lock Relay Output circuit in the RKE module connector.. Is the resistance below 3.0 ohms? Yes → Repair the Driver Door Unlock Relay Output circuit for a short to the Door Lock Relay Output circuit. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module and replace the fuse. Perform BODY VERIFICATION TEST - VER 1.	All
12	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Driver Door Unlock Relay Output circuit and the Driver Door Lock Relay Output circuit in the RKE module connector.. Is the resistance below 3.0 ohms? Yes → Repair the Driver Door Unlock Relay Output circuit for a short to the Driver Door Lock Relay Output circuit. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module and replace the fuse. Perform BODY VERIFICATION TEST - VER 1.	All

*ALL DOOR LOCKS INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
13	Disconnect the RKE Module connector. Using a test light connected to ground, test both sides of Fuse #3 to ensure the fuse is Okay and that the 12.0 volt supply is not open. Measure the voltage of the Fused B(+) circuit (cavity #3) in the RKE Module connector. Is the voltage above 10.0 volts? Yes → Go To 14 No → Repair the open Fused B(+) wire from the RKE Module connector to the fuse. Perform BODY VERIFICATION TEST - VER 1.	All
14	Turn ignition off. Disconnect the RKE Module connector. Using a 12-volt test light connected to 12-volts, check the Ground circuit (cavity #8) in the RKE Module connector. Does the test light illuminate brightly? Yes → Go To 15 No → Repair the open ground circuit. Perform BODY VERIFICATION TEST - VER 1.	All
15	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Door Unlock Relay Output circuit and the Door Lock Relay Output circuit in the RKE module connector.. Is the resistance LESS than 7.0 ohms? Yes → Go To 16 No → Repair the open Door Lock Relay Output circuit. Perform BODY VERIFICATION TEST - VER 1.	All
16	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module (relays open). Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL DOORS FAIL TO LOCK**

POSSIBLE CAUSES
DOOR LOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - LOCK RELAY

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the Door Lock Relay Output circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Door Lock Relay Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL DOORS FAIL TO UNLOCK**

POSSIBLE CAUSES
DOOR UNLOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - UNLOCK RELAY

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the Door Unlock Relay Output circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Relay Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL LOCKS INOPERATIVE FROM ONE LOCK SWITCH**

POSSIBLE CAUSES
DOOR LOCK SWITCH - SHORT TO GROUND
DOOR SWITCH GROUND WIRE OPEN
DOOR SWITCH MUX WIRE SHORT TO VOLTAGE
CYLINDER LOCK SWITCH SHORT TO GROUND
DOOR SWITCH MUX WIRE OPEN
DOOR LOCK SWITCH - OPEN
DOOR SWITCH MUX WIRE SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - HIGH VOLTAGE
REMOTE KEYLESS ENTRY MODULE - LOW VOLTAGE

TEST	ACTION	APPLICABILITY
1	With the DRBIII® in Sensors, read the appropriate DOOR LOCK SW voltage.. Select the reading found: Between 0.0 and 3.7 volts. Go To 2 Between 4.9 and 5.5 volts. Go To 6 Above 5.6 volts. Go To 9	All
2	Turn the ignition off. Disconnect the Remote Keyless Entry Module connector. Measure the resistance between ground and the appropriate Door Switch Mux circuit. Is the resistance below 1000.0 ohms? Yes → Go To 3 No → Replace the Remote Keyless Entry module. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Remote Keyless Entry Module connector. Disconnect the Door Lock Switch connector. Measure the resistance between ground and the Door Switch Mux circuit. Is the resistance below 1000.0 ohms? Yes → Go To 4 No → Replace the Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All

*ALL LOCKS INOPERATIVE FROM ONE LOCK SWITCH — Continued

TEST	ACTION	APPLICABILITY
4	NOTE: If this vehicle is not equipped with Cylinder Lock Switches answer YES to the question.. Turn the ignition off. Disconnect the Remote Keyless Entry Module connector. Disconnect the Cylinder Lock Switch connector. Measure the resistance between ground and the Door Switch Mux circuit. Is the resistance below 1000.0 ohms? No → Replace the Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1. Yes → Go To 5	All
5	If there are no possible causes remaining, view repair. Repair Repair the Door Switch Mux wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Door Lock Switch connector. Measure the resistance between ground and the Ground circuit in the appropriate Door Lock Switch connector.. Is the resistance below 5.0 ohms? Yes → Go To 7 No → Repair the Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
7	Turn the ignition off. Disconnect the Remote Keyless Entry Module connector. Disconnect the Door Lock Switch connector. Measure the resistance of the appropriate Door Switch Mux circuit between the RKE connector and the Door Lock Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 8 No → Repair the Door Switch Mux wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
8	If there are no possible causes remaining, view repair. Repair Replace the Door Lock Switch - open resistor. Perform BODY VERIFICATION TEST - VER 1.	All
9	Turn the ignition off. Disconnect the Remote Keyless Entry Module connector. Disconnect the Door Lock Switch connector. Measure the voltage between the appropriate Door Switch Mux circuit and ground. Is there any voltage present? Yes → Repair the Door Switch Mux wire for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*DECKLID RELEASE SWITCH INOPERATIVE - PT27

POSSIBLE CAUSES
DECKLID RELEASE SWITCH OPEN
DECKLID RELEASE SWITCH SENSE CIRCUIT OPEN
REMOTE KEYLESS ENTRY MODULE OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Decklid Release Switch harness connector. Turn the ignition on. **NOTE: Ensure the Decklid is closed before continuing.** Momentarily touch the Decklid Release Switch Sense circuit to Ground. Did the decklid open? Yes → Replace the Decklid Release Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition off. Disconnect the Decklid Release Switch harness connector. Disconnect the RKE module harness connector. Measure the resistance of the Decklid Release Switch Sense circuit between the RKE module connector and the Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Decklid Release Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*DECKLID SOLENOID INOPERATIVE - PT27

POSSIBLE CAUSES
SOLENOID GROUND OPEN
DECKLID RELEASE SOLENOID OPEN
DECKLID RELEASE RELAY OUTPUT WIRE OPEN
RKE MODULE - DECKLID RELAY OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Decklid Solenoid connector. Connect a test light between the Decklid Release Relay Output circuit and the Ground circuit in the Decklid Solenoid connector. With the DRBIII actuate the "Decklid Solenoid". Did the test light illuminate when the solenoid was actuated? Yes → Replace the Decklid Release Solenoid. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn ignition off. Disconnect the Decklid Solenoid connector. Using a 12-volt test light connected to 12-volts, check the Ground circuit in the Decklid Release connector. Does the test light illuminate brightly? Yes → Go To 3 No → Repair the open ground wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Disconnect the Decklid Solenoid connector. Measure the resistance of the Decklid Release Relay Output wire from the RKE module connector to the Decklid Solenoid connector. Is the resistance below 5.0 ohms? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Decklid Release Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***DOORS LOCKABLE WITH KEY IN IGNITION AND DRIVER DOOR OPEN**

POSSIBLE CAUSES
DRIVER DOOR AJAR SWITCH - OPEN
OPEN DRIVER DOOR AJAR SWITCH SENSE TO RKE MODULE
IGNITION SWITCH OPEN
KEY-IN IGNITION SWITCH SENSE WIRE OPEN
OPEN DRIVER DOOR AJAR SWITCH SENSE TO CLUSTER
INSTRUMENT CLUSTER - KEY-IN IGNITION OPEN
INSTRUMENT CLUSTER DEFECTIVE-DRIVER DOOR AJAR OPEN
RKE MODULE DEFECTIVE-OPEN DRIVER DOOR AJAR

TEST	ACTION	APPLICABILITY
1	Open the Drivers door. With the DRBIII select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Drv Door Ajar Sw″ state. Does the DRBIII Show: ″CLOSED″? No → Go To 2 Yes → Go To 5	All
2	Remove the driver door inner trim panel to gain access to the Door Lock Motor/Ajar Switch connector. Disconnect the Driver Door Lock Motor/ Ajar Switch connector. Connect a jumper wire between Door Ajar Switch Sense circuit and ground. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Drv Door Ajar Sw″ state. Does the DRBIII show: ″Closed″? Yes → Replace the Driver Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn ignition off. Disconnect the Driver Door Lock Motor/Ajar Switch connector. Disconnect the Instrument Cluster connector. Measure the resistance of the Driver Door Ajar Switch Sense circuit between the Driver Door Lock Motor/Ajar Switch connector and the Instrument Cluster connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Door Ajar Switch Sense wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*DOORS LOCKABLE WITH KEY IN IGNITION AND DRIVER DOOR OPEN — Continued

TEST	ACTION	APPLICABILITY
4	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All
5	**Note: Ensure that the Key is still in the Ignition Switch.** With the DRBIII, read the Key-In Ignition status. Does the DRB show KEY-IN IGN: CLOSED ? No → Go To 6 Yes → Go To 9	All
6	Ensure the Instrument Cluster is connected before proceeding. Disconnect the Ignition Switch connector. Connect a jumper wire from the Key-In Ignition Switch Sense circuit in the ignition switch connector to ground. With the DRBIII, read the Key-In Ignition status. Does the DRBIII show KEY-IN IGN: CLOSED ? Yes → Replace the Ignition Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Disconnect the Ignition Switch connector. Disconnect the Instrument Cluster connector. Measure the resistance of the Key-In Ignition Switch Sense circuit between the ignition switch connector and the instrument cluster connector. Is the resistance below 5.0 ohms? Yes → Go To 8 No → Repair the open Key-In Ignition Switch Sense wire. Perform BODY VERIFICATION TEST - VER 1.	All
8	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster (key-in ign open). Perform BODY VERIFICATION TEST - VER 1.	All
9	Turn ignition off. Remove the driver door inner trim panel. Disconnect the Driver Door Lock Motor/Ajar Switch connector. Disconnect the RKE Module connector. Measure the resistance of the Driver Door Ajar Switch Sense circuit between the Driver Door Lock Motor/Ajar Switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Go To 10 No → Repair the open Door Ajar Switch Sense wire. Perform BODY VERIFICATION TEST - VER 1.	All
10	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*DRIVER DOOR FAILS TO LOCK

POSSIBLE CAUSES
DRIVER DOOR LOCK RELAY OUTPUT WIRE SHORT TO GROUND
RKE MODULE DEFECTIVE - DRIVER LOCK OPEN

TEST	ACTION	APPLICABILITY
1	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Lock Relay Output circuit in the RKE module connector to body ground. Is the resistance below 5000.0 ohms? Yes → Repair the Driver Door Lock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*DRIVER DOOR FAILS TO LOCK AND UNLOCK

POSSIBLE CAUSES
RKE MODULE - OPEN DRIVER UNLOCK CIRCUIT
DRIVER DOOR LOCK MOTOR - OPEN
DRIVER DOOR LOCK RELAY OUTPUT WIRE OPEN
DRIVER DOOR UNLOCK RELAY OUTPUT WIRE OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Remote Keyless Entry module connector. Lower the driver door window. Connect a jumper wire between the Driver Door Lock Relay Output ckt and the Ground ckt in the RKE module connector. Connect a jumper wire to the Driver Door Unlock Relay Output ckt and momentarily touch it to the Fused B(+) ckt and observe the door lock. Reverse the jumper wires to drive the motor in the opposite direction. Did the drivers door Lock and Unlock? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Ensure the RKE module is connected before proceeding. Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Connect a test light between the Driver Door Lock Relay Output and the Driver Door Unlock Relay Output circuits in the door lock motor connector. Press the door lock switch to the Lock and Unlock positions. Did the test light illuminate when the lock switch was pressed in both directions? Yes → Replace the Driver Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Lock Relay Output wire between the RKE connector and the door lock motor connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Driver Door Lock Relay Output Wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*DRIVER DOOR FAILS TO LOCK AND UNLOCK — Continued

TEST	ACTION	APPLICABILITY
4	Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Unlock Relay Output wire between the RKE connector and the door lock motor connector. Is the resistance below 5.0 ohms? Yes → Test Complete. No → Repair the open Driver Door Unlock Relay Output wire. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*DRIVER DOOR FAILS TO UNLOCK

POSSIBLE CAUSES
DRIVER DOOR UNLOCK RELAY OUTPUT WIRE SHORT TO GROUND
RKE MODULE DEFECTIVE - DRIVER UNLOCK OPEN

TEST	ACTION	APPLICABILITY
1	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Unlock Relay Output circuit in the RKE module connector to body ground. Is the resistance below 5000.0 ohms? Yes → Repair the Driver Door Unlock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***DRIVER DOOR FAILS UNLOCK - PT27**

POSSIBLE CAUSES
DRIVER DOOR UNLOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - DRIVER UNLOCK RELAY

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the Driver Door Unlock Relay Output circuit. Is the resistance below 5000.0 ohms? Yes → Repair the Driver Door Unlock Relay Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***LIFTGATE LOCK MOTOR FAILS TO LOCK OR UNLOCK**

POSSIBLE CAUSES
LIFTGATE LOCK MOTOR
DOOR UNLOCK RELAY OUTPUT WIRE OPEN
DOOR UNLOCK RELAY OUTPUT WIRE SHORT TO GROUND
DOOR LOCK RELAY OUTPUT WIRE OPEN
DOOR UNLOCK RELAY OUTPUT SHORT TO DOOR LOCK RELAY OUTPUT
DOOR LOCK RELAY OUTPUT WIRE SHORT TO GROUND

TEST	ACTION	APPLICABILITY
1	Remove the liftgate trim panel to gain access to the Liftgate Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Connect a test light between the Door Lock Relay Output and the Door Unlock Relay Output circuits in the liftgate lock motor connector. Press the door lock switch to the Lock and Unlock positions. Did the test light illuminate when the lock switch was pressed in both directions? Yes → Replace the Liftgate Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn ignition off. Remove the liftgate trim panel to gain access to the Liftgate Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Using a 12-volt test light connected to ground, check the Door Unlock Relay Output circuit. With the DRBIII®, actuate the door unlock relay and observe the test light. Does the test light illuminate brightly when the relay is actuated? Yes → Go To 3 No → Repair the Door Unlock Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn ignition off. Remove the liftgate trim panel to gain access to the Liftgate Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Unlock Relay Output wire to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

*LIFTGATE LOCK MOTOR FAILS TO LOCK OR UNLOCK — Continued

TEST	ACTION	APPLICABILITY
4	Turn ignition off. Remove the liftgate trim panel to gain access to the Liftgate Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Using a 12-volt test light connected to ground, check the Door Lock Relay Output circuit. With the DRBIII®, actuate the Door Lock Relay and observe the test light. Does the test light illuminate brightly when the relay is actuated? Yes → Go To 5 No → Repair the Door Lock Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn ignition off. Remove the liftgate trim panel to gain access to the Liftgate Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Door Unlock Relay Output circuit and the Door Lock Relay Output circuit Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Relay Output wire for a short to the Door Lock Relay Output wire. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn ignition off. Remove the liftgate trim panel to gain access to the Liftgate Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Lock Relay Output wire to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Lock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

***ONE DOOR FAILS TO LOCK AND UNLOCK - PT27**

POSSIBLE CAUSES
*OPEN MOTOR - 27
DOOR (OR DRIVER DOOR) UNLOCK RELAY OUTPUT WIRE OPEN
DOOR LOCK RELAY OUTPUT WIRE OPEN
DOOR (OR DRIVER DOOR) UNLOCK RELAY OUTPUT CKT SHORT TO DOOR LOCK RELAY OUTPUT
RKE MODULE - DOOR LOCK OPEN
RKE MODULE - DOOR UNLOCK OPEN
RKE MODULE - SHORTED

TEST	ACTION	APPLICABILITY
1	Disconnect the inoperative Door Lock Motor/Ajar Switch connector. Using a 12-volt test light, connect one end to the Door Lock Relay Output ckt and the other to the Door (or Driver Door) Unlock Relay Output ckt. With the DRBIII®, actuate the Door Lock Relay and then the Door (or Drv Door) Unlock Relay and observe the test light.. Did the test light illuminate brightly when the switch was activated in both directions? Yes → Replace the Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the inoperative Door Lock Motor/Ajar Switch. Using a 12-volt test light connected to ground, check the Door Lock Relay Output circuit. With the DRBIII®, actuate the Door Lock Relay and observe the test light. Does the test light illuminate brightly when the relay is actuated? Yes → Go To 3 No → Go To 6	All
3	Disconnect the inoperative Door Lock Motor/Ajar Switch. Using a 12-volt test light connected to ground, check the Door (or Driver Door) Unlock Relay Output circuit. With the DRBIII®, actuate the appropriate Door Unlock Relay and observe the test light. Does the test light illuminate brightly when the relay is actuated? Yes → Go To 4 No → Go To 5	All

*ONE DOOR FAILS TO LOCK AND UNLOCK - PT27 — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Door Lock Motor/Ajar Switch connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the appropriate Door Unlock Relay Output circuit to the Door Lock Relay Output circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Door (or Driver Door) Unlock Relay Output circuit for a short to the Door Lock Relay Output circuit. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Door Lock Motor/Ajar Switch connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the appropriate Door Unlock Relay Output circuit between the RKE module connector and the Door Lock Motor/Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Door (or Driver Door) Unlock Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the inoperative Door Lock Motor/Ajar Switch connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Door Lock Relay Output circuit between the RKE module connector and the Door Lock Motor/Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Door Lock Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ONE PASSENGER DOOR FAILS TO LOCK AND UNLOCK**

POSSIBLE CAUSES
DOOR LOCK MOTOR - OPEN
DOOR UNLOCK RELAY OUTPUT WIRE OPEN
DOOR LOCK RELAY OUTPUT WIRE OPEN
DOOR UNLOCK RELAY OUTPUT WIRE SHORT TO GROUND
DOOR UNLOCK RELAY OUTPUT SHORT TO DOOR LOCK RELAY OUTPUT
DOOR LOCK RELAY OUTPUT WIRE SHORT TO GROUND

TEST	ACTION	APPLICABILITY
1	Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the appropriate Door Lock Motor connector. Connect a test light between the Door Lock Relay Output and the Door Unlock Relay Output circuits in the door lock motor connector. Press the door lock switch to the Lock and Unlock positions. Did the test light illuminate when the lock switch was pressed in both directions? Yes → Replace the Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn ignition off. Remove the appropriate inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Unlock Relay Output wire between the RKE module connector and the door lock motor connector. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Door Unlock Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn ignition off. Remove the appropriate inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Lock Relay Output wire between the RKE module connector and the door lock motor connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Door Lock Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*ONE PASSENGER DOOR FAILS TO LOCK AND UNLOCK — Continued

TEST	ACTION	APPLICABILITY
4	Turn ignition off. Remove the appropriate inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Unlock Relay Output wire to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn ignition off. Remove the appropriate inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Door Unlock Relay Output circuit and the Door Lock Relay Output circuit Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Relay Output wire for a short to the Door Lock Relay Output wire. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn ignition off. Remove the appropriate inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Lock Relay Output wire to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Lock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

***PASSENGER DOOR FAILS TO UNLOCK - PT27**

POSSIBLE CAUSES
DOOR UNLOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND
REMOTE KEYLESS ENTRY MODULE - UNLOCK RELAY

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance between ground and the Door Unlock Relay Output circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Relay Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*RKE INOPERATIVE

POSSIBLE CAUSES
TEST TRANSMITTER WITH TESTER
RKE TRANSMITTER NOT PROGRAMMED
TEST RKE TRANSMITTER
RKE TRANSMITTER - INOPERATIVE
RKE MODULE
RKE MODULE - RECEIVER INOPERABLE

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure the RKE module is configured for RKE and the M1 (IOD) fuse is installed.** **Note: Ensure the voltage of each battery is greater than 3.0 volts before proceeding.** Do you have access to the Miller Tool ″9001 RF DETECTOR″? ? Yes → Go To 2 No → Go To 4	All
2	Using the 9001 RF Detector, follow the instructions on the back of the tester and test the transmitter several times. Does the signal strength measure ″STRONG″? Yes → Go To 3 No → Replace the transmitter. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition on Place transmission in the Park position. Ensure Vehicle Theft Security System (if equipped) is in Disarm Mode. With the DRBIII®, select Theft Alarm, VTSS, MISCELLANEOUS, then PROGRAM RKE. Follow the instructions on the screen. Exit PROGRAM RKE. Activate the Door Locks using the RKE Transmitter. Did the door locks respond properly to the RKE transmitter commands? Yes → Repair complete. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module and reprogram all transmitters used with this vehicle. Perform BODY VERIFICATION TEST - VER 1.	All

*RKE INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
4	Using the DRBIII select Theft Alarm, VTSS, MISCELLANEOUS then RKE FOB & Module Test. Follow the instructions on the DRBIII screen. Try the Door Locks using the original Transmitter. Did the Door Locks respond properly to the Transmitter commands ? Yes → Using the DRBIII, program the transmitter and recheck the system. If okay, program all Transmitters that will be used with this vehicle. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Secure a known good Transmitter from another PL or PT vehicle. Using the DRBIII select BODY, Theft Alarm, VTSS, MISCELLANEOUS then RKE FOB & Module Test. Follow the instructions on the DRBIII screen. Try the Door Locks using the Transmitter. Did the Door Locks respond properly to the Transmitter commands ? Yes → Replace the original Transmitter. Program all Transmitters that will be used with this Vehicle. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
AMBIENT TEMP MESSAGE NOT RECEIVED

When Monitored and Set Condition:

AMBIENT TEMP MESSAGE NOT RECEIVED

When Monitored: Whenever the module is awake.

Set Condition: When the module looks for ambient temperature messages and they are not received, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
ENGINE TROUBLE CODE PRESENT
MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Start the engine. Run the engine at approximately 1500 RPM for 1 minute. With the DRBIII®, read DTCs. Does the DRBIII® display AMBIENT TEMP MESSAGES NOT RECEIVED? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using Service Information, check the charging system. Perform BODY VERIFICATION TEST - VER 1.	All
2	Start the engine. Run the engine at approximately 1500 RPM for 1 minute. With the DRBIII®, read ENGINE DTCs. Does the DRBIII® display any AMBIENT TEMP SENSOR DTC's? Yes → Refer to symptom Ambient Temp Sensor DTC's in the Driveability - NGC category. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information.. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

POWER TOP RELAY CONTROL CIRCUIT OPEN

When Monitored and Set Condition:

POWER TOP RELAY CONTROL CIRCUIT OPEN

When Monitored: Whenever the module is awake.

Set Condition: If the Driver Window Regulator Module does not sense any (0.0) voltage on either the Top Down or Top Up Relay Control circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
POWER TOP FUSE OPEN
RELAY FUSED B+ CIRCUIT OPEN
TOP DOWN RELAY CONTROL WIRE SHORT TO GROUND
TOP UP RELAY CONTROL WIRE SHORT TO GROUND
TOP DOWN RELAY CONTROL WIRE SHORT TO VOLTAGE
TOP UP RELAY CONTROL WIRE SHORT TO VOLTAGE
TOP DOWN RELAY CONTROL WIRE OPEN
TOP DOWN RELAY OPEN
TOP UP RELAY CONTROL WIRE OPEN
TOP UP RELAY OPEN
DRIVER WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the Power Top down and up. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display POWER TOP RELAY CONTROL CIRCUIT OPEN/ SHORTED? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All

POWER TOP RELAY CONTROL CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	Test the Power Top fuse in the PDC. Is the fuse open? Yes → Replace the fuse and operate the power top several times. If the fuse blows again, use the wiring diagram/schematic as a guide to locate the shorted circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Disconnect the Convertible Top Relay (at the Pump assembly). Measure the voltage between Fused B+ circuit and ground at the Power Top Relays. Is the voltage above 11.0 volts? Yes → Go To 4 No → Repair the Fused B+ circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Convertible Top Relay (at the Pump assembly). Disconnect the Driver Window Regulator Module. Measure the resistance between ground and the Top Down Relay Control circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Top Down Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Convertible Top Relay (at the Pump assembly). Disconnect the Driver Window Module. Measure the resistance between ground and the Top Up Relay Control circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Top Up Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Disconnect the Convertible Top Relay (at the Pump assembly). Disconnect the Driver Window Regulator Module. Turn the ignition on. Measure the voltage between the Top Down Relay Control circuit and ground . Is there any voltage present? Yes → Repair the Top Down Relay Control circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Disconnect the Convertible Top Relay (at the Pump assembly). Disconnect the Driver Window Regulator Module. Turn the ignition on. Measure the voltage between the Top Up Relay Control circuit and ground . Is there any voltage present? Yes → Repair the Top Up Relay Control circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All

POWER TOP RELAY CONTROL CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
8	Turn the ignition off. Disconnect the Driver Window Regulator Module. **NOTE: Ensure the Convertible Top Relay (at the Pump assembly) is connected before proceeding.** Turn the ignition on. Measure the voltage between the Top Down Relay Control circuit and Ground. Is the voltage above 11.0 volts? Yes → Go To 9 No → Go To 11	All
9	Turn the ignition off. Disconnect the Driver Window Regulator Module. **NOTE: Ensure the Convertible Top Relay (at the Pump assembly) is connected before proceeding.** Turn the ignition on. Measure the voltage between the Top Up Relay Control circuit and Ground. Is the voltage above 11.0 volts? Yes → Replace the Driver Window Regulator Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	Turn the ignition off. Disconnect the Driver Window Regulator Module. Disconnect the Convertible Top Relay (at the Pump assembly). Measure the resistance of the Top Up Relay Control circuit between the relay connector and the module connector. Is the resistance below 5.0 ohms? Yes → Replace the Convertible Top Relay. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Top Up Relay Control circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
11	Turn the ignition off. Disconnect the Driver Window Regulator Module. Disconnect the Convertible Top Relay connector (at the Pump assembly). Measure the resistance of the Top Down Relay Control circuit between the relay connector and the module connector. Is the resistance below 5.0 ohms? Yes → Replace the Convertible Top Relay. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Top Down Relay Control wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

POWER TOP RELAY INOPERATIVE

When Monitored and Set Condition:

POWER TOP RELAY INOPERATIVE

When Monitored: Whenever the module is awake.

Set Condition: If the voltage on either the Top Down or Top Up Relay Control circuit does not drop to below 1.0 volts when a top up or top down command is sensed at the Power Top Switch Mux circuit, this code will set.

POSSIBLE CAUSES
WINDOW MODULE INOPERATIVE

Repair Instructions:

WINDOW MODULE INOPERATIVE

If there are no other trouble codes present, replace the Window Regulator Module in accordance with service information.

Perform BODY VERIFICATION TEST - VER 1.

Symptom:

POWER TOP SWITCH MUX CIRCUIT OPEN

When Monitored and Set Condition:

POWER TOP SWITCH MUX CIRCUIT OPEN

When Monitored: Whenever the module is awake.

Set Condition: If the Module senses a voltage above 4.8 volts on the Power Top Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
POWER TOP SWITCH GROUND OPEN
POWER TOP SWITCH OPEN
POWER TOP SWITCH MUX CIRCUIT OPEN
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off to On. Operate the Power Top down and up. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display POWER TOP SWITCH MUX CIRCUIT OPEN? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Turn all lights off. Disconnect the Power Top Switch connector. With the DRBIII®, read DTCs. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Power Top Switch Ground circuit. Perform BODY VERIFICATION TEST - VER 1.	All

POWER TOP SWITCH MUX CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	With the DRBIII®, erase DTC's. Cycle the ignition switch from On to Off. Disconnect the Power Top Switch connector. Connect a jumper wire between Ground and the Power Top Switch Mux circuit. Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display POWER TOP SWITCH MUX CIRCUIT SHORT TO GROUND? Yes → Replace the Power Top Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Disconnect the Power Top Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance of the Power Top Switch Mux circuit between the Window Module connector and the Power Top Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Power Top Switch Mux circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

POWER TOP SWITCH MUX CIRCUIT SHORT TO GROUND

When Monitored and Set Condition:

POWER TOP SWITCH MUX CIRCUIT SHORT TO GROUND

When Monitored: Whenever the module is awake.

Set Condition: If the Module senses a voltage below 0.75 volts on the Power Top Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
POWER TOP SWITCH OPEN
POWER TOP SWITCH MUX CIRCUIT SHORT TO GROUND
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the Power Top down and up. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display POWER TOP SWITCH MUX CIRCUIT SHORT TO GROUND? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from On to Off. Disconnect the Power Top Switch connector. Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display POWER TOP SWITCH MUX CIRCUIT OPEN? Yes → Replace the Power Top Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

POWER TOP SWITCH MUX CIRCUIT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Top Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance between Ground and the Power Top Switch Mux circuit. Is the resistance below 1000.0 ohms? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Power Top Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

POWER TOP SWITCH MUX CIRCUIT VALUE OUT OF RANGE

When Monitored and Set Condition:

POWER TOP SWITCH MUX CIRCUIT VALUE OUT OF RANGE

When Monitored: Whenever the module is awake.

Set Condition: If the Module receives a resistance value which is not acceptable on the Power Top Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
SWITCH GROUND OPEN
POWER TOP SWITCH MUX CIRCUIT SHORT TO GROUND
SWITCH INOPERATIVE
POWER TOP SWITCH MUX CIRCUIT SHORT TO VOLTAGE
DRIVER WINDOW MODULE - VOLTAGE HIGH
WINDOW MODULE - VOLTAGE LOW

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off to on. Operate the Power Top down and up. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display POWER TOP SWITCH MUX CIRCUIT VALUE OUT OF RANGE? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Power Top Switch connector. Turn off all lights. Measure the resistance between Ground and the Power Top Switch Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Power Top Switch Ground for an open. Perform BODY VERIFICATION TEST - VER 1.	All

POWER TOP SWITCH MUX CIRCUIT VALUE OUT OF RANGE — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Top Switch connector. Turn the ignition on. Measure the voltage between the Power Top Switch Mux circuit and Ground. Select the voltage measured. 4.9 to 5.2 Volts Replace the Power Top Switch. Perform BODY VERIFICATION TEST - VER 1. Below 4.8 Volts Go To 4 Above 5.3 Volts Go To 5	All
4	Turn the ignition off. Disconnect the Power Top Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance between Ground and the Power Top Switch Mux circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Power Top Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Power Top Switch connector. Disconnect the Window Regulator Module connector. Turn the ignition on. Measure the voltage between the Rear Window Switch Mux circuit and ground. Is the voltage above 5.1 volts?? Yes → Disconnect the Passenger Window Module to ensure high voltage is not coming from it. If not, repair the Power Top Switch Mux circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Driver Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
SPEED MESSAGE NOT RECEIVED

When Monitored and Set Condition:

SPEED MESSAGE NOT RECEIVED

When Monitored: Whenever the module is awake.

Set Condition: When the module looks for vehicle speed messages and they are not received, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
ENGINE TROUBLE CODE PRESENT
MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Start the engine. Run the engine at approximately 1500 RPM for 1 minute. With the DRBIII®, read DTCs. Does the DRBIII® display SPEED MESSAGE NOT RECEIVED? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using Service Information, check the charging system. Perform BODY VERIFICATION TEST - VER 1.	All
2	Start the engine. Run the engine at approximately 1500 RPM for 1 minute. With the DRBIII®, read ENGINE DTCs. Does the DRBIII® display P0501- VEHICLE SPEED SENSOR #1 PERFORMANCE? Yes → Refer to symptom P0501 in the Driveability - NGC category. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information.. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
BATTERY VOLTAGE TOO HIGH

When Monitored and Set Condition:

BATTERY VOLTAGE TOO HIGH

When Monitored: Whenever the battery is connected.

Set Condition: When the module senses battery voltage above 16.0 volts, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
CHARGING SYSTEM HIGH

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Start the engine. Run the engine at approximately 1500 RPM for 1 minute. With the DRBIII®, read DTCs. Does the DRBIII® display BATTERY VOLTAGE TOO HIGH? Yes → Using Service Information, check the charging system. Perform BODY VERIFICATION TEST - VER 1. No → The conditions that caused this code to set is not present at this time. Using Service Information, check the charging system. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
BATTERY VOLTAGE TOO LOW

When Monitored and Set Condition:

BATTERY VOLTAGE TOO LOW

When Monitored: Whenever the battery is connected.

Set Condition: When the module senses battery voltage below 9.0 volts, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
FUSED B+ HIGH RESISTANCE
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off to On. Start the engine. Run the engine at approximately 1500 RPM for 1 minute. With the DRBIII®, read DTCs. Does the DRBIII® display BATTERY VOLTAGE TOO LOW? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using Service Information, check the charging system. Perform BODY VERIFICATION TEST - VER 1.	All
2	**NOTE: Ensure the battery is fully charged and serviceable before proceeding.** Disconnect the Window Regulator Module connector. Using a 12-volt test light connected to ground, check the Fused B+ circuit. **NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.** Does the test light illuminate brightly? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Fused B+ circuit for high resistance. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
FRONT WINDOW MOTOR MALFUNCTION

When Monitored and Set Condition:

FRONT WINDOW MOTOR MALFUNCTION

When Monitored: Whenever the module is awake.

Set Condition: If the module does not sense a fully open or fully closed glass position after 10 seconds of actuation, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
FRONT WINDOW MOTOR

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off to On. Operate the front window switch down and up several times. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display FRONT WINDOW MOTOR MALFUNCTION? Yes → Replace the Front Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

FRONT WINDOW SWITCH MUX CIRCUIT OPEN

When Monitored and Set Condition:

FRONT WINDOW SWITCH MUX CIRCUIT OPEN

When Monitored: Whenever the module is awake.

Set Condition: If the Module senses a voltage above 4.8 volts on the Front Window Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
SWITCH OPEN
FRONT WINDOW SWITCH MUX CIRCUIT OPEN
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the front window switch down and up several times. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display FRONT WINDOW SWITCH MUX CIRCUIT OPEN? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from On to Off. Disconnect the Power Window Switch connector. Connect a jumper wire between Ground and the Front Window Switch Mux circuit. With the DRBIII®, read DTCs. Does the DRBIII® display FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND? Yes → Replace the power window switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

FRONT WINDOW SWITCH MUX CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance of the Front Window Switch Mux circuit between the Window Module connector and the Window Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Front Window Switch Mux circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND

When Monitored and Set Condition:

FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND

When Monitored: Whenever the module is awake.

Set Condition: If the Module senses a voltage below 0.75 volts on the Front Window Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
SWITCH SHORTED
FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the front window switch down and up several times. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from On to Off. Disconnect the Power Window Switch connector. With the DRBIII®, read DTCs. Does the DRBIII® display FRONT WINDOW SWITCH MUX CIRCUIT OPEN? Yes → Replace the power window switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance between Ground and the Front Window Switch Mux circuit. Is the resistance below 5000.0 ohms? Yes → Repair the Front Window Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

FRONT WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE

When Monitored and Set Condition:

FRONT WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE

When Monitored: Whenever the module is awake.

Set Condition: If the Module receives a resistance value which is not acceptable on the Front Window Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
SWITCH GROUND OPEN
FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND
SWITCH INOPERATIVE
FRONT WINDOW SWITCH MUX CIRCUIT SHORT TO VOLTAGE
WINDOW MODULE - VOLTAGE HIGH
WINDOW MODULE - VOLTAGE LOW

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the front window switch down and up several times. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display FRONT WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Power Window Switch connector. Turn off all lights. Measure the resistance between Ground and the Window Switch Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Window Switch Ground for an open. Perform BODY VERIFICATION TEST - VER 1.	All

FRONT WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Window Switch connector. Turn the ignition on. Measure the voltage between the Front Window Switch Mux circuit and Ground. Select the voltage measured. 4.9 to 5.2 Volts Replace the power window switch. Perform BODY VERIFICATION TEST - VER 1. Below 4.8 Volts Go To 4 Above 5.3 Volts Go To 5	All
4	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance between Ground and the Front Window Switch Mux circuit. Is the resistance below 10000.0 ohms? Yes → Repair the Front Window Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Turn the ignition on. Measure the voltage between the Window Switch Mux circuit and ground. Is there any voltage present? Yes → Repair the Front Window Switch Mux circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
IGNITION SWITCH OUTPUT OPEN

When Monitored and Set Condition:

IGNITION SWITCH OUTPUT OPEN

When Monitored: Whenever the ignition is on.

Set Condition: When the module senses ignition voltage via the PCI bus but there is 0.0 volts at the Fused Ignition Switch Output circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
WINDOW MODULE OPEN

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure Fuse #14 is not open before proceeding** With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Open and close the door that this code was stored in. Start the engine. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display IGNITION SWITCH OUTPUT CIRCUIT OPEN? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Window Regulator Module connector. Turn the ignition on. Measure the voltage between the Fused Ignition Switch Output circuit and ground. Is the voltage above 11.0 volts? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
REAR WINDOW MOTOR CIRCUIT OPEN OR SHORTED

When Monitored and Set Condition:

REAR WINDOW MOTOR CIRCUIT OPEN OR SHORTED

When Monitored: Whenever the module is awake.

Set Condition: Whenever the module receives a rear window motor operation signal and there is no current or over current sensed on the Rear Window Driver circuit, this code will set.

POSSIBLE CAUSES
MODULE OPEN
REAR WINDOW DRIVER DOWN CIRCUIT OPEN
REAR WINDOW DRIVER UP CIRCUIT OPEN
REAR WINDOW DRIVER UP CIRCUIT SHORT TO GROUND
REAR WINDOW DRIVER DOWN CIRCUIT SHORT TO GROUND
REAR WINDOW DRIVER DOWN CIRCUIT SHORT TO REAR WINDOW DRIVER UP CIRCUIT
MOTOR INOPERATIVE

TEST	ACTION	APPLICABILITY
1	Disconnect the affected side Window Regulator Module connector Connected a jumper wire between the Fused B+ circuit and the Rear Window Driver Down circuit in the connector. Connect a second jumper wire to the Rear Window Driver Down circuit and momentarily touch it to Ground (the motor should begin to lower the window). Reverse the jumper wires momentarily to drive the motor Up. Did the window motor operate properly? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition off. Disconnect the affected side Window Regulator Module connector Disconnect the Power Window Motor connector. Measure the resistance of the Rear Window Driver Up circuit between the Module connector and the Motor connector. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Rear Window Driver Up circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

REAR WINDOW MOTOR CIRCUIT OPEN OR SHORTED — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the affected side Window Regulator Module connector Disconnect the Power Window Motor connector. Measure the resistance of the Rear Window Driver Down circuit between the Module connector and the Motor connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Rear Window Driver Down circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the affected side Window Regulator Module connector Disconnect the Power Window Motor connector. Measure the resistance between Ground and the Rear Window Driver Up circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Rear Window Driver Up circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the affected side Window Module connector Disconnect the Power Window Motor connector. Measure the resistance between Ground and the Rear Window Driver Down circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Rear Window Driver Down circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect the affected side Window Regulator Module connector Disconnect the Power Window Motor connector. Measure the resistance between the Rear Window Driver Up circuit and the Rear Window Driver Down circuit in the motor connector. Is the resistance below 1000.0 ohms? Yes → Repair the Rear Window Driver Down circuit for a short to the Rear Window Driver Up circuit. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Power Window Motor/Regulator in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

REAR WINDOW SWITCH MUX CIRCUIT OPEN

When Monitored and Set Condition:

REAR WINDOW SWITCH MUX CIRCUIT OPEN

When Monitored: Whenever the module is awake.

Set Condition: If the Module senses a voltage above 4.8 volts on the Rear Window Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
SWITCH OPEN
REAR WINDOW SWITCH MUX CIRCUIT OPEN
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the rear window switch down and up several times. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW SWITCH MUX CIRCUIT OPEN? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from On to Off. Disconnect the Power Window Switch connector. Connect a jumper wire between Ground and the Rear Window Switch Mux circuit. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND? Yes → Replace the power window switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

REAR WINDOW SWITCH MUX CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance of the Rear Window Switch Mux circuit between the Window Module connector and the Window Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Rear Window Switch Mux circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

REAR WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND

When Monitored and Set Condition:

REAR WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND

When Monitored: Whenever the module is awake.

Set Condition: If the Module senses a voltage below 0.75 volts on the Rear Window Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
SWITCH SHORTED
REAR WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the rear window switch down and up several times. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from On to Off. Disconnect the Power Window Switch connector. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW SWITCH MUX CIRCUIT OPEN? Yes → Replace the power window switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

REAR WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance between Ground and the Rear Window Switch Mux circuit. Is the resistance below 5000.0 ohms? Yes → Repair the Rear Window Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

REAR WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE

When Monitored and Set Condition:

REAR WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE

When Monitored: Whenever the module is awake.

Set Condition: If the Module receives a resistance value which is not acceptable on the Rear Window Switch Mux circuit, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
SWITCH GROUND OPEN
REAR WINDOW SWITCH MUX CIRCUIT SHORT TO GROUND
SWITCH INOPERATIVE
REAR WINDOW SWITCH MUX CIRCUIT SHORT TO VOLTAGE
WINDOW MODULE - VOLTAGE HIGH
WINDOW MODULE - VOLTAGE LOW

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Operate the rear window switch down and up several times. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Power Window Switch connector. Turn off all lights. Measure the resistance between Ground and the Window Switch Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Window Switch Ground for an open. Perform BODY VERIFICATION TEST - VER 1.	All

REAR WINDOW SWITCH MUX CIRCUIT VALUE OUT OF RANGE — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Power Window Switch connector. Turn the ignition on. Measure the voltage between the Rear Window Switch Mux circuit and Ground. Select the voltage measured. 4.9 to 5.2 Volts Replace the power window switch. Perform BODY VERIFICATION TEST - VER 1. Below 4.8 Volts Go To 4 Above 5.3 Volts Go To 5	All
4	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Measure the resistance between Ground and the Rear Window Switch Mux circuit. Is the resistance below 10000.0 ohms? Yes → Repair the Rear Window Switch Mux circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Power Window Switch connector. Disconnect the Window Regulator Module connector. Turn the ignition on. Measure the voltage between the Rear Window Switch Mux circuit and ground. Is there any voltage present? Yes → Repair the Rear Window Switch Mux circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
WINDOW DROP SWITCH SENSE CIRCUIT OPEN

When Monitored and Set Condition:

WINDOW DROP SWITCH SENSE CIRCUIT OPEN

When Monitored: During a window operating command.

Set Condition: When the module senses a door ajar switch sense circuit low and the window drop switch sense circuit stays above 4.5 volts, this code will set.

POSSIBLE CAUSES
TROUBLE CODE PRESENT
WINDOW DROP SWITCH OPEN
WINDOW DROP SWITCH SENSE CIRCUIT OPEN
WINDOW MODULE OPEN

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, record and erase DTC's. Cycle the ignition switch from On to Off. Open and close the door that this code was stored in. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display WINDOW DROP SWITCH SENSE CIRCUIT OPEN? Yes → Go To 2 No → The conditions that caused this code to set is not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors for a intermittent condition. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Window Drop Switch connector (on the latch assembly). Connect a jumper wire between the Window Drop Switch Sense circuit and ground. With the DRBIII®, erase DTC's. Cycle the ignition switch from On to Off. Wait one minute. With the DRBIII®, read DTCs. Does the DRBIII® display WINDOW DROP SWITCH SENSE CIRCUIT SHORT TO GROUND? Yes → Replace the Door Latch Assembly. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

WINDOW DROP SWITCH SENSE CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Window Drop Switch connector (on the latch assembly). Disconnect the Window Regulator Module connector. Measure the resistance of the Window Drop Switch Sense circuit between the Window Drop Switch connector and the Window Module Connector.. Is the resistance below 5.0 ohms? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Window Drop Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*DOOR AJAR CIRCUIT OPEN

POSSIBLE CAUSES
DOOR AJAR GROUND CIRCUIT OPEN
DOOR AJAR SWITCH OPEN
DOOR AJAR SWITCH SENSE CIRCUIT OPEN
WINDOW MODULE

TEST	ACTION	APPLICABILITY
1	Disconnect the Door Lock Motor/Ajar Switch harness connector. Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity. Does the light illuminate? Yes → Go To 2 No → Repair the Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Door Lock Motor/Ajar Switch harness connector. With the DRBIII® in Inputs/Outputs, read the DOOR AJAR SW state. Connect a jumper wire between Door Ajar Switch Sense circuit and the Ground circuit. Does the DRBIII® display DOOR AJAR SW: CLOSED? Yes → Replace the Door Latch Assembly. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Window Regulator Module harness connector. Disconnect the Door Lock Motor/Ajar Switch harness connector. Measure the resistance of the Door Ajar Switch Sense circuit between the Window Module connector and the Door Lock Motor/Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Door Ajar Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***DOOR WINDOWS STAY IN DROP DOWN POSITION**

POSSIBLE CAUSES
TROUBLE CODE PRESENT
WINDOW DROP SWITCH SHORTED
WINDOW DROP SWITCH SENSE CIRCUIT SHORT TO GROUND
WINDOW MODULE SHORTED

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, read DTCs. Are there any window or door lock related DTC's Yes → Refer to symptom list for problems related to POWER WINDOWS or POWER DOOR LOCKS. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Window Drop Switch connector (on the latch assembly). Close the driver door. Raise the window to the fully closed position. Does the window glass now travel to the full closed position Yes → Replace the Door Latch Assembly. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Window Drop Switch connector (on the latch assembly). Disconnect the Window Regulator Module connector. Measure the resistance between ground and the Window Drop Switch Sense circuit. Is the resistance below 1000.0 ohms? Yes → Repair the Window Drop Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Window Regulator Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***WINDOW DROPS OR JERKS DURING OPENING**

POSSIBLE CAUSES
WINDOW MODULE

Repair Instructions:

WINDOW MODULE

Replace the Window Regulator Module in accordance with the Service Information.

Perform BODY VERIFICATION TEST - VER 1.

Symptom:
AUDIO HARDWARE MESSAGE NOT RECEIVED

When Monitored and Set Condition:

AUDIO HARDWARE MESSAGE NOT RECEIVED

When Monitored: With the ignition on.

Set Condition: The Hands Free Module does not receive the bus message from the radio indicating what kind of radio the vehicle is equipped with.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE RADIO MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Turn the Radio on. With the DRBIII®, attempt to communicate with the Radio. Was the DRBIII® able to I/D or communicate with the Radio? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace and program the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

BLUETOOTH ERROR
FLASH CHECKSUM ERROR
FLASH WRITE ERROR
PCI BUS INTERNAL ERROR
RAM WRITE ERROR
ROM CHECKSUM ERROR

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be BLUETOOTH ERROR.

When Monitored and Set Condition:

BLUETOOTH ERROR

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a fault during an internal diagnostic check.

FLASH CHECKSUM ERROR

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a fault during an internal diagnostic check.

FLASH WRITE ERROR

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a fault during an internal diagnostic check.

PCI BUS INTERNAL ERROR

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a fault during an internal diagnostic check.

RAM WRITE ERROR

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a fault during an internal diagnostic check.

ROM CHECKSUM ERROR

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a fault during an internal diagnostic check.

BLUETOOTH ERROR — Continued

POSSIBLE CAUSES
HFM INTERNAL DTC FAILURE

TEST	ACTION	APPLICABILITY
1	**NOTE: This trouble code indicates an internal Hands Free Module fault.** With the DRBIII®, read and record the HFM DTCs and then erase the DTCs. Perform 5 ignition key cycles, leaving the ignition key on for a minimum of 90 seconds per cycle. With the DRBIII®, read the DTCs. Did the same DTC return? Yes → Replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

BODY STYLE MESSAGE NOT RECEIVED
INVALID BODY STYLE

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be BODY STYLE MESSAGE NOT RECEIVED.

When Monitored and Set Condition:

BODY STYLE MESSAGE NOT RECEIVED

When Monitored: With the ignition on.

Set Condition: The Hands Free Module does not receive the body style message from the PCM.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE PCM
CHECK PCM IS ACTIVE ON BUS
MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, attempt to communicate with the PCM. Was the DRBIII® able to I/D or communicate with the PCM? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition on. With the DRBIII®, select System Monitors then J1850 Module Scan. Is the PCM one of the modules present on the bus? Yes → Go To 3 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
3	With the DRBIII®, erase DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace and program the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

GENERAL MICROPHONE FAULT

POSSIBLE CAUSES
HANDS FREE MODULE
MICROPHONE CIRCUITS OPEN
MICROPHONE CIRCUITS SHORT TO GROUND
MICROPHONE CIRCUITS SHORT TO VOLTAGE
MICROPHONE CIRCUITS SHORTED TOGETHER
REAR VIEW MIRROR
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Attempt to make a phone call using the system. With the DRBIII®, read DTCs. Does the DRBIII® display this DTC? Yes → Go To 2 No → Go To 7	All
2	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance of each Microphone circuit between the HFM connector and the rear view mirror connector. Is the resistance below 10.0 ohms for each measurement? Yes → Go To 3 No → Repair the Microphone circuits for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between ground and each Microphone circuit. Is the resistance above 1000.0 ohms for each measurement? Yes → Go To 4 No → Repair the Microphone circuits for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All

GENERAL MICROPHONE FAULT — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Turn the ignition on. Measure the voltage of each Microphone circuit. Is the voltage below 1.0 volt for each measurement? Yes → Go To 5 No → Repair the Microphone circuits for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between each Microphone circuit in the rear view mirror harness connector. Is the resistance above 1000 ohms for each measurement? Yes → Go To 6 No → Refer the Microphone circuits for a short together. Perform BODY VERIFICATION TEST - VER 1.	All
6	Replace the Rear View Mirror in accordance with the Service Information. Turn the ignition on. With the DRBIII®, erase DTC's. Attempt to make a phone call using the system. With the DRBIII®, read DTCs. Does the DRBIII® display this DTC? Yes → Inspect the wiring and connectors for damage or shorted circuits. Repair as necessary. If ok, replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All
7	**NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the failure. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
IGNITION POWER MESSAGE NOT RECEIVED

When Monitored and Set Condition:

IGNITION POWER MESSAGE NOT RECEIVED

When Monitored: With the ignition on.

Set Condition: The Hands Free Module does not receive an Ignition Power Status message from the MIC.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE MIC
MODULE

TEST	ACTION	APPLICABILITY
1	Start and idle the engine. With the DRBIII®, attempt to I/D and communicate with the MIC. Was the DRBIII® able to I/D or communicate with the MIC? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

LEFT AUDIO INPUT SHORT TO GROUND
LEFT AUDIO INPUT SHORT TO VOLTAGE
LEFT AUDIO OUTPUT 1 SHORT TO GROUND
LEFT AUDIO OUTPUT 1 SHORT TO VOLTAGE

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be LEFT AUDIO INPUT SHORT TO GROUND.

When Monitored and Set Condition:

LEFT AUDIO INPUT SHORT TO GROUND

When Monitored: With the ignition on

Set Condition: The Hands Free Module detects low voltage on the input circuit.

LEFT AUDIO INPUT SHORT TO VOLTAGE

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects high voltage on the input circuit.

LEFT AUDIO OUTPUT 1 SHORT TO GROUND

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a short to Ground on the Audio MUX Left circuit.

LEFT AUDIO OUTPUT 1 SHORT TO VOLTAGE

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a short to voltage on the Audio MUX Left circuit.

POSSIBLE CAUSES
AUDIO MUX LEFT AND AUDIO MUX RIGHT CIRCUITS SHORTED TOGETHER
AUDIO MUX LEFT CIRCUIT OPEN
AUDIO MUX LEFT CIRCUIT SHORT TO GROUND
AUDIO MUX LEFT CIRCUIT SHORT TO VOLTAGE
HANDS FREE MODULE
INTERMITTENT CONDITION

LEFT AUDIO INPUT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase HFM DTCs. Attempt to make a phone call using the system. With the DRBIII®, read HFM DTCs. Does the DRBIII® display this DTC? Yes → Go To 2 No → Go To 6	All
2	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance of the Audio MUX Left circuit. Is the resistance below 10.0 ohms? Yes → Go To 3 No → Repair the Audio MUX Left circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between ground and the Audio MUX Left circuit. Is the resistance above 1000.0 ohms? Yes → Go To 4 No → Repair the Audio MUX Left circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Turn the ignition on. Measure the voltage of the Audio MUX Left circuit. Is the voltage below 1.0 volt? Yes → Go To 5 No → Repair the Audio MUX Left circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between the Audio MUX Left circuit and the Audio MUX Right circuit. Is the resistance above 1000 ohms? Yes → Inspect the wiring and connectors for damage or shorted circuits. Repair as necessary. If ok, replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Audio MUX Left circuit for a short to the Audio MUX Right circuit. Perform BODY VERIFICATION TEST - VER 1.	All

LEFT AUDIO INPUT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
6	**NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the failure. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

MIRROR POWER CIRCUIT SHORT TO GROUND
MIRROR POWER CIRCUIT SHORT TO VOLTAGE

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be MIRROR POWER CIRCUIT SHORT TO GROUND.

POSSIBLE CAUSES
HANDS FREE MODULE
IGNITION RUN/ACC SIGNAL CIRCUIT SHORT TO OTHER CIRCUITS
IGNITION RUN/ACC SIGNAL CIRCUIT SHORT TO VOLTAGE
IGNITION RUN/ACC SIGNAL OPEN
IGNITION RUN/ACC SIGNAL SHORT TO GROUND
REAR VIEW MIRROR
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Attempt to make a phone call using the system. With the DRBIII®, read DTCs. Does the DRBIII® display this DTC? Yes → Go To 2 No → Go To 7	All
2	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance of the Ignition RUN/ACC Signal circuit. Is the resistance below 10.0 ohms? Yes → Go To 3 No → Repair the Ignition RUN/ACC Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between ground and the Ignition RUN/ACC Signal circuit. Is the resistance above 1000.0 ohms? Yes → Go To 4 No → Repair the Ignition RUN/ACC Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All

MIRROR POWER CIRCUIT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Turn the ignition on. Measure the voltage of the Ignition RUN/ACC Signal circuit. Is the voltage below 1.0 volt? Yes → Go To 5 No → Repair the Ignition RUN/ACC Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between the Ignition RUN/ACC Signal circuit and each of the other circuits in the rear view mirror connector. Is the resistance above 1000 ohms for each measurement? Yes → Go To 6 No → Repair the Ignition RUN/ACC Signal circuit for a short to other circuits. Perform BODY VERIFICATION TEST - VER 1.	All
6	Replace the Rear View Mirror in accordance with the Service Information. Turn the ignition on. With the DRBIII®, erase the DTC's Attempt to make a phone call using the system. With the DRBIII®, read DTCs. Does the DRBIII® display this DTC? Yes → Inspect the wiring and connectors for damage or shorted circuits. Repair as necessary. If ok, replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All
7	**NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the failure. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

PCI BUS BUSY
PCI BUS CIRCUIT OPEN
PCI BUS CIRCUIT SHORT TO GROUND
PCI BUS CIRCUIT SHORT TO VOLTAGE

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be PCI BUS BUSY.

When Monitored and Set Condition:

PCI BUS BUSY

When Monitored: With the ignition on.

Set Condition: The HFM has detected a fault on the PCI Bus circuit.

PCI BUS CIRCUIT OPEN

When Monitored: With the ignition on.

Set Condition: The HFM has detected a fault on the PCI Bus circuit.

PCI BUS CIRCUIT SHORT TO GROUND

When Monitored: With the ignition on.

Set Condition: The HFM has detected a fault on the PCI Bus circuit.

PCI BUS CIRCUIT SHORT TO VOLTAGE

When Monitored: With the ignition on.

Set Condition: The HFM has detected a fault on the PCI Bus circuit.

POSSIBLE CAUSES
INTERMITTENT CONDITION

PCI BUS BUSY — Continued

TEST	ACTION	APPLICABILITY
1	**NOTE: For this code to be active, the DRBIII® will not be able to communicate with any modules on the vehicle (except the PCM).** **NOTE: Clear the code. If this code continues to set and the DRBIII® can still communicate with the module, it will be necessary to replace the module.** **NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the complete bus failure condition. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

PHONE SWITCH STUCK
VOICE RECOGNITION SWITCH STUCK
VOICE RECOGNITION/PHONE SWITCH CIRCUIT RATIONALITY
VOICE RECOGNITION/PHONE SWITCH CIRCUIT SHORT TO GROUND
VOICE RECOGNITION/PHONE SWITCH CIRCUIT SHORT TO VOLTAGE

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be PHONE SWITCH STUCK.

When Monitored and Set Condition:

PHONE SWITCH STUCK

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects voltage between 2.8 volts and 3.3 volts on the VR/Phone Switch Signal circuit for more than 30 seconds.

VOICE RECOGNITION SWITCH STUCK

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects voltage between 3.5 volts and 4.0 volts on the VR/Phone Switch Signal circuit for more than 30 seconds.

VOICE RECOGNITION/PHONE SWITCH CIRCUIT RATIONALITY

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects an invalid voltage signal on the VR/Phone Switch Signal circuit.

VOICE RECOGNITION/PHONE SWITCH CIRCUIT SHORT TO GROUND

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects voltage below 0.6 volt on the VR/Phone Switch Signal circuit.

VOICE RECOGNITION/PHONE SWITCH CIRCUIT SHORT TO VOLTAGE

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects voltage above 4.7 volts on the VR/Phone Switch Signal circuit.

POSSIBLE CAUSES
HANDS FREE MODULE

PHONE SWITCH STUCK — Continued

POSSIBLE CAUSES
HANDS FREE MODULE
HANDS FREE MODULE
REAR VIEW MIRROR
SENSOR GROUND CIRCUIT OPEN
VR/PHONE SWITCH SIGNAL CIRCUIT OPEN
VR/PHONE SWITCH SIGNAL CIRCUIT SHORTED TO GROUND
VR/PHONE SWITCH SIGNAL CIRCUIT SHORTED TO SENSOR GROUND
VR/PHONE SWITCH SIGNAL CIRCUIT SHORTED TO VOLTAGE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Turn the ignition on. Measure the voltage of the VR/Phone Switch Signal circuit in the Rear View Mirror harness connector. Chose which of the following describes the voltage measured. Voltage is above 5.3 volts Go To 2 Voltage is between 4.7 and 5.3 volts Go To 3 Voltage is below 4.7 volt Go To 4	All
2	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Turn the ignition on. Measure the voltage of the VR/Phone Switch Signal circuit. Is the voltage below 1.0 volt? Yes → Inspect the wiring and connectors for damage or shorted circuits. Repair as necessary. If ok, replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the VR/Phone Switch Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.	All

PHONE SWITCH STUCK — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Turn the ignition on. With the DRBIII®, read the VR/Phone Switch Signal voltage. Connect one end of a jumper wire to the VR/Phone Switch Signal circuit at the Rear View Mirror harness connector. While observing the DRBIII®, momentarily connect and disconnect the other end of the jumper wire to Sensor Ground at the Rear View Mirror harness connector. **NOTE: The DRBIII® sensor voltage should switch from above 4.7 volts when jumper is not connected to below 0.6 volts when jumper is connected.** Does sensor voltage switch from above 4.7 volts to below 0.6 volt as described? Yes → Replace the Rear View Mirror in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Inspect the wiring and connectors for damage or shorted circuits. Repair as necessary. If ok, replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance of the VR/Phone Switch Signal circuit. Is the resistance below 10.0 ohms? Yes → Go To 5 No → Repair the VR/Phone Switch Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance of the Sensor Ground circuit. Is the resistance below 10.0 ohms? Yes → Go To 6 No → Repair the Sensor Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connector. Measure the resistance between ground and the VR/Phone Switch Signal circuit. Is the resistance above 1000.0 ohms? Yes → Go To 7 No → Repair the VR/Phone Switch Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All

PHONE SWITCH STUCK — Continued

TEST	ACTION	APPLICABILITY
7	Turn the ignition off. Disconnect the Rear View Mirror harness connector. Disconnect the Hands Free Module harness connector. Measure the resistance between Sensor Ground and the VR/Phone Switch Signal circuit at the Rear View Mirror harness connector. Is the resistance above 1000.0 ohms? Yes → Inspect the wiring and connectors for damage or shorted circuits. Repair as necessary. If ok, replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the VR/Phone Switch Signal circuit for a short to the Sensor Ground circuit. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

PRNDL MESSAGE NOT RECEIVED

When Monitored and Set Condition:

PRNDL MESSAGE NOT RECEIVED

When Monitored: With the ignition on.

Set Condition: The Hands Free Module does not receive a gear selector message from the PCM/TCM.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE PCM (TCM)
MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, attempt to communicate with the PCM (TCM). Was the DRBIII® able to I/D or communicate with the PCM? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
RADIO MESSAGE NOT RECEIVED

When Monitored and Set Condition:

RADIO MESSAGE NOT RECEIVED

When Monitored: With the ignition on.

Set Condition: The Hands Free Module does not receive a message from the radio.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE RADIO MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Turn the Radio on. With the DRBIII®, attempt to communicate with the Radio. Was the DRBIII® able to I/D or communicate with the Radio? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

RIGHT AUDIO INPUT SHORT TO GROUND
RIGHT AUDIO INPUT SHORT TO VOLTAGE
RIGHT AUDIO OUTPUT 1 SHORT TO GROUND
RIGHT AUDIO OUTPUT 1 SHORT TO VOLTAGE

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be RIGHT AUDIO INPUT SHORT TO GROUND.

When Monitored and Set Condition:

RIGHT AUDIO INPUT SHORT TO GROUND

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects low voltage on the input circuit.

RIGHT AUDIO INPUT SHORT TO VOLTAGE

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects high voltage on the input circuit.

RIGHT AUDIO OUTPUT 1 SHORT TO GROUND

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a short to ground on the Audio MUX Right circuit.

RIGHT AUDIO OUTPUT 1 SHORT TO VOLTAGE

When Monitored: With the ignition on.

Set Condition: The Hands Free Module detects a short to voltage on the Audio MUX Right circuit.

POSSIBLE CAUSES
AUDIO MUX LEFT AND AUDIO MUX RIGHT CIRCUITS SHORTED TOGETHER
AUDIO MUX RIGHT CIRCUIT OPEN
AUDIO MUX RIGHT CIRCUIT SHORT TO GROUND
AUDIO MUX RIGHT CIRCUIT SHORT TO VOLTAGE
HANDS FREE MODULE
INTERMITTENT CONDITION

RIGHT AUDIO INPUT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase HFM DTCs. Attempt to make a phone call using the system. With the DRBIII®, read HFM DTCs. Does the DRBIII® display this DTC? Yes → Go To 2 No → Go To 6	All
2	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance of the Audio MUX Right circuit. Is the resistance below 10.0 ohms? Yes → Go To 3 No → Repair the Audio MUX Right circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between ground and the Audio MUX Right circuit. Is the resistance above 1000.0 ohms? Yes → Go To 4 No → Repair the Audio MUX Right circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Turn the ignition on. Measure the voltage of the Audio MUX Right circuit. Is the voltage below 1.0 volt? Yes → Go To 5 No → Repair the Audio MUX Right circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Radio C2 harness connector. Disconnect the Hands Free Module harness connectors. Measure the resistance between the Audio MUX Left circuit and the Audio MUX Right circuit. Is the resistance above 1000 ohms? Yes → Inspect the wiring and connectors for damage or shorted circuits. Repair as necessary. If ok, replace and program the Hands Free Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Audio MUX Left circuit for a short to the Audio MUX Right circuit. Perform BODY VERIFICATION TEST - VER 1.	All

RIGHT AUDIO INPUT SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
6	**NOTE: The conditions that set the DTC are not present at this time. The following list may help in identifying the intermittent condition.** With the engine running at normal operating temperature, wiggle the wiring harnesses. This is to try and duplicate the failure. Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
RPM MESSAGE NOT RECEIVED

When Monitored and Set Condition:

RPM MESSAGE NOT RECEIVED

When Monitored: With the ignition on.

Set Condition: The Hands Free Module does not detect a Bus message indicating current engine rpm.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE PCM
MODULE

TEST	ACTION	APPLICABILITY
1	Start and idle the engine. With the DRBIII®, select Engine and read the Engine RPM. Was the DRBIII® able to I/D or communicate with the PCM and read RPM? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, erase DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace and program the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
VIN MESSAGE NOT RECEIVED

When Monitored and Set Condition:

VIN MESSAGE NOT RECEIVED

When Monitored: With the ignition on.

Set Condition: The Hands Free Module does not receive the VIN message from the PCM.

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE PCM
CHECK PCM IS ACTIVE ON BUS
MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, attempt to communicate with the PCM. Was the DRBIII® able to I/D or communicate with the PCM? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition on. With the DRBIII®, select System Monitors then J1850 Module Scan. Is the PCM one of the modules present on the bus? Yes → Go To 3 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All
3	With the DRBIII®, erase DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
VIN MISMATCH

When Monitored and Set Condition:

VIN MISMATCH

When Monitored: With the ignition on.

Set Condition: The Hands Free Module will receive and monitor the VIN message from the PCM and record the VIN if different from the last VIN.

POSSIBLE CAUSES
PCM DTC'S
MODULE-VIN MISMATCH

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, read PCM DTCs. Are there any PCM DTC's? Yes → Refer to the Driveability category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	With the DRBIII®, erase the HFM DTC's. Cycle the ignition switch from off to on and wait approximately 1 minute. With the DRBIII®, read DTC's. Did this DTC reset? Yes → Replace and program the Hands Free Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
HOOD AJAR SWITCH MISSING (EXPORT ONLY)

When Monitored and Set Condition:

HOOD AJAR SWITCH MISSING (EXPORT ONLY)

When Monitored: With the ignition on during configuration of the Remote Keyless Entry Module.

Set Condition: If the Hood Ajar Switch RKE Module input is NOT grounded while the module is being configured for VTSS, this code will set.

POSSIBLE CAUSES
MODULE CONFIGURATION TEST
HOOD AJAR SWITCH OPERATIONAL TEST
OPEN GROUND CIRCUIT
HOOD AJAR SWITCH SENSE CIRCUIT OPEN
HOOD AJAR SWITCH
RKE MODULE - HOOD AJAR

TEST	ACTION	APPLICABILITY
1	Was the hood open during module configuration? Yes → Go To 2 No → Open the hood and attempt to reconfigure the RKE module. Perform VTSS VERIFICATION TEST - 1A.	All
2	Open the hood. With the DRBIII® select: VEHICLE THEFT, VTSS, INPUT/OUTPUT. Read the HOOD AJAR SW state. Does the DRBIII® show CLOSED? Yes → Replace the Remote Keyless Entry Module. Perform VTSS VERIFICATION TEST - 1A. No → Go To 3	All
3	Disconnect the Hood Ajar Switch connector. Measure the resistance of the Ground circuit in the Hood Ajar connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

HOOD AJAR SWITCH MISSING (EXPORT ONLY) — Continued

TEST	ACTION	APPLICABILITY
4	Disconnect the Hood Ajar Switch connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Hood Ajar Switch Sense circuit between the switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair the Hood Ajar Switch Sense circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
5	Disconnect the Hood Ajar Switch connector. Connect a jumper wire between the Hood Ajar Switch Sense circuit and ground. Does the DRBIII® show Hood Ajar Sw: Closed? Yes → Replace the Hood Ajar Switch. Perform VTSS VERIFICATION TEST - 1A. No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
MODULE PREVIOUSLY CONFIGURED FOR VTSS

When Monitored and Set Condition:

MODULE PREVIOUSLY CONFIGURED FOR VTSS

When Monitored: With the ignition on during the configuration of the Remote Keyless Entry Module.

Set Condition: If the configuration of the module type has been previously set for VTSS, an attempt to set the module for non-VTSS will cause the new configuration to fail. This code should only appear if attempting to re-configure a used RKE module.

POSSIBLE CAUSES
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	The RKE module attempting to be configured to non-VTSS, has originally been configured to be used on a VTSS equipped vehicle. If the vehicle is NOT VTSS equipped (does not have door cylinder lock switches (non-siren equipped)) the RKE module attempting to be configured should be replaced. If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALARM TRIPS ON ITS OWN**

POSSIBLE CAUSES
LAST VTSS CAUSE
ATTEMPT TO TRIP ALARM
INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	With the DRBIII® in Theft Alarm Monitor Display, read the Alarm Tripped By state. Were there any causes displayed? Yes → Check for a possible intermittent condition with the circuit indicated by the DRBIII®. Perform VTSS VERIFICATION TEST - 1A. No → Go To 2	All
2	Is this an export vehicle equipped with a hood ajar switch? Yes → Go To 3 No → Go To 4	All
3	Remove the ignition key (but keep in hand). Lock the vehicle and close all the doors, liftgate and hood. Allow the VTSS to arm. Lightly tap on hood near ajar switch to simulate wind and noise vibration. Did the VTSS trip to the alarming state? Yes → Replace the hood ajar switch. Perform VTSS VERIFICATION TEST - 1A. No → Go To 4	All
4	**NOTE: The condition that caused the alarm is not present at this time. The following list may help in indentifying the intermittent condition.** Refer to any Technical Service Bulletins (TSB) that may apply. Visually inspect related wiring harnesses. Look for chafed, pierced, pinched, or partially broken wires. Visually inspect the related wiring harness connectors. Look for loose connections, broken, bent, pushed out, or corroded terminals. Were any of the above conditions present? Yes → Repair as necessary Perform VTSS VERIFICATION TEST - 1A. No → Test Complete.	All

Symptom:

***HEADLAMPS FAIL TO FLASH DURING ALARM**

POSSIBLE CAUSES
DIMMER SWITCH LOW BEAM OUTPUT CIRCUIT OPEN
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Ensure the Low Beam Headlamps are operational before proceeding. If the lamps are not working properly, refer to the appropriate Service Information and repair the headlamp circuit as necessary. Disconnect the Remote Keyless Entry module connector. Connect a test light from the Dimmer Switch Low Beam Output circuit to ground. Turn the Low Beam Headlamps on. Does the test light illuminate when the low beam headlamps are on? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Dimmer Switch Low Beam Output circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:

*HORN FAILS TO SOUND DURING ALARM

POSSIBLE CAUSES
HORN RELAY CONTROL CIRCUIT OPEN
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Ensure the horn is operational from the horn switch before proceeding. If the horn does not work properly, refer to the appropriate Service Information and repair the Horn circuit as necessary. Disconnect the Remote Keyless Entry module connector. Connect one end of a jumper wire to the Horn Relay Control circuit in the RKE connector. Momentarily touch the other end of the jumper wire to ground. Did the horn sound when the jumper wire was attached? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Horn Relay Control circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:

***INTRUSION SENSOR CANNOT BE DISABLED (EXPORT ONLY)**

POSSIBLE CAUSES
INTRUSION SENSOR
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Disconnect the Dome Lamp/Intrusion Sensor connector. Measure the voltage between the Intrusion Sensor Signal circuit and ground. Is the voltage above 10.0 volts? Yes → Replace the Intrusion Sensor. Perform VTSS VERIFICATION TEST - 1A. No → Replace the Remote Keyless Entry Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***INTRUSION SENSOR FAILS TO TRIP VTSS (EXPORT ONLY)**

POSSIBLE CAUSES
INTRUSION SENSOR
OPEN FUSED B(+) CIRCUIT
OPEN GROUND CIRCUIT
INTRUSION SENSOR SIGNAL CIRCUIT OPEN
INTRUSION SENSOR SIGNAL CIRCUIT SHORTED TO GROUND
INTRUSION SENSOR
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Ensure the IOD fuse is installed. Using the DRBIII®, read the module configuration and ensure it is configured for PREMIUM VTA. With the DRBIII® select: THEFT ALARM, VTSS, SYSTEM TEST and INTRUSION SENSOR TEST. While waving your hand around the Intrusion Sensor, read the DRBIII®. Does the DRBIII® display INTRUSION DETECTED? Yes → Verify the system has not been armed with the intrusion sensor disabled. Replace the Intrusion Sensor if the problem remains intermittent. Perform VTSS VERIFICATION TEST - 1A. No → Go To 2	All
2	Disconnect the Dome Lamp/Intrusion Sensor connector. Measure the voltage between the Fused B(+) circuit and ground. Is the voltage above 10.0 volts? Yes → Go To 3 No → Repair the Fused B(+) circuit for an open between the IOD fuse and the Intrusion Sensor. Perform VTSS VERIFICATION TEST - 1A.	All
3	Disconnect the Dome Lamp/Intrusion Sensor connector. Turn the ignition and all the lights off. Measure the resistance between ground and the Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

*INTRUSION SENSOR FAILS TO TRIP VTSS (EXPORT ONLY) — Continued

TEST	ACTION	APPLICABILITY
4	Disconnect the Dome Lamp/Intrusion Sensor connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Intrusion Sensor Signal circuit between the sensor connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair the Intrusion Sensor Signal circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
5	Turn the ignition and all the lights off. Disconnect the Dome Lamp/Intrusion Sensor connector. Disconnect the Remote Keyless Entry Module Connector. Measure the resistance of the Intrusion Sensor Signal circuit to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Intrusion Sensor Signal circuit for a short to ground. Perform VTSS VERIFICATION TEST - 1A. No → Go To 6	All
6	Disconnect the Dome Lamp/Intrusion Sensor connector. Backprobe a voltmeter lead to the Intrusion Sensor Signal circuit in the sensor connector and the other lead to ground. Reconnect the Intrusion Sensor connector. Wave your hand around the Intrusion Sensor and observe the voltmeter. Is the voltage between 3.0 and 6.0 volts? Yes → Replace the Remote Keyless Entry Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Intrusion Sensor in accordance with the Service Information. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:

***INTRUSION SENSOR REPEATEDLY TRIGGERS VTSS (EXPORT ONLY)**

POSSIBLE CAUSES
INTRUSION SENSOR
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	**NOTE: Ensure there are no hanging objects or loose seat belts causing the false triggering. Also, ensure there is no dust or debris around the intrusion sensor causing the false triggering.** Disconnect the Dome Lamp/Intrusion Sensor connector. Close all the doors and arm the VTSS. Does the alarm inadvertently trigger due to intrusion sense even though the sensor is disconnected? Yes → Replace the Remote Keyless Entry Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Intrusion Sensor in accordance with the Service Information. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:
*OPEN DRIVER DOOR FAILS TO TRIP ALARM

POSSIBLE CAUSES
DRIVER DOOR AJAR SWITCH
DRIVER DOOR AJAR SWITCH GROUND CIRCUIT OPEN
DRIVER DOOR AJAR SWITCH STATUS
FRONT DOOR AJAR SWITCH SENSE CIRCUIT OPEN
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Open the Drivers door. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. With the DRBIII®, read the DRV DOOR AJAR SW state. Does the DRBIII® show: CLOSED? Yes → Replace the RKE module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Driver Door Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity. Does the light illuminate? Yes → Go To 3 No → Repair the Driver Door Ajar Switch Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
3	Disconnect the Driver Door Lock Motor/Ajar Switch connector. Connect a jumper wire between the Front Door Ajar Switch Sense circuit and ground. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. With the DRBIII®, read the DRV DOOR AJAR SW state. Does the DRBIII® show: CLOSED? Yes → Replace the Driver Door Lock Motor/Ajar Switch. Perform VTSS VERIFICATION TEST - 1A. No → Go To 4	All
4	Turn the ignition off. Disconnect the Driver Door Lock Motor/Ajar Switch connector. Disconnect the RKE Module connector. Measure the resistance of the Front Door Ajar Switch Sense circuit between the door ajar switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Front Door Ajar Switch Sense circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:

***OPEN LIFTGATE FAILS TO TRIP ALARM**

POSSIBLE CAUSES
LIFTGATE AJAR SWITCH
LIFTGATE AJAR SWITCH GROUND CIRCUIT OPEN
LIFTGATE AJAR SWITCH STATUS
DECKLID AJAR SWITCH SENSE CIRCUIT OPEN
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Open the Liftgate. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. With the DRBIII®, read the Liftgate Ajar Sw state. Does the DRBIII® show: CLOSED? Yes → Replace the RKE module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Liftgate Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity. Does the light illuminate? Yes → Go To 3 No → Repair the Liftgate Ajar Switch Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
3	Disconnect the Liftgate Ajar Switch connector. Connect a jumper wire between the Decklid Ajar Switch Sense circuit and ground. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. With the DRBIII®, read the Liftgate Ajar Sw state. Does the DRBIII® show: CLOSED? Yes → Replace the Liftgate Ajar Switch. Perform VTSS VERIFICATION TEST - 1A. No → Go To 4	All
4	Turn the ignition off. Disconnect the Liftgate Ajar Switch connector. Disconnect the RKE Module connector. Measure the resistance of the Decklid Ajar Switch Sense circuit between the Liftgate Ajar switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Decklid Ajar Switch Sense circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:

***OPEN PASSENGER DOOR FAILS TO TRIP ALARM**

POSSIBLE CAUSES
LEFT REAR DOOR AJAR SWITCH GROUND CIRCUIT OPEN
PASSENGER DOOR AJAR SWITCH
PASSENGER DOOR AJAR SWITCH GROUND CIRCUIT OPEN
RIGHT REAR DOOR AJAR SWITCH GROUND CIRCUIT OPEN
PASSENGER DOOR AJAR/RKE SENSE CIRCUIT OPEN
LEFT REAR DOOR AJAR SWITCH
PASSENGER DOOR AJAR/RKE SENSE CIRCUIT OPEN
RIGHT REAR DOOR AJAR SWITCH
PASSENGER DOOR AJAR/RKE CIRCUIT OPEN
PASSENGER DOOR AJAR/RKE SENSE CIRCUIT OPEN
REMOTE KEYLESS ENTRY MODULE
RKE MODULE - PASSENGER DOOR AJAR SENSE

TEST	ACTION	APPLICABILITY
1	Close all passenger doors. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. Read the PASS DOOR AJAR SW state and open and close each passenger door. Select the door(s) that did not show CLOSED when that door was opened. Passenger Go To 2 Left Rear Go To 4 Right Rear Go To 6 All Passenger Doors Go To 8 All Door States Read Correctly Retest the VTSS system. If the passenger doors will still not trip the alarm, replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Passenger Door Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity. Does the light illuminate? Yes → Go To 3 No → Repair the Passenger Door Ajar Switch Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

*OPEN PASSENGER DOOR FAILS TO TRIP ALARM — Continued

TEST	ACTION	APPLICABILITY
3	Open the Passenger Door. Disconnect the Passenger Door Lock Motor/Ajar Switch connector. Close all the other passenger doors. Connect a jumper wire from the Passenger Door Ajar/RKE Sense circuit to ground. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. With the DRBIII®, read the PASS DOOR AJAR SW state. Does the DRBIII® show: CLOSED? Yes → Replace the Passenger Door Lock Motor/Ajar Switch. Perform VTSS VERIFICATION TEST - 1A. No → Repair the Passenger Door Ajar Switch Sense circuit for an open between the door ajar switch and the splice. Perform VTSS VERIFICATION TEST - 1A.	All
4	Disconnect the Left Rear Door Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity. Does the light illuminate? Yes → Go To 5 No → Repair the Left Rear Door Ajar Switch Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
5	Disconnect the Left Rear Door Ajar Switch connector. Close all the other Passenger Doors. Connect a jumper wire from the Passenger Door Ajar/RKE Sense circuit to ground. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. With the DRBIII®, read the PASS DOOR AJAR SW state. Does the DRBIII® show: CLOSED? Yes → Replace the Left Rear Door Ajar Switch. Perform VTSS VERIFICATION TEST - 1A. No → Repair the Passenger Door Ajar Switch Sense circuit for an open between the door ajar switch and the splice. Perform VTSS VERIFICATION TEST - 1A.	All
6	Disconnect the Right Rear Door Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity. Does the light illuminate? Yes → Go To 7 No → Repair the Right Rear Door Ajar Switch Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

*OPEN PASSENGER DOOR FAILS TO TRIP ALARM — Continued

TEST	ACTION	APPLICABILITY
7	Disconnect the Right Rear Door Ajar Switch connector. Close all the other Passenger Doors. Connect a jumper wire from the Passenger Door Ajar/RKE Sense circuit to ground. With the DRBIII® select: THEFT ALARM, VTSS, INPUT/OUTPUT. With the DRBIII®, read the PASS DOOR AJAR SW state. Does the DRBIII® show: CLOSED? Yes → Replace the Right Rear Door Ajar Switch. Perform VTSS VERIFICATION TEST - 1A. No → Repair the Passenger Door Ajar Switch Sense circuit for an open between the door ajar switch and the splice. Perform VTSS VERIFICATION TEST - 1A.	All
8	Turn the ignition off. Disconnect the Passenger Door Ajar Switch connector. Disconnect the RKE Module connector. Measure the resistance of the Passenger Door Ajar/RKE Sense circuit between the door ajar switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Passenger Door Ajar/RKE Sense circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:

***PARK LAMPS FAIL TO FLASH DURING ALARM**

POSSIBLE CAUSES
PARK LAMP SWITCH OUTPUT CIRCUIT OPEN
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Ensure the park lamps are operational from the multifunction switch. If the park lamps are inoperative, refer to the appropriate Service Information and repair the Park Lamp circuit as necessary. Disconnect the Remote Keyless Entry Module connector. Connect a test light to the Park Lamp Switch Output circuit (cav 2) to ground. Turn the Park Lamps on. Does the test light illuminate when the Park Lamps are on? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Park Lamp Switch Output circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom List:

***VTSS FAILS TO ARM FROM LEFT DOOR CYLINDER LOCK SWITCH (EXPORT ONLY)**

***VTSS FAILS TO ARM/DISARM FROM LEFT DOOR CYLINDER LOCK SWITCH**

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be *VTSS FAILS TO ARM FROM LEFT DOOR CYLINDER LOCK SWITCH (EXPORT ONLY).

POSSIBLE CAUSES
DOOR LOCK OPERATION TEST
GROUND CIRCUIT OPEN
LEFT DOOR SWITCH MUX CIRCUIT OPEN
LEFT CYLINDER LOCK SWITCH

TEST	ACTION	APPLICABILITY
1	Open the door and operate the door locks from the door lock switch. Did the door locks operate properly? Yes → Go To 2 No → Refer to symptom: *ALL LOCKS INOPERATIVE FROM ONE LOCK SWITCH in the POWER DOOR LOCKS/RKE category. Perform VTSS VERIFICATION TEST - 1A.	All
2	Disconnect the Cylinder Lock Switch connector. Measure the resistance of the ground circuit to body ground. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
3	Disconnect the Cylinder Lock Switch connector. Measure the voltage between the Door Switch MUX circuit and ground. Is the voltage approximately 5.0 volts? Yes → Replace the Left Cylinder Lock Switch. Perform VTSS VERIFICATION TEST - 1A. No → Repair the Left Door Switch MUX circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom List:

***VTSS FAILS TO ARM FROM LIFTGATE CYLINDER LOCK SWITCH (EXPORT ONLY)**

***VTSS FAILS TO ARM/DISARM FROM LIFTGATE CYLINDER LOCK SWITCH**

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be *VTSS FAILS TO ARM FROM LIFTGATE CYLINDER LOCK SWITCH (EXPORT ONLY).

POSSIBLE CAUSES
DOOR LOCK OPERATION TEST
GROUND CIRCUIT OPEN
RIGHT DOOR SWITCH MUX CIRCUIT OPEN
LIFTGATE CYLINDER LOCK SWITCH

TEST	ACTION	APPLICABILITY
1	Open the passenger door and operate the door locks from the door lock switch. Did the door locks operate properly? Yes → Go To 2 No → Refer to symptom: *ALL LOCKS INOPERATIVE FROM ONE DOOR LOCK SWITCH in the POWER DOOR LOCKS/RKE category. Perform VTSS VERIFICATION TEST - 1A.	All
2	Disconnect the Liftgate Cylinder Lock Switch connector. Measure the resistance of the ground circuit to body ground. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
3	Disconnect the Liftgate Cylinder Lock Switch connector. Measure the voltage between the Right Door Switch MUX circuit and ground. Is the voltage approximately 5.0 volts? Yes → Replace the Liftgate Cylinder Lock Switch. Perform VTSS VERIFICATION TEST - 1A. No → Repair the Right Door Switch MUX circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom List:

***VTSS FAILS TO ARM FROM RIGHT DOOR CYLINDER LOCK SWITCH (EXPORT ONLY)**

***VTSS FAILS TO ARM/DISARM FROM RIGHT DOOR CYLINDER LOCK SWITCH**

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be *VTSS FAILS TO ARM FROM RIGHT DOOR CYLINDER LOCK SWITCH (EXPORT ONLY).

POSSIBLE CAUSES
DOOR LOCK OPERATION TEST
GROUND CIRCUIT OPEN
RIGHT DOOR SWITCH MUX CIRCUIT OPEN
RIGHT CYLINDER LOCK SWITCH

TEST	ACTION	APPLICABILITY
1	Open the door and operate the door locks from the door lock switch. Did the door locks operate properly? Yes → Go To 2 No → Refer to symptom: *ALL LOCKS INOPERATIVE FROM ONE DOOR LOCK SWITCH in the POWER DOOR LOCKS/RKE category. Perform VTSS VERIFICATION TEST - 1A.	All
2	Disconnect the Right Cylinder Lock Switch connector. Measure the resistance of the ground circuit to body ground. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
3	Disconnect the Right Cylinder Lock Switch connector. Measure the voltage between the Right Door Switch MUX circuit and ground. Is the voltage approximately 5.0 volts? Yes → Replace the Right Cylinder Lock Switch. Perform VTSS VERIFICATION TEST - 1A. No → Repair the Right Door Switch MUX circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:
*VTSS INDICATOR FAILS TO FLASH

POSSIBLE CAUSES
REMOTE KEYLESS ENTRY MODULE
INSTRUMENT CLUSTER
VTSS INDICATOR DRIVER CIRCUIT OPEN
VTSS LED OPEN

TEST	ACTION	APPLICABILITY
1	**NOTE: The VTSS must be enabled for the Indicator Lamp to operate. To help ensure an accurate diagnosis, verify the system is enabled before proceeding.** Disconnect the Remote Keyless Entry Module connector. Connect a jumper wire between the VTSS Indicator Driver circuit and ground. Does the VTSS Indicator illuminate? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Remote Keyless Entry Module connector. Disconnect the Instrument Cluster connector. Measure the resistance of the VTSS Indicator Driver circuit between the RKE module connector and the Instrument Cluster connector. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the VTSS Indicator Driver circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
3	Remove the VTSS Indicator LED from the Instrument Cluster. Test the VTSS Indicator LED for functionality. Does the VTSS Indicator LED light? Yes → Replace the Instrument Cluster. Perform VTSS VERIFICATION TEST - 1A. No → Replace the VTSS LED. Perform VTSS VERIFICATION TEST - 1A.	All

Symptom:

***VTSS INDICATOR STAYS ON STEADY DURING ARMING**

POSSIBLE CAUSES
HOOD AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND (IF EQUIPPED)
HOOD AJAR SWITCH (IF EQUIPPED)
RKE MODULE - VTSS INDICATOR

TEST	ACTION	APPLICABILITY
1	Is this a Export vehicle equipped with a hood ajar switch? Yes → Go To 2 No → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
2	Ensure the hood is closed and aligned properly. With the DRBIII®, read the Hood Ajar status. Does the DRBIII® show OPEN? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Disconnect the Hood Ajar switch connector. With the DRBIII®, read the Hood Ajar status. Does the DRBIII® show OPEN? Yes → Replace the Hood Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Hood Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*VTSS SIREN INOPERATIVE (EXPORT ONLY)

POSSIBLE CAUSES
SIREN FUNCTIONAL TEST
OPEN FUSED B(+) CIRCUIT
OPEN GROUND CIRCUIT
FAULTY SIREN
SIREN CONTROL CIRCUIT OPEN
SIREN CONTROL CIRCUIT SHORTED TO GROUND
REMOTE KEYLESS ENTRY MODULE

TEST	ACTION	APPLICABILITY
1	Ensure the IOD fuse is installed and the vehicle is in the Customer Usage Mode. Using the DRBIII®, read the module configuration and ensure it is configured for PREMIUM VTA. With the DRBIII®, actuate the SIREN. Does the Siren actuate and sound proper? Yes → The condition that caused this symptom is currently not present. Inspect the related wiring harness for a possible intermittent condition. Look for any chafed, pierced, pinched or partially broken wires. Perform VTSS VERIFICATION TEST - 1A. No → Go To 2	All
2	Disconnect the Siren connector. Measure the voltage of the Fused B(+) circuit in the Siren connector. Is the voltage above 10.0 volts? Yes → Go To 3 No → Repair the Fused B(+) circuit for an open between the IOD fuse and the Siren. Perform VTSS VERIFICATION TEST - 1A.	All
3	Turn the ignition off. Disconnect the Siren connector. Measure the resistance between ground and the Ground circuit in the Siren connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All

*VTSS SIREN INOPERATIVE (EXPORT ONLY) — Continued

TEST	ACTION	APPLICABILITY
4	Use the DRBIII® and set up as follows: Use the Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes. Connect the scope input cable to the channel one connector on the DRBIII®. Attach the red and black leads and the cable to probe adapter to the scope input cable. Select DRBIII® Standalone. Select lab scope. Select Live. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Disconnect the Siren connector. Connect the black lead to the chassis ground. Connect the red lead to the Siren Control circuits (cavities 1 & 2) in the Siren connector. Observe the voltage displayed on the DRBIII® Lab Scope. Is there a voltage square wave present in each cavity every 1 or 2 seconds? Yes → Replace the Siren in accordance with the Service Information. Perform VTSS VERIFICATION TEST - 1A. No → Go To 5	All
5	Turn the ignition off. Disconnect the Siren connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Siren Control circuit between the Siren connector (cavities 1&2) and the RKE module connector (cavity 15). Is the resistance below 5.0 ohms at all cavities? Yes → Go To 6 No → Repair the Siren Control circuit for an open between the Siren and the RKE module connector. Perform VTSS VERIFICATION TEST - 1A.	All
6	Turn the ignition off. Disconnect the Siren connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Siren Control circuit to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Siren Control circuit for a short to ground. Perform VTSS VERIFICATION TEST - 1A. No → Replace the Remote Keyless Entry Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

Verification Tests

40/41TE (NGC) TRANSMISSION VERIFICATION TEST - VER 1	APPLICABILITY
1. NOTE: After completion of the Transmission Verification Test, the Powertrain Verification Test must be performed. Refer to the Powertrain Category. 2. Connect the DRBIII® to the Data Link Connector (DLC). 3. Reconnect any disconnected components. 4. With the DRBIII®, erase all Transmission DTC's, also erase the PCM DTC's. 5. Perform *PRNDL FAULT CLEARING PROCEDURE after completion of repairs for P0706 CHECK SHIFTER SIGNAL. 6. With the DRBIII®, display Transmission Temperature. Start and run the engine until the Transmission Temperature is HOT, above 43° C or 110° F. 7. Check the transmission fluid and adjust if necessary. Refer to the Service Information for the Fluid Fill procedure. **8. NOTE: If the Transmission Control Module or Torque Converter has been replaced, or if the Transmission has been repaired or replaced, it is necessary to perform the DRBIII® Quick Learn Procedure and reset the "Pinion Factor".** 9. Road test the vehicle. With the DRBIII®, monitor the engine RPM. Make 15 to 20 1-2, 2-3, 3-4 upshifts. Perform these shifts from a standing start to 45 MPH with a constant throttle opening of 20 to 25 degrees. 10. Below 25 MPH, make 5 to 8 wide open throttle kickdowns to 1st gear. Allow at least 5 seconds each in 2nd and 3rd gear between each kickdown. 11. For a specific DTC, drive the vehicle to the Symptom's When Monitored and Set Conditions to verify the DTC is repaired. 12. If equipped with AutoStick®, upshift and downshift several times using the AutoStick® feature during the road test. **13. NOTE: Use the EATX OBDII task manager to run Good Trip time in each gear, this will confirm the repair and to ensure that the DTC has not re-matured.** 14. Check for Diagnostic Trouble Codes (DTC's) during the road test. If a DTC sets during the road test , return to the Symptom list and perform the appropriate symptom. **15. NOTE: Erase P0700 DTC in the PCM to turn the MIL light off after making transmission repairs.** Were there any Diagnostic Trouble Codes set during the road test? Yes → Repair is not complete, refer to the appropriate symptom. No → Repair is complete.	All

Verification Tests — Continued

ABS VERIFICATION TEST - VER 1	APPLICABILITY
1. Turn the ignition off. 2. Connect all previously disconnected components and connectors. 3. Ensure all accessories are turned off and the battery is fully charged. 4. Ensure that the Ignition is on, and with the DRBIII, erase all Diagnostic Trouble Codes from ALL modules. Start the engine and allow it to run for 2 minutes and fully operate the system that was malfunctioning. 5. Turn the ignition off and wait 5 seconds. Turn the ignition on and using the DRBIII, read DTC's from ALL modules. 6. If any Diagnostic Trouble Codes are present, return to Symptom list and troubleshoot new or recurring symptom. **7. NOTE: For Sensor Signal and Pump Motor faults, the CAB must sense all 4 wheels at 25 km/h (15 mph) before it will extinguish the ABS Indicator.** 8. If there are no DTC's present after turning ignition on, road test the vehicle for at least 5 minutes. Perform several antilock braking stops. **9. Caution: Ensure braking capability is available before road testing.** 10. Again, with the DRBIII® read DTC's. If any DTC's are present, return to Symptom list. 11. If there are no Diagnostic Trouble Codes (DTC's) present, and the customer's concern can no longer be duplicated, the repair is complete. Are any DTC's present or is the original concern still present? Yes → Repair is not complete, refer to appropriate symptom. No → Repair is complete.	All

BODY VERIFICATION TEST - VER 1	APPLICABILITY
1. Disconnect all jumper wires and reconnect all previously disconnected components and connectors. **2. NOTE: If the SKIM or PCM/ECM was replaced, refer to the service information for proper programming procedures.** **3. NOTE: PT27 ONLY: If a Window Regulator Module was replaced, close both doors, raise both door windows fully up and hold the switch in the up position for 2 additional seconds then use the DRBIII to ″Initialize Module″.** 4. Program all RKE transmitters and other options as necessary. 5. Ensure that all accessories are turned off and the battery is fully charged. 6. With the DRBIII®, record and erase all DTC's from ALL modules. Start and run the engine for 2 minutes. Operate all functions of the system that caused the original concern. 7. Turn the ignition off and wait 5 seconds. Turn the ignition on and using the DRBIII®, read DTC's from ALL modules. Are any DTC's present or is the original condition still present? Yes → Repair is not complete, refer to the appropriate symptom. No → Repair is complete.	All

Verification Tests — Continued

POWERTRAIN VERIFICATION TEST VER - 1 - NGC	APPLICABILITY
1. NOTE: After completing the Powertrain Verification Test the Transmission Verification Test must be performed. **2. NOTE: If the PCM has been replace and the vehicle is equipped with a 2.4L Turbo, Manual Transmission, the Pinion Factor MUST be programmed into the PCM. Failure to do so will cause the speedometer to become inoperative or inaccurate.** **3. NOTE: If the PCM has been replaced and the correct VIN and mileage have not been programmed, a DTC will be set in the ABS Module, Airbag Module and the SKIM.** **4. NOTE: If the vehicle is equipped with a Sentry Key Immobilizer System, Secret Key data must be updated. Refer to the Service Information for the PCM, SKIM and the Transponder (ignition key) for programming information.** 5. Inspect the vehicle to ensure that all components related to the repair are connected properly. 6. Inspect the engine oil for fuel contamination. Replace the oil and filter as necessary. 7. Attempt to start the engine. 8. If the No Start condition is still present, refer to the symptom list and perform the diagnostic testing as necessary. refer to and Technical Service Bulletins that may apply. 9. Run the engine for one warm-up cycle to verify operation. 10. With the DRBIII®, confirm that no DTCs or Secondary Indicators are present and that all components are functioning properly. 11. If a DTC is present, refer to the appropriate category and select the corresponding symptom. Are any DTCs present? Yes → Repair is not complete, refer to appropriate symptom. No → Repair is complete.	All

POWERTRAIN VERIFICATION TEST VER-1 - 1.6L	APPLICABILITY
1. NOTE: If the PCM has been replaced, it must be programmed with the latest calibration before continuing. **2. NOTE: If the PCM has been replaced and the correct VIN and mileage have not been programmed, a DTC will be set in the ABS Module, Airbag Module and the SKIM.** **3. NOTE: If the vehicle is equipped with a Sentry Key Immobilizer System, Secret Key data must be updated. Refer to the Service Information for the PCM, SKIM and the Transponder (ignition key) for programming information.** 4. Inspect the vehicle to ensure that all components related to the repair are connected properly. 5. Inspect the engine oil for fuel contamination. Replace the oil and filter as necessary. 6. Attempt to start the engine. 7. If the No Start condition is still present, refer to the symptom list and perform the diagnostic testing as necessary. refer to any Technical Service Bulletins that may apply. 8. Run the engine for one warm-up cycle to verify operation. 9. With the DRBIII®, confirm that no DTCs are present and that all components are functioning properly. 10. If a DTC is present, refer to the appropriate category and select the corresponding symptom. Are any DTCs present? Yes → Repair is not complete, refer to appropriate symptom. No → Repair is complete.	All

Verification Tests — Continued

ROAD TEST VERIFICATION - VER-2	APPLICABILITY
1. Inspect the vehicle to ensure that all engine components are properly installed and connected. Reassemble and reconnect components as necessary. 2. If this verification procedure is being performed after a non-DTC test, perform steps 3 and 4. If not, proceed to step 5. 3. Check to see if the initial symptom still exists. If there are no trouble codes and the symptom no longer exists, the repair was successful and testing is now complete. 4. If the initial or another symptom exists, the repair is not complete. Check all pertinent Technical Service Bulletins (TSBs) and return to the Symptom List if necessary. 5. For previously read DTCs that have not been dealt with, return to the Symptom List and follow the diagnostic path for that DTC; otherwise, continue. 6. If the Engine Control Module (ECM) has not been changed, perform steps 7 and 8, otherwise, continue with step 9. 7. With the DRB III®, erase all diagnostic trouble codes (DTCs), then disconnect the DRB III®. 8. Turn the ignition off for at least 10 seconds. 9. If equipped with a Transfer Case Position Switch, perform step 10, otherwise, continue with step 11. 10. With the ignition switch on, place the Transfer Case Shift Lever in each gear position, stopping for 15 seconds in each position. 11. Ensure no DTCs remain by performing steps 12 through 15. 12. Road test the vehicle. For some of the road test, go at least 64 km/h (40 MPH). If this test is for an A/C Relay Control Circuit, drive the vehicle for at least 5 minutes with the A/C on. 13. At some point, stop the vehicle and turn the engine off for at least 10 seconds, then restart the engine and continue. 14. Upon completion of the road test, turn the engine off and check for DTCs with the DRB III®. 15. If the repaired DTC has set again, the repair is not complete. Check for any pertinent Technical Service Bulletins (TSBs) and return to the Symptom List. If there are no DTCs, the repair was successful and is now complete. Are any DTCs or symptoms remaining? Yes → Repair is not complete, refer to appropriate symptom. No → Repair is complete.	All

SKIS VERIFICATION	APPLICABILITY
1. Reconnect all previously disconnected components and connectors. 2. Obtain the vehicle's unique Personal Identification Number (PIN) assigned to it's original SKIM. This number can be obtained from the vehicle's invoice or Chrysler's Customer Center (1-800-992-1997). **3. NOTE: When entering the PIN, care should be taken because the SKIM will only allow 3 consecutive attempts to enter the correct PIN. If 3 consecutive incorrect PIN's are entered the SKIM will Lock Out the DRB III for 1 hour.** 4. To exit Lock Out mode, the ignition key must remain in the Run position continually for 1 hour. Turn off all accessories and connect a battery charger if necessary. 5. With the DRB III, select Theft Alarm, SKIM and Miscellaneous. Then select desired procedure and follow the steps that will be displayed. 6. If the SKIM has been replaced, ensure all of the vehicle ignition keys are programmed to the new SKIM. **7. NOTE: Prior to returning vehicle to the costumer, perform a module scan to be sure that all DTC's are erased. Erase any DTC's that are found.** 8. With the DRB III erase all DTC's. Perform 5 ignition key cycles leaving the key on for at least 90 seconds per cycle. 9. With the DRB III, read the SKIM DTC's. Are there any SKIM DTC's? Yes → Repair is not complete, refer to appropriate symptom. No → Repair is complete.	All

Verification Tests — Continued

VTSS VERIFICATION TEST - 1A	APPLICABILITY
1. Ensure all doors, hood and the liftgate are closed. 2. Open the driver door. 3. Remove the ignition key (but keep in hand). 4. Lock the doors with RKE transmitter. 5. Close the driver door. 6. - If the VTSS indicator lamp flashes rapidly and after approximately 15 seconds changes to a slower flash, the system is operational. 7. - If the indicator fails to flash as described, there is a problem with the system. Select the Identifying VTSS symptom from the Symptom List to troubleshoot. Does the VTSS indicator lamp flash as specified? Yes → Repair is complete. No → Repair is not complete, refer to appropriate symptom.	All

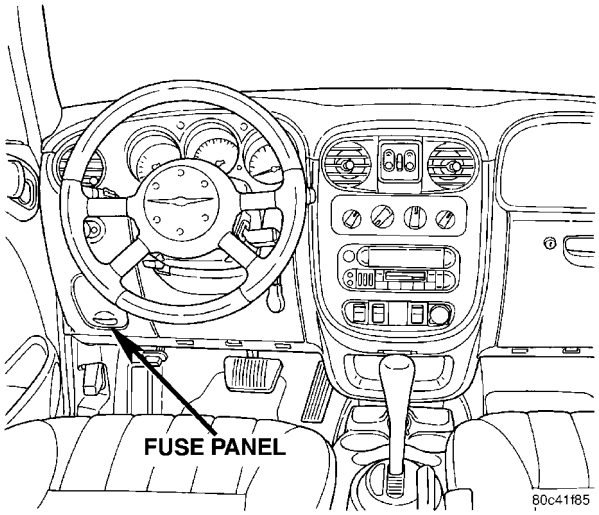
__AIRBAG VERIFICATION TEST - VER 1	APPLICABILITY
1. Remove any special tools or jumper wires and reconnect all previously disconnected components - except the Battery. **2. WARNING: TO AVOID PERSONAL INJURY OR DEATH, TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.** 3. Connect the DRBIII® to the Data Link Connector - use the most current software available. 4. Use the DRBIII® and erase the stored codes in all airbag system modules. 5. Turn the ignition off, and wait 15 seconds, then turn the ignition on. 6. Wait one minute, and read active codes and if there are none present read the stored codes. 7. Note: If equipped with Airbag On - Off switch, read the DTC's in all switch positions. 8. Note: Read the DTC's in all airbag system related modules. 9. If the DRBIII® shows any active or stored codes, return to the Symptom list and follow path specified for that trouble code. If no active or stored codes are present, the repair is complete. Are any DTC's present or is the original condition still present? YES Repair is not complete, refer to appropriate symptom list. NO Repair is complete.	All

NOTES

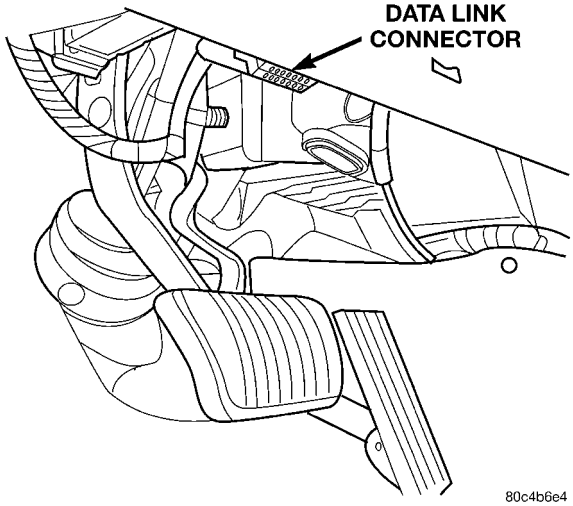
8.0 COMPONENT LOCATIONS

8.1 AIRBAG SYSTEM

8.1.1 FUSE BLOCK

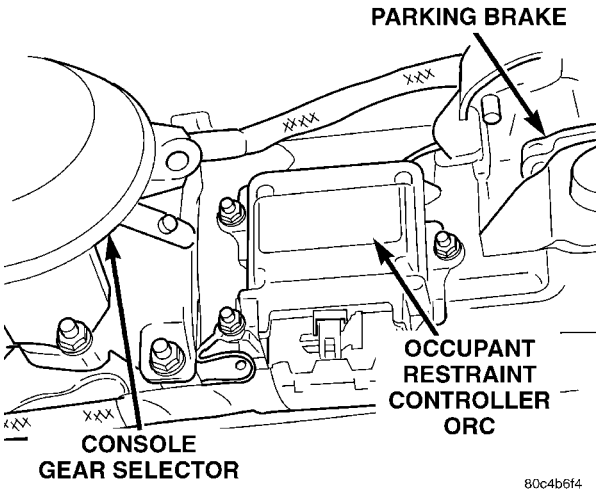


8.1.2 DATA LINK CONNECTOR



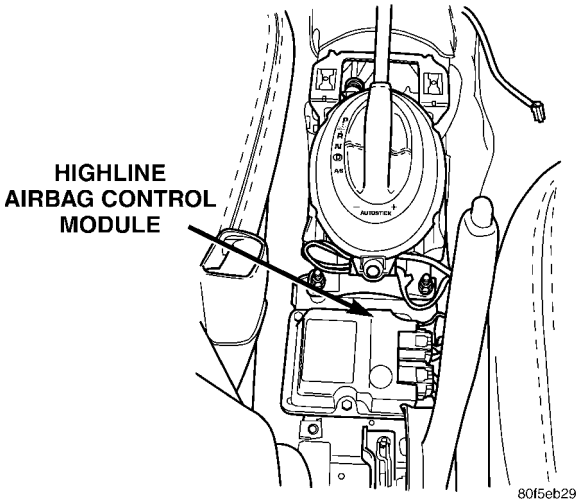
8.1.3 AIRBAG CONTROL MODULE (ORC)

8.1.3.1 BASE

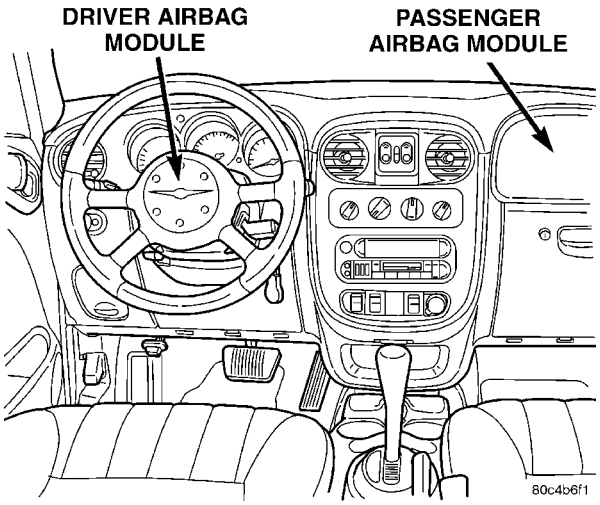


8.1 AIRBAG SYSTEM (Continued)

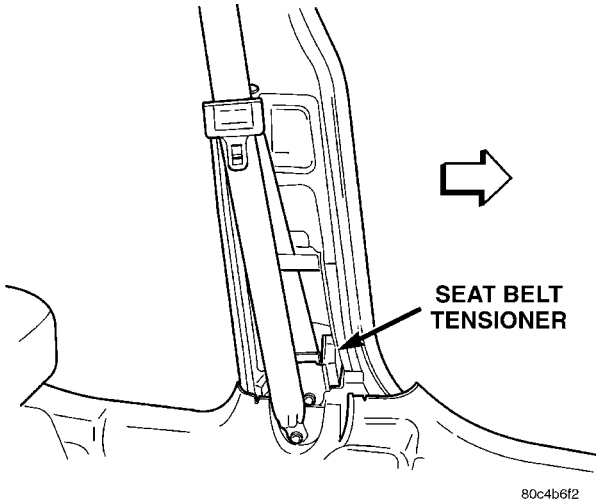
8.1.3.2 PREMIUM



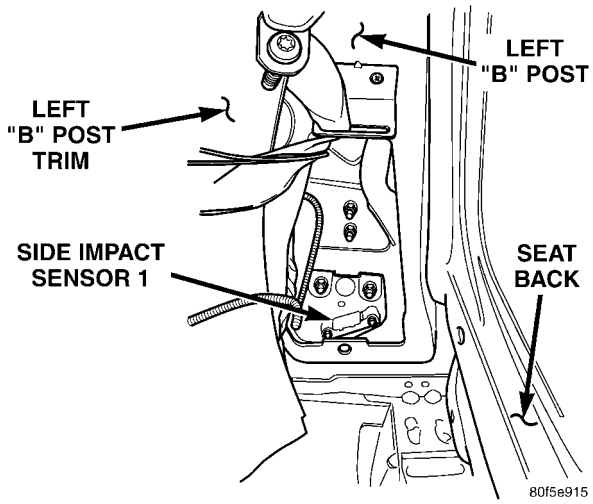
8.1.4 DRIVER AND PASSENGER AIRBAG MODULES



8.1.5 SEAT BELT PRETENSIONER

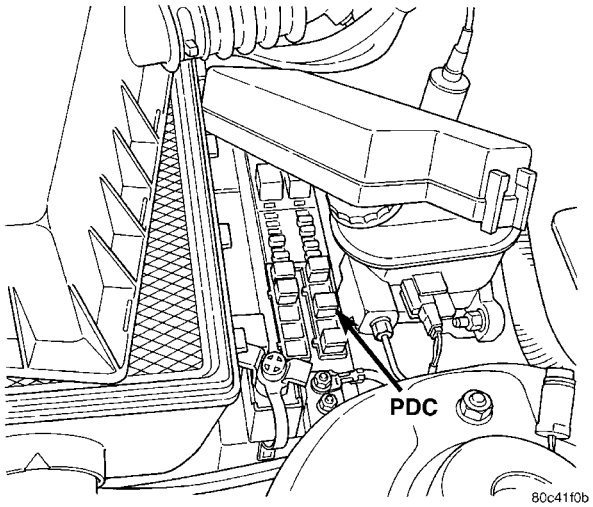


8.1.6 SIDE IMPACT SENSOR

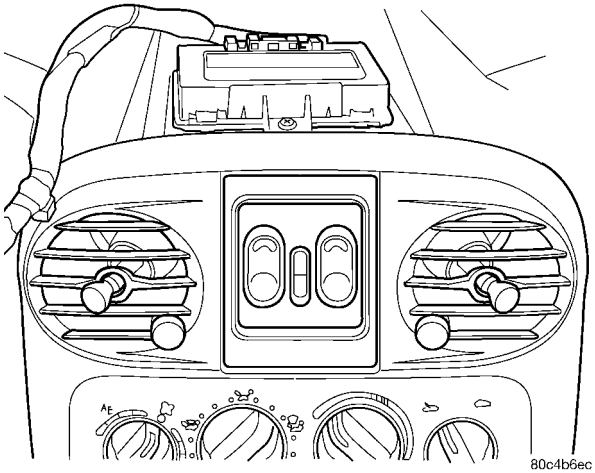


8.2 COMMUNICATION

8.2.1 POWER DISTRIBUTION CENTER

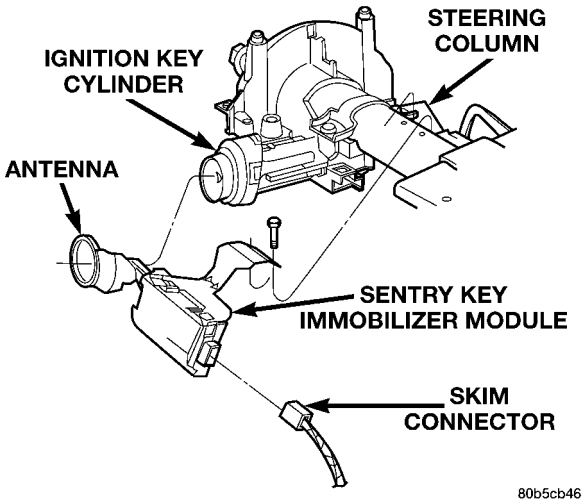


8.2.2 REMOTE KEYLESS ENTRY MODULE



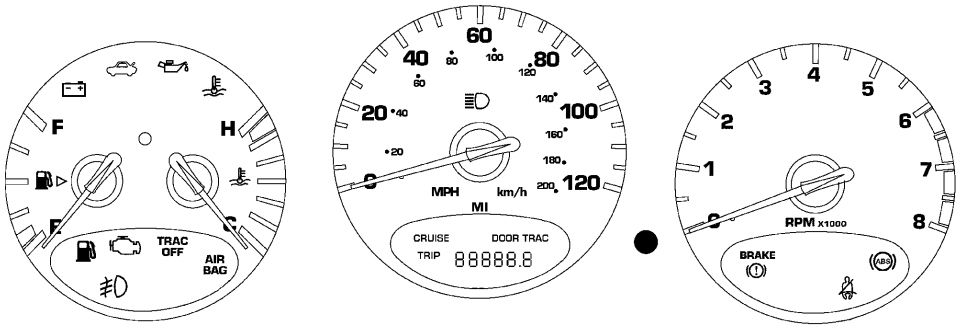
8.2 COMMUNICATION (Continued)

8.2.3 SENTRY KEY IMMOBILIZER

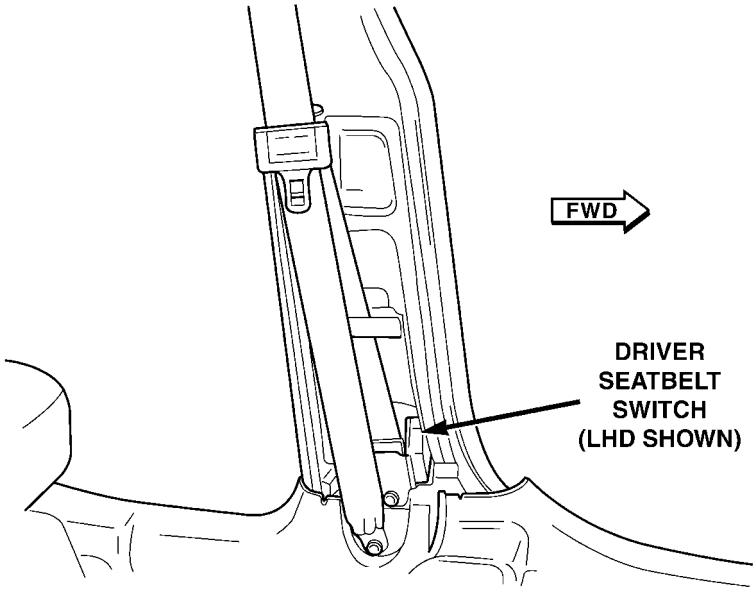


8.3 INSTRUMENT CLUSTER

8.3.1 INSTRUMENT CLUSTER



8.3.2 SEATBELT SWITCH



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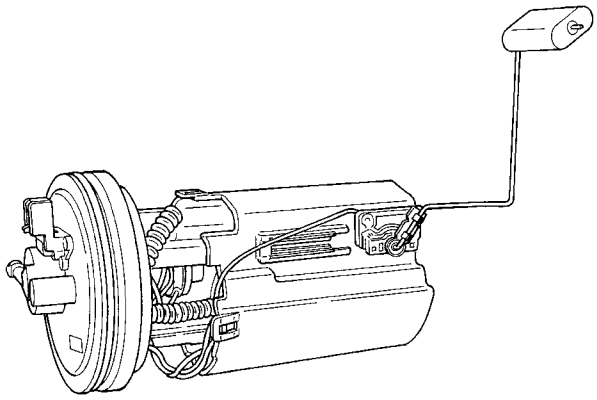
8.3.3 FUEL SENSOR



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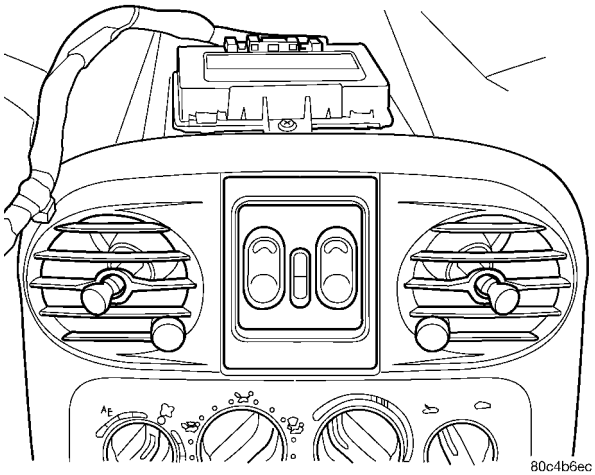
8.4 POWER DOOR LOCKS/RKE

8.4.1 REMOTE KEYLESS ENTRY MODULE



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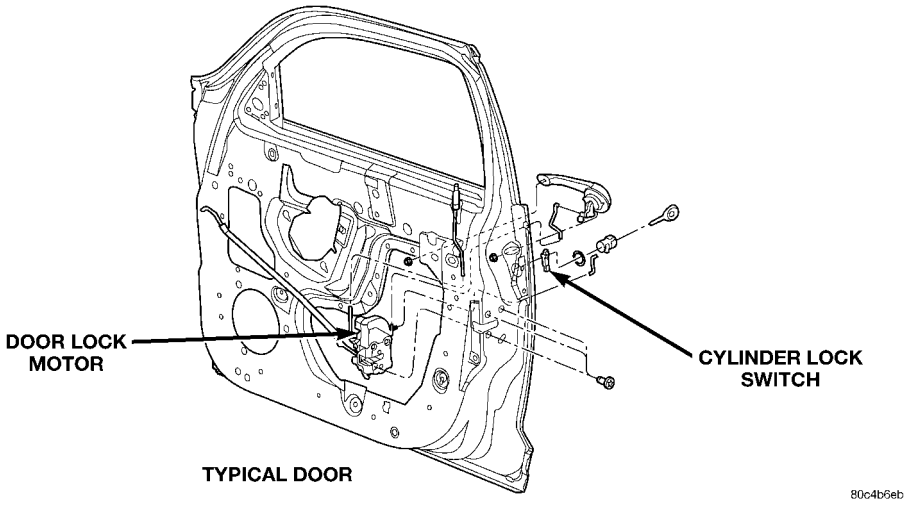
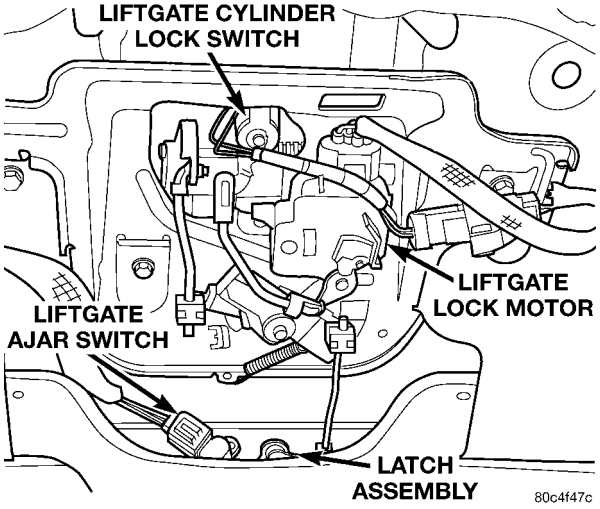
8.4 POWER DOOR LOCKS/RKE (Continued)

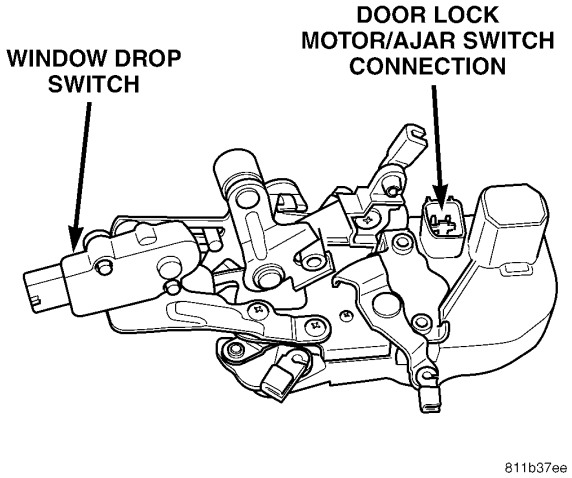
8.4.2 DOOR LOCK MOTOR



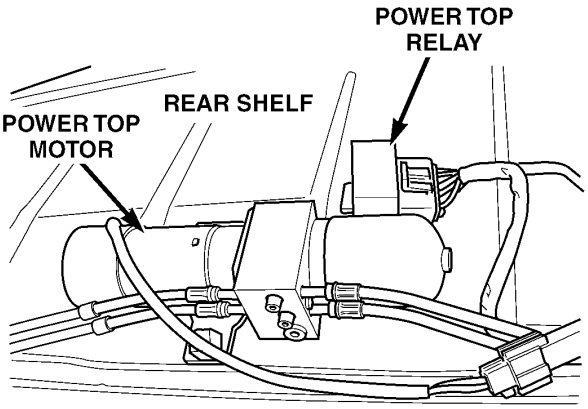
8.4.3 LIFTGATE LOCK MOTOR



8.4.4 DOOR LATCH (PT27)



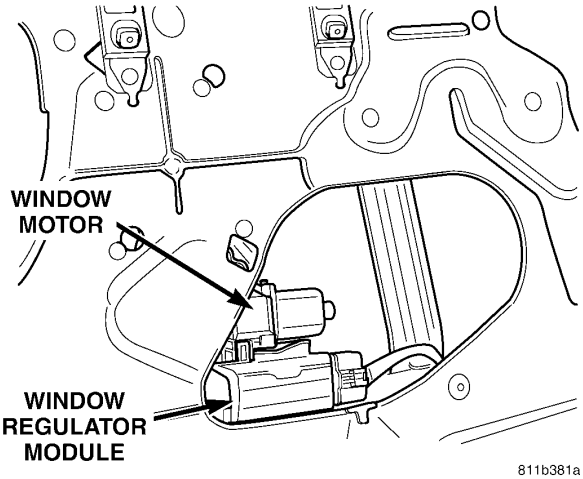
8.5 POWER TOP (PT27)



811b380a

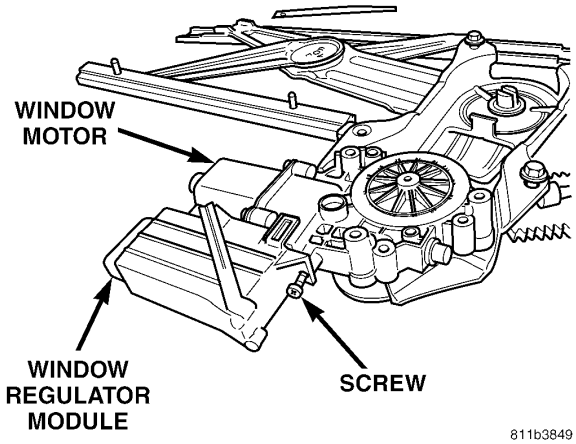
8.6 POWER WINDOWS (PT27)

8.6.1 WINDOW REGULATOR MODULE



811b381a

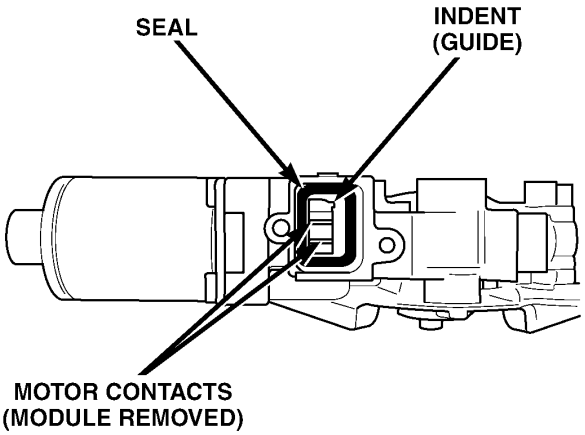
8.6.2 WINDOW MOTOR



811b3849

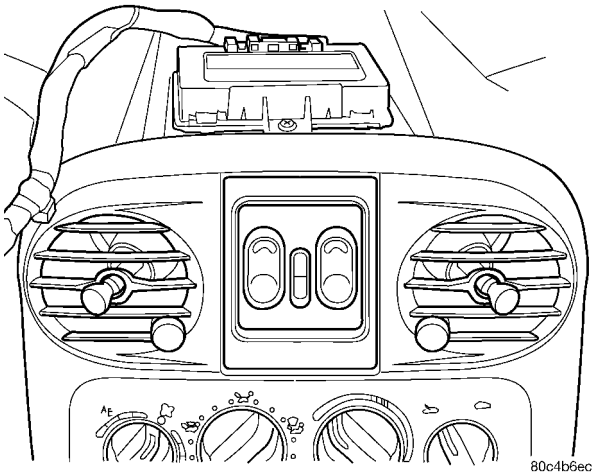
8.6 POWER WINDOWS (PT27) (Continued)

8.6.3 WINDOW MOTOR DETAIL

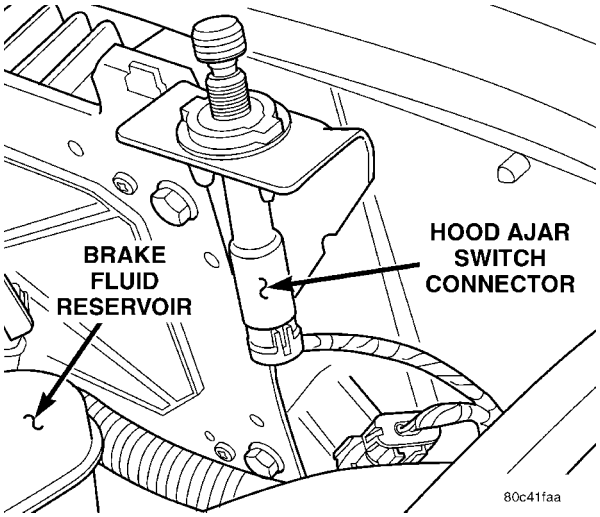


8.7 VEHICLE THEFT SECURITY SYSTEM

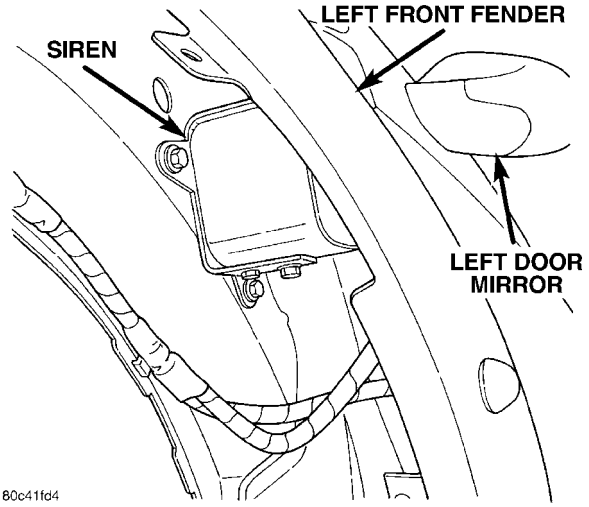
8.7.1 REMOTE KEYLESS ENTRY MODULE



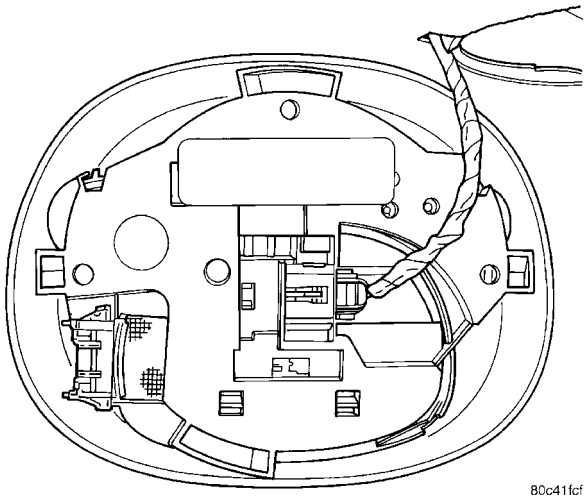
8.7.2 HOOD AJAR SWITCH (EXPORT ONLY)



8.7.3 SIREN (EXPORT ONLY)

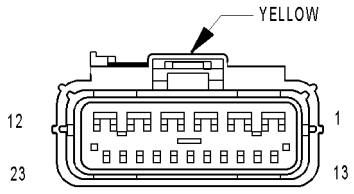


8.7.4 INTRUSION SENSOR (EXPORT ONLY)



NOTES

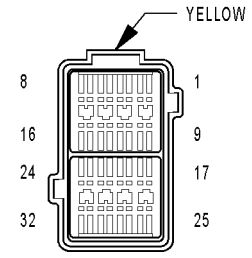
9.0 CONNECTOR PINOUTS



AIRBAG CONTROL MODULE (ORC) (BASE)

AIRBAG CONTROL MODULE (ORC) (BASE) - YELLOW 23 WAY

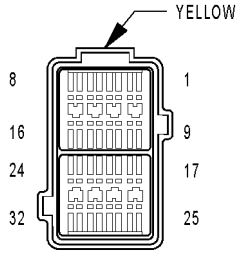
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	-	-
4	-	-
5	R42 20BK/YL	PASSENGER SQUIB 1 LINE 1
6	R44 20DG/YL	PASSENGER SQUIB 1 LINE 2
7	R55 20LG/DG	DRIVER SEAT BELT TENSIONER LINE 1
8	R53 20LG/YL	DRIVER SEAT BELT TENSIONER LINE 2
9	R56 20LB/DG	PASSENGER SEAT BELT TENSIONER LINE 1
10	R54 20LB/YL	PASSENGER SEAT BELT TENSIONER LINE 2
11	R43 20BK/LB	DRIVER SQUIB 1 LINE 1
12	R45 20DG/LB	DRIVER SQUIB 1 LINE 2
13	-	-
14	F15 20DG/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
15	F25 20TN/LG	FUSED IGNITION SWITCH OUTPUT (RUN)
16	Z100 20BK/OR (HANDS FREE)	GROUND
17	-	-
18	-	-
19	-	-
20	-	-
21	D25 20VT/YL	PCI BUS
22	-	-
23	-	-



AIRBAG CONTROL MODULE C1 (ORC) (PREMIUM)

AIRBAG CONTROL MODULE C1 (ORC) (PREMIUM) - YELLOW 32 WAY

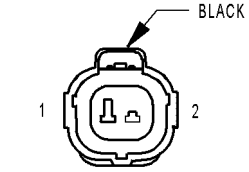
CAV	CIRCUIT	FUNCTION
1	R53 20LG/YL	DRIVER SEAT BELT TENSIONER LINE 2
2	R55 20LG/DG	DRIVER SEAT BELT TENSIONER LINE 1
3	R56 20LB/DG	PASSENGER SEAT BELT TENSIONER LINE 1
4	R54 20LB/YL	PASSENGER SEAT BELT TENSIONER LINE 2
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	R131 20LG/YL	LEFT SIDE IMPACT SENSOR 1 SIGNAL
16	R134 20LB/BR	RIGHT SIDE IMPACT SENSOR 1 GROUND
17	-	-
18	-	-
19	R133 20LB/DG	LEFT SIDE IMPACT SENSOR 1 GROUND
20	-	-
21	-	-
22	-	-
23	-	-
24	R132 20LG/VT	RIGHT SIDE IMPACT SENSOR 1 SIGNAL
25	R33 20LG/WT	LEFT SEAT SQUIB 1 LINE 2
26	R31 20LG/OR	LEFT SEAT SQUIB 1 LINE 1
27	R32 20LB/OR	RIGHT SEAT SQUIB 1 LINE 1
28	R34 20LB/WT	RIGHT SEAT SQUIB 1 LINE 2
29	-	-
30	-	-
31	-	-
32	-	-



AIRBAG CONTROL MODULE C2 (ORC) (PREMIUM)

AIRBAG CONTROL MODULE C2 (ORC) (PREMIUM) - YELLOW 32 WAY

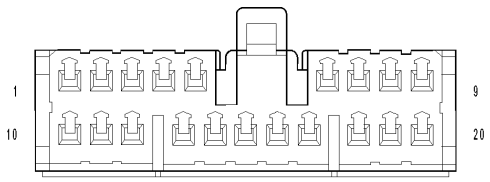
CAV	CIRCUIT	FUNCTION
1	R45 20DG/LB	DRIVER SQUIB 1 LINE 2
2	R43 20BK/LB	DRIVER SQUIB 1 LINE 1
3	-	-
4	-	-
5	R44 20DG/YL	PASSENGER SQUIB 1 LINE 2
6	R42 20BK/YL	PASSENGER SQUIB 1 LINE 1
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	D25 20VT/YL	PCI BUS
16	F15 20DB/WT (EXCEPT EXPORT/EXCEPT HANDS FREE)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
16	F15 20DG/WT (OTHER)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	Z100 20BK/OR	GROUND
23	-	-
24	F25 20TN/LG	FUSED IGNITION SWITCH OUTPUT (RUN)
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-



AMBIENT TEMPERATURE SENSOR (EXCEPT 2.4L BASE)

AMBIENT TEMPERATURE SENSOR (EXCEPT 2.4L BASE) - BLACK 2 WAY

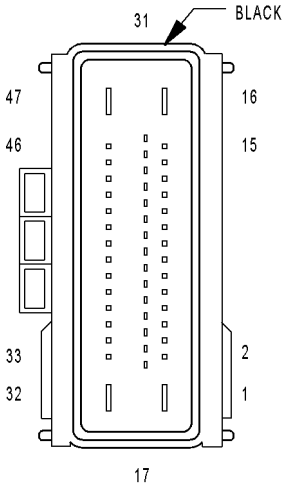
CAV	CIRCUIT	FUNCTION
1	G31 20VT/LG	AMBIENT TEMPERATURE SENSOR SIGNAL
2	G32 20BK/LB	SENSOR GROUND



AMPLIFIER AUDIO C1

AMPLIFIER AUDIO C1 - 20 WAY

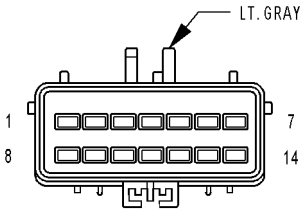
CAV	CIRCUIT	FUNCTION
1	X209 18GY/OR	LEFT INSTRUMENT PANEL SPEAKER (+)
2	X208 18GY/DG	RIGHT INSTRUMENT PANEL SPEAKER (+)
3	-	
4	M11 18PK/LB	FUSED (B+)
5	-	
6	D25 20VT/YL	PCI BUS
7	X51 20DG/DB	LEFT REAR SPEAKER (+)
8	X52 20GY/DB	RIGHT REAR SPEAKER (+)
9	Z9 18BK	GROUND
10	X299 18GY/YL	LEFT INSTRUMENT PANEL SPEAKER (-)
11	X298 18GY/LG	RIGHT INSTRUMENT PANEL SPEAKER (-)
12	-	
13	M11 18PK/LB	FUSED (B+)
14	-	
15	-	
16	-	
17	F30 16RD	FUSED (B+)
18	X57 20DG/OR	LEFT REAR SPEAKER (-)
19	X58 20GY/OR	RIGHT REAR SPEAKER (-)
20	Z9 18BK	GROUND



ANTI-LOCK BRAKE MODULE

ANTI-LOCK BRAKE MODULE - BLACK 47 WAY

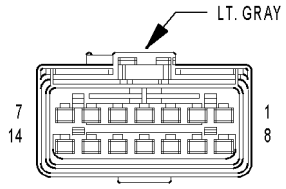
CAV	CIRCUIT	FUNCTION
1	A10 12RD/DG	FUSED B(+) (PUMP)
2	-	-
3	-	-
4	B27 18RD/YL	TRACTION CONTROL SWITCH SENSE
5	-	-
6	L50 18WT/TN	BRAKE LAMP SWITCH OUTPUT
7	-	-
8	F12 18DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
9	-	-
10	D223 20WT/VT	NOT USED
11	D25 18VT/YL	PCI BUS
12	-	-
13	-	-
14	-	-
15	-	-
16	Z1 12BK	GROUND
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	A20 12RD/DB	FUSED B(+) (VALVE)
33	B6 18WT/DB	RIGHT FRONT WHEEL SPEED SENSOR SIGNAL
34	B7 18WT	RIGHT FRONT WHEEL SPEED SENSOR 12 VOLT SUPPLY
35	-	-
36	B4 18LG	LEFT REAR WHEEL SPEED SENSOR 12 VOLT SUPPLY
37	B3 18LG/DB	LEFT REAR WHEEL SPEED SENSOR SIGNAL
38	-	-
39	-	-
40	-	-
41	-	-
42	B1 18YL/DB	RIGHT REAR WHEEL SPEED SENSOR SIGNAL
43	B2 18YL	RIGHT REAR WHEEL SPEED SENSOR 12 VOLT SUPPLY
44	-	-
45	B9 18RD	LEFT FRONT WHEEL SPEED SENSOR 12 VOLT SUPPLY
46	B8 18RD/DB	LEFT FRONT WHEEL SPEED SENSOR SIGNAL
47	Z1 12BK	GROUND



C203
(PT27)

C203 (PT27) - LT. GRAY (BODY SIDE)

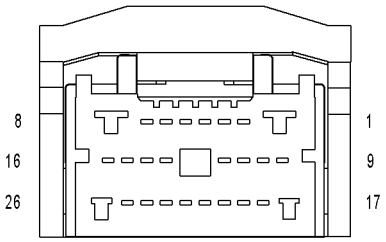
CAV	CIRCUIT
1	X52 20DB/WT (BASE AUDIO)
1	X82 18LB/VT (PREMIUM AUDIO)
2	X58 20DB/BK (BASE AUDIO)
2	X80 18LB/BK PREMIUM AUDIO)
3	Q2 16LG/BK
4	-
5	F98 18RD/WT (HEATED SEAT)
6	R54 20LB/YL (BASE ORC)
7	R56 20LB/DG (BASE ORC)
8	L62 18BR/WT
9	F30 16RD
10	M1 20PK
11	M2 20YL
12	Q24 14DG
13	Q14 14GY
14	G11 20WT/BK



C203
(PT27)

C203 (PT27) - LT. GRAY (INSTRUMENT PANEL SIDE)

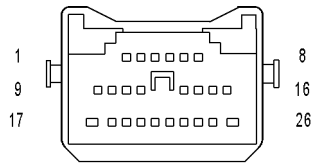
CAV	CIRCUIT
1	X52 20DB/WT (BASE AUDIO)
1	X82 18LB/VT (PREMIUM AUDIO)
2	X58 20DB/BK (BASE AUDIO)
2	X80 18LB/BK (PREMIUM AUDIO)
3	Q2 16LG/BK
4	-
5	F98 18RD/WT (HEATED SEATS)
5	F98 18RD/WT (HEATED SEATS)
6	R54 20LB/YL (BASE ORC)
7	R56 20LB/DG (BASE ORC)
8	L62 18BR/RD
8	L62 18BR/RD (EXPORT)
9	F30 16RD
10	M1 20PK
11	M2 20YL
12	Q24 16DG
13	Q14 16GY
14	G11 20WT/BK



C204
(PT27)

C204 (PT27) - (INSTRUMENT PANEL SIDE)

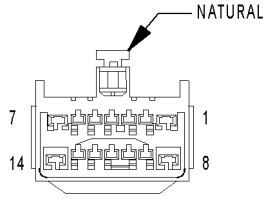
CAV	CIRCUIT
1	Q13 16DB
2	Q335 20OR/LG
3	G75 20TN/DB
3	G75 20TN/DB
4	P75 20DB/WT
5	-
6	-
7	X53 20DG/VT (BASE AUDIO)
7	X87 18LG/VT (PREMIUM AUDIO)
8	Q23 16RD/WT
9	-
10	C16 20LB/YL
11	P73 20YL/PK
12	P34 18PK/BK
13	P97 20WT/DG
14	X55 20BR/DB (BASE AUDIO)
14	X85 18LG/DG (PREMIUM AUDIO)
15	P35 18OR/VT
16	P71 20BR/YL
17	Z1 16BK
18	Q325 20OR/LB
19	P6 20RD/WT
20	Q31 20OR/DB
21	P5 20YL/BK
22	D25 18VT/YL
23	Z2 20BK/LG
24	F10 18YL/RD
25	-
26	F21 16TN



C204
(PT27)

C204 (PT27) - (LEFT FRONT DOOR SIDE)

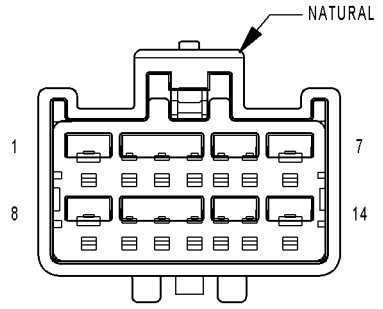
CAV	CIRCUIT
1	Q13 16DB
2	Q335 20OR/LG
3	G75 20TN/DB
4	P75 20DB/WT
5	-
6	-
7	X53 18DG/VT
8	Q23 16RD/WT
9	-
10	C16 20LB/YL
11	P73 20YL/PK
12	P34 20PK/BK
13	P97 20WT/DG
14	X55 18BR/DB
15	P35 20OR/VT
16	P71 20BR/YL
17	Z1 16BK
18	Q325 20OR/LB
19	P6 20RD/WT
20	Q31 20OR/DB
21	P5 20YL/BK
22	D25 18VT/YL
23	Z2 20BK/LG
24	F10 18YL/RD
25	-
26	F21 16TN



C204
(PT44 LHD)

C204 (PT44 LHD) - NATURAL (INSTRUMENT PANEL SIDE)

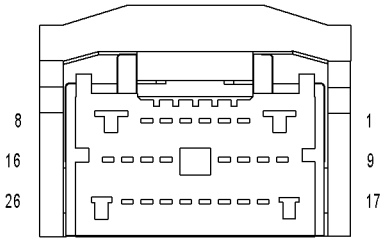
CAV	CIRCUIT
1	C16 20LB/YL (HEATED MIRRORS)
2	X53 20DG
2	X53 20DG/VT (EXCEPT HANDS FREE)
2	X53 20DG (HANDS FREE)
3	G75 20TN
4	P75 20DB/WT
5	P73 20YL/PK
6	X55 20BR/DB
6	X55 20BR/DB (EXCEPT HANDS FREE)
6	X55 20BR/DB (HANDS FREE)
7	-
8	Q11 14LB
9	Z1 20BK
10	P34 18DB
11	P97 20WT/DG
12	P35 18OR/BK
13	P71 20YL/BK
14	Q21 14WT



C204
(PT44 LHD)

C204 (PT44 LHD) - NATURAL (LEFT FRONT DOOR SIDE)

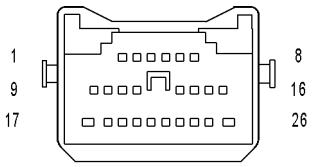
CAV	CIRCUIT
1	C16 20 LB/YL (HEATED MIRRORS)
2	X53 20DG/VT (BASE)
2	X53 20DG (EXCEPT BASE)
3	G75 20TN/DB
4	P75 20 DB/WT
5	P73 20YL/PK
6	X55 20BR/DB
7	-
8	Q11 14LB
9	Z1 20BK
10	P34 20PK/BK
11	P97 20WT/DG
12	P35 20OR/WT
13	P71 20BR/YL
14	Q21 14WT



C205
(PT27)

C205 (PT27) - (INSTRUMENT PANEL SIDE)

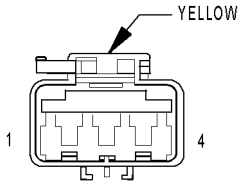
CAV	CIRCUIT
1	Q14 16GY
2	Q336 20OR/GY
3	M9 20DB/OR
3	M9 20DB/OR
4	P74 20DB/WT
5	-
6	-
7	X54 20VT (BASE AUDIO)
7	X82 18LB/VT (PREMIUM AUDIO)
8	Q24 16DG
9	-
10	C16 20LB/YL (HEATED MIRRORS)
11	P72 20YL/BK
12	P36 18PK/VT
13	P96 20DG
13	P96 20WT/DG
14	X56 20DB/RD (BASE AUDIO)
14	X80 18LB/BK (PREMIUM AUDIO)
15	P35 18OR/VT
16	P70 20PK
17	Z1 16BK
18	Q326 20OR/BR
19	-
20	Q31 20OR/DB
21	-
22	D25 18VT/YL
23	Z2 20BK/LG
23	Z2 20BK/LG
24	F10 18YL/RD
25	-
26	F21 16TN



C205
(PT27)

C205 (PT27) - (RIGHT FRONT DOOR SIDE)

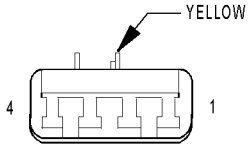
CAV	CIRCUIT
1	Q14 16GY
2	Q336 20OR/GY
3	G74 18TN/RD
4	P74 20DB/WT
5	-
6	-
7	X54 18VT
8	Q24 16DG
9	-
10	C16 20LB/YL (HEATED MIRRORS)
11	P72 20YL/BK
12	P36 20PK/VT
13	P96 20WT/DG
14	X56 18DB/RD
15	P35 20OR/VT
16	P70 20PK
17	Z1 16BK
18	Q326 20OR/BR
19	-
20	Q31 20OR/DB
21	-
22	D25 18VT/YL
23	Z2 20BK/LG
24	F10 18YL/RD
25	-
26	F21 16TN



C305

C305 - YELLOW (AIRBAG SIDE)

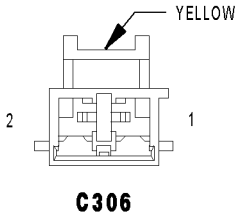
CAV	CIRCUIT
1	-
2	-
3	R32 18OR (LHD)
3	R31 18OR (RHD)
4	R34 18WT (LHD)
4	R33 18WT (RHD)



C305

C305 - YELLOW (UNIBODY SIDE)

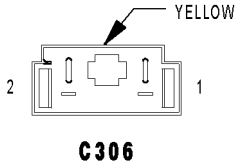
CAV	CIRCUIT
1	-
2	-
3	R32 20LB/OR (LHD)
3	R31 20LG/OR (RHD)
4	R34 20LB/WT (LHD)
4	R33 20LG/WT (RHD)



C306

C306 - YELLOW (AIRBAG SIDE)

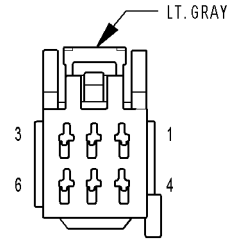
CAV	CIRCUIT
1	R31 18OR (LHD)
1	R32 18OR (RHD)
2	R33 18WT (LHD)
2	R34 18WT (RHD)



C306

C306 - YELLOW (UNIBODY SIDE)

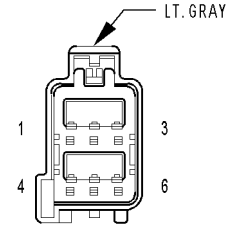
CAV	CIRCUIT
1	R31 20LG/OR (LHD)
1	R32 20LB/OR (RHD)
2	R33 20LG/WT (LHD)
2	R34 20LB/WT (RHD)



C343
(PT27)

C343 (PT27) - LT. GRAY (DECKLID JUMPER SIDE)

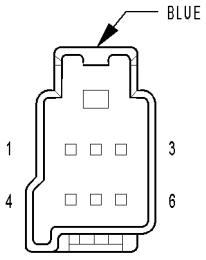
CAV	CIRCUIT
1	Q2 16LG/BK
2	-
3	G78 20TN/BK
4	P96 20WT/DG
5	L50 18WT/TN
6	Z1 16BK



C343
(PT27)

C343 (PT27) - LT. GRAY (DECKLID SIDE)

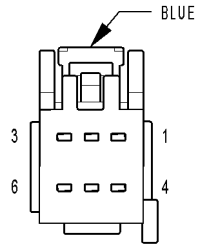
CAV	CIRCUIT
1	Q2 16LG/BK
2	-
3	G78 20TN/BK
4	P96 20WT/DG
5	L50 18WT/TN
6	Z1 16BK



C349
(PT27)

C349 (PT27) - BLUE (BODY SIDE)

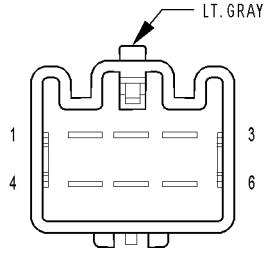
CAV	CIRCUIT
1	Q2 16LG/BK
2	-
3	G78 20TN/BK
4	P96 20WT/DG
5	L50 18WT/TN
6	Z1 16BK



C349
(PT27)

C349 (PT27) - BLUE (DECKLID JUMPER SIDE)

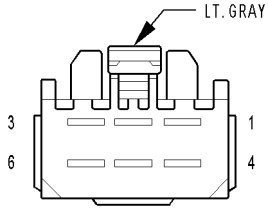
CAV	CIRCUIT
1	Q2 16LG/BK
2	-
3	G78 20TN/BK
4	P96 20WT/DG
5	L50 18WT/TN
6	Z1 16BK



C362
(PT27)

C362 (PT27) - LT. GRAY (BODY SIDE)

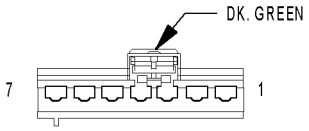
CAV	CIRCUIT
1	P6 20RD/WT
2	C15 12BK/WT
3	A25 12DB
4	Z253 12BK
5	Z1 12BK
6	P5 20YL/BK



C362
(PT27)

C362 (PT27) - LT. GRAY (POWER TOP SIDE)

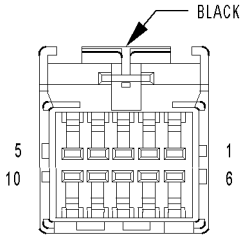
CAV	CIRCUIT
1	P6 20RD/WT
2	C15 12BK/WT
3	A25 12DB
4	Z253 12BK/DB
5	Z1 12BK
6	P5 20YL/BK



CLOCKSPRING

CLOCKSPRING - DK. GREEN 7 WAY

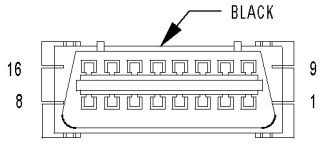
CAV	CIRCUIT	FUNCTION
1	R43 20BK/LB	DRIVER SQUIB 1 LINE 1
2	R45 20DG/LB	DRIVER SQUIB 1 LINE 2
3	-	-
4	-	-
5	X3 20BK/RD	HORN RELAY CONTROL
5	X3 20BK/RD (EXCEPT BASE)	HORN RELAY CONTROL
6	V37 20RD/LG (SPEED CONTROL DIESEL)	SPEED CONTROL SWITCH SIGNAL
6	V37 20RD/LG (SPEED CONTROL EXCEPT DIESEL)	S/C SWITCH SIGNAL
7	K914 20BR/WT (SPEED CONTROL DIESEL)	SENSOR GROUND 1
7	K914 20BR/WT (SPEED CONTROL EXCEPT DIESEL)	SENSOR GROUND 2



COMPASS/ TEMPERATURE MIRROR MODULE (PT27)

COMPASS/TEMPERATURE MIRROR MODULE (PT27) - BLACK 10 WAY

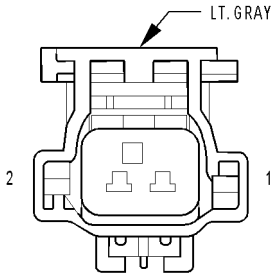
CAV	CIRCUIT	FUNCTION
1	F20 20BK/WT	FUSED IGNITION SWITCH OUTPUT (RUN)
2	M1 20BK/PK	FUSED B(+)
3	-	-
4	-	-
5	D25 20BK/VT	PCI BUS
6	Z2 20BK/LG	GROUND
7	M2 20BK/YL	COURTESY LAMPS DRIVER
8	-	-
9	-	-
10	Z2 20BK/LG	GROUND



DATA LINK CONNECTOR

DATA LINK CONNECTOR - BLACK 16 WAY

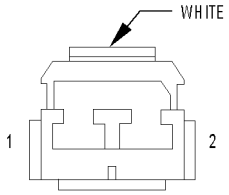
CAV	CIRCUIT	FUNCTION
1	-	-
2	D25 20VT/YL	PCI BUS
3	D223 20WT/VT	NOT USED
4	Z12 20BK/TN	GROUND
5	Z12 20BK/TN	GROUND
6	-	-
7	D21 20PK (DIESEL)	SCI TRANSMIT (ECM)
7	D21 20PK (GAS)	SCI TRANSMIT (PCM)
8	-	-
9	D24 20WT/DG	FLASH PROGRAM ENABLE
10	-	-
11	-	-
12	D20 20LG (GAS)	SCI RECEIVE
13	-	-
14	-	-
15	D15 20WT/DG (EATX)	SCI TRANSMIT (TCM)
16	A14 18RD/WT	FUSED B(+)



DECKLID CYLINDER UNLOCK SWITCH (PT27)

DECKLID CYLINDER UNLOCK SWITCH (PT27) - LT. GRAY 2 WAY

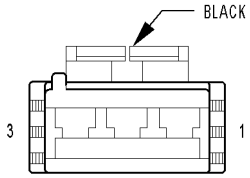
CAV	CIRCUIT	FUNCTION
1	P96 20WT/DG	PASSENGER DOOR SWITCH MUX
2	Z1 20BK	GROUND



DECKLID HANDLE SWITCH (PT27)

DECKLID HANDLE SWITCH (PT27) - WHITE 2 WAY

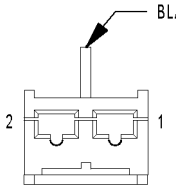
CAV	CIRCUIT	FUNCTION
1	G78 20TN/BK	DECKLID AJAR SWITCH SENSE
2	Z1 20BK	GROUND



DECKLID RELEASE MOTOR (PT27)

DECKLID RELEASE MOTOR (PT27) - BLACK 3 WAY

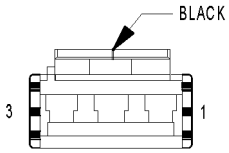
CAV	CIRCUIT	FUNCTION
1	Z1 16BK	GROUND
2	-	-
3	Q2 16LG/BK	DECKLID RELEASE RELAY OUTPUT



DECKLID RELEASE SWITCH (PT27)

DECKLID RELEASE SWITCH (PT27) - BLACK 2 WAY

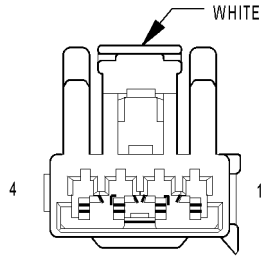
CAV	CIRCUIT	FUNCTION
1	Q33 20BR/LB	DECKLID RELEASE SWITCH SENSE
2	Z2 20BK/LG	GROUND



DOME LAMP

DOME LAMP - BLACK 3 WAY

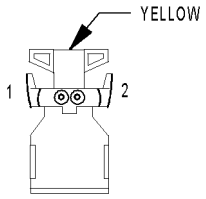
CAV	CIRCUIT	FUNCTION
1	-	-
2	M1 20PK	FUSED B(+)
3	M2 20YL	COURTESY LAMPS DRIVER



DOME LAMP/INTRUSION SENSOR (EXPORT)

DOME LAMP/INTRUSION SENSOR (EXPORT) - WHITE 4 WAY

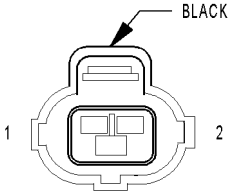
CAV	CIRCUIT	FUNCTION
1	M2 20YL	COURTESY LAMPS DRIVER
2	M1 20PK	FUSED B(+)
3	Z2 20BK/LG	GROUND
3	Z2 20BK/LG (OVERHEAD CONSOLE)	GROUND
4	G120 20WT/LB	INTRUSION SENSOR SIGNAL



DRIVER AIRBAG SQUIB 1

DRIVER AIRBAG SQUIB 1 - YELLOW 2 WAY

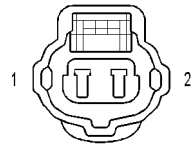
CAV	CIRCUIT	FUNCTION
1	R43 20BK/LB	DRIVER SQUIB 1 LINE 1
2	R45 20DG/LB	DRIVER SQUIB 1 LINE 2



DRIVER DOOR AJAR SWITCH

DRIVER DOOR AJAR SWITCH - BLACK 2 WAY

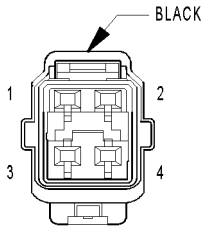
CAV	CIRCUIT	FUNCTION
1	G75 20TN/DB	DRIVER DOOR AJAR SWITCH SENSE
2	Z1 20BK	GROUND



DRIVER DOOR HANDLE SWITCH (PT27)

DRIVER DOOR HANDLE SWITCH (PT27) - 2 WAY

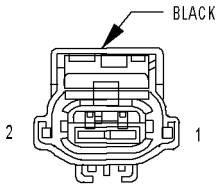
CAV	CIRCUIT	FUNCTION
1	Q59 20OR/YL	DRIVER WINDOW DROP SWITCH SENSE
2	Z2 20BK/LG	GROUND



DRIVER DOOR POWER LOCK MOTOR/AJAR SWITCH

DRIVER DOOR POWER LOCK MOTOR/AJAR SWITCH - BLACK 4 WAY

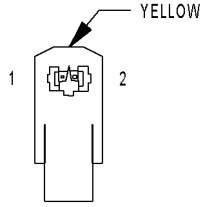
CAV	CIRCUIT	FUNCTION
1	G75 20TN/DB (LHD)	LEFT FRONT DOOR AJAR SWITCH SENSE
1	G74 20TN/DB (RHD)	RIGHT FRONT DOOR AJAR SWITCH SENSE
2	Z1 20BK	GROUND
3	P34 20PK/BK	DRIVER DOOR UNLOCK RELAY OUTPUT
4	P35 20OR/VT (PT27)	DOOR LOCK RELAY OUTPUT
4	P35 20OR/WT (PT44 LHD)	DOOR LOCK RELAY OUTPUT
4	P33 20OR/BK (PT44 RHD)	DOOR LOCK RELAY OUTPUT



DRIVER REAR WINDOW MOTOR (PT27)

DRIVER REAR WINDOW MOTOR (PT27) - BLACK 2 WAY

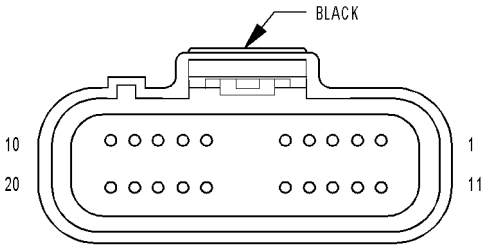
CAV	CIRCUIT	FUNCTION
1	Q23 14RD/WT	DRIVER REAR WINDOW DRIVER DOWN
2	Q13 14DB	DRIVER REAR WINDOW DRIVER UP



DRIVER SEAT BELT TENSIONER

DRIVER SEAT BELT TENSIONER - YELLOW 2 WAY

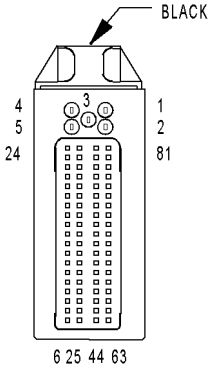
CAV	CIRCUIT	FUNCTION
1	R53 20LG/YL	DRIVER SEAT BELT TENSIONER LINE 2
2	R55 20LG/DG	DRIVER SEAT BELT TENSIONER LINE 1



DRIVER WINDOW REGUALTOR MODULE (PT27)

DRIVER WINDOW REGULATOR MODULE (PT27) - BLACK 20 WAY

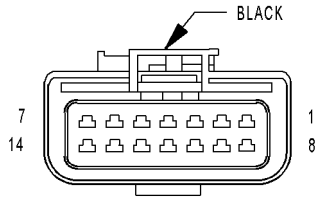
CAV	CIRCUIT	FUNCTION
1	Z1 16BK	GROUND
2	G75 18TN/DB	LEFT FRONT DOOR AJAR SWITCH SENSE
3	Q325 20OR/LB	DRIVER REAR WINDOW SWITCH MUX
4	Q335 20OR/LG	DRIVER FRONT WINDOW SWITCH MUX
5	Q31 20OR/DB	POWER TOP SWITCH MUX
6	Q13 16DB	DRIVER REAR WINDOW DRIVER UP
7	Q23 16RD/WT	DRIVER REAR WINDOW DRIVER DOWN
8	P6 20RD/WT	TOP UP RELAY CONTROL
9	P5 20YL/BK	TOP DOWN RELAY CONTROL
10	F21 16TN	FUSED B(+)
11	Z1 16BK	GROUND
12	Z2 20BK/LG	GROUND
13	D25 18VT/YL	PCI BUS
14	F10 18YL/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
15	Q59 20OR/YL	DRIVER WINDOW DROP SWITCH SENSE
16	-	-
17	-	-
18	-	-
19	-	-
20	F21 16TN	FUSED B(+)



ENGINE CONTROL MODULE C1 (DIESEL)

ENGINE CONTROL MODULE C1 (DIESEL) - BLACK 81 WAY

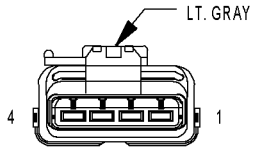
CAV	CIRCUIT	FUNCTION
1	Z12 12BK/LG	GROUND
2	Z12 12BK/LG	GROUND
3	K20 12LB/WT	GENERATOR FIELD CONTROL
4	A142 12RD/LG	AUTOMATIC SHUT DOWN RELAY OUTPUT
5	A142 12RD/LG	AUTOMATIC SHUT DOWN RELAY OUTPUT
6	-	-
7	D25 20VT/YL	PCI BUS
8	K944 20BR/LG	CAMSHAFT POSITION SENSOR GROUND
9	K44 20YL/GY	CAMSHAFT POSITION SENSOR SIGNAL
10	-	-
11	K1 20BK/YL	BOOST PRESSURE SENSOR SIGNAL
12	K155 20YL/WT	MASS AIR FLOW SENSOR SIGNAL
13	N20 20LG/VT	FUEL PRESSURE SENSOR SIGNAL
14	K81 20LB/LG	ACCELERATOR PEDAL POSITION SENSOR NO. 2 SIGNAL
15	K80 20BK/LG	ACCELERATOR PEDAL POSITION SENSOR NO. 1 SIGNAL
16	N920 20BR/GY	FUEL PRESSURE SENSOR GROUND
17	K21 20YL/LG	AMBIENT AIR TEMPERATURE SENSOR SIGNAL
18	-	-
19	A14 18RD/LB	FUSED B(+)
20	Z11 20WT/BK	GROUND
21	K4 20BK/LB	SENSOR GROUND
22	F12 20LB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
23	K9 20RD/BK	SENSOR REFERENCE VOLTAGE B
24	K3 20BK	CRANKSHAFT POSITION SENSOR SIGNAL NO. 1
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	K118 20RD/YL	BATTERY TEMPERATURE SENSOR SIGNAL
33	-	-
34	K167 20BR/YL	ACCELERATOR PEDAL POSITION SENSOR NO. 1 GROUND
35	F858 20LG/VT	ACCELERATOR PEDAL POSITION SENSOR NO. 1 5 VOLT SUPPLY
36	-	-
37	-	-
38	V37 20RD/LG	SPEED CONTROL SWITCH SIGNAL
39	-	-
40	K2 20LG/RD	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL
41	K48 20LG/WT	INLET AIR TEMPERATURE SENSOR SIGNAL
42	Z31 20	GROUND (DRAIN)
43	K24 20YL	CRANKSHAFT POSITION SENSOR SIGNAL NO. 2
44	-	-
45	-	-
46	-	-
47	L50 18WT/LB	PRIMARY BRAKE SWITCH SIGNAL
48	K29 20WT/RD	SECONDARY BRAKE SWITCH SIGNAL
49	A41 18YL	FUSED IGNITION SWITCH OUTPUT (START)
50	F859 20LG/PK	SENSOR REFERENCE VOLTAGE A
51	-	-
52	K121 20BR/WT	SENSOR GROUND
53	-	-
54	K957 20BR	MASS AIR FLOW SENSOR GROUND
55	G7 20GY/WT	VEHICLE SPEED SENSOR SIGNAL
56	K981 20LG/BR	ACCELERATOR PEDAL POSITION SENSOR NO. 2 GROUND
57	-	-
58	N907 20BK/VT	VEHICLE SPEED SENSOR GROUND
59	K47 20LB	SWIRL SOLENOID CONTROL
60	Y99 20RD/LB	FUEL PRESSURE SENSOR 5 VOLT SUPPLY
61	K51 20LB/YL	AUTOMATIC SHUT DOWN RELAY CONTROL
62	-	-
63	D21 20RD	SCI TRANSMIT (ECM)
64	-	-
65	-	-
66	-	-
67	-	-
68	-	-
69	C28 20LB/RD	A/C COMPRESSOR CLUTCH RELAY CONTROL
70	C24 20LB/PK	LOW SPEED RADIATOR FAN RELAY CONTROL
71	C27 20LB/BK	HIGH SPEED RADIATOR FAN RELAY CONTROL
72	K31 20BR/LB	FUEL PUMP RELAY CONTROL
73	-	-
74	K90 20YL/BK	STARTER MOTOR RELAY CONTROL
75	C41 20LG/LB	CABIN HEATER RELAY NO. 1 CONTROL
76	K137 20LB/GY	WASTEGATE SOLENOID CONTROL
77	K152 20WT	GLOW PLUG RELAY CONTROL
78	-	-
79	C42 20GY/LB	CABIN HEATER RELAY NO. 2 CONTROL
80	K46 20BK/WT	FUEL PRESSURE SOLENOID CONTROL
81	K46 20BK/WT	FUEL PRESSURE SOLENOID CONTROL



FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH - BLACK 14 WAY

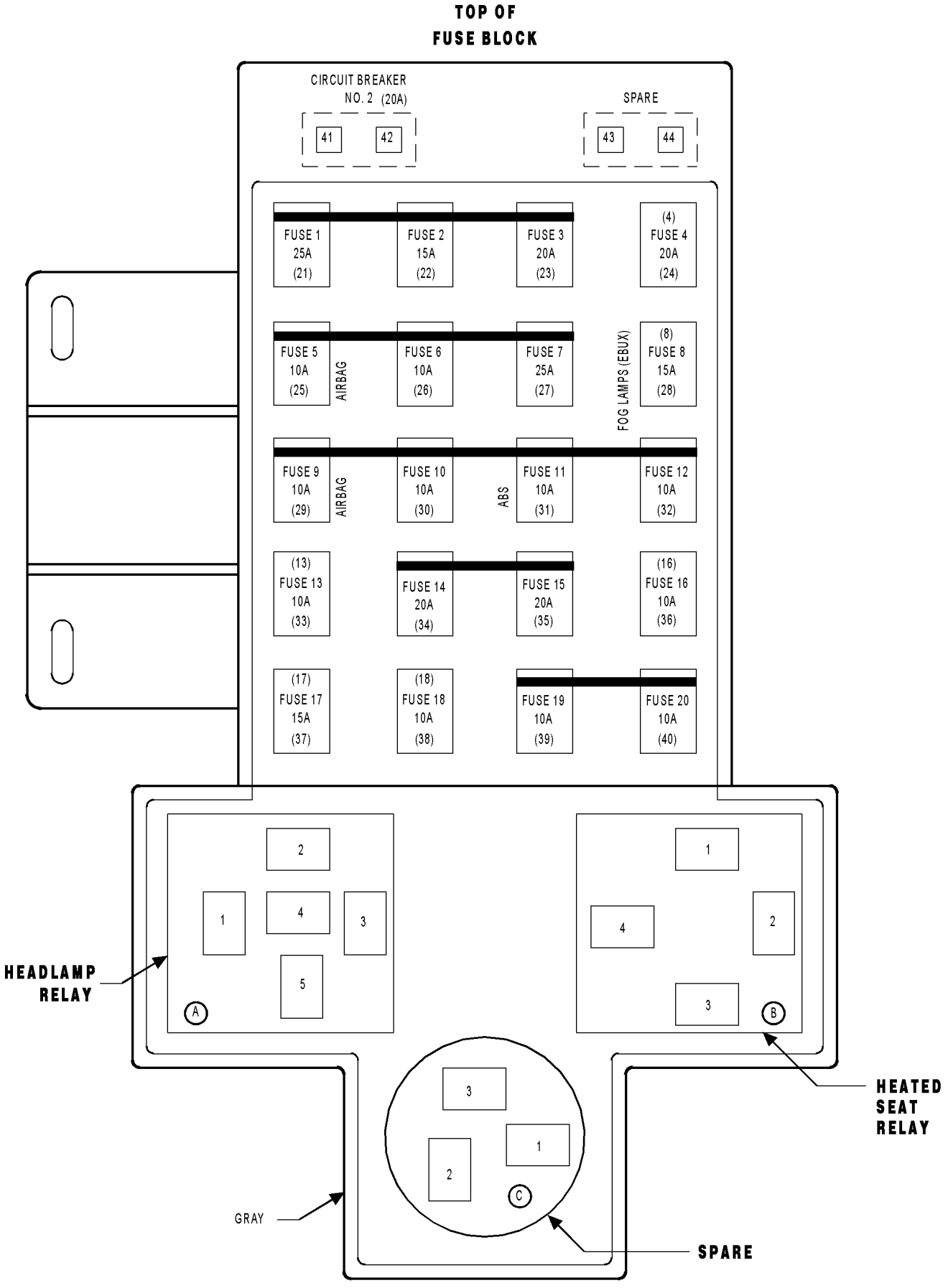
CAV	CIRCUIT	FUNCTION
1	Q18 14GY/BK (PT44)	MASTER RIGHT REAR WINDOW DRIVER (UP)
2	Q28 14DG/WT (PT44)	MASTER RIGHT REAR WINDOW DRIVER (DOWN)
3	Q336 20OR/GY (PT27)	PASSENGER FRONT WINDOW SWITCH MUX
3	Q22 14VT/WT (PT44)	RIGHT FRONT WINDOW DRIVER (DOWN)
4	Q335 20OR/LG (PT27)	DRIVER FRONT WINDOW SWITCH MUX
4	Z1 14BK (PT44)	GROUND
5	Q325 20OR/LB (PT27)	DRIVER REAR WINDOW SWITCH MUX
5	Q1 14YL (PT44)	WINDOW SWITCH SUPPLY
6	E2 20OR (PT44)	PANEL LAMPS DRIVER
7	Q12 14BR/LB (PT44)	RIGHT FRONT WINDOW DRIVER (UP)
8	Q17 14DB/WT (PT44)	MASTER LEFT REAR WINDOW DRIVER (UP)
9	Q27 14RD/BK (PT44)	MASTER LEFT REAR WINDOW DRIVER (DOWN)
10	Q326 20OR/BR (PT27)	PASSENGER REAR WINDOW SWITCH MUX
11	-	-
12	Z2 20BK/LG (PT27)	GROUND
12	Z2 20BK/LG (PT27)	GROUND
12	F21 14TN (PT44)	FUSED IGNITION SWITCH OUTPUT (RUN)
13	E2 18OR (PT27)	PANEL LAMPS DRIVER
13	Q21 14WT (PT44)	LEFT FRONT WINDOW DRIVER (DOWN)
14	Q11 14LB (PT44)	LEFT FRONT WINDOW DRIVER (UP)



FUEL PUMP MODULE

FUEL PUMP MODULE - LT. GRAY 4 WAY

CAV	CIRCUIT	FUNCTION
1	Z1 16BK	GROUND
2	Z2 20BK/LG	GROUND
3	G4 20DB	FUEL LEVEL SENSOR SIGNAL
4	A141 16DG/WT	FUEL PUMP RELAY OUTPUT


TOP OF
FUSE BLOCK
CIRCUIT BREAKER
NO. 2 (20A)
41
42
SPARE
43
44
FUSE 1
25A
(21)
FUSE 2
15A
(22)
FUSE 3
20A
(23)
(4)
FUSE 4
20A
(24)
FUSE 5
10A
(25)
AIRBAG
FUSE 6
10A
(26)
FUSE 7
25A
(27)
FOG LAMPS (EBUX)
(8)
FUSE 8
15A
(28)
FUSE 9
10A
(29)
AIRBAG
FUSE 10
10A
(30)
ABS
FUSE 11
10A
(31)
FUSE 12
10A
(32)
(13)
FUSE 13
10A
(33)
FUSE 14
20A
(34)
FUSE 15
20A
(35)
(16)
FUSE 16
10A
(36)
(17)
FUSE 17
15A
(37)
(18)
FUSE 18
10A
(38)
FUSE 19
10A
(39)
FUSE 20
10A
(40)
HEADLAMP
RELAY
A
HEATED
SEAT
RELAY
B
GRAY
SPARE
C

FUSES (FB)

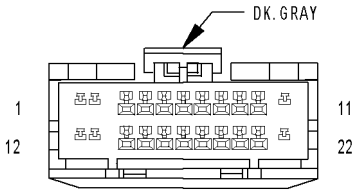
FUSE NO.	AMPS	FUSED CIRCUIT	FUNCTION
1	25A	F3 16LB/OR	FUSED B(+)
2	15A	F33 18PK/RD	FUSED B(+)
3	20A	F35 18RD	FUSED B(+)
4	20A	A120 16RD/LG (POWER SEATS)	FUSED B(+)
5	10A	F25 20TN/LG	FUSED IGNITION SWITCH OUTPUT (RUN)
6	10A	F20 18WT (PT27 HEATED SEATS)	FUSED IGNITION SWITCH OUTPUT (RUN)
6	10A	F20 20WT (PT44 EXCEPT EXPORT/EXCEPT HANDS FREE)	FUSED IGNITION SWITCH OUTPUT (RUN)
6	10A	F20 20WT (PT44)	FUSED IGNITION SWITCH OUTPUT (RUN)
7	25A	C1 14DG	FUSED IGNITION SWITCH OUTPUT (RUN)
8	15A	F39 18PK/LG (EXCEPT HEADLAMP LEVELING)	FUSED HEADLAMP RELAY OUTPUT
9	10A	F15 20DB/WT (EXCEPT HANDS FREE)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
9	10A	F15 20DG/WT (HANDS FREE)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
10	10A	G5 20DB/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
11	10A	F12 20DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
11	10A	F12 20DB/WT (MTX)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
12	10A	F18 20LG/BK (GAS EATX)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
12	10A	F18 20LG/BK (GAS)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
13	10A	M1 18PK	FUSED B(+)
14	20A	F10 18YL/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
14	10A	X12 20RD/WT (HANDS FREE/LHD EXPORT)	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
15	20A	L6 16RD/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
16	10A	A81 20DG/RD (AUTOSTICK)	FUSED B(+)
17	15A	F235 18RD (HEATED SEATS)	FUSED B(+)
18	10A	C16 20LB/YL (HEATED MIRRORS)	FUSED REAR WINDOW DEFOGGER SWITCH OUTPUT
18	10A	C16 20LB/YL (HEATED MIRRORS)	FUSED REAR WINDOW DEFOGGER SWITCH OUTPUT
19	10A	L44 16VT/RD	FUSED RIGHT LOW BEAM OUTPUT
20	10A	L43 16VT	FUSED LEFT LOW BEAM OUTPUT
20	10A	L43 18VT (HEADLAMP LEVELING)	FUSED LEFT LOW BEAM OUTPUT

HEADLAMP RELAY (LHD)

CAV	CIRCUIT	FUNCTION
A1	Z1 20BK	GROUND
A2	L4 16VT/WT	HEADLAMP RELAY OUTPUT
A3	L3 16RD/OR	HEADLAMP RELAY CONTROL
A4	F34 18TN/BK (EXCEPT HEADLAMP LEVELING)	HEADLAMP RELAY OUTPUT
A5	F3 16LB/OR	FUSED B(+)

HEADLAMP RELAY (RHD)

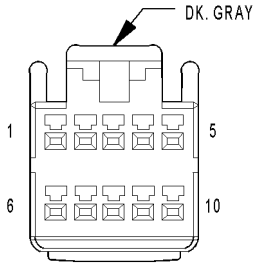
CAV	CIRCUIT	FUNCTION
B1	Z1 20BK	GROUND
B2	L4 16VT/WT	HEADLAMP RELAY OUTPUT
B3	L3 16RD/OR	HEADLAMP RELAY CONTROL
B4	-	-
B5	F3 16LB/OR	FUSED B(+)



HANDS FREE MODULE C1

HANDS FREE MODULE C1 - DK. GRAY 22 WAY

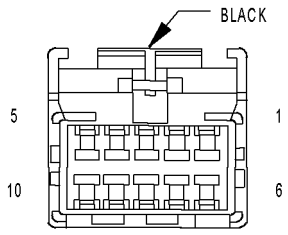
CAV	CIRCUIT	FUNCTION
1	M11 18PK/LB	FUSED B(+) (I.O.D.)
2	-	-
3	-	-
4	-	-
5	X722 20LB/DG	MICROPHONE 2 IN(+)
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	D25 20VT/YL	PCI BUS
15	X730 20BK/GY	VOICE RECOGNITION/PHONE SWITCH SIGNAL
16	X712 20BK/DG	MICROPHONE 1 IN(+)
17	X792 20BK/VT	MICROPHONE IN(-)
18	-	-
19	-	-
20	X793 20DG/YL	IGNITION RUN/ACC SIGNAL
21	X835 20BK/DB	SENSOR GROUND
22	Z9 20BK	GROUND



HANDS FREE MODULE C2 (SATELLITE RADIO)

HANDS FREE MODULE C2 (SATELLITE RADIO) - DK. GRAY 10 WAY

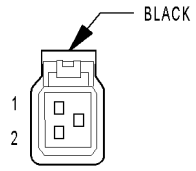
CAV	CIRCUIT	FUNCTION
1	X416 20DG/YL	AUDIO MUX RIGHT
2	X916 20GY/OR	AUDIO RETURN
3	Z417 22DG/BK	SHIELD
3	Z417 22DG/BK	SHIELD
4	D25 20VT/YL	PCI BUS
5	X112 20RD	IGNITION RUN/ACC SIGNAL
6	X417 20DG/OR	AUDIO MUX LEFT
7	Z141 20BK/OR	GROUND
8	X481 20DG	AUDIO BUS
9	E14 20OR/TN	PANEL LAMPS DRIVER
10	X160 20YL	FUSED B(+)



HANDS FREE MODULE C3

HANDS FREE MODULE C3 - BLACK 10 WAY

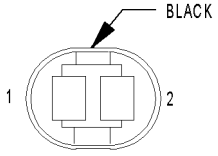
CAV	CIRCUIT	FUNCTION
1	X112 20RD	IGNITION RUN/ACC SIGNAL
2	D25 20VT/YL	PCI BUS
3	-	-
4	Z9 20BK	AUDIO RETURN
5	X40 20GY/WT	AUDIO MUX RIGHT
6	X160 20YL	FUSED B(+)
7	E14 20OR/TN	PANEL LAMPS DRIVER
8	X481 20DG/YL	AUDIO BUS
9	Z17 20BK	GROUND
10	X41 20WT/DG	AUDIO MUX LEFT



HIGH NOTE HORN (EXPORT)

HIGH NOTE HORN (EXPORT) - BLACK 2 WAY

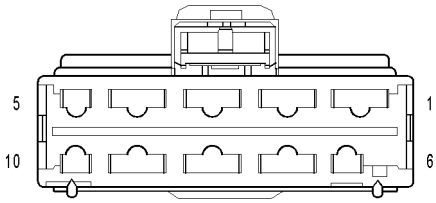
CAV	CIRCUIT	FUNCTION
1	X2 20DG/RD	HORN RELAY OUTPUT
2	Z1 20BK	GROUND



HOOD AJAR SWITCH (EXPORT)

HOOD AJAR SWITCH (EXPORT) - BLACK 2 WAY

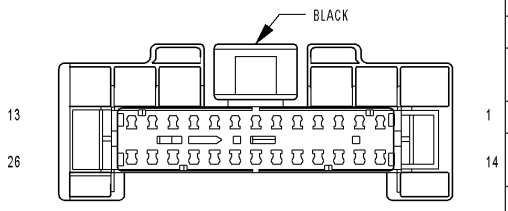
CAV	CIRCUIT	FUNCTION
1	G70 20BR/TN	HOOD AJAR SWITCH SENSE
2	Z1 20BK	GROUND



IGNITION SWITCH C1

IGNITION SWITCH C1 - 10 WAY

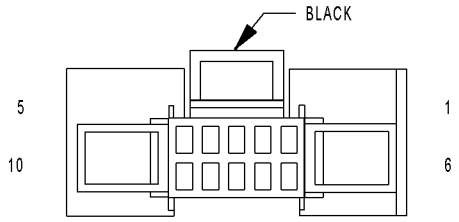
CAV	CIRCUIT	FUNCTION
1	A1 14RD	FUSED B(+)
1	A1 14RD (AUTOSTICK)	FUSED B(+)
2	A21 14DB	IGNITION SWITCH OUTPUT (RUN-START)
3	F30 16RD	IGNITION SWITCH OUTPUT (RUN-ACC)
4	F1 16DB/BK	FUSED B(+)
4	F1 16DB/BK (POWER OUTLET)	FUSED B(+)
5	G26 20LB	KEY-IN IGNITION SWITCH SENSE
6	A41 14YL	FUSED IGNITION SWITCH OUTPUT (START)
7	A31 14BK/WT	IGNITION SWITCH OUTPUT (RUN-ACC)
8	A22 12BK/OR	IGNITION SWITCH OUTPUT (RUN)
9	A2 12PK/BK	FUSED B(+)
10	-	-



INSTRUMENT CLUSTER C1

INSTRUMENT CLUSTER C1 - BLACK 26 WAY

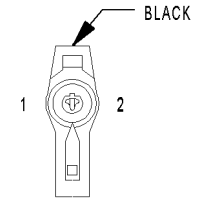
CAV	CIRCUIT	FUNCTION
1	Z1 18BK	GROUND
2	Z2 20BK/LG	GROUND
3	L7 20BK/YL	HEADLAMP SWITCH OUTPUT
4	M1 20PK	FUSED B(+)
5	-	-
6	-	-
7	M2 20YL	COURTESY LAMPS DRIVER
8	-	-
9	G75 20TN (LHD PT44)	LEFT FRONT DOOR AJAR SWITCH SENSE
9	G75 20TN/DB (PT27)	LEFT FRONT DOOR AJAR SWITCH SENSE
9	G74 20TN/RD (RHD)	RIGHT FRONT DOOR AJAR SWITCH SENSE
10	L161 18LG/OR	LEFT TURN SIGNAL (OUT)
11	L61 18LG	LEFT TURN SIGNAL (IN)
12	L160 18TN/RD	RIGHT TURN SIGNAL (OUT)
13	L60 18TN	RIGHT TURN SIGNAL (IN)
14	G5 20DB/WT	IGNITION SWITCH OUTPUT (RUN-START)
15	F11 20RD/WT (AUTO-STICK)	IGNITION SWITCH OUTPUT (UNLOCK-RUN-START)
16	-	-
17	L4 16VT/WT (EXCEPT SAT-ELLITE RADIO)	DIMMER SWITCH LOW BEAM OUTPUT
18	L3 18RD/OR	DIMMER SWITCH HIGH BEAM OUTPUT
19	G26 20LB	KEY-IN IGNITION SWITCH SENSE
20	G10 20LG/RD	SEAT BELT SWITCH SENSE
21	G11 20WT/BK	RED BRAKE WARNING INDICATOR DRIVER
22	E2 20OR	PANEL LAMPS DRIVER
23	M9 20DB/OR	PASSENGER DOOR AJAR/RKE SENSE
24	G78 20TN/BK (PT27)	DECKLID AJAR SWITCH SENSE
24	G78 20TN/BK (PT44)	LIFTGATE AJAR SWITCH SENSE
25	D24 20WT/DG	FLASH PROGRAM ENABLE
26	D25 20VT/YL	PCI BUS



INSTRUMENT CLUSTER C2

INSTRUMENT CLUSTER C2 - BLACK 10 WAY

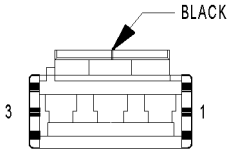
CAV	CIRCUIT	FUNCTION
1	L39 18LB (FOG LAMPS)	FOG LAMP SWITCH OUTPUT
2	G69 20BK/OR (RKE)	VTSS INDICATOR DRIVER
3	-	-
4	-	-
5	-	-
6	L38 18BR/WT (REAR FOG LAMPS)	REAR FOG LAMP SWITCH OUTPUT
7	E19 20RD	PANEL LAMPS DIMMER SIGNAL
8	L1 20VT/BK (MTX)	BACK-UP LAMP SWITCH OUTPUT
9	G4 20DB	FUEL LEVEL SENSOR SIGNAL
10	-	-



LEFT
CYLINDER
LOCK SWITCH

LEFT CYLINDER LOCK SWITCH - BLACK 2 WAY

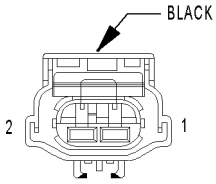
CAV	CIRCUIT	FUNCTION
1	P97 18LG	LEFT DOOR SWITCH MUX
2	Z1 18BK	GROUND



**LEFT
DOOR LOCK
SWITCH**

LEFT DOOR LOCK SWITCH - BLACK 3 WAY

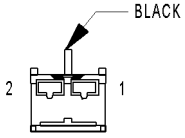
CAV	CIRCUIT	FUNCTION
1	-	-
2	P97 20WT/DG	LEFT DOOR SWITCH MUX
3	Z1 20BK	GROUND



**LEFT FRONT
POWER WINDOW
MOTOR
(PT44)**

LEFT FRONT POWER WINDOW MOTOR (PT44) - BLACK 2 WAY

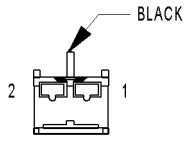
CAV	CIRCUIT	FUNCTION
1	Q21 14WT	LEFT WINDOW DRIVER (DOWN)
2	Q11 14LB	LEFT WINDOW DRIVER (UP)



LEFT INSTRUMENT
PANEL SPEAKER

LEFT INSTRUMENT PANEL SPEAKER - BLACK 2 WAY

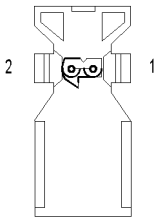
CAV	CIRCUIT	FUNCTION
1	X53 18VT/DG (EXCEPT HANDS FREE/PT27 BASE AUDIO)	LEFT FRONT SPEAKER (+)
1	X53 18VT (HANDS FREE)	LEFT FRONT SPEAKER (+)
1	X209 18VT/DG (PT27 PREMIUM AUDIO)	LEFT FRONT SPEAKER (+)
2	X55 18DB/RD (PT27 BASE AUDIO)	LEFT FRONT SPEAKER (-)
2	X299 18DB/RD (PT27 PREMIUM AUDIO)	LEFT FRONT SPEAKER (-)



LEFT REAR SPEAKER (PT44)

LEFT REAR SPEAKER (PT44) - BLACK 2 WAY

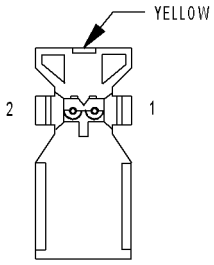
CAV	CIRCUIT	FUNCTION
1	X57 18BR/LB	LEFT REAR SPEAKER (-)
2	X51 18BR/YL	LEFT REAR SPEAKER (+)



LEFT SEAT AIRBAG SQUIB (LHD)

LEFT SEAT AIRBAG SQUIB (LHD) - YELLOW 2 WAY

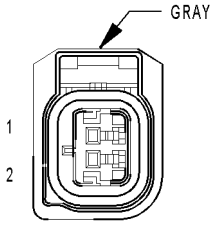
CAV	CIRCUIT	FUNCTION
1	R33 18WT	LEFT SEAT SQUIB 1 LINE 2
2	R31 18OR	LEFT SEAT SQUIB 1 LINE 1



LEFT SEAT AIRBAG SQUIB (RHD)

LEFT SEAT AIRBAG SQUIB (RHD) - YELLOW 2 WAY

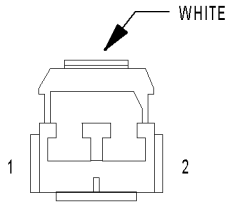
CAV	CIRCUIT	FUNCTION
1	R33 18WT	LEFT SEAT SQUIB 1 LINE 2
2	R31 18OR	LEFT SEAT SQUIB 1 LINE 1



LEFT SIDE IMPACT SENSOR 1

LEFT SIDE IMPACT SENSOR 1 - GRAY 2 WAY

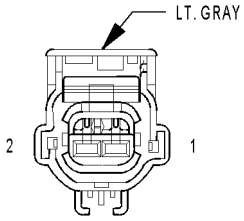
CAV	CIRCUIT	FUNCTION
1	R133 20LB/DG	LEFT SIDE IMPACT SENSOR 1 GROUND
2	R131 20LG/YL	LEFT SIDE IMPACT SENSOR 1 SIGNAL



LIFTGATE AJAR SWITCH

LIFTGATE AJAR SWITCH - WHITE 2 WAY

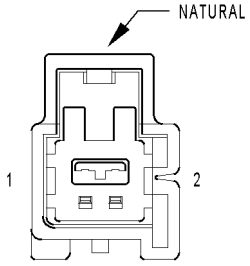
CAV	CIRCUIT	FUNCTION
1	G78 20TN/BK	DECKLID AJAR SWITCH SENSE
2	Z1 20BK	GROUND



LIFTGATE CYLINDER LOCK SWITCH

LIFTGATE CYLINDER LOCK SWITCH - LT. GRAY 2 WAY

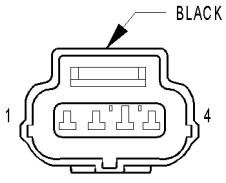
CAV	CIRCUIT	FUNCTION
1	P96 20WT/LG	RIGHT DOOR SWITCH MUX
2	Z1 20BK	GROUND



LIFTGATE HANDLE SWITCH (PT44)

LIFTGATE HANDLE SWITCH (PT44) - NATURAL 2 WAY

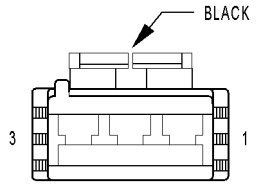
CAV	CIRCUIT	FUNCTION
1	Q33 20BR/LB	LIFTGATE RELEASE SWITCH SENSE
2	Z1 20BK	GROUND



LIFTGATE POWER LOCK MOTOR

LIFTGATE POWER LOCK MOTOR - BLACK 4 WAY

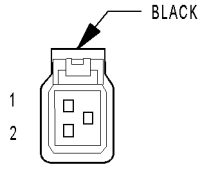
CAV	CIRCUIT	FUNCTION
1	P35 18OR/VT	DOOR LOCK RELAY OUTPUT
2	P36 18PK/VT	DOOR UNLOCK RELAY OUTPUT
3	-	-
4	-	-



LIFTGATE RELEASE MOTOR (PT44)

LIFTGATE RELEASE MOTOR - BLACK 3 WAY

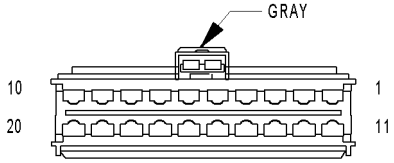
CAV	CIRCUIT	FUNCTION
1	Z1 16BK	GROUND
2	-	-
3	Q2 16LG/BK	LIFTGATE RELEASE RELAY OUTPUT



LOW NOTE HORN

LOW NOTE HORN - BLACK 2 WAY

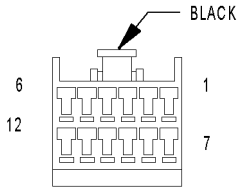
CAV	CIRCUIT	FUNCTION
1	X2 20DG/RD	HORN RELAY OUTPUT
2	Z1 20BK	GROUND



MULTI-FUNCTION SWITCH

MULTI-FUNCTION SWITCH - GRAY 20 WAY

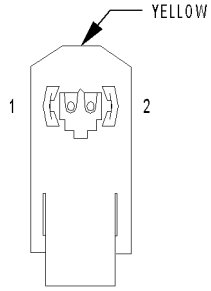
CAV	CIRCUIT	FUNCTION
1	-	-
2	L61 18LG	LEFT TURN SIGNAL
2	L61 20LG (EXCEPT EX-PORT)	LEFT TURN SIGNAL
3	L6 18RD/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
4	L63 18DG/RD	LEFT REAR TURN SIGNAL
4	L61 18LG (EXPORT)	LEFT TURN SIGNAL
5	L62 18BR/RD	RIGHT REAR TURN SIGNAL
5	L60 18TN (EXPORT)	RIGHT TURN SIGNAL
6	L60 18TN	RIGHT TURN SIGNAL
6	L60 20TN (EXCEPT EX-PORT)	RIGHT TURN SIGNAL
7	Z2 18BK/LG	GROUND
8	E19 20RD	PANEL LAMPS DIMMER SIGNAL
9	L7 20BK/YL	HEADLAMP SWITCH OUTPUT
10	-	-
11	A15 18PK/DG	FUSED B(+)
12	L38 18BR/WT (EXPORT)	REAR FOG LAMP SWITCH OUTPUT
12	L38 18BR/WT (EXPORT)	REAR FOG LAMP SWITCH OUTPUT
13	F39 18PK/LG	FUSED HEADLAMP RELAY OUTPUT
14	L39 18LB (FOG LAMPS)	FOG LAMP SWITCH OUTPUT
14	L39 18LB (FOG LAMPS)	FOG LAMP SWITCH OUTPUT
15	-	-
16	L4 16VT/WT	DIMMER SWITCH LOW BEAM OUTPUT
17	L3 18RD/OR	DIMMER SWITCH HIGH BEAM OUTPUT
18	F3 12LB/OR	FUSED B(+)
19	F3 12LB/OR	FUSED B(+)
20	F33 18PK/RD	FUSED B(+)



OVERHEAD CONSOLE MODULE

OVERHEAD CONSOLE MODULE - BLACK 12 WAY

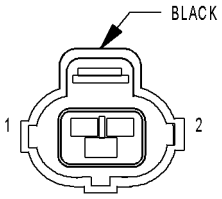
CAV	CIRCUIT	FUNCTION
1	Q41 20WT (POWER SUN-ROOF)	SUNROOF OPEN
2	Q44 20BR (POWER SUN-ROOF)	SUNROOF SWITCH GROUND
3	M2 20YL	COURTESY LAMPS DRIVER
4	M1 20PK	FUSED B(+)
5	G31 20VT/LG	AMBIENT TEMPERATURE SENSOR SIGNAL
6	F10 20YL/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
7	Q43 20VT (POWER SUN-ROOF)	SUNROOF VENT
8	Q42 20LB (POWER SUN-ROOF)	SUNROOF CLOSE
9	Z1 20BK	GROUND
10	E2 20OR	PANEL LAMPS DRIVER
11	G32 20BK/LB	SENSOR GROUND
12	Z2 20BK/LG	GROUND



PASSENGER AIRBAG SQUIB 1

PASSENGER AIRBAG SQUIB 1 - YELLOW 2 WAY

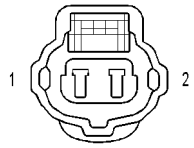
CAV	CIRCUIT	FUNCTION
1	R44 20DG/YL	PASSENGER SQUIB 1 LINE 2
2	R42 20BK/YL	PASSENGER SQUIB 1 LINE 1



PASSENGER DOOR AJAR SWITCH

PASSENGER DOOR AJAR SWITCH - BLACK 2 WAY

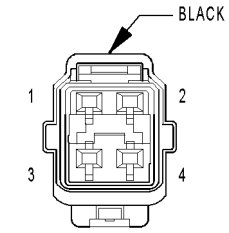
CAV	CIRCUIT	FUNCTION
1	G74 20TN/DB	PASSENGER DOOR AJAR SWITCH SENSE
2	Z1 20BK	GROUND



PASSENGER DOOR HANDLE SWITCH (PT27)

PASSENGER DOOR HANDLE SWITCH (PT27) - 2 WAY

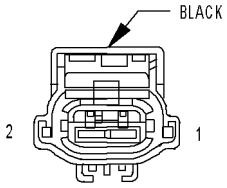
CAV	CIRCUIT	FUNCTION
1	Q58 20OR/YL	PASSENGER WINDOW DROP SWITCH SENSE
2	Z2 20BK/LG	GROUND



PASSENGER DOOR POWER LOCK MOTOR/AJAR SWITCH

PASSENGER DOOR POWER LOCK MOTOR/AJAR SWITCH - BLACK 4 WAY

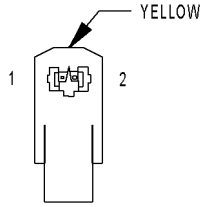
CAV	CIRCUIT	FUNCTION
1	G74 20TN/DB (LHD)	RIGHT FRONT DOOR AJAR SWITCH SENSE
1	G75 20TN/DB (RHD)	LEFT FRONT DOOR AJAR SWITCH SENSE
2	Z1 20BK	GROUND
3	P36 20PK/VT (LHD)	DOOR UNLOCK RELAY OUTPUT
3	P34 20PK/BK (RHD)	DOOR UNLOCK RELAY OUTPUT
4	P35 20OR/VT (LHD)	DOOR LOCK RELAY OUTPUT
4	P33 20OR/BK (RHD)	DOOR LOCK RELAY OUTPUT



PASSENGER REAR WINDOW MOTOR (PT27)

PASSENGER REAR WINDOW MOTOR (PT27) - BLACK 2 WAY

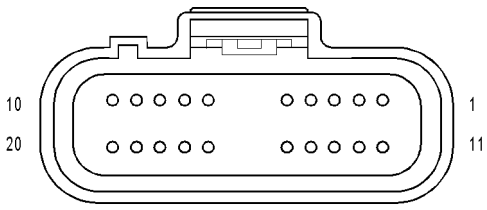
CAV	CIRCUIT	FUNCTION
1	Q24 14DG	PASSENGER REAR WINDOW DRIVER DOWN
2	Q14 14GY	PASSENGER REAR WINDOW DRIVER UP



PASSENGER SEAT BELT TENSIONER

PASSENGER SEAT BELT TENSIONER - YELLOW 2 WAY

CAV	CIRCUIT	FUNCTION
1	R54 20LB/YL	PASSENGER SEAT BELT TENSIONER LINE 2
2	R56 20LB/DG	PASSENGER SEAT BELT TENSIONER LINE 1

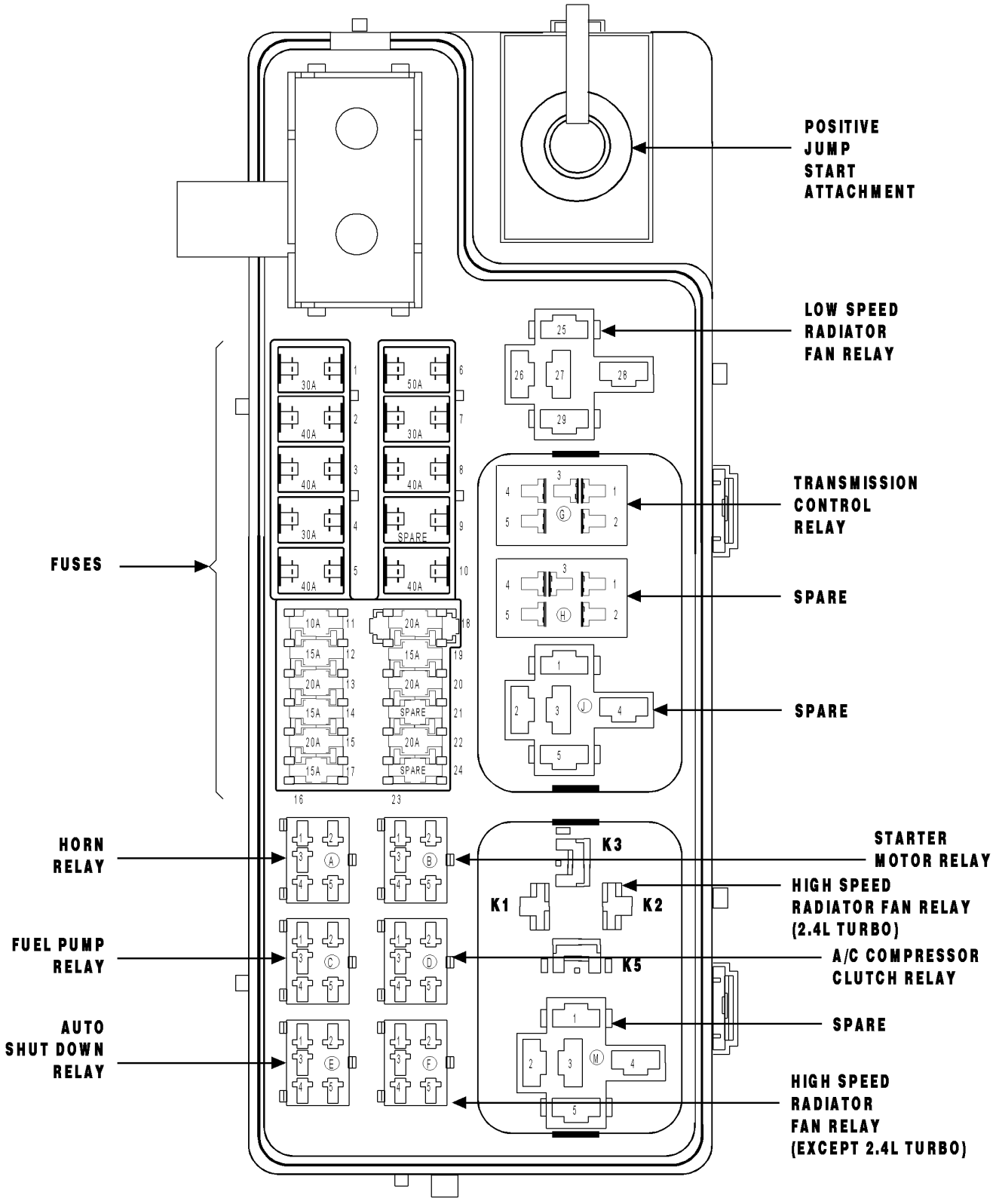


PASSENGER WINDOW REGULATOR MODULE (PT27)

PASSENGER WINDOW REGULATOR MODULE (PT27) - BLACK 20 WAY

CAV	CIRCUIT	FUNCTION
1	Z1 16BK	GROUND
2	G74 18TN/RD	PASSENGER DOOR AJAR SWITCH SENSE
3	Q326 20OR/BR	PASSENGER REAR WINDOW SWITCH MUX
4	Q336 20OR/GY	PASSENGER FRONT WINDOW SWITCH MUX
5	Q31 20OR/DB	POWER TOP SWITCH MUX
6	Q14 16GY	PASSENGER REAR WINDOW DRIVER UP
7	Q24 16DG	PASSENGER REAR WINDOW DRIVER DOWN
8	-	-
9	-	-
10	F21 16TN	FUSED B(+)
11	Z1 16BK	GROUND
12	Z2 20BK/LG	GROUND
13	D25 18VT/YL	PCI BUS
14	F10 18YL/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
15	Q58 20OR/YL	PASSENGER WINDOW DROP SWITCH SENSE
16	-	-
17	-	-
18	-	-
19	-	-
20	F21 16TN	FUSED B(+)

POWER DISTRIBUTION CENTER
GAS

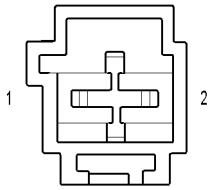


FUSES (PDC)

FUSE NO.	AMPS	FUSED CIRCUIT	FUNCTION
1	30A	A1 14RD	FUSED B(+)
2	40A	A10 12RD/DG (ABS)	FUSED B(+)
3	40A	A2 12PK/BK	FUSED B(+)
4	30A	A35 14DB (POWER SEATS)	FUSED B(+)
5	40A	A16 12GY	FUSED B(+)
6	50A	A110 10VT/RD (2.4L TURBO)	FUSED B(+)
7	30A	A20 12RD/DB (ABS)	FUSED B(+)
8	40A	A4 12BK/PK	FUSED B(+)
9	40A	A122 12RD (DIESEL)	FUSED B(+)
9	40A	A25 12DB (POWER TOP)	FUSED B(+)
10	40A	A3 12RD/WT	FUSED B(+)
11	10A	A17 20RD/BK	FUSED B(+)
12	15A	F32 18PK/DB	FUSED B(+)
13	20A	A14 18RD/WT	FUSED B(+)
14	15A	F62 20RD	FUSED B(+)
14	15A	F62 20RD	FUSED B(+)
15	20A	A30 16RD/WT (EATX)	FUSED B(+)
16	15A	L3 16RD/OR	DIMMER SWITCH HIGH BEAM OUTPUT
17	15A	L33 16LG/BR	FUSED DIMMER SWITCH HIGH BEAM OUTPUT
18	20A	M11 16PK/LB	FUSED B(+)
19	15A	A15 18PK/DG	FUSED B(+)
20	20A	F1 16DB/BK	FUSED B(+)
21	15A	A140 16DG/WT (DIESEL)	FUSED B(+)
22	20A	F39 16PK/LG (EXPORT)	FUSED B(+)
23	-	-	-
24	-	-	-

HORN RELAY

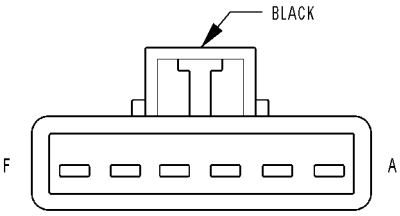
CAV	CIRCUIT	FUNCTION
A1	X2 20DG/RD	HORN RELAY OUTPUT
A2	X3 20BK/RD	HORN RELAY CONTROL
A3	-	-
A4	F62 20RD	FUSED B(+)
A5	F62 20RD	FUSED B(+)



POWER TOP MOTOR (PT27)

POWER TOP MOTOR (PT27) - 2 WAY

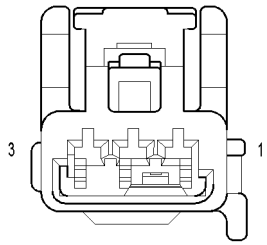
CAV	CIRCUIT	FUNCTION
1	P3 12YL	TOP UP RELAY OUTPUT
2	P4 12 RD	TOP DOWN RELAY OUTPUT



POWER TOP RELAY (PT27)

POWER TOP RELAY (PT27) - BLACK 6 WAY

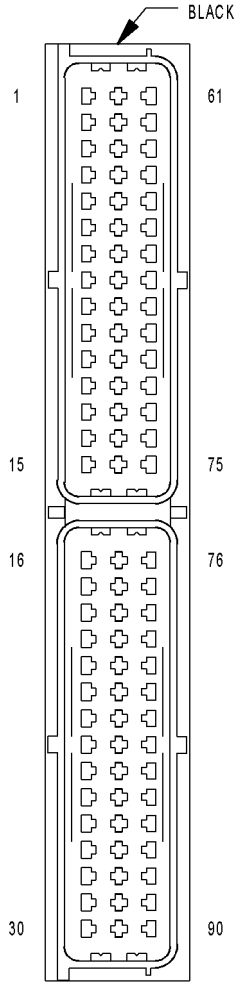
CAV	CIRCUIT	FUNCTION
A	P6 20RD/WT	TOP UP RELAY CONTROL
B	P3 12YL	TOP UP RELAY OUTPUT
C	A25 12DB	FUSED B(+)
D	Z253 12BK/DB	GROUND
E	P4 12RD	TOP DOWN RELAY OUTPUT
F	P5 20YL/BK	TOP DOWN RELAY CONTROL



POWER TOP SWITCH (PT27)

POWER TOP SWITCH (PT27) - 3 WAY

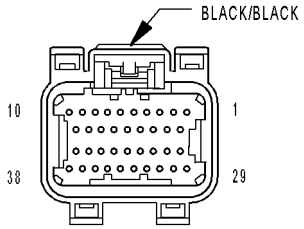
CAV	CIRCUIT	FUNCTION
1	E2 20OR	PANEL LAMPS DRIVER
2	Z2 20BK/LG	GROUND
3	Q31 20OR/DB	POWER TOP SWITCH MUX



POWERTRAIN CONTROL MODULE (1.6L)

POWERTRAIN CONTROL MODULE (1.6L) - BLACK 90 WAY

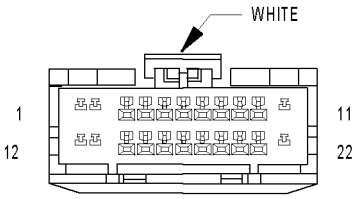
CAV	CIRCUIT	FUNCTION
1	A14 18GY/WT	FUSED B(+)
2	-	-
3	-	-
4	-	-
5	C28 20DB/OR	A/C COMPRESSOR CLUTCH RELAY CONTROL
6	D25 20VT/YL	PCI BUS
7	K81 20DB/DG	ACCELERATOR PEDAL POSITION SENSOR NO. 2 SIGNAL
8	C22 18BR/WT	A/C HIGH PRESSURE SIGNAL
9	K921 20RD	INLET AIR TEMPERATURE SENSOR GROUND
10	N907 20BR/OR	VEHICLE SPEED SENSOR GROUND
11	K901 20DB/VT	MANIFOLD ABSOLUTE PRESSURE SENSOR GROUND
12	F858 20DG/LG	ACCELERATOR PEDAL POSITION SENSOR NO. 1 5 VOLT SUPPLY
13	F859 20DG/PK	ACCELERATOR PEDAL POSITION SENSOR NO. 2 5 VOLT SUPPLY
14	F855 18OR/PK	THROTTLE POSITION SENSOR 5 VOLT SUPPLY
15	-	-
16	K1 20DG/RD	MANIFOLD ABSOLUTE PRESSURE SENSOR SIGNAL
17	K2 20TN/BK	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL
18	K41 20BK/DG	OXYGEN SENSOR 1/1 SIGNAL
19	K167 20BR/YL	ACCELERATOR PEDAL POSITION SENSOR NO. 1 GROUND
20	K42 20DB/LG	KNOCK SENSOR SIGNAL
21	K24 20GY/BK	CRANKSHAFT POSITION SENSOR SIGNAL
22	K981 20BR/DG	ACCELERATOR PEDAL POSITION SENSOR NO. 2 GROUND
23	K922 20DB/OR	THROTTLE POSITION SENSOR GROUND
24	K902 20BR/DG	OXYGEN SENSOR 1/1 GROUND
25	K924 20BR/WT	CRANKSHAFT POSITION SENSOR GROUND
26	K45 20BK/VT	KNOCK SENSOR GROUND
27	-	-
28	Z12 18BK/TN	GROUND
29	Z12 18BK/TN	GROUND
30	K17 18DB/TN	IGNITION COIL NO. 2 DRIVER
31	V50 20VT/OR	ELECTRONIC THROTTLE CONTROL POSITIVE MOTOR CONTROL
32	V51 20WT	ELECTRONIC THROTTLE CONTROL NEGATIVE MOTOR CONTROL
33	K4 20BK/LB	ENGINE COOLANT TEMPERATURE SENSOR GROUND
34	K51 20DB/YL	AUTOMATIC SHUT DOWN RELAY CONTROL
35	K90 20TN	STARTER MOTOR RELAY CONTROL
36	C24 20YL/RD	LOW SPEED RADIATOR FAN RELAY CONTROL
37	-	-
38	-	-
39	K10 20DB/OR	STEERING PRESSURE SWITCH SIGNAL
40	G9 20GY/BK	RED BRAKE WARNING INDICATOR DRIVER
41	D20 20LG	SCI RECEIVE
42	K944 20BR/GY	CAMSHAFT POSITION SENSOR GROUND
43	F854 20GY/PK	CAMSHAFT POSITION SENSOR 5 VOLT SUPPLY
44	K7 20OR	CRANKSHAFT POSITION SENSOR 5 VOLT SUPPLY
45	F857 20OR/PK	VEHICLE SPEED SENSOR 5V SUPPLY
46	K22 20OR/DB	THROTTLE POSITION SENSOR SIGNAL NO. 1
47	K141 20TN/WT	OXYGEN SENSOR 1/2 SIGNAL
48	-	-
49	K44 20TN/YL	CAMSHAFT POSITION SENSOR SIGNAL
50	G6 20GY	ENGINE OIL PRESSURE SWITCH SIGNAL
51	-	-
52	-	-
53	K904 20DB/DG	OXYGEN SENSOR 1/2 GROUND
54	K11 18WT/DB	FUEL INJECTOR NO. 1 DRIVER
55	K52 20PK/BK	EVAP/PURGE SOLENOID CONTROL
56	-	-
57	-	-
58	-	-
59	Z12 18BK/TN	GROUND
60	K19 18BK/GY	IGNITION COIL NO. 1 DRIVER
61	F12 18DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
62	-	-
63	-	-
64	-	-
65	C27 20DB/PK	HIGH SPEED RADIATOR FAN RELAY CONTROL
66	K31 20BR	FUEL PUMP RELAY CONTROL
67	-	-
68	L50 20WT/TN	BRAKE LAMP SWITCH OUTPUT
69	K119 20LG/BK	CLUTCH UPSTOP SWITCH SIGNAL
70	T141 20YL/RD	CLUTCH INTERLOCK SWITCH SIGNAL
71	K29 20WT/PK	BRAKE LAMP SWITCH SIGNAL
72	K21 20BK/RD	INLET AIR TEMPERATURE SENSOR SIGNAL
73	D21 20PK	SCI TRANSMIT
74	K80 20BK/LG	ACCELERATOR PEDAL POSITION SENSOR NO. 1 SIGNAL
75	K6 18VT/WT	MANIFOLD ABSOLUTE PRESSURE SENSOR 5V SUPPLY
76	-	-
77	K122 20DB/GY	THROTTLE POSITION SENSOR SIGNAL NO. 2
78	-	-
79	G7 20WT/OR	VEHICLE SPEED SENSOR SIGNAL
80	-	-
81	K79 18OR/RD	OXYGEN SENSOR 1/1 CONTROL
82	K12 18TN	FUEL INJECTOR NO. 2 DRIVER
83	K13 18YL/WT	FUEL INJECTOR NO. 3 DRIVER
84	K14 18LB/BR	FUEL INJECTOR NO. 4 DRIVER
85	K199 18BR/VT	OXYGEN SENSOR 1/2 CONTROL
86	-	-
87	-	-
88	A142 18DG/OR	AUTOMATIC SHUT DOWN RELAY OUTPUT
89	K20 18DG	GENERATOR FIELD CONTROL
90	Z12 18BK/TN	GROUND



POWERTRAIN CONTROL MODULE C1 (NGC)

POWERTRAIN CONTROL MODULE C1 (NGC) - BLACK/BLACK 38 WAY

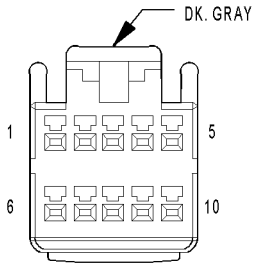
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	Z12 16BK/TN	GROUND
10	-	-
11	F12 20DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
12	F11 20RD/WT (EATX)	FUSED IGNITION SWITCH OUTPUT (UNLOCK-RUN-START)
13	G7 20WT/OR (MTX)	VEHICLE SPEED SIGNAL
14	G9 20GY/BK	RED BRAKE WARNING INDICATOR DRIVER
15	K55 18LB (2.4L TURBO)	TIP SOL CONTROL
16	-	-
17	K150 18DB/YL (2.4L TURBO)	SURGE SOL CONTROL
18	Z12 16BK/TN	GROUND
19	-	-
20	G6 20GY	OIL PRESSURE SIGNAL
21	-	-
22	K145 20BR/OR	AAT SIGNAL
23	K153 20DB/LG (2.4L TURBO)	TIP SIGNAL
24	-	-
25	D20 20LG	SCI RECEIVE
26	D6 20PK/LB (EATX)	SCI RECEIVE (TCM)
27	K6 20VT/WT (2.4L TURBO)	5 VOLT SUPPLY
28	K137 18DB/GY (2.4L TURBO)	WASTEGATE SOL CONTROL
29	A14 18RD/WT	FUSED B(+)
30	A41 16YL	FUSED IGNITION SWITCH OUTPUT (START)
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	D21 20PK	SCI TRANSMIT
37	D15 20WT/DG (EATX)	SCI TRANSMIT (TCM)
38	D25 18VT/YL	PCI BUS



RADIO C1

RADIO C1 - WHITE 22 WAY

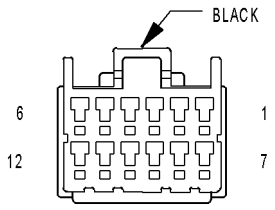
CAV	CIRCUIT	FUNCTION
1	M11 18PK/LB	FUSED B(+) (I.O.D.)
2	X12 20RD/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
3	E2 20OR	PANEL LAMPS DRIVER
4	-	-
5	-	-
6	-	-
7	X54 20VT (EXCEPT PT27 PREMIUM AUDIO)	RIGHT FRONT SPEAKER (+)
8	X56 20DB/RD (EXCEPT PT27 PREMIUM AUDIO)	RIGHT FRONT SPEAKER (-)
9	X55 20BR/DB (EXCEPT PT27 PREMIUM AUDIO)	LEFT FRONT SPEAKER (-)
10	X53 20DG (EXCEPT PT27 PREMIUM AUDIO)	LEFT FRONT SPEAKER (+)
11	Z9 16BK (EXCEPT PT27 PREMIUM AUDIO)	GROUND
12	M11 18PK/LB (EXCEPT PT27 PREMIUM AUDIO)	FUSED B(+) (I.O.D.)
13	-	-
14	D25 20VT/YL	PCI BUS
15	-	-
16	-	-
17	-	-
18	X51 20BR/YL (EXCEPT PT27 PREMIUM AUDIO)	LEFT REAR SPEAKER (+)
18	X51 20DG/DB (PT27 PREMIUM AUDIO)	AMPLIFIER LEFT REAR (+)
19	X57 20BR/LB (EXCEPT PT27 PREMIUM AUDIO)	LEFT REAR SPEAKER (-)
19	X57 20DG/OR (PT27 PREMIUM AUDIO)	AMPLIFIER LEFT REAR (-)
20	X58 20DB/BK (EXCEPT PT27 PREMIUM AUDIO)	RIGHT REAR SPEAKER (-)
20	X58 20GY/OR (PT27 PREMIUM AUDIO	AMPLIFIER RIGHT REAR (+)
21	X52 20DB/WT (EXCEPT PT27 PREMIUM AUDIO)	RIGHT REAR SPEAKER (+)
21	X52 20GY/DB (PT27 PREMIUM AUDIO)	AMPLIFIER RIGHT REAR (-)
22	Z9 16BK	GROUND



RADIO C2 (HANDS FREE)

RADIO C2 (HANDS FREE) - DK. GRAY 10 WAY

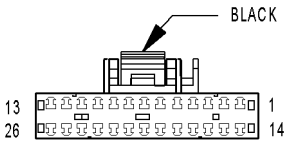
CAV	CIRCUIT	FUNCTION
1	X40 20GY/WT	AUDIO MUX RIGHT
2	Z9 20BK	AUDIO RETURN
3	Z30 22DG	SHIELD
4	D25 20VT/YL	PCI BUS
5	X112 20RD	IGNITION RUN/ACC SIGNAL
6	X41 20WT/DG	AUDIO MUX LEFT
7	Z17 20BK	GROUND
8	X481 20DG	AUDIO BUS
9	E14 20OR/TN	PANEL LAMPS DRIVER
10	X160 20YL	FUSED B(+)



REAR VIEW MIRROR C1

REAR VIEW MIRROR C1 - BLACK 12 WAY

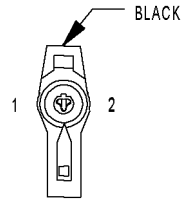
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	-	-
4	X722 20BK/LB	MICROPHONE 2 IN(+)
5	-	-
6	X712 20BK/DG	MICROPHONE 1 IN(+)
7	X793 20BK/YL	IGNITION RUN/ACC SIGNAL
8	-	-
9	X730 20BK/GY	VOICE RECOGNITION/PHONE SWITCH SIGNAL
10	-	-
11	X835 20BK/DB	SENSOR GROUND
12	X792 20BK/VT	MICROPHONE IN(-)



REMOTE KEYLESS ENTRY MODULE

REMOTE KEYLESS ENTRY MODULE - BLACK 26 WAY

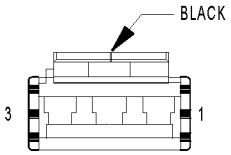
CAV	CIRCUIT	FUNCTION
1	L4 16VT/WT (EXCEPT HEADLAMP LEVELING)	DIMMER SWITCH LOW BEAM OUTPUT
1	L63 18DG/RD (HEADLAMP LEVELING)	LEFT REAR TURN SIGNAL
2	L7 20BK/YL (EXCEPT HEADLAMP LEVELING)	HEADLAMP SWITCH OUTPUT
2	L62 18BR/RD (HEADLAMP LEVELING)	RIGHT REAR TURN SIGNAL
3	F35 18RD	FUSED B(+)
4	P35 18OR/VT (PT27)	DOOR LOCK RELAY OUTPUT
4	P35 18OR/BK (PT44)	DOOR LOCK RELAY OUTPUT
5	P34 18PK/BK (PT27)	DRIVER DOOR UNLOCK RELAY OUTPUT
5	P34 18DB (PT44)	DRIVER DOOR UNLOCK RELAY OUTPUT
6	P36 18PK/VT (PT27)	DOOR UNLOCK RELAY OUTPUT
6	P36 18PK/BK (PT44)	DOOR UNLOCK RELAY OUTPUT
7	M9 20DB/OR	PASSENGER DOOR AJAR/RKE SENSE
8	Z1 18BK	GROUND
9	M1 18PK	FUSED B(+)
10	P97 20WT/DG (LHD)	LEFT DOOR SWITCH MUX
10	P96 20DG (RHD)	RIGHT DOOR SWITCH MUX
11	P96 20DG	RIGHT DOOR SWITCH MUX
11	P97 20WT/DG (RHD)	LEFT DOOR SWITCH MUX
12	Z2 20BK/LG	GROUND
13	G38 20GY	LEFT VISOR LAMP/UGDO GROUND SENSE
14	Q33 20BR/LB	DECKLID/LIFTGATE RELEASE SWITCH SENSE
15	X5 20LB/RD (EXPORT)	SIREN CONTROL
16	Q2 16LG/BK	DECKLID/LIFTGATE RELEASE RELAY OUTPUT
17	G69 20BK/OR (ALARM)	VTSS INDICATOR DRIVER
18	X3 20BK/RD (ALARM)	HORN RELAY CONTROL
19	D25 20VT/YL	PCI BUS
20	G120 20WT/LB (EXPORT/ PT44)	INTRUSION SENSOR SIGNAL
21	-	-
22	G5 20DB/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
23	G70 20BR/TN (EXPORT)	HOOD AJAR SWITCH SENSE
24	G78 20TN/BK (PT27)	DECKLID AJAR SWITCH SENSE
24	G78 20TN/BK (PT44)	LIFTGATE AJAR SWITCH SENSE
25	G75 20TN (LHD PT44)	LEFT FRONT DOOR AJAR SWITCH SENSE
25	G75 20TN/DB (PT27)	LEFT FRONT DOOR AJAR SWITCH SENSE
25	G74 20TN/RD (RHD PT44)	RIGHT FRONT DOOR AJAR SWITCH SENSE
26	-	-



RIGHT
CYLINDER
LOCK SWITCH
(EXPORT)

RIGHT CYLINDER LOCK SWITCH (EXPORT) - BLACK 2 WAY

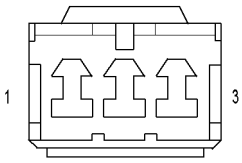
CAV	CIRCUIT	FUNCTION
1	P96 18LG	RIGHT DOOR SWITCH MUX
2	Z1 20BK	GROUND



RIGHT DOOR LOCK SWITCH

RIGHT DOOR LOCK SWITCH - BLACK 3 WAY

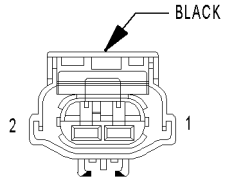
CAV	CIRCUIT	FUNCTION
1	-	-
2	P96 20WT/DG (PT27/RHD)	RIGHT DOOR SWITCH MUX
2	P96 20DG (PT44/LHD)	RIGHT DOOR SWITCH MUX
2	P96 18LG (RHD)	RIGHT DOOR SWITCH MUX
3	Z1 20BK	GROUND



RIGHT FRONT DOOR SPEAKER

RIGHT FRONT DOOR SPEAKER - 3 WAY

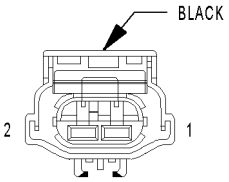
CAV	CIRCUIT	FUNCTION
1	X54 18DG/VT (BASE)	RIGHT FRONT SPEAKER (+)
1	X54 18VT (LHD EXCEPT BASE)	RIGHT FRONT SPEAKER (+)
1	X54 18DG (RHD)	RIGHT FRONT SPEAKER (+)
2	-	-
3	X56 18BR/DB (BASE/RHD)	RIGHT FRONT SPEAKER (-)
3	X56 18DB/RD (LHD EXCEPT BASE)	RIGHT FRONT SPEAKER (-)



RIGHT FRONT POWER WINDOW MOTOR (PT44)

RIGHT FRONT POWER WINDOW MOTOR (PT44) - BLACK 2 WAY

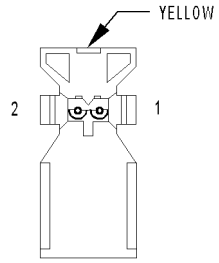
CAV	CIRCUIT	FUNCTION
1	Q22 14VT/WT (LHD)	RIGHT FRONT WINDOW DRIVER (DOWN)
1	Q21 14WT (RHD)	RIGHT FRONT WINDOW DRIVER (DOWN)
2	Q12 14BR (LHD)	RIGHT FRONT WINDOW DRIVER (UP)
2	Q11 14LB (RHD)	RIGHT FRONT WINDOW DRIVER (UP)



RIGHT REAR POWER WINDOW MOTOR (PT44)

RIGHT REAR POWER WINDOW MOTOR (PT44) - BLACK 2 WAY

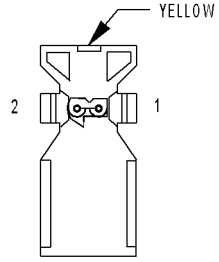
CAV	CIRCUIT	FUNCTION
1	Q24 14RD/DG	RIGHT REAR WINDOW DRIVER (DOWN)
2	Q14 14DB/GY	RIGHT REAR WINDOW DRIVER (UP)



RIGHT SEAT AIRBAG SQUIB (LHD)

RIGHT SEAT AIRBAG SQUIB (LHD) - YELLOW 2 WAY

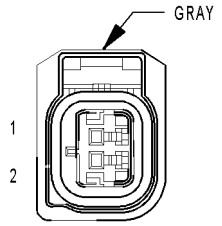
CAV	CIRCUIT	FUNCTION
1	R32 18OR	RIGHT SEAT SQUIB 1 LINE 1
2	R34 18WT	RIGHT SEAT SQUIB 1 LINE 2



RIGHT SEAT AIRBAG SQUIB (RHD)

RIGHT SEAT AIRBAG SQUIB (RHD) - YELLOW 2 WAY

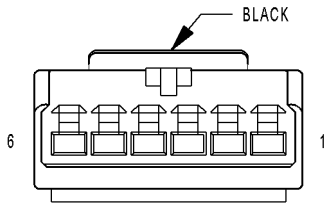
CAV	CIRCUIT	FUNCTION
1	R32 18OR	RIGHT SEAT SQUIB 1 LINE 1
2	R34 18WT	RIGHT SEAT SQUIB 1 LINE 2



RIGHT SIDE IMPACT SENSOR 1

RIGHT SIDE IMPACT SENSOR 1 - GRAY 2 WAY

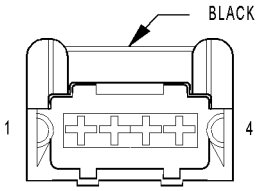
CAV	CIRCUIT	FUNCTION
1	R134 20LB/BR	RIGHT SIDE IMPACT SENSOR 1 GROUND
2	R132 20LG/VT	RIGHT SIDE IMPACT SENSOR 1 SIGNAL



SENTRY KEY IMMOBILIZER MODULE

SENTRY KEY IMMOBILIZER MODULE - BLACK 6 WAY

CAV	CIRCUIT	FUNCTION
1	-	-
2	D25 20VT/YL	PCI BUS
3	-	-
4	G5 20DB/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
5	Z2 20BK/LG	GROUND
6	M1 18PK	FUSED B(+)



SIREN (EXPORT)

SIREN (EXPORT) - BLACK 4 WAY

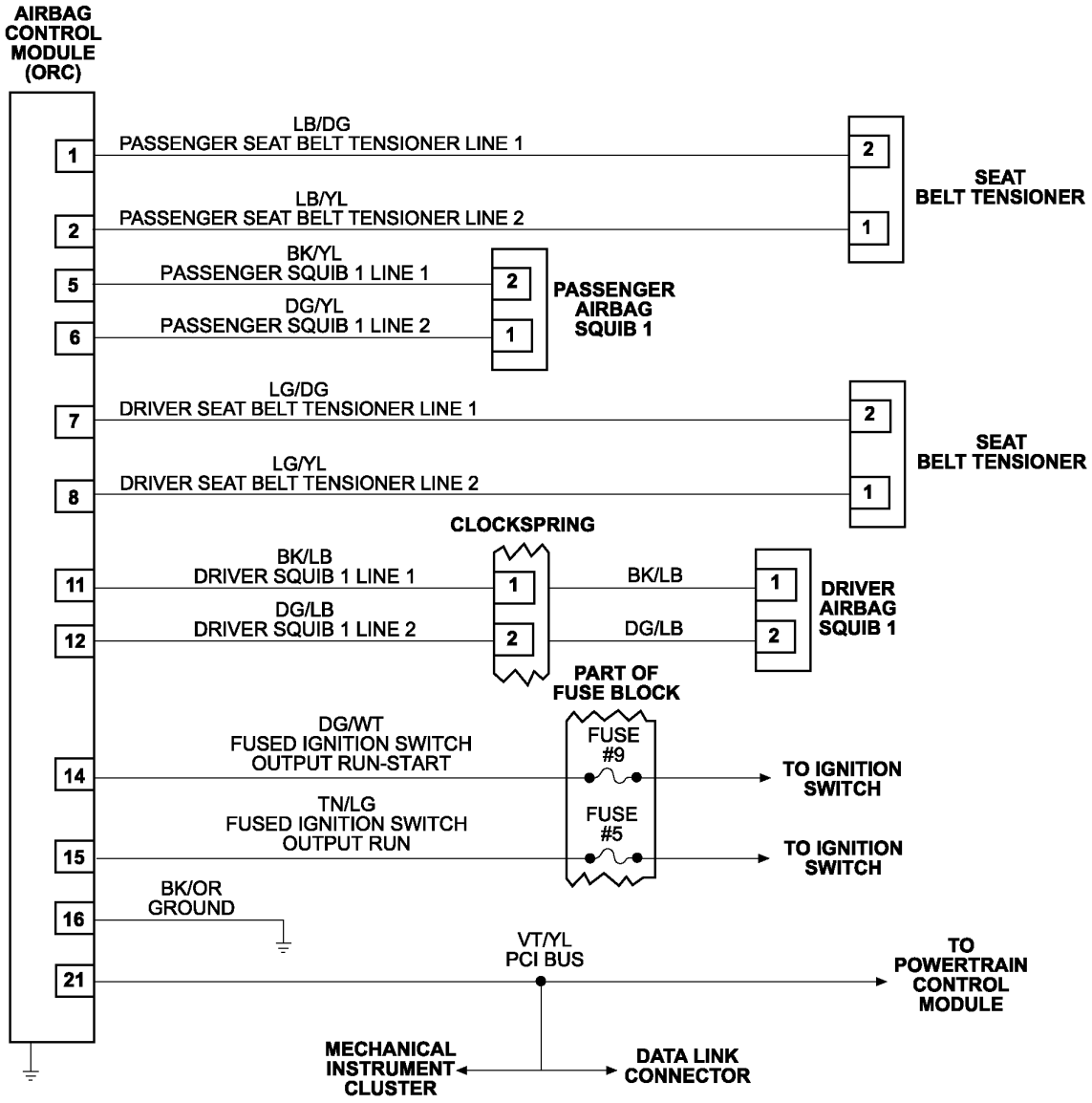
CAV	CIRCUIT	FUNCTION
1	X5 20LB/RD	SIREN CONTROL
2	X5 20LB/RD	SIREN CONTROL
3	Z1 20BK	GROUND
4	M11 16PK/LB	FUSED B(+) (I.O.D.)

NOTES

10.0 SCHEMATIC DIAGRAMS

10.1 AIRBAG SYSTEM

10.1.1 BASE SYSTEM



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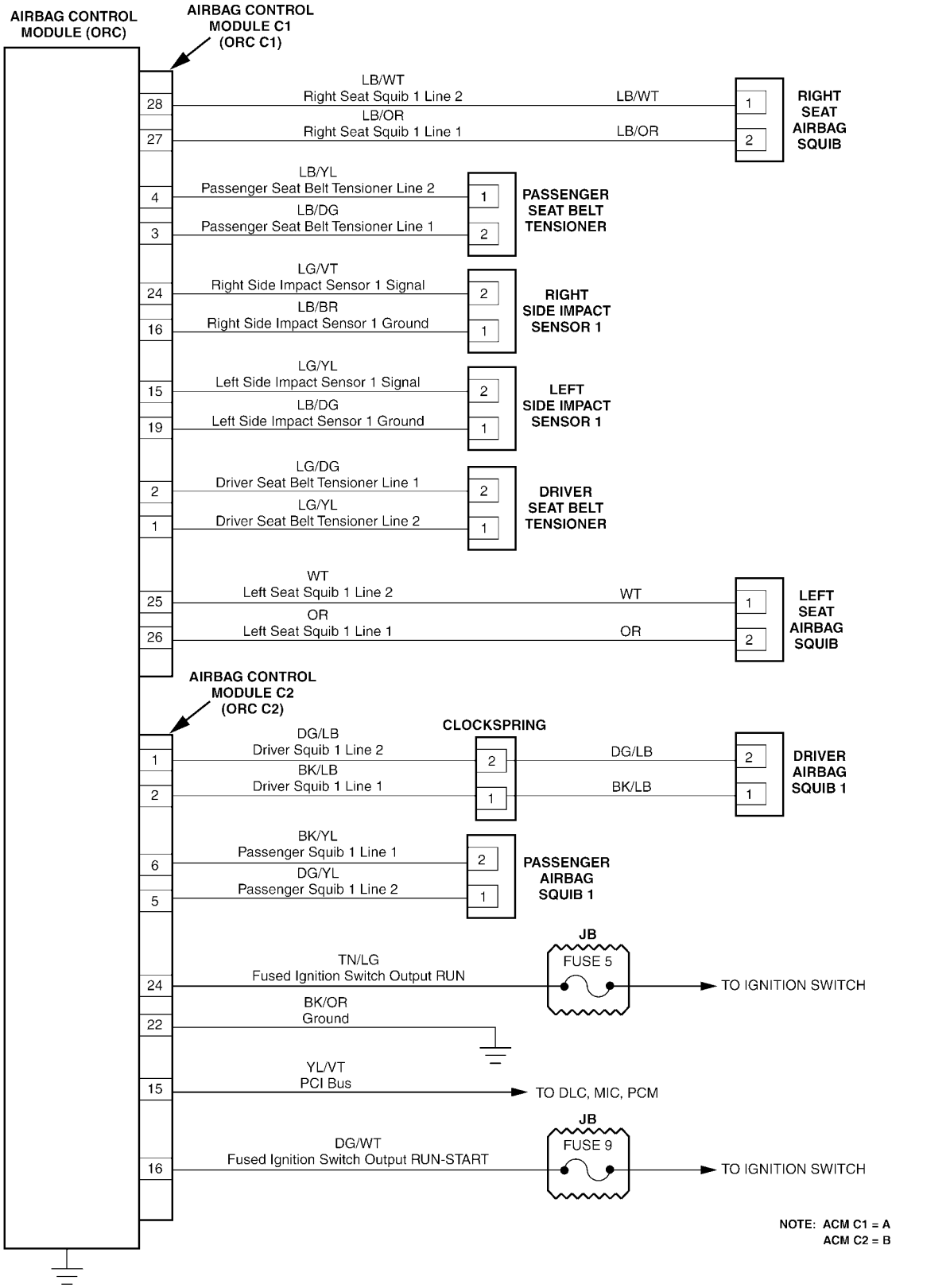
10.1 AIRBAG SYSTEM (Continued)

10.1.2 PREMIUM SYSTEM



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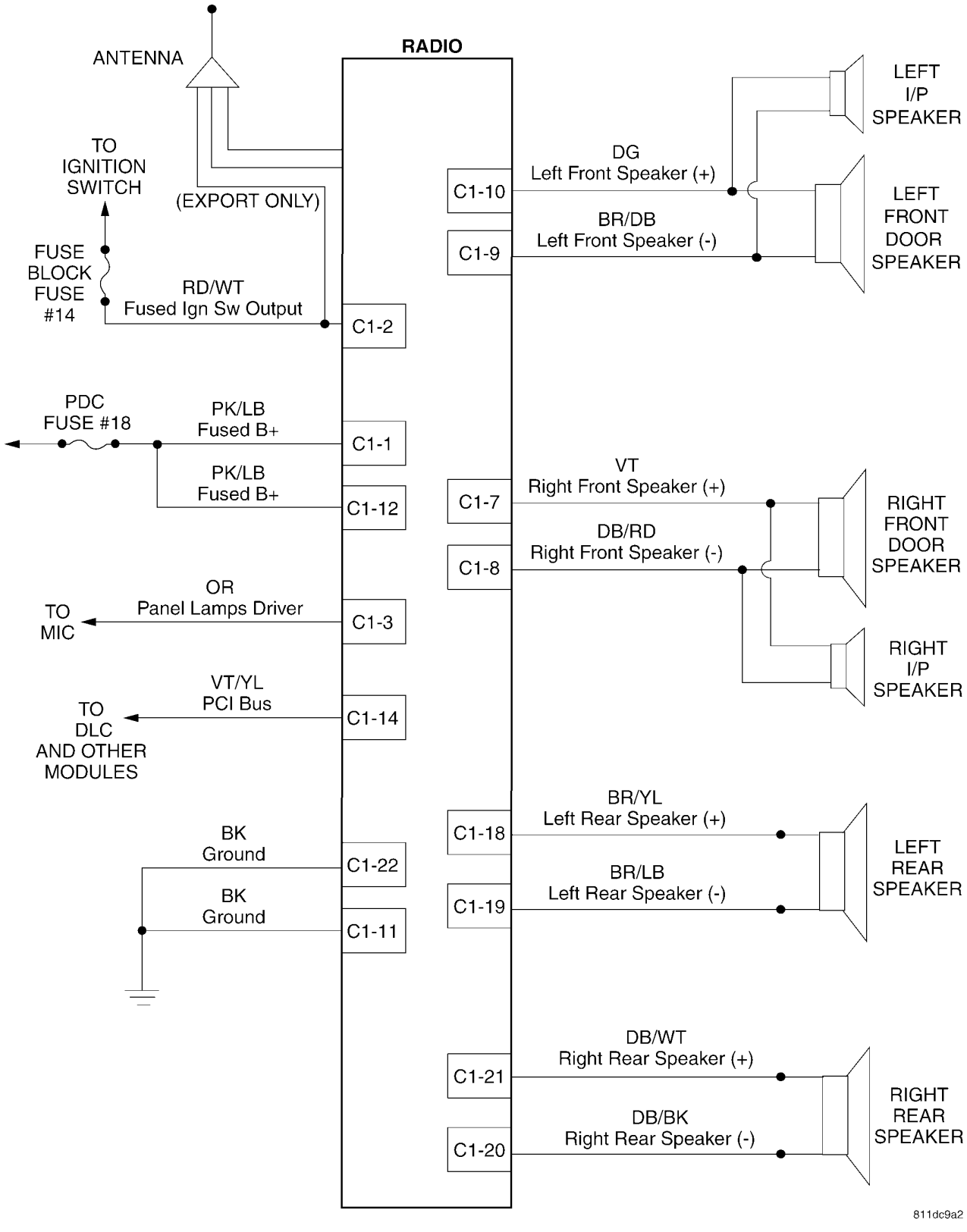
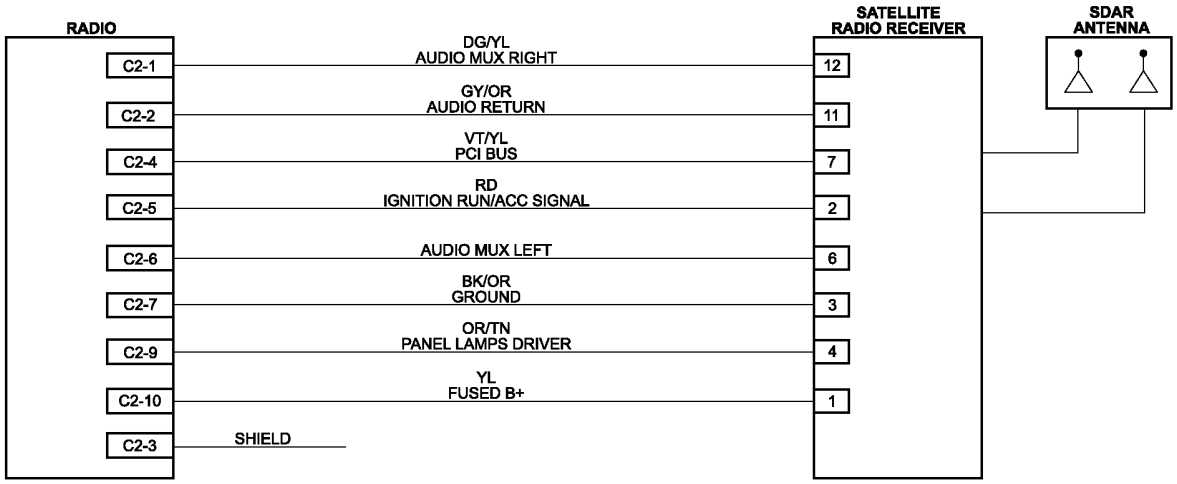
10.2 AUDIO SYSTEM



10.2 AUDIO SYSTEM (Continued)
10.2.1 SATELLITE DIGITAL AUDIO RECEIVER SYSTEM (SDARS)



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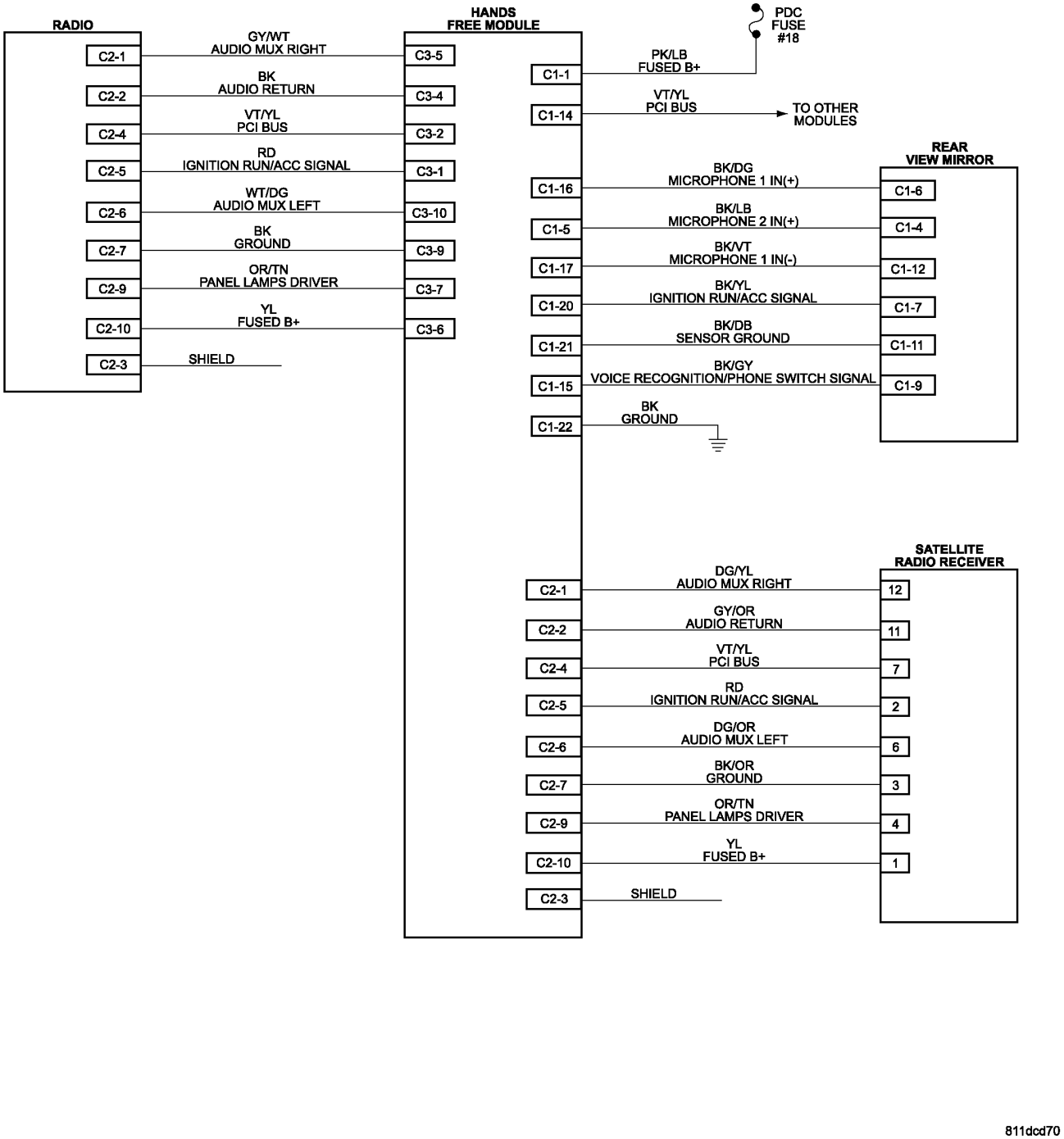
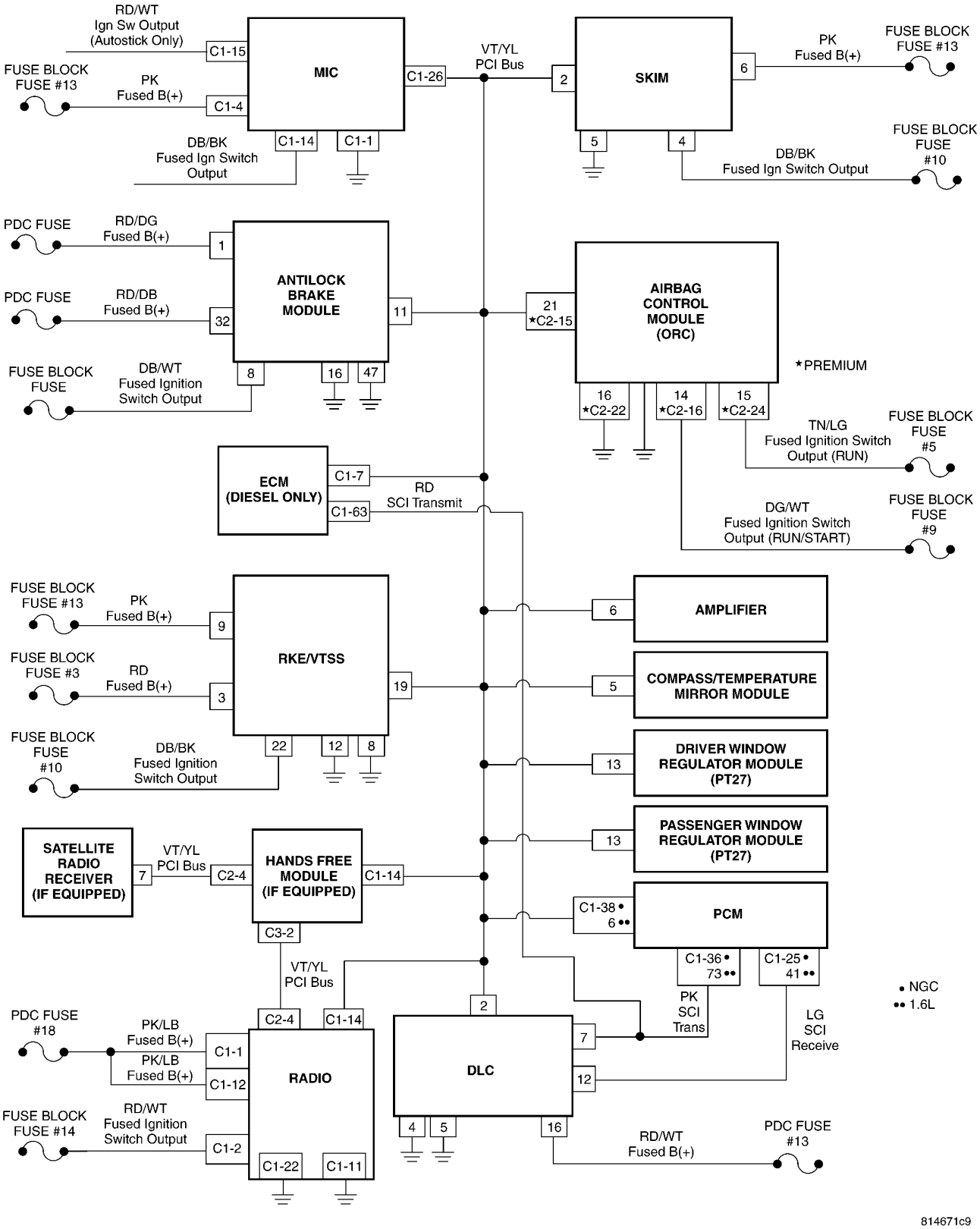
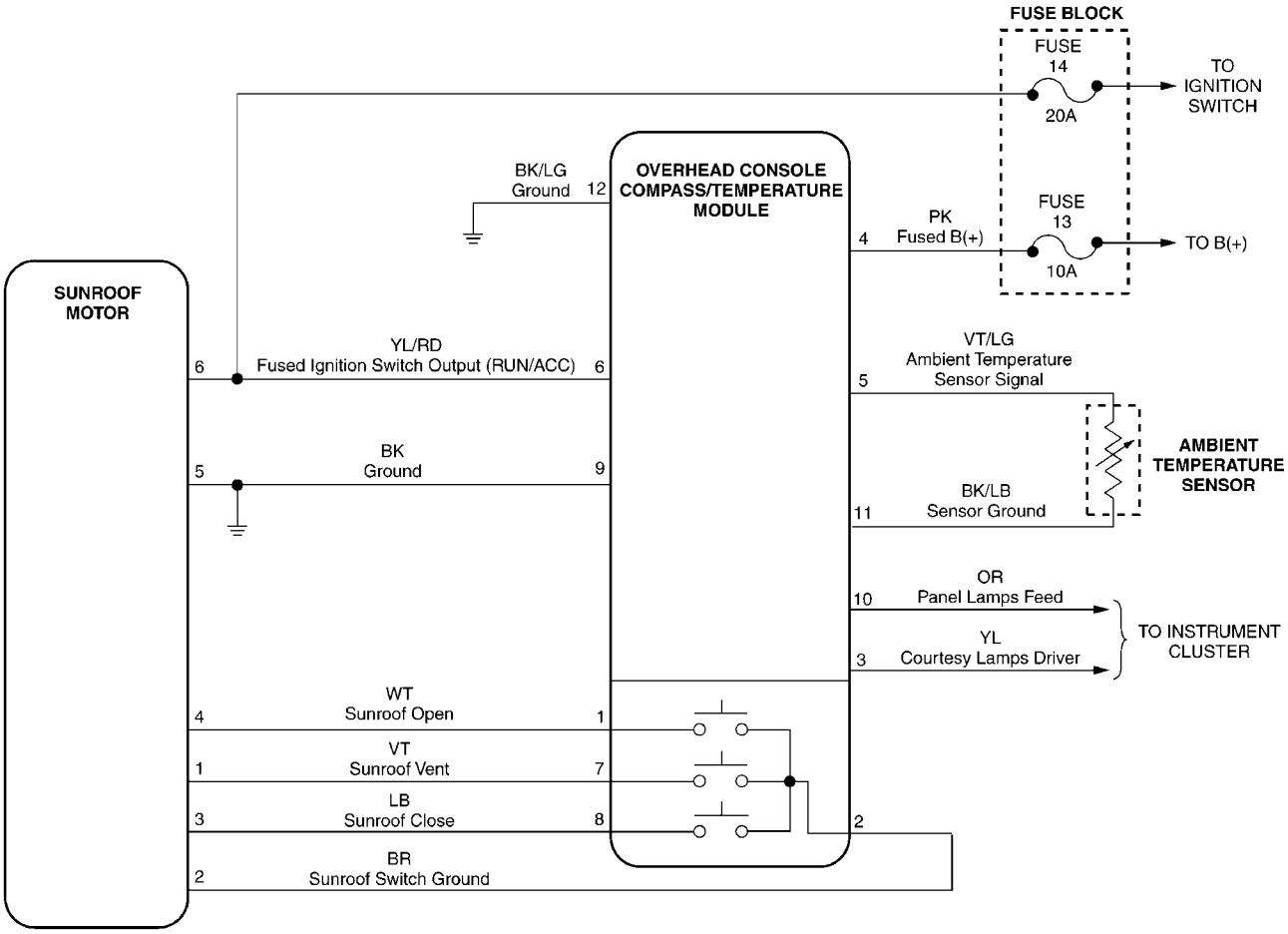
10.2.2 SATELLITE DIGITAL AUDIO RECEIVER SYSTEM (SDARS) EQUIPPED WITH HANDS FREE MODULE (HFM)



10.3 COMMUNICATION



10.4 COMPASS/TEMPERATURE MODULE



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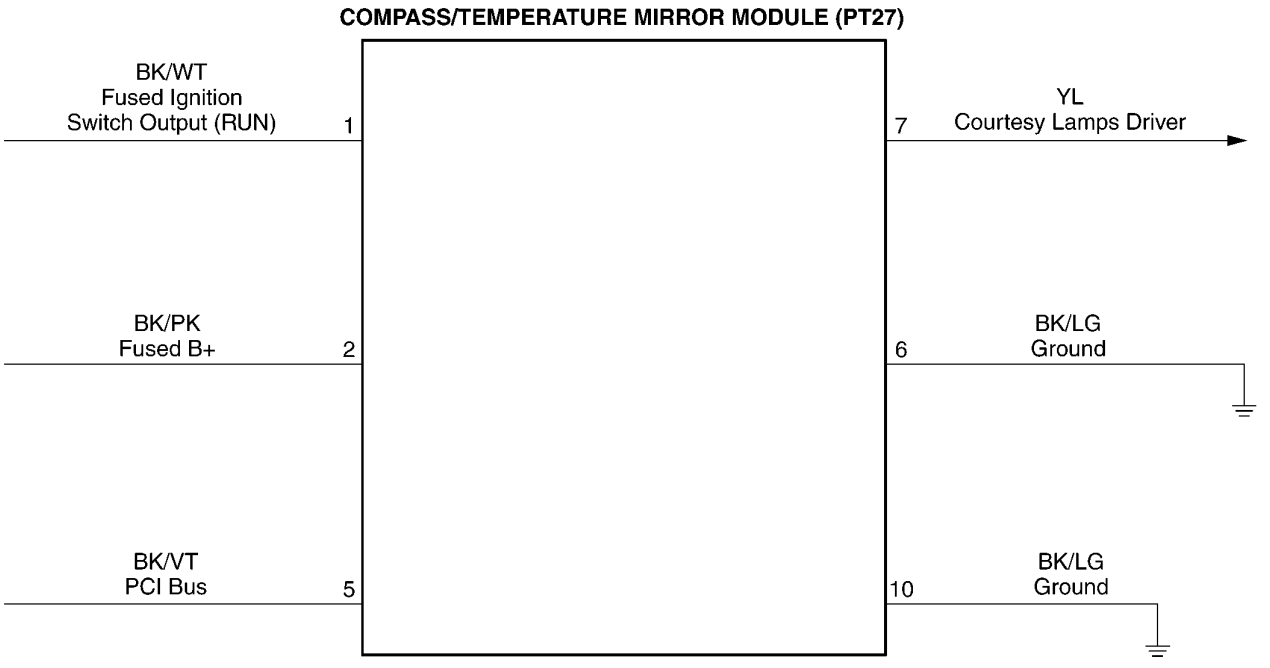
10.4.1 COMPASS/TEMPERATURE MIRROR MODULE (PT27)



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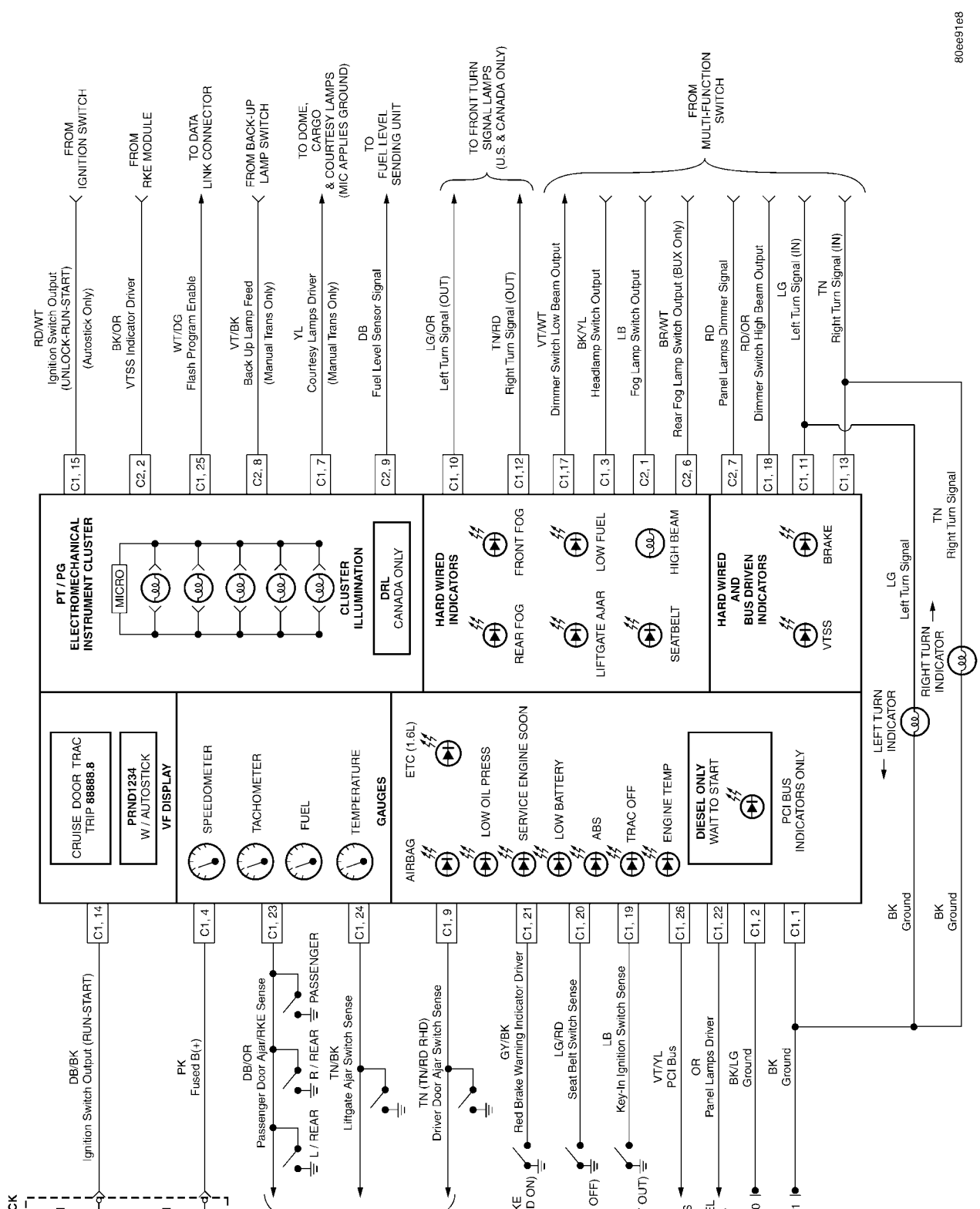
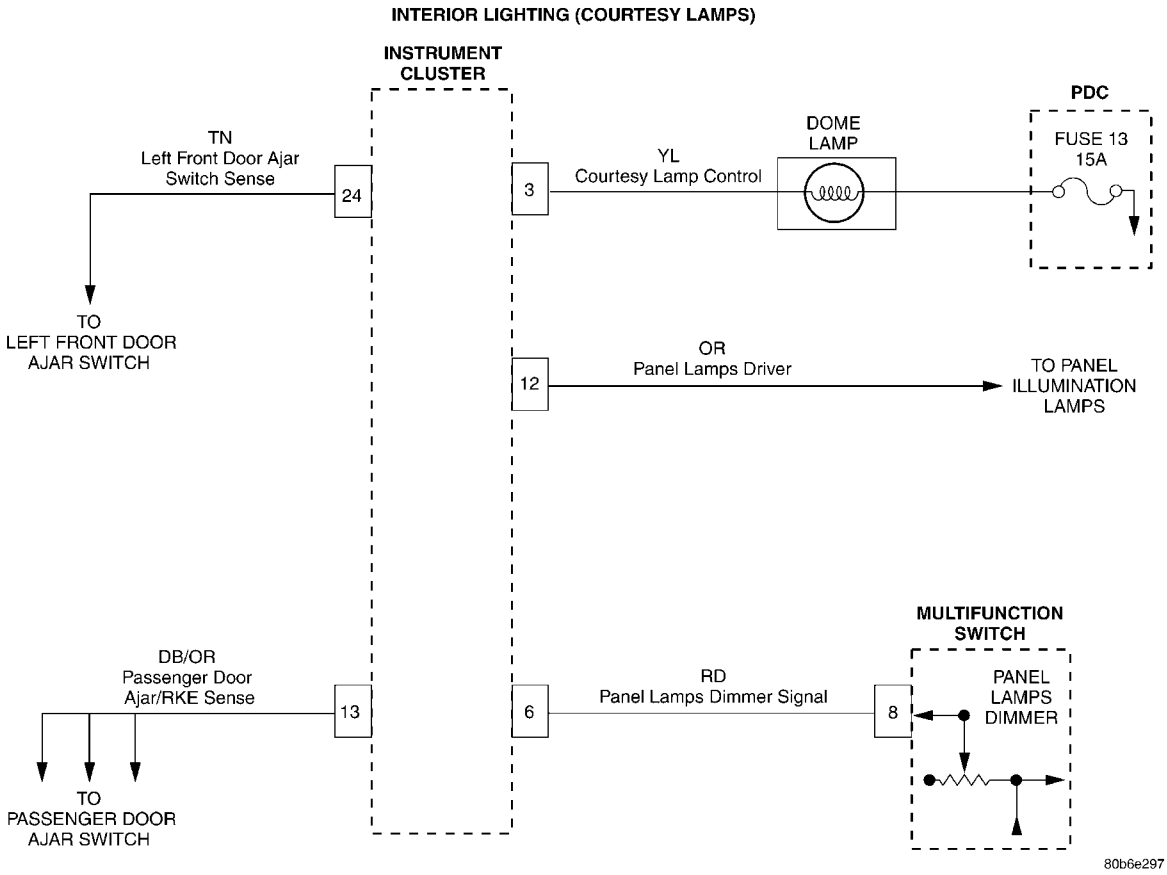
10.5 INSTRUMENT CLUSTER

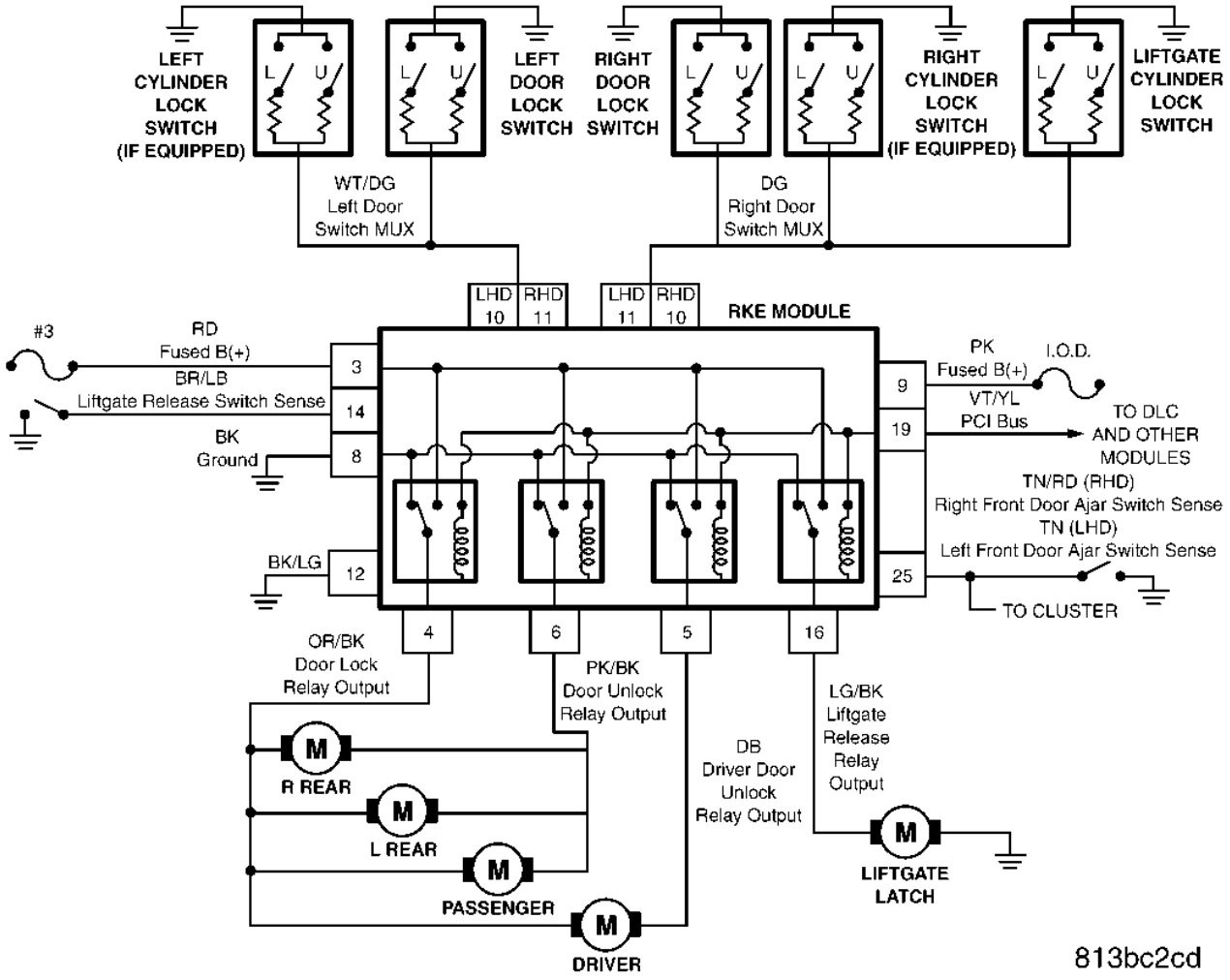


10.6 INTERIOR LIGHTING

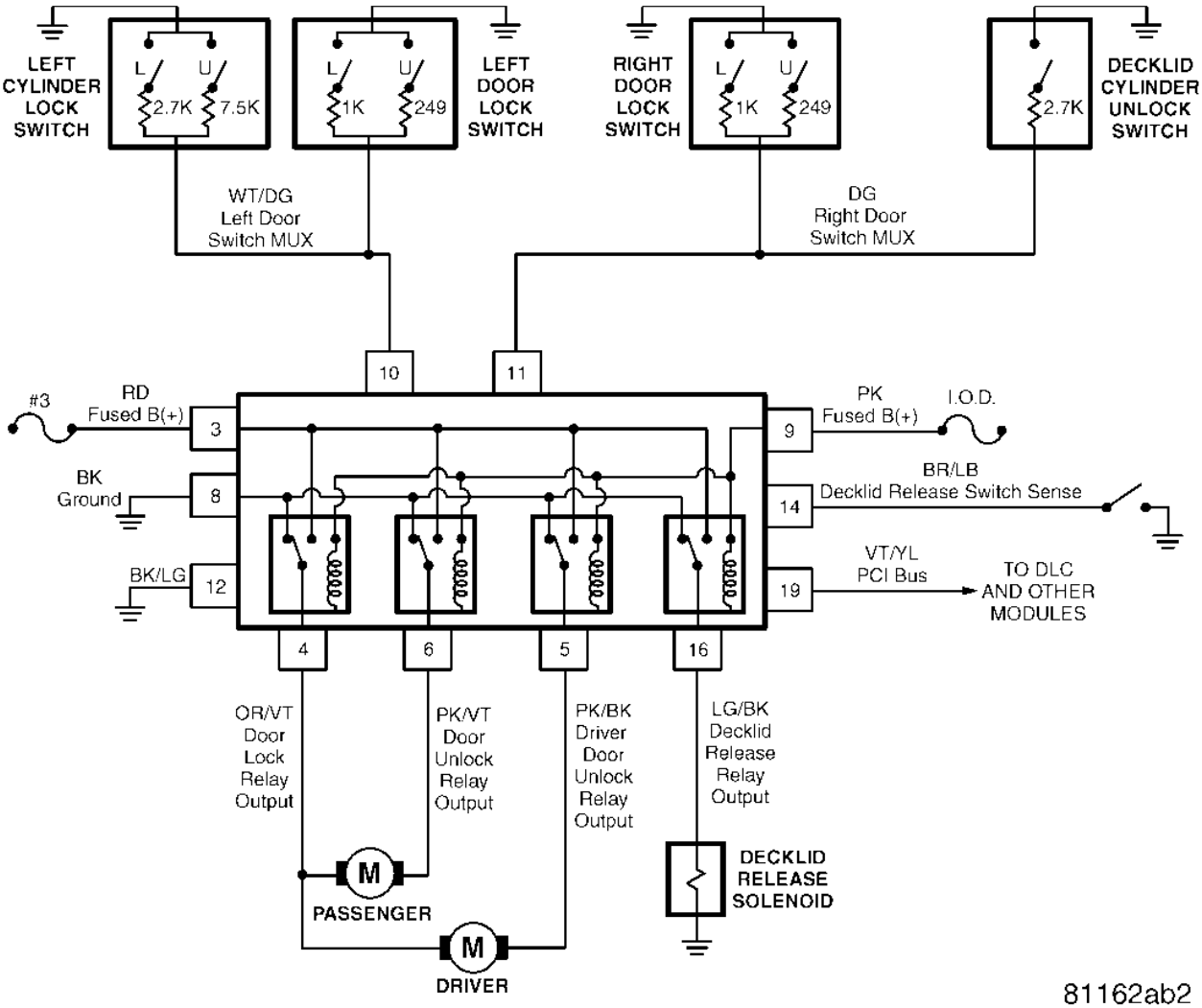


10.7 POWER DOOR LOCKS

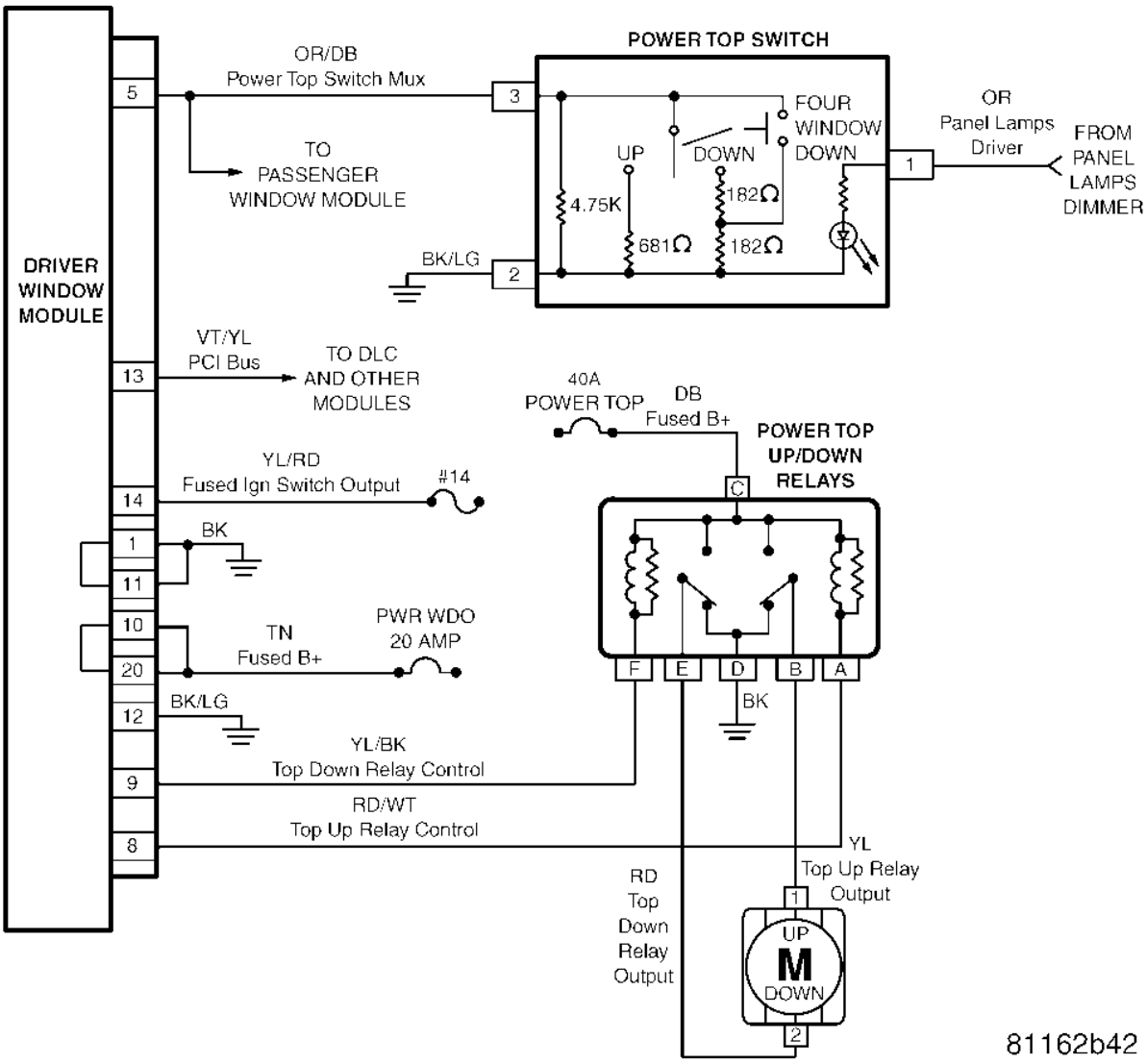
10.7.1 PT44



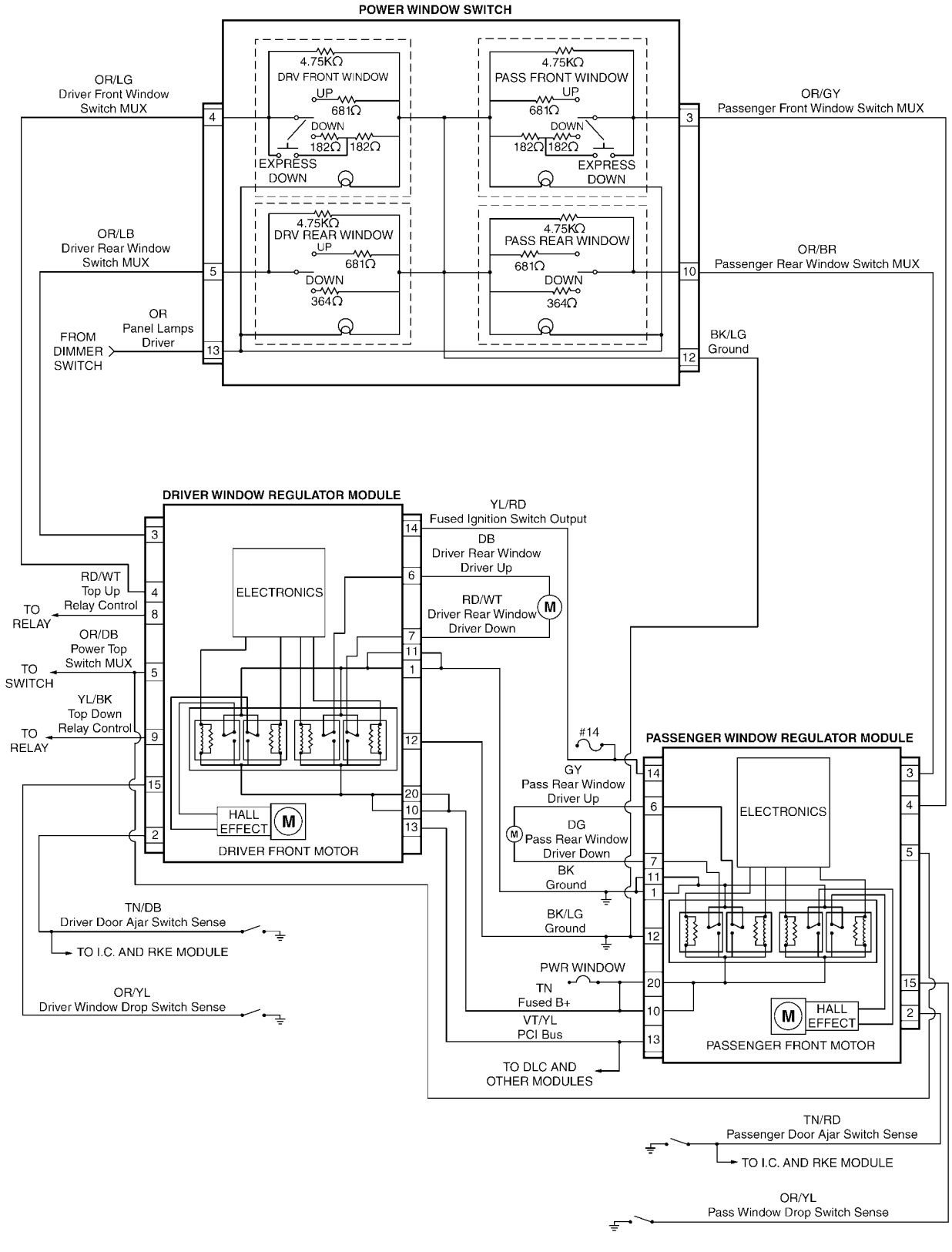
10.7.2 PT27


LEFT CYLINDER LOCK SWITCH
L
U
2.7K
7.5K
LEFT DOOR LOCK SWITCH
1K
249
RIGHT DOOR LOCK SWITCH
DECKLID CYLINDER UNLOCK SWITCH
WT/DG Left Door Switch MUX
DG Right Door Switch MUX
10
11
#3
RD Fused B(+)
3
BK Ground
8
BK/LG
12
PK Fused B(+)
I.O.D.
9
BR/LB Decklid Release Switch Sense
14
VT/YL PCI Bus
19
TO DLC AND OTHER MODULES
4
6
5
16
OR/VT Door Lock Relay Output
PK/VT Door Unlock Relay Output
PK/BK Driver Door Unlock Relay Output
LG/BK Decklid Release Relay Output
M
PASSENGER
DRIVER
DECKLID RELEASE SOLENOID
81162ab2

10.8 POWER TOP (PT27)



10.9 POWER WINDOWS (PT27)



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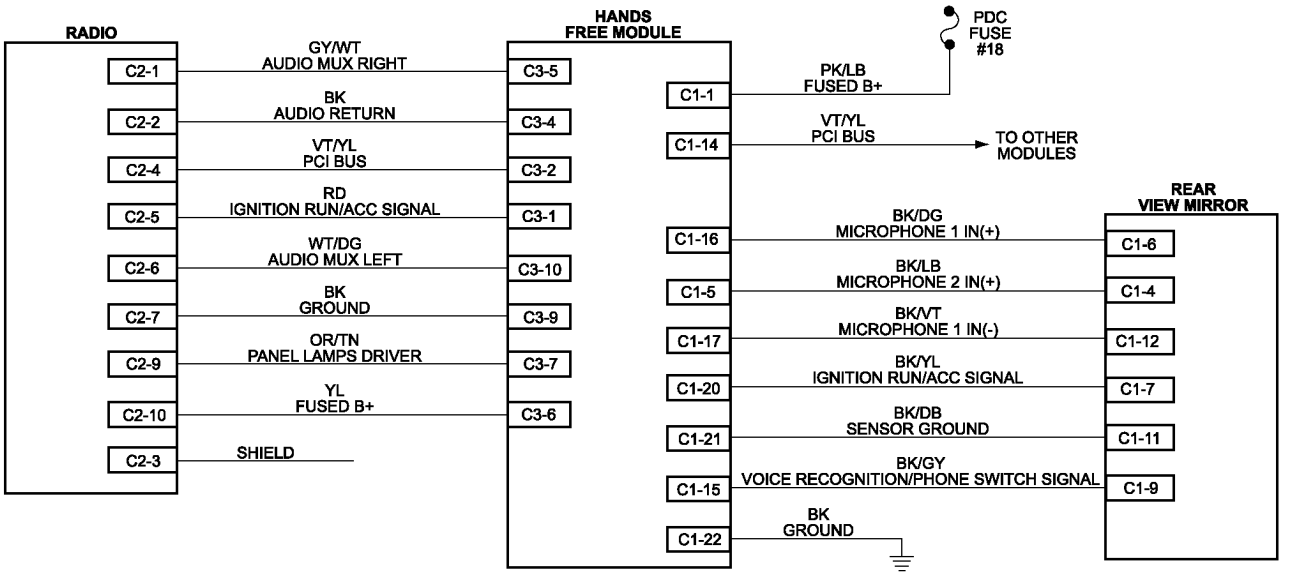
10.10 TELECOMMUNICATIONS – HANDS FREE MODULE (HFM)



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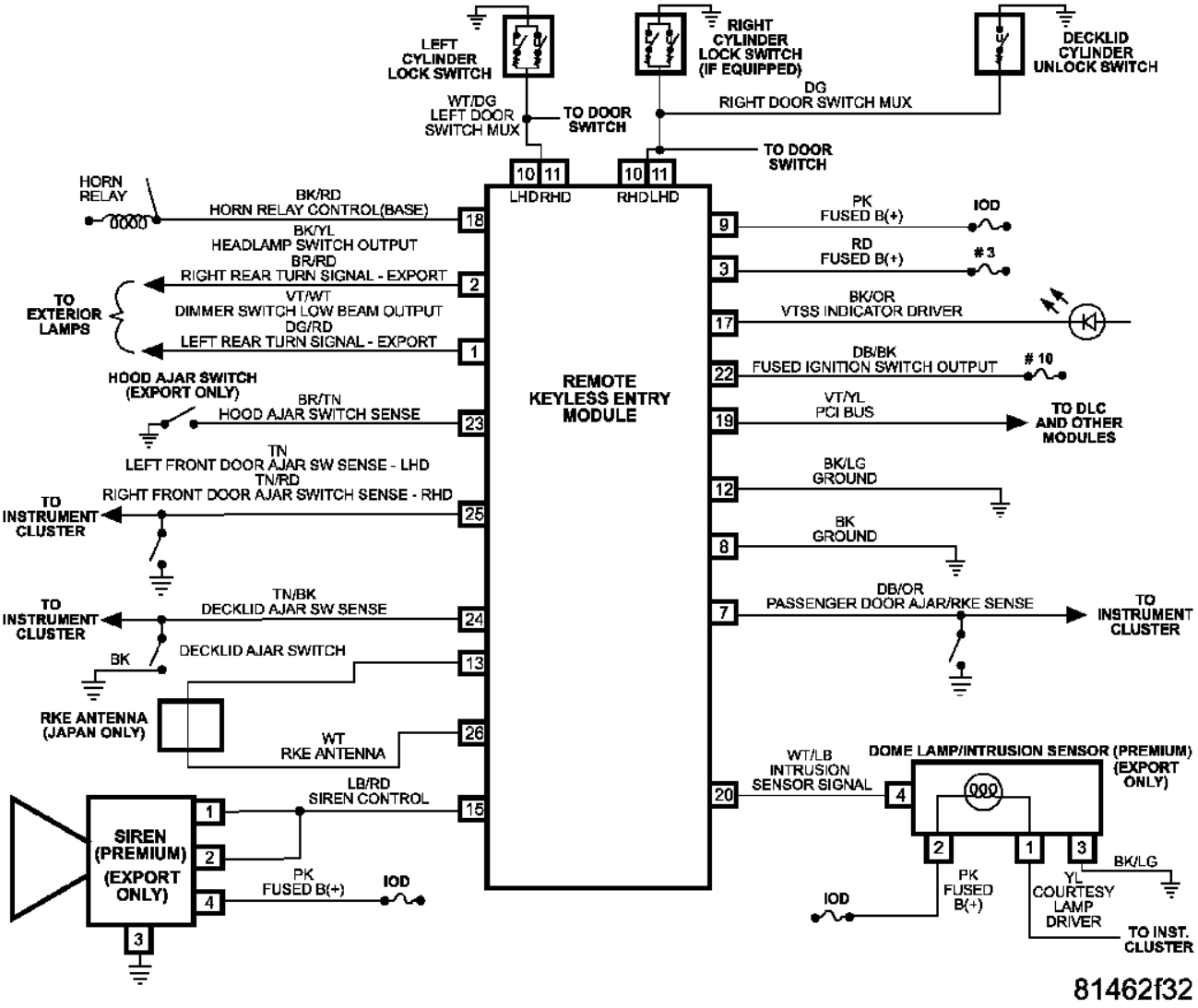
10.11 VEHICLE THEFT SECURITY SYSTEM



NOTES