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1.0 INTRODUCTION

The procedures contained in this manual include all the specifications, instructions, and graphics needed to diagnose 2003 body system problems. The diagnostics in this manual are based on the failure condition or symptom being present at the 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” 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 indicated 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 back of the book and mail it back to us.

1.1 SYSTEM COVERAGE

This diagnostic manual covers 2003 Jeep Liberty (KJ) 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:

- Electrically Heated System
- Audio
- Airbag System (ORC) and (SIACM)
- Chime
- Overhead Console (CMTC)
- Exterior Lighting
- Mechanical Instrument Cluster (MIC)
- Interior Lighting
- Door Ajar
- Vehicle Communication
- Power Door Locks/RKE
- Vehicle Theft Security System
- Wiper System

3.0 SYSTEM DESCRIPTION AND FUNCTIONAL OPERATION

The body system on the 2003 KJ 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 its function. It will only respond to messages “addressed” to it through 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 Communication Section of this general information.

3.1 AIRBAG SYSTEM/OCCUPANT RESTRAINT CONTROLLER SYSTEM

The 2003 Liberty Airbag System contain the following components: Occupant Restraint Controller (ORC), Airbag Warning Indicator, Clockspring, Driver and Passenger Airbags, Driver Seat belt Tensioner (SBT), Driver and Passenger Hall-effect Seat Belt buckle Switches (SBS), Left and Right

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Side Airbag Control Module (SIACM), curtain Airbags, and front impact sensors.

The Occupant Restraint Controller (ORC) is a new type of Airbag Control Module (ACM). The new ACM supports staged airbag deployment and remote impact sensing. Staged deployment is the ability to trigger airbag system squib inflators individually as needed to provide the appropriate restraint for the severity of the impact. The ACM has four major functions: PCI Bus communications, onboard diagnostics, impact sensing, and component deployment. The ACM also contains an energy-storage capacitor. This capacitor stores enough electrical energy to deploy the front airbag components for two seconds following a battery disconnect or failure during an impact. The ACM is secured to the floor panel transmission tunnel below the instrument panel inside the vehicle. The ACM cannot be repaired or adjusted.

The ACM sends and/or receives PCI Bus messages with the Instrument Cluster (MIC), Body Control Module (BCM), and Side Impact Airbag Control Module (SIACM). Diagnostic trouble codes will be set if the communication with these modules is lost or contains invalid information.

The microprocessor in the ACM monitors the front impact sensor signals and the airbag system electrical circuits to determine the system readiness. The ACM also monitors bus messages from both SIACM's. If the ACM detects a monitored system fault or SIACM fault, it sends a message to the instrument cluster via PCI bus to turn on the airbag warning indicator. The ACM can set both active and stored diagnostic trouble codes to aid in the diagnosing system problems. See DIAGNOSTIC TROUBLE CODES in this section.

The ACM uses two front impact sensors, Internal Accelerometer, and Safing Sensor to sense the rate of vehicle deceleration, provide verification of the direction and severity of an impact. A pre-programmed decision algorithm in the ACM microprocessor determines when the deceleration rate is severe enough to require airbag system protection. The ACM also uses the driver and front passenger seat belt switch status (buckled or unbuckled) and crash severity to determine the level of driver and front passenger airbag deployment, low medium or high. When the programmed conditions are met, the ACM sends an electrical signal to deploy the appropriate airbag system components.

WARNING: THE AIRBAG SYSTEM IS A SENSITIVE, COMPLEX ELECTRO-MECHANICAL 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 AIRBAG CONTROL MODULE IS ACCIDENTALLY DROPPED DURING SERVICE, THE MODULE MUST BE SCRAPPED AND REPLACED WITH A NEW UNIT.

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 indicator on for 6-8 seconds. After the lamp check, if the indicator turns off, it means that the ACM has checked the system and found it to be free of discernible malfunctions. If the lamp remains on, there could be an active fault in the system or the MIC lamp circuit may be internally shorted. If the lamp comes on and stays on for a period longer than 6-8 seconds then goes off, there is usually an intermittent problem in the system.

3.1.1 DRIVER AIRBAG

The airbag protective trim cover is the most visible part of the driver side airbag system. 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. 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 hybrid inflator are attached and sealed. The 2003 Liberty is equipped with driver airbag with dual stage inflators. When supplied with the proper electrical signal, the inflator or inflators discharge the gas directly into the cushion. The airbag module cannot be repaired, and must be replaced if deployed or in any way damaged.

WARNING: THE DRIVER AIRBAG MODULE CONTAINS ARGON GAS PRESSURIZED TO OVER 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 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.

CAUTION: Deployed Front Air Bags may or may not have live pyrotechnic material within the air bag inflator. Do not dispose of 2003 Model Year Driver and Passenger Airbags unless you are sure of complete deployment. Please refer to the Hazardous Substance Control System for Proper Disposal. Dispose of deployed air bags in a manner consistent with state, provincial, local, and federal regulations. Use the following table to identify the status of the Airbag Squib.

AIRBAG SQUIB STATUS

(1) Using a DRBIII® read Airbag DTC's **If** the following active codes are present:

ACTIVE DTC	CONDITIONS	SQUIB STATUS
Driver Squib 1 open Driver Squib 2 open	Check the stored DTC's AND IF the stored minutes for both are within 15 minutes of each other.	Both Driver Squib 1 and 2 were used.
Driver Squib 1 open Driver Squib 2 open	Check the stored DTC's AND IF the stored minutes for Driver Squib 2 open is GREATER than the stored minutes for Driver Squib 1 by 15 minutes or more.	Driver Squib 1 was used; Driver Squib 2 is live.
Driver Squib 1 open Driver Squib 2 open	Check the stored DTC's AND IF the stored minutes for Driver Squib 1 open is GREATER than the stored minutes for Driver Squib 2 by 15 minutes or more.	Driver Squib 1 is live; Driver Squib 2 was used.
If Driver Squib 1 open	AND IF Driver Squib 2 opens is NOT an active code.	Driver Squib 1 was used; Driver Squib 2 is live.
If Driver Squib 2 open	AND IF Driver Squib 1 open is NOT an active code.	Driver Squib 1 is live; Driver Squib 2 was used.

If neither of the following codes is an active code:

ACTIVE DTC	SQUIB STATUS
Driver squib 1 open	Status of Airbag is
Driver Squib 2 open	Unknown.

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 wiring and the driver airbag, the horn, and the vehicle speed control switches if equipped. The clockspring must be properly centered when it is reinstalled on the steering column following any service procedure, or it could be damaged. The clockspring cannot be repaired and it must be replaced.

3.1.3 PASSENGER AIRBAG

The 2003 Liberty is equipped with front passenger airbag with dual stage squib inflators. When supplied with the proper electrical signal the inflator or inflators discharge the gas directly into the cushion. The airbag module cannot be repaired, and must be replaced if deployed or in any way damaged.

WARNING: THE PASSENGER AIRBAG MODULE CONTAINS 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 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.

CAUTION: Deployed Front Air Bags may or may not have live pyrotechnic material within the air bag inflator. Do not dispose of 2003 Mopar Year Driver and Passenger Airbags unless you are sure of complete deployment. Please refer to the Hazardous Substance Control System for Proper Disposal. Dispose of deployed air bags in a manner consistent with state, provincial, local, and federal regulations. Use the following table to identify the status of the Airbag Squib.

AIRBAG SQUIB STATUS

(1) Using a DRBIII® read Airbag DTC's **If** the following active codes are present:

ACTIVE DTC	CONDITIONS	SQUIB STATUS
Passenger Squib 1 open Passenger Squib 2 open	Check the stored DTC's AND IF the stored minutes for both are within 15 minutes of each other.	Both Passenger Squib 1 and 2 were used.
Passenger Squib 1 open Passenger Squib 2 open	Check the stored DTC's AND IF the stored minutes for Passenger Squib 2 open is GREATER than the stored minutes for Passenger Squib 1 by 15 minutes or more.	Passenger Squib 1 was used; Passenger Squib 2 is live.
Passenger Squib 1 open Passenger Squib 2 open	Check the stored DTC's AND IF the stored minutes for Passenger Squib 1 open is GREATER than the stored minutes for Driver Squib 2 by 15 minutes or more.	Passenger Squib 1 is live; Driver Squib 2 was used.
If Passenger Squib 1 open	AND IF Passenger Squib 2 open is NOT an active code.	Passenger Squib 1 was used; Passenger Squib 2 is live.
If Passenger Squib 2 open	AND IF Passenger Squib 1 open is NOT an active code.	Passenger Squib 1 is live; Passenger Squib 2 was used.

If neither of the following codes is an active code:

ACTIVE DTC	SQUIB STATUS
Passenger squib 1 open	Status of Airbag is
Passenger squib 2 open	Unknown.

3.1.4 SEAT BELT TENSIONER (SBT)

The 2003 Liberty driver front seat belt (retractor) tensioner supplements the driver airbag system. The seat belt tensioner is integral to the driver side front seat belt and retractor unit, which is secured to the B-pillar on the left side of the vehicle. The retractor is concealed beneath the molded plastic B-pillar trim. At the onset of an impact event the ACM uses the seat belt tensioner to rapidly retract the seat belt. With the slack removed, the occupant's forward motion in an impact will be reduced as will the likelihood of contacting interior components. The seat belt tensioner cannot be repaired, if damaged or defective it must be replaced. The ACM continuously monitors the resistance of the seat belt tensioner circuits and reports DTCs for open or shorted conditions.

3.1.5 SEAT BELT SWITCH (SBS)

The hall-effect driver seat belt switch provide the seat belt status, buckled or unbuckled, via hard-wired inputs to the ACM. The ACM uses seat belt switch input to determine the appropriate level of airbag deployment. The ACM also controls the seat belt warning indicator via a PCI Bus message to

the instrument cluster. The indicator will be turned on if the driver seat belt status is unbuckled. If the seat belt switch is damaged or defective the seat belt buckle assembly must be replaced. The ACM continuously monitors the seat belt switch circuits for an open or shorted conditions.

3.1.6 SIDE IMPACT AIRBAG CONTROL MODULE (SIACM)

Supplemental driver and front passenger curtain airbags provide side impact protection for the front and rear seat occupants. Each curtain airbag has its own side impact airbag control module (SIACM) to provide independent impact sensing and deployment. SIACM are located on the left and right B post just below the seat belt retractor. The SIACM performs self diagnostics and circuit tests to determine if the system is functioning properly. If the test finds a problem the SIACM will set both active and stored diagnostic trouble codes. The results of the system test are transmitted on the PCI Bus to the ACM once each second. If the warning lamp status message from either SIACM contains a lamp on request, the ACM will set an active DTC. At the same time as the DTC is set the ACM sends a PCI Bus message to the mechanical instrument cluster (MIC) requesting the airbag warning lamp be turned on. Observe all ACM warning and caution statements when servicing or handling the SIACM. SIACM are not repairable and must be replaced if they are dropped.

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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 AIRBAG CONTROL MODULE IS ACCIDENTALLY DROPPED DURING SERVICE, THE MODULE MUST BE SCRAPPED AND REPLACED WITH A NEW UNIT.

3.1.7 CURTAIN AIRBAGS

The Left and Right curtain airbags are located in the outboard edge of the roof under the headliner, just above the door openings. When supplied with the proper electrical signal the inflator can discharge the compress gas directly into the curtain airbag. Upon deployment, the curtain will tear open the headliner allowing the curtain airbag to fully deploy between the headliner and seat. The curtain airbag cannot re repaired and must be replaced if deployed or in any way damaged.

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.

3.1.8 FRONT IMPACT SENSOR

The front impact sensors are electronic accelerometers that sense the rate of vehicle deceleration, and combined with the ACM Accelerometer and Safing Sensor provides verification of the direction and severity of an 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 front 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 indicator operation accordingly. The impact sensors each receive battery current and ground through dedicated left and right sensor signal and ground circuits from the ACM. The impact sensors and the ACM communicate by modulating the voltage in the sensor signal circuit. If the sensor is dropped it must be replaced.

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

3.1.9 SPECIAL TOOLS

Some airbag diagnostic test use special tools, airbag load tools, 8310 and 8443 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 an Driver or Passenger Airbag, curtain airbag, clockspring, or seat belt tensioner (use a 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 component has been removed from the system and should be replaced. If the DTC is still active, continue this process until all component 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.

3.1.11 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. Always begin by reading the diagnostic trouble codes with the DRB. This will direct you to the specific test(s) that must be performed. In certain test procedures within this manual, diagnostic trouble codes are used as a diagnostic tool.

3.1.11.1 ACTIVE CODES

The code becomes active as soon as the malfunction is detected or key-on, whichever occurs first. An active trouble code indicates an on-going mal-

function. This means that the defect is currently there every time the airbag control module checks that circuit or component. It is impossible to erase an active code. Active diagnostic trouble codes for the airbag system are not permanent and will change the moment the reason for the code is corrected. 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.

3.1.11.2 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. When a trouble code occurs, the airbag warning indicator illuminates for 12 seconds minimum (even if the problem existed for less than 12 seconds). Once the code is no longer active, the time in minutes it was active, and the number of times the ignition has been cycled since the problem was last detected will be displayed. 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. 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 diagnostic trouble code will continue to be a stored code. If a malfunction is not active while performing a diagnostic test procedure, the active code diagnostic test will not locate the source of the problem. In this case, the stored code can indicate an area to inspect. Maintain a safe distance from all airbags while performing the following inspection. If no obvious problems are found, erase stored codes, and with the ignition on wiggle the wire harness and connectors, rotate the steering wheel from stop to stop. Recheck for codes periodically as you work through the system. This procedure may uncover a malfunction that is difficult to locate.

3.2 AUDIO SYSTEM

The PCI Bus inputs into the radio are used for VF dimming and remote steering wheel controls. All the radios are capable of displaying faults and allowing certain actuation tests through the use of

the DRBIII®. When attempting to perform PCI Bus diagnostics, the first step is to identify the radio in use in the vehicle.

When trouble shooting output shorts or “output” error messages, the following applies:

On radios without an external amplifier, the term output refers to the path between the radio and the speaker. This type of circuit can be monitored all the way through the speaker connections by the radio assembly. When the radio displays a shorted output DTC with this type of system, the speaker, radio, or wiring could be at fault.

On radios with an external amplifier, the term “output” refers to the circuit between the radio connector and the amplifier. The radio is capable of monitoring only this portion and can tell nothing about the circuit between the amplifier and the speakers. Consequently, a shorted output DTC on this type of system would only refer to this circuit. A faulty speaker could not cause this DTC.

3.2.1 REMOTE RADIO CONTROLS

These radios can be controlled via remote radio switches (optional). These switches are located on the back side of the steering wheel. They control mode, preset, seek up, seek down, volume up and volume down functions.

These functions are inputs to the Body Control Module and can be read with the DRBIII®. The switches are a multiplexed signal to the BCM. The radio control MUX circuit is a 5 volt line that is pulled to ground through different value resistors built into the switches. This causes a voltage drop to be seen by the BCM and it sends a specific message to the radio on the PCI Bus circuit. The radio then responds to the message.

This circuit is fairly simple to troubleshoot. The circuit must be complete from the switches in the steering wheel to the BCM. The ground must be complete so that the switches can cause the voltage drop for the BCM to see. The circuit passes through the clockspring so continuity through this device must be verified.

3.2.2 CD CHANGER

The CD Changer is mounted in the cargo area of the passenger compartment on the right rear quarter panel. The CD Changer features a removable 10-CD magazine. The CD Changer receives both ground and radio switch power through the radio. The controls on the radio operate the CD Changer through messages sent over the PCI Bus. The two-channel audio outputs of the CD Changer are hard-wired back to the radio, which then outputs the signal through the channels to the speakers or amplifiers.

3.3 BODY CONTROL MODULE

The KJ Body Control Module (BCM) is attached to the Junction Block (JB), which is the interface for the Body Harness, Instrument Panel (IP) Harness, and the Headlamp & Dash Harness. The JB also contains the fuses and relays used for the interior electrical system of the vehicle. The combination of the BCM and the JB is called the Junction Block Module (JBM).

There are two versions of JBM's: highline and lowline. The lowline is a subset of the components in the highline. Basically the lowline JBM will not support the following: Front or Rear Fogs, Remote Keyless Entry (RKE), and Vehicle Theft Alarm (VTA). In order to reduce service inventory, only the highline will be stocked. If there is a need to replace a lowline module in the field, a highline module may be used to replace it without any noticeable difference to the customer. The relay content of the JB varies based on vehicle options (power vs. manual seats, with or without Front Fogs, etc.). On right hand drive vehicles there is a separate ground wire connected to the BCM to identify it as a right hand drive.

The BCM controls the following subsystems:

- Compass/Mini-Trip Computer
- Door Ajar System
- Exterior Lighting
- Interior Lighting
- Power Door Locks / Remote Keyless Entry
- Rear Window Defogger
- Vehicle Theft Security System
- Windshield Wipers System

The BCM also is involved in the following functions:

- Vehicle Speed Sensing (Program Tire Size)
- Detection / Analysis of Miscellaneous Body Switches
- Driver Information Warnings (Chime)

The BCM is powered via the Ignition Off Draw (IOD) fuse. This allows the BCM to be active whenever the vehicle battery is connected whether the ignition is on or not. This is necessary because the BCM controls functions which are active when the ignition is not on (power locks, VTSS, etc.). If the IOD fuse is removed (i.e. for shipping or storage), the BCM will not be powered when the ignition is off, so any ignition-off functions will not be available. To optimize battery life in a stationary vehicle with the IOD fuse in place, the BCM goes to a low power mode (“sleeps”), when it detects that there is no relevant input or output active when the ignition is off. This transition from full

power mode to low power mode, and vice versa, is extremely quick and is transparent to the vehicle owner.

3.3.1 DOOR AJAR SYSTEM

The door ajar, tailgate and flip-up glass ajar states are used as inputs for the Body Control Module (BCM). The BCM uses these inputs to determine exactly what position the doors, tailgate and flip-up glass are in. The DRBIII® will display the state of the door ajar, tailgate ajar and flip-up glass ajar switches in Input/Outputs. It's important to note, that when any door, the tailgate or flip-up glass is closed the switch state on the DRBIII® will show OPEN. When any door, the tailgate or flip-up glass is open the switch state on the DRBIII® will show CLOSED. During diagnosis, if a door, the tailgate or flip-up glass is closed and the DRBIII® displays the switch state as CLOSED, it indicates a shorted ajar circuit. If a door, the tailgate or flip-up glass is open and the DRBIII® displays the switch state as OPEN, it indicates an open ajar circuit.

The door ajar switch is part of the door latch assembly. Each of the door ajar switches are individually connected to the Body Control Module. On right hand drive vehicles there is a separate ground wire connected to the BCM to identify it as a right hand drive. Therefore, when using the DRBIII and reading Input/Output on a RHD vehicle, the driver door ajar switch will read the Right Front Door Ajar Switch status.

3.3.2 EXTERIOR LIGHTING

The BCM controls the Exterior Lights via the appropriate relays, based on input from the Exterior Light Mode Switch. The BCM reads the position of the Exterior Light Mode Switch, and turns on the corresponding Exterior Lamps. The Exterior Lights are:

- Park Lamps
- Low Beams
- High Beams
- Front Fogs (optional)
- Rear Fogs (export markets)

If the Exterior Lamp Mode Switch is in the Lowbeam position, and then the ignition is turned off, followed by the customer turning off the Exterior Lamp Mode Switch, the BCM enters the Headlamp Delay mode. In this mode, the Lowbeam Lamps are left on for either 30, 60, or 90 seconds. The time period can be changed via the DRBIII®. This mode is exited if the ignition switch or the Exterior Lamp Mode Switch is cycled.

In certain conditions, the BCM will also control certain Exterior Lamps to signal special conditions (VTSS alarm, etc).

In the Canadian market, the BCM enables the Daylight Running Lamp (DRL) mode. The High-beam Relay is replaced in the JB with a solid-state relay. The BCM will duty cycle this relay when the engine is running and the Lowbeam Lamps are not on.

If either the Exterior Lamps are left on with the ignition in the OFF position for greater than 8 minutes, the BCM will turn off ("Loadshed") the lamps until another cycle occurs (i.e. ignition is turned on, Exterior Lamp Mode Switch position is changed, etc.). This feature exists to attempt to save the vehicle battery in the event that a customer forgets to turn off the headlamps, etc. On export vehicles, the park lamps do not "Loadshed".

3.3.3 INTERIOR LIGHTING

The BCM controls the Courtesy Lamps directly based on input from the Dimmer Switch, Door Ajar switches, Glass Ajar switch, and Rear Courtesy Disable switch.

The Courtesy Lamps are switched on in the event of a door or glass ajar, RKE unlock reception, or optional cylinder lock switch in the unlock position event. Upon the above inputs returning to off (door closed, etc.) the Courtesy Lamps will stay on for 27 seconds, and then fade to off ("Theater Dimming") over a period of 3 seconds.

If the Dimmer Switch is turned to the off position, the Courtesy Lamps are disabled and will not be turned on when any of the above inputs occur.

If the Rear Courtesy Disable Switch is in the disable position, the Courtesy Lamps will still be turned on when any of the above inputs occur except the flip-up glass ajar or tailgate ajar. This allows the interior lights to be off if the customer leaves the tailgate open for an extended period of time ("Tailgate Mode").

If the ignition is turned to Run, or a RKE door lock input is received while the Courtesy Lamps are on, the remainder of the 27 second timer is skipped and the Courtesy Lamps proceed immediately to the 3 second fade to off mode.

There are also two Map Lamps in the vehicle headliner between the driver and the passenger. The Map Lamps may be individually controlled independently of the Courtesy Lamp function. The Map Lamps are turned off and on by pressing directly on the lens cover. If the Map Lamp is in the OFF position, the Map Lamps will mimic the Courtesy Lamp state (i.e. if the Courtesy Lamps are on, the Map Lamps will also be on). If the Map Lamp is in the ON position, the Map Lamp will

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remain on until it is pressed again by the driver (independent of the Dimmer switch, door ajar, etc.).

If either the Courtesy Lamps or the Map Lamps are left on with the ignition in the OFF position for greater than 8 minutes, the BCM will turn off ("Loadshed") the lamps until another cycle occurs (i.e. ignition is turned on, a different door is opened, etc.). This feature exists to attempt to save the vehicle battery in the event that a door is accidentally left open, etc.

3.3.4 OVERHEAD CONSOLE

3.3.4.1 ELECTRONIC VEHICLE INFORMATION CENTER (EVIC)

When equipped, the Electronic Vehicle Information Center (EVIC) is located in the overhead console. The EVIC supplements the standard vehicle instrumentation. The EVIC also provides additional driver information, warnings; an interface to enable and disable vehicle programmable features and displays memory system messages. Most of the EVIC display information is received over the PCI bus. The EVIC sends and receives data over the PCI bus, communicating with the BCM, PCM, and the Instrument Cluster.

The EVIC uses a vacuum fluorescent (VF) display to supply the vehicle operator with a compass heading, outdoor temperature, average fuel economy, distance to empty, trip odometer, and elapsed ignition on time.

The EVIC function buttons are labeled C/T, RESET, STEP, and MENU. The three UGDO buttons are labeled with dots to indicate the channel number.

The optional Universal Garage Door Opener (UGDO) known as HomeLink® is integrated with the EVIC.

VEHICLE INFORMATION DISPLAY

The EVIC provides the following functions:

- Compass direction
 - Outside temperature
 - Elapsed ignition on time
 - Distance to empty
 - Average fuel economy
 - Trip Odometer
 - Service Interval
 - Customer Programmable Features
 - Vehicle Information Warning Message Displays
- The EVIC will not display information for any of the screens for which it did not receive the proper

PCI bus data. Refer to the symptom list in the Compass Mini-Trip Computer section for problems related to the EVIC.

The EVIC receives the following messages from the Instrument Cluster:

- Low Washer Fluid
- Turn Signal On
- Vehicle Odometer

The EVIC receives the following message from the BCM:

- Filtered Outside Temperature
- Door(s) Ajar
- Reargate Ajar
- Liftgate Ajar
- Remote Key Battery Low
- VF display dimming brightness and exterior lamp status
- Elapsed Ignition On Time data
- Distance to Empty
- Average Fuel Economy
- Trip Odometer data
- Verification of US/Metric status

The EVIC receives the following message from the PCM:

- Vehicle Speed
- Engine RPM
- Charging System Voltage

WARNING MESSAGES: When the appropriate conditions exist, the EVIC displays the following warning messages and symbols. Each message is accompanied by a series of beeps.

- TURN SIGNAL ON (with graphic)
- PERFORM SERVICE
- DRIVER DOOR OPEN (with graphic)
- PASSENGER DOOR OPEN (with graphic)
- REAR DOOR(S) OPEN (One or more, with graphic)
- REARGATE OPEN
- LIFTGLASS OPEN
- HOOD OPEN (BUX Only)
- WASHER FLUID LOW
- REMOTE KEY BATTERY LOW
- NO J1850 MSGS RECEIVED

CUSTOMER PROGRAMMABLE FEATURES:

Press the MENU button to select one of the following displays:

- LANGUAGE (Press STEP button to select one of 5 languages)

- US or METRIC (Press STEP button to toggle between US or Metric units)
- AUTO DOOR LOCKS (Press STEP button to select "Yes" or "No.") (EXCEPT BUX)
- AUTO UNLOCK ON EXIT (Press STEP button to select "Yes" or "No.") (EXCEPT BUX)
- REMOTE UNLOCK DRIVER'S DOOR 1st (Press STEP button to select)
- SOUND HORN ON LOCK (Press STEP button to select)
- FLASH LIGHTS ON LOCK/UNLOCK? (Press STEP button to select "Yes" or "No.")
- HEADLAMP DELAY (Press STEP button to select desired delay)
- SERVICE INTERVAL (Press STEP button to select distance intervals)
- TRAIN REMOTE (Press STEP button to select "Yes" or "No.")
- RESET SERVICE DISTANCE (Press STEP button to select "Yes" or "No.")
- LOW FUEL CHIME (Press STEP button to select "Yes" or "No.")

MENU BUTTON

Pressing the MENU button while displaying Compass/Temp or traveler screens will initiate the personalization menu. Pressing the MENU button while in the personalization menu will step the EVIC through the personalization screens.

STEP BUTTON

The EVIC will enter a traveler screen by pressing the STEP button while the Compass/Temp screen is displayed or by stepping through all the personalization screens with the MENU button. The STEP Button can be used in one of the following ways:

1) To sequentially select one of 4 displays or blank display in the following order:

- Average Fuel Economy
- Distance to Empty
- Trip Odometer
- Time Elapsed
- Service Mileage
- Off (Blank)

2) To set the magnetic variance zone when VARIANCE = X (X = 1 - 15) is indicated in the VF display.

3) Pressing the STEP button while displaying a personalization screen will toggle the options for that feature.

RESET BUTTON

The RESET Button has two different functions:

1) To clear the trip functions that may be reset

2) To enter and exit the diagnostic mode

Pressing the RESET button once will clear the trip function that is currently being displayed and the EVIC will send a PCI bus beep request to the BCM. If the RESET button is pressed again within 3 seconds, the EVIC will reset ALL of the trip functions and an additional beep request is sent to the BCM. The trip functions that may be reset are:

- Average Fuel Economy
- Trip Odometer
- Elapsed Time
- Service Mileage

A reset will only occur if one of the trip functions that may be reset is currently being displayed. The EVIC module will send a beep request to the BCM.

Simultaneously pressing the RESET button and the C/T button while turning the ignition from Off to On will enter the EVIC into the self-diagnostic mode. The EVIC self-diagnostic mode may also be initiated using the DRBIII®.

COMPASS/TEMPERATURE (C/T) BUTTON

Actuating the Compass/Temperature Button (C/T) will cause the EVIC to display the compass and temperature information. This function will operate from another traveler display. The EVIC simultaneously displays the compass reading and the outside temperature. Outside temperature information is received via the PCI bus from the BCM.

The EVIC module internally senses and calculates the compass direction.

TRAVELER DISPLAY FUNCTIONS

Using the STEP button will change the EVIC between modes of operation and display the appropriate information according to data received from the PCI Bus.

COMPASS OPERATION

Upon ignition on, if the calibration information stored in the EVIC memory is within the normal range, the EVIC will perform in slow Auto-Cal mode. In slow Auto-Cal mode, the EVIC continuously compensates for the slowly changing magnetic field of the vehicle. The compass module detects changes in the vehicle magnetism and makes appropriate internal corrections to ensure proper displayed direction.

However, if the calibration information stored in the EVIC memory is not within the normal range at ignition on, the EVIC will enter fast Auto-Cal. CAL is displayed along with the temperature.

Auto activation of the fast Auto-Cal mode will also occur when the EVIC is subjected to high magnetic field strength levels, which cause all compass readings to be erroneous for a continuous

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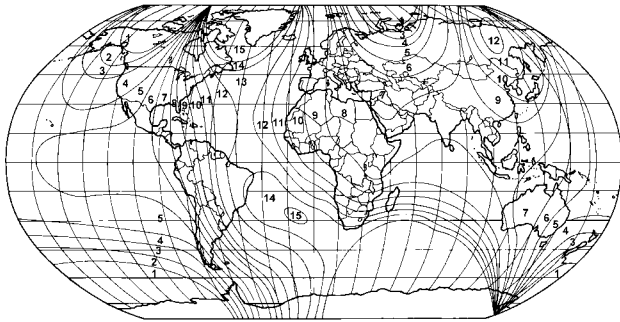
period of five (5) minutes. During fast Auto-Cal, CAL will be displayed along with the temperature.

Fast Auto-Cal can also be performed manually, by pressing and holding the RESET button for 10 seconds during the Compass/Temperature display mode.

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 EVIC display must not be blank.
- If the compass/temperature data is not currently being displayed, momentarily press and release the C/T button to display compass/temp information.
- Press and hold the RESET button until VARIANCE = XX is displayed. The EVIC will display the variance zone stored in memory and the word VARIANCE.
- Use the STEP button to select the proper variance zone number, 1 through 15.
- After selecting the proper zone number, momentarily press and release the RESET button. The variance zone is then stored in the memory and the EVIC returns to normal operation.



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COMPASS CALIBRATION

The compass module has 2 types of auto-calibration; slow-cal and fast-cal. Slow-cal ensures that during normal vehicle operation the compass performs auto-calibration functions to keep the compass sensors in their proper operating range. Whenever the ignition is On and the EVIC receives PCI bus data indicating that engine RPM is greater than zero, auto-calibration is performed continuously.

If the calibration information stored in the compass module memory is not within the normal range after a power-up cycle, the compass will display CAL. The EVIC will enter into the fast-cal mode until calibration is complete.

To enter the compass into Manual Calibration mode, perform the following steps:

- 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."
- The ignition switch must be in the On position and the EVIC display must not be blank.
- Press the C/T button to view the Compass/Temperature display.
- Press and hold the RESET button until CAL is displayed, then release the button.
- Drive slowly, less than 5 MPH (8KPH) in at least 1 complete 360 degree circle.
- CAL will remain illuminated to alert the driver that the compass is in the calibration mode.
- After calibration is complete, CAL will turn off.

If the compass appears blank, unable to be calibrated, or the compass displays false indications, the vehicle must be demagnetized. Refer to Compass Demagnetizing Procedure in the Service Manual.

SELF-CHECK DIAGNOSTICS

The EVIC is capable of performing a diagnostic self check on its internal functions. EVIC diagnostics may be performed using a DRBIII® or by using the following procedure:

- (1) With the ignition switch in the OFF position, depress and hold the RESET and the C/T buttons.
- (2) Turn the ignition switch to the ON position.
- (3) Continue to hold both buttons until the software versions are displayed, then release the buttons.

(4) All of the VFD segments will illuminate for 2-4 seconds. Check for segments that do not illuminate or illuminate all the time.

(5) When the self-check is complete the EVIC will display one of the following messages:

- PASSED SELF TEST
- FAILED SELF TEST
- FAILED J1850 COMMUNICATION

(6) To exit the self-check mode, depress the RESET button or cycle the ignition switch and the EVIC will return to normal operation.

If a Communication fault is displayed, refer to the symptom list. If a FAILED SELF TEST is displayed, the EVIC must be replaced.

AMBIENT TEMPERATURE SENSOR

The ambient air temperature is monitored by the BCM and displayed by the EVIC. The BCM receives a hardwire input from the ambient temperature sensor (ATS).

The ATS is a variable resistor that operates on a 5-volt reference signal circuit hardwired from the

BCM. The resistance in the ATS changes as the outside temperature rises or falls. The BCM senses the change in reference voltage through the ATS resistor. Based on the resistance of the ATS, the BCM is programmed to correspond to a specific temperature. The BCM stores and filters the ambient temperature data and transmits this data to the EVIC via the PCI Bus. The ATS cannot be adjusted or repaired and, if faulty or damaged, it must be replaced.

AMBIENT TEMPERATURE SENSOR FAULT CODES

The outside temperature function is supported by the ambient temperature sensor (ATS), a signal and ground circuit hardwired to the BCM, and the EVIC display.

If the EVIC display indicates 54°C (130°F) or the ATS sense circuit is shorted to ground, the temp display will be 54°C (130°F) to indicate a SHORT circuit condition.

If the EVIC display indicates -40°C (-40°F) or the ATS sense circuit is open, the temp display will be -40°C (-40°F) to indicate an OPEN circuit condition.

If there is an OPEN or SHORT circuit condition, it must be repaired before the CMTC/EVIC VFD can be tested.

The ATS is supported by the FCM. Ambient Temperature Sensor DTCs will be recorded in the FCM. 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 EVIC passes the self test, and the ATS, the circuits, and PCI bus communications are confirmed to be OK, but the EVIC temperature display is inoperative or incorrect, replace the FCM.

AMBIENT TEMPERATURE SENSOR TEST

- (1) Turn the ignition OFF.
 - (2) Disconnect the ATS harness connector.
 - (3) 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.

HOMELINK® UNIVERSAL TRANSMITTER

If equipped, the HomeLink® Universal Transmitter is integrated into the overhead console. For added security it will operate home security systems that use coded signals known generically as Rolling Codes. The overhead console display provides visual feedback to the operator, indicating which HomeLink® transmitter channel button is being pressed. The HomeLink® can learn and store up to 3 separate transmitter radio frequency codes to operate garage door openers, security gates, and security lighting. The HomeLink® buttons are marked with one, two, or three dots. For complete information, refer to Universal Transmitter in the Service Manual or Owner Manual.

3.3.5 POWER DOOR LOCKS/REMOTE KEYLESS ENTRY (RKE)

The BCM controls the Power Door Locks via the relays in the JB. There are three individual relays for this system: Driver Unlock Relay, which only unlocks the drivers door, the Unlock Relay which unlocks the other 3 doors, and the Lock Relay, which locks all of the doors.

There are two Power Door Lock Switches (on the driver and passenger doors) which are read by the BCM to control the locks.

The optional RKE module plugs directly into the side of a highline BCM. A lowline BCM does not have a connector for the RKE. The RKE receiver communicates with the RKE transmitters (key fobs), and gives the BCM commands, via a direct serial communications line. The RKE can tell the BCM to unlock the doors, lock the doors, open the flip-up glass, or initiate the panic alarm. The RKE also can be used to change the Customer Programmable Features (such as Enable / Disable Optical Chirp).

The BCM will actuate the Lock Relay for 250 ms if either power lock switch is in the lock position, unless the driver's door is ajar and the key is in the ignition. The BCM will also lock the doors if the RKE lock button is pressed.

The BCM will actuate the Driver's Door Unlock Relay and the Unlock All Relay for 250 ms if either power lock switch is in the unlock position. If the Customer Programmable Features are set to Unlock Driver's Door First, the BCM will only actuate the Driver's Door Unlock Relay when the RKE Unlock button is pressed the first time. If the button is pressed a second time, both the unlock relays will be actuated (2 unlock presses within 5 seconds). However, if the Customer Programmable Features are set to Unlock All Doors, then the BCM

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actuates both unlock relays every time an RKE unlock button is pressed.

The BCM does not allow rapid cycling of the lock / unlock relays. Once the BCM starts to actuate a lock or unlock relay, it will hold it for 250 ms regardless of someone cycling the switch rapidly.

The BCM will lock the doors if the Customer Programmable Feature for Rolling Locks is enabled, and the PCI bus message from the Powertrain Control Module (PCM) is received.

The BCM also directly drives the Tailgate Lock motor and the Flip-up Glass Release motor. The BCM can reverse the current through the Tailgate Lock motor to lock or unlock the door as required. If the BCM actuates the Flip-up Glass Release motor, the latch on the glass is released, and the window will raise itself under the power of two gas cylinders (struts).

The Tailgate motor will be controlled to the lock or unlock positions exactly the same as the conditions above for the Door Lock Relay. In addition, the Tailgate Motor will be locked for the following conditions:

1. Tailgate Cylinder Lock Switch in the lock position (if equipped).
2. Battery disconnect / reconnect (including pulling and replacing the IOD fuse)
3. Rear Wiper Switch turned on

The Tailgate Motor can also be unlocked with the Tailgate Cylinder Lock Switch (if equipped).

The Flip-Up Glass Release Motor will release the latch if the Tailgate Cylinder Lock Switch is turned to the unlock position (if equipped) or the RKE Flip-Up Glass button is pressed or the BCM “knows” the doors are unlocked and the rear door handle is pulled to the Flip-Up Glass Release position.

This vehicle is not equipped with central locking. The key cylinder lock switches, if equipped, are to disarm the VTSS only.

3.3.6 REAR WINDOW DEFOGGER

The Body Control Module reads the Rear Window Defogger Switch and turns on the rear window defogger relay to defrost the rear glass. The first time in an ignition cycle that the driver presses the defogger button, the BCM will turn on the relay for 10 minutes. The second and subsequent times, the BCM will turn on the relay for 5 minutes. If the ignition is turned off, the BCM will turn the rear window defogger relay off.

3.3.7.1 VEHICLE THEFT SECURITY SYSTEM (VTSS)

The BCM controls the VTSS if equipped. To arm the VTSS the BCM will begin the VTSS Pre-arming process, which last for sixteen seconds

after the following criteria is met. The key is removed from the ignition switch and the operator locks the vehicle using a key fob or power door lock switch with the doors closed or if the doors are open it will then begin when all doors are closed. During Pre-arm, the VTSS indicator located in the Instrument Cluster flashes two times per second. Pre-arm is exited if any door/tailgate is opened, flip-up glass is opened, a cylinder lock switch is turned to unlock, or the ignition is turned on.

After the Pre-arm timer expires, the BCM goes to the armed mode and flashes the VTSS indicator at a slower rate. The BCM monitors the door ajar, flip-up glass ajar, tailgate ajar and ignition status and trips to alarming if any of these change states.

Disarming the VTSS feature is done with the left key cylinder lock switch, a Remote Keyless Entry system “unlock” or the ignition turned to the “on” position with a valid SKIM key.

If the BCM is triggered to the Alarm state, it flashes the headlamps, hazard lamps and actuates the Horn on and off for 3 minutes, then will flash the headlamps and hazard lamps without the horn for an additional 15 minutes until it times out. After the timeout, the alarm will return to the armed state. If the alarm was triggered while the operator was away from the vehicle, the BCM will chirp the horn 3 times (“Tamper Alert”) when the driver disarms the alarm.

3.3.7.2 VEHICLE THEFT SECURITY SYSTEM (VTSS) (EXPORT ONLY)

The Vehicle Theft Security System (VTSS) is available in either a base or a premium version for this model. The base system is controlled by the Body Control Module (BCM) while the premium system is controlled by the BCM along with an Intrusion Transceiver Module (ITM) which monitors the interior of the vehicle for movement. The base VTSS uses the vehicle horn for the audible alert while the premium version is equipped with a battery backed siren. Both systems will flash the hazard lamps when tripped. The VTSS does not prevent engine operation, this is done with the Sentry Key Immobilizer System SKIS. For information regarding SKIS, refer to the appropriate Powertrain Diagnostic Procedures manual.

To arm the VTSS the BCM must complete a sixteen-second Pre-arming process, which will begin after the following criteria are met. The key is removed from the ignition switch and the operator locks the vehicle using a key fob or power door lock switch with the doors, tailgate and flip-up glass closed or if any of these are open, pre-arm will begin after they are closed. If the hood is left open during pre-arming it will be ignored as input until

it is closed. During Pre-arming, the VTSS indicator located in the Instrument Cluster flashes two times per second. Pre-arm is exited if any doors, tailgate, flip-up glass or the hood is opened, or if the ignition switch is turned to the on position.

After the Pre-arming timer expires, the BCM goes to the armed mode and flashes the VTSS indicator at a slower rate. The BCM will then monitor the ignition switch status along with the hood/door/flip-up glass/tailgate ajar switches. For vehicles equipped with the Intrusion Transceiver Module the vehicle's interior will continuously be monitored for movement. This feature can be disabled during the pre-arm sequence with three additional lock commands from the RKE which will cause a single audible chirp confirming this request. While armed the Siren will continuously monitor its battery feed and the siren signal control circuits and will trigger if either of these are disconnected. The Siren also sends a status message back to the ITM.

Disarming the VTSS is done with either a Remote Keyless Entry system "unlock" or the ignition turned to the "on" position with a valid SKIM key.

When the VTSS is triggered on a base system, the alarming state will be twenty-five seconds. Vehicles with the premium system will actuate the hazard lamps for twenty-five seconds and the siren twenty-eight seconds. After that period if the disturbance is still present only the siren will be activated again for twenty-eight seconds with five seconds intervals between warning cycles. This will continue up to ten times unless the disturbance goes away. If the alarm was triggered while the operator was away from the vehicle, there will be three audible chirp messages when the system is disarmed.

3.3.8 WINDSHIELD WIPER SYSTEM (FRONT)

The BCM controls the Front Windshield Wipers via the On/Off and Hi/Low relays located in the Power Distribution Center (PDC), based on input from the Front Wiper Mode Switch. Note: The BCM does not control the rear wiper system, however, the BCM does monitor the Rear Wiper Mode Switch to control the flip-up glass release. This function is discussed under Power Door Locks.

If the Front Wiper Mode Switch is in any of the Intermittent Delay positions, the BCM will turn on the On/ Off relay until the wiper motor is off of the Park Switch. The internal wiring between the motor and the relays, allows the wipers to complete a single cycle and return to the parked position. The BCM monitors the Park Switch to make sure that the Wiper is able to return to the parked position within 8 seconds. If this does not occur, the

BCM sets a Wiper Park Switch DTC and turns the wiper on/off relay to on until the wipers are switched off.

If the Front Wiper Mode Switch is in the Low position, the BCM will turn on the On/Off relay. The wiper motor will run at low speed.

If the Front Wiper Mode Switch is in the High position, the BCM will turn on the On/Off relay and the Hi/Low relay. The wiper motor will run at high speed.

If the Front Wiper Mode Switch is turned to the Wash position, the BCM will turn on the On/Off relay until it sees 3 cycles of the park switch. The wiper motor will run at low speed for 3 cycles and then resume whatever the current mode of the switch is.

3.3.9 THE BCM IS ALSO INVOLVED IN THE FOLLOWING FUNCTIONS:

3.3.9.1 VEHICLE SPEED SENSING

The speed sensor on the rear axle generates approximately 80,000 pulses per mile. This signal is sent to the ABS module (if equipped) and then to the BCM. The BCM has been programmed in the Assembly Plant with the proper tire size. If a BCM is replaced, it must be programmed with the proper tire size using the DRBIII®. Based on this tire size, the BCM converts the 80,000 pulses per mile into 8,000 pulses per mile, and outputs this signal to the PCM.

If the vehicle is equipped with ABS, the ABS module supplies the required 12VDC to the wheel speed sensor. If the vehicle is not equipped with ABS, the BCM supplies this voltage on the Vehicle Speed Sensor Supply pin. This output is on for non-ABS vehicles when the ignition switch is in the Run or Crank positions.

3.3.9.2 DETECTION / ANALYSIS OF MISCELLANEOUS BODY SWITCHES

The BCM detects the position of the A/C Switch from the control head and reports this over the PCI bus to the PCM.

The BCM detects the position of the Renegade Lighting Input and reports this over the PCI bus to the Cluster.

3.3.9.3 DRIVER INFORMATION WARNINGS (CHIME)

The Chime is located in the cluster. However, the cluster goes to sleep with the ignition off, so the BCM turns on the Cluster Wakeup Output when it detects that the Headlamps-On Warning or the Key-In-Ignition Warning conditions exist. The BCM sends these warnings to the Cluster over the PCI bus.

3.4 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. Additional tracer colors may be added in order to distinguish between different module connections. The modules are wired in parallel. Connections are made in the harness using splices.

The following modules are used on this vehicle:

- Body Control Module
- Airbag Control Module
- Left Side Impact Airbag Control Module
- Right Side Impact Airbag Control Module
- Controller Antilock Brake
- Powertrain Control Module (Gas only)
- Engine Control Module (Diesel only)
- Radio
- CD Changer
- Transmission Control Module
- Sentry Key Immobilizer Module
- Overhead Console
- Intrusion Transceiver Module (Export only)
- Instrument Cluster

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 10800 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 following figure for some typical displays.

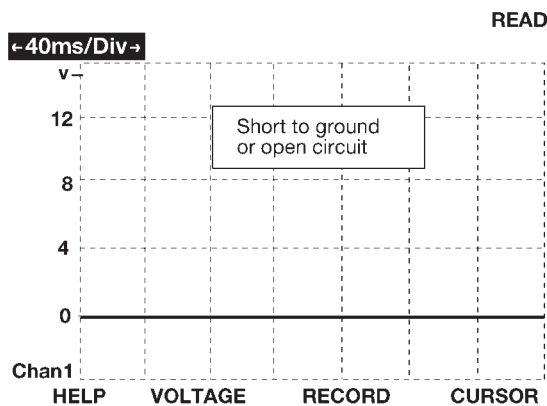
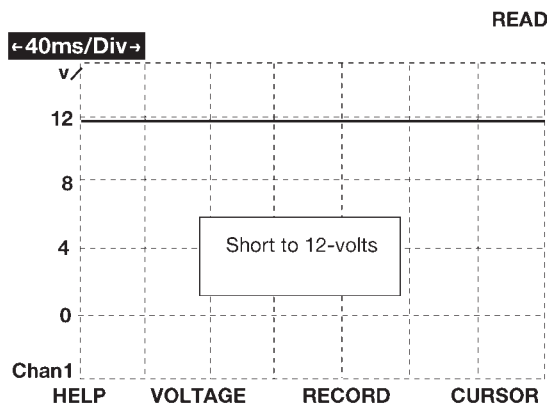
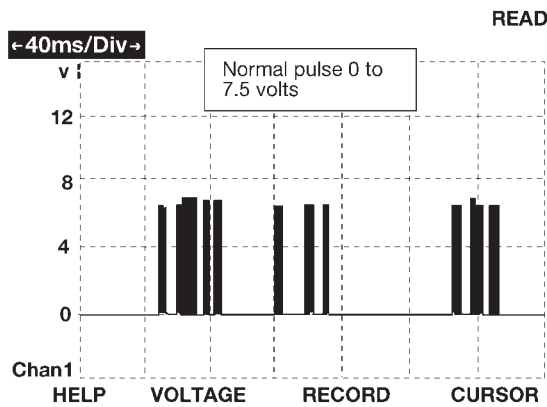
The PCI bus failure modes are broken down into two categories. Complete PCI Bus Communication Failure and individual module no response. Causes of a complete PCI Bus Communication Failure include a short to ground or battery on the PCI circuit. Individual module no response can be caused by an open PCI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

Symptoms of a complete 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
- Dashed lines in the overhead console ambient temperature display
- No response received from any module on the PCI bus (except the 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 complete 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.



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3.5 INSTRUMENT CLUSTER

The Instrument Cluster houses the Speedometer, Tachometer, Fuel, and Engine Coolant Temperature analog gauges. The cluster positions all of the gauges using PCI Bus messages received from the PCM. The cluster contains certain warning indicators, depending on engine type and options. Some of the indicators are hardware inputs to the cluster and some indicators are controlled by messages received via the PCI Bus. The warning chime tone generator is contained internally within the

cluster. The cluster contains a vacuum fluorescent (VF) display for the Odometer/Trip/Warning function. The VF will also display warning messages such as door / gate / glass ajar; low washer fluid level, and no bus communications. The cluster has the ability to store DTCs, communicate on the PCI Bus, display engine information, and display certain inputs using the DRBIII®.

For complete Description and Operation of the Instrument Cluster, refer to the KJ Service Manual Instrument Cluster section.

3.5.1 DIAGNOSTIC SELF TEST

The Instrument Cluster is capable of performing a Diagnostic Self Test. This self test can be initiated manually by depressing and holding the odometer trip reset button while cycling the ignition from the Off to the On position. This self test can also be initiated using the DRBIII®. During the self test, all of the PCI Bus controlled light-emitting diode (LED) indicators will illuminate. (NOTE: The VTSS indicator can be turned on and off through the BCM using the DRBIII®; the Airbag indicator is illuminated by the ORC module in response to a PCI Bus message from the cluster). The Speedometer, Tachometer, Fuel gauge, and the Engine Coolant Temperature gauge will position the pointers at the respective calibration points. The vacuum fluorescent (VF) display will illuminate all segments beginning with 111111 through 999999, and then display the cluster software version. The chime will sound 5 (five) times. The cluster will then return to normal operation. Turning the ignition switch to the Off position or the cluster detecting engine RPM greater than 0 (zero) will stop the self test.

3.6 USING THE DRBIII®

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

3.7 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. This is a sample of such an error message display.

- User-Requested WARM Boot by pressing MORE and NO at the same time.

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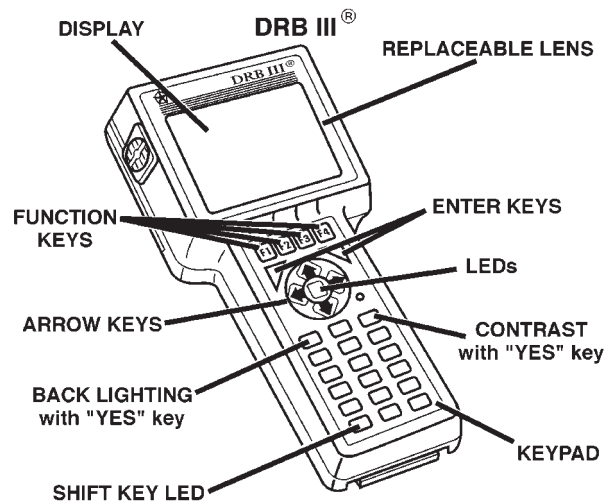
ver: 2.29
date: 1 Oct 93
file: key_itf.cc
date: Jan 12 1994
line: 544
err: 0x1
User-Requested WARM Boot

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

or User-Requested COLD Boot by pressing
MORE and YES at the same time.

ver: 2.29
date: 1 Oct 99
file: keyhndi.cc
date: Mar 8 2000
line: 1297
err: 0x1
User-Requested COLD Boot

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



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4.2 SAFETY

4.2.1 TECHNICIAN SAFETY INFORMATION

WARNING: ENGINES PRODUCE CARBON MONOXIDE THAT IS ODORLESS, CAUSES SLOWER REACTION TIME, AND CAN LEAD TO SERIOUS INJURY. 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 drive wheels.

When servicing a vehicle, always wear eye protection, and remove any metal jewelry such as 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 the service manual. 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 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 sub-

3.7.1 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 16-way connector cavity 16). A minimum of 11 volts is required to adequately power the DRBIII®. Check for proper grounds at DLC cavities 4 and 5.

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.

3.7.2 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.

components 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. IT CAN EXPOSE YOU TO SERIOUS OR POSSIBLY FATAL INJURY. CAREFULLY READ AND UNDERSTAND THE CAUTIONS AND THE SPECIFICATION LIMITS.

- 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 functions for the measurement. Do not try voltage or current measurement 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.
- The circuit being tested must be protected by a 10A fuse or circuit breaker.
- 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 the load.

- 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: BEFORE ROAD TESTING A VEHICLE, BE SURE THAT ALL COMPONENTS ARE REASSEMBLED. DURING THE TEST DRIVE, DO NOT TRY TO READ THE DRBIII® SCREEN WHILE IN MOTION. DO NOT HANG THE DRBIII® FROM THE REAR VIEW MIRROR OR OPERATE IT YOURSELF. HAVE AN ASSISTANT AVAILABLE TO OPERATE THE DRBIII®.

5.0 REQUIRED TOOLS AND EQUIPMENT

DRBIII® (diagnostic read-out box)
Jumper wires
ohmmeter
voltmeter
Test Light
8310 Airbag Load Tool
8443 SRS Airbag System Load Tool

GENERAL INFORMATION

6.0 GLOSSARY OF TERMS

ABS	antilock brake system	ORC	occupant restraint controller
ACM	airbag control module	PAB	passenger airbag
AECM	airbag electronic control module (ACM)	PCI	programmable communication interface
ASDM	airbag system diagnostic module (ACM)	PCM	powertrain control module
BCM	body control module	PDC	power distribution center
CAB	controller antilock brakes	PWM	pulse width modulated
DAB	driver airbag	RHD	right hand drive
DLC	data link connector	RKE	remote keyless entry
DTC	diagnostic trouble code	SBS	seat belt switch
EBL	electric back lite (rear window defogger)	SBT	seat belt tensioner
ECM	engine control module	SIACM	side impact airbag control module
EVIC	electronic vehicle information center	SKIM	Sentry Key Immobilizer Module
ITM	intrusion transceiver module	SKIS	Sentry Key Immobilizer System
JB	junction block	SRS	supplemental restraint system
LHD	left hand drive	SUV	sport utility vehicle
MIC	mechanical instrument cluster	TCM	transmission control module
ODO	odometer	UGDO	universal garage door opener
		VFD	vacuum fluorescent display
		VTSS	vehicle theft security system

7.0

DIAGNOSTIC INFORMATION AND PROCEDURES

Symptom List:

ACCELEROMETER 1
ACCELEROMETER 2
INTERNAL 1
OUTPUT DRIVER 1
SAFING SENSOR
STORED ENERGY FIRING 1

Test Note: All symptoms listed above are diagnosed using the same tests.
The title for the tests will be INTERNAL MODULE TEST.

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.

ACCELEROMETER 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 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 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.

SAFING SENSOR

When Monitored: When 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 safing sensor.

STORED ENERGY FIRING 1

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

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

INTERNAL MODULE TEST — Continued

POSSIBLE CAUSES	
AIRBAG CONTROL MODULE - ACM LEFT SIDE IMPACT AIRBAG CONTROL MODULE - LSIACM RIGHT SIDE IMPACT AIRBAG CONTROL MODULE - RSIACM	

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. Ensure the battery is fully charged. WARNING: IF THE MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. 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 reporting this diagnostic trouble code. SELECT ONE:</p> <p>ACM - ACTIVE or STORED DTC WARNING: MAKE SURE THE BATTERY IS DISCONNECTED, THEN WAIT TWO MINUTES BEFORE PROCEEDING. Replace the Airbag Control Module in accordance with Service Instructions. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>LEFT SIACM - ACTIVE or STORED DTC WARNING: MAKE SURE THE BATTERY IS DISCONNECTED, THEN WAIT TWO MINUTES BEFORE PROCEEDING. Replace the Left Side Impact Airbag Control Module in accordance with Service Instructions. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>RIGHT SIACM - ACTIVE or STORED DTC WARNING: MAKE SURE THE BATTERY IS DISCONNECTED, THEN WAIT TWO MINUTES BEFORE PROCEEDING. Replace the Right Side Impact Airbag Control Module in accordance with Service information. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

Symptom List:

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 TEST**.

When Monitored and Set Condition:

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 MIC transmits the message one time at ignition on, upon lamp state change, or in response to the ACM lamp message.

Set Condition: This DTC will set if the indicator status is OPEN for 2 or 3 consecutive messages or 2 or 3 seconds.

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 MIC transmits the message one time at ignition on, upon lamp state change, or in response to the ACM lamp message.

Set Condition: This DTC will set if the indicator status is SHORT for 2 or 3 consecutive messages or 2 or 3 seconds.

POSSIBLE CAUSES

MIC, COMMUNICATION FAILURE
WARNING INDICATOR
ACM, WARNING INDICATOR
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

AIRBAG WARNING INDICATOR TEST — Continued

TEST	ACTION	APPLICABILITY
2	<p>With the DRBIII®, ensure PCI Bus communications with the Instrument Cluster. Is the Instrument Cluster communicating on the PCI Bus?</p> <p>Yes → Go To 3</p> <p>No → Refer to category COMMUNICATION CATEGORY and select the related symptom INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>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. Does the DRBIII® show the LAMP STATUS: OK?</p> <p>YES Go To 4</p> <p>NO Replace Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. If there are no possible causes remaining, view repair.</p> <p>Repair Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
5	<p>NOTE: Ensure the battery is fully charged. With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions. Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary. You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem: - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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. No → Go To 3	All

CLUSTER MESSAGE MISMATCH — Continued

TEST	ACTION	APPLICABILITY
3	<p>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?</p> <p>YES Go To 4</p> <p>NO Replace Mechanical Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: MAKE SURE THE BATTERY IS DISCONNECTED, THEN WAIT TWO MINUTES BEFORE PROCEEDING. If there are no possible causes remaining, view repair.</p> <p>Repair Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
5	<p>NOTE: Ensure the battery is fully charged. With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions. Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary. You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem: - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom: CONFIGURATION ERROR

When Monitored and Set Condition:

CONFIGURATION ERROR

When Monitored: With ignition on the Side Impact Airbag Control Module monitors the unused squib terminals for the a valid squib circuit resistance.

Set Condition: When the SIACM detects a valid squib circuit resistance across the unused terminals.

POSSIBLE CAUSES

SELECT MODULE REPORTING DTC
MISS WIRED LEFT SIACM CONNECTOR
MISS WIRED RIGHT SIACM CONNECTOR
LEFT SIDE IMPACT AIRBAG CONTROL MODULE - LSIACM
RIGHT SIDE IMPACT AIRBAG CONTROL MODULE - LSIACM
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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 ONE:</p> <p>LEFT SIACM - ACTIVE DTC Go To 2</p> <p>LEFT SIACM - STORED DTC Go To 4</p> <p>RIGHT SIACM - ACTIVE DTC Go To 3</p> <p>RIGHT SIACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

CONFIGURATION ERROR — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Left SIACM connector. NOTE: Check connectors - Clean and repair as necessary. Using the wiring diagram/schematic as a guide, inspect the Left SIACM connector wiring. Is the connector correctly wired?</p> <p>Yes → Replace the Left Side Impact Airbag Control Module in accordance with Service Instructions. WARNING: IF THE SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Rewire the Left Side Impact Airbag Control Module connector. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Right SIACM connector. NOTE: Check connectors - Clean and repair as necessary. Using the wiring diagram/schematic as a guide, inspect the Right SIACM connector wiring. Is the connector correctly wired?</p> <p>Yes → Replace the Right Side Impact Airbag Control Module in accordance with Service Instructions. WARNING: IF THE SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Rewire the Right Side Impact Airbag Control Module connector. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged. With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions. Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary. You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem: - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom: CURTAIN SQUIB CIRCUIT OPEN

When Monitored and Set Condition:

CURTAIN SQUIB CIRCUIT OPEN

When Monitored: With the ignition is On, the SIACM monitors the resistance of the Curtain Squib circuits.

Set Condition: When the SIACM detects an open circuit or high resistance on the Curtain Squib circuits.

POSSIBLE CAUSES

CURTAIN AIRBAG OPEN
CURTAIN SQUIB LINE 1 OR LINE 2 CIRCUIT OPEN
SIACM, CURTAIN SQUIB CIRCUIT OPEN
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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. SELECT ONE:</p> <p>LEFT SIACM - ACTIVE DTC Go To 2</p> <p>LEFT SIACM - STORED DTC Go To 4</p> <p>RIGHT SIACM - ACTIVE DTC Go To 2</p> <p>RIGHT SIACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

CURTAIN SQUIB CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>Disconnect the Curtain Airbag connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Curtain Airbag connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII[®], read the SIACM active DTC's.</p> <p>Does the DRBIII[®] show CURTAIN SQUIB CIRCUIT OPEN?</p> <p>Yes → Go To 3</p> <p>No → Replace Curtain Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>Disconnect the Airbag Load Tool Jumper.</p> <p>Disconnect the Side Impact Airbag Control Module Connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Side Impact Airbag Control Module connector.</p> <p>Measure the resistance of the Curtain Squib 1 Line 1 and Line 2 circuits between the Load Tool SIACM adaptor and the Curtain Airbag connector.</p> <p>Is the resistance below 1.0 ohms on both circuits?</p> <p>Yes → Replace the Side Impact Airbag Control Module in accordance with the Service information. WARNING: IF THE SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair open or high resistance in the Curtain Squib 1 Line 1 or Line 2 circuits.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

CURTAIN SQUIB CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

CURTAIN SQUIB CIRCUIT SHORT

When Monitored and Set Condition:

CURTAIN SQUIB CIRCUIT SHORT

When Monitored: When the ignition is on, the SIACM monitors the resistance between the Curtain Squib circuits.

Set Condition: When the SIACM detects a low resistance between the Curtain Squib circuits.

POSSIBLE CAUSES

CURTAIN AIRBAG SHORT
 CURTAIN SQUIB 1 LINE 1 SHORT TO LINE 2
 SIACM, CURTAIN SQUIB CIRCUIT SHORT
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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. SELECT ONE:</p> <p>LEFT SIACM - ACTIVE DTC Go To 2</p> <p>LEFT SIACM - STORED DTC Go To 4</p> <p>RIGHT SIACM - ACTIVE DTC Go To 2</p> <p>RIGHT SIACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

CURTAIN SQUIB CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>Disconnect the Curtain Airbag connector.</p> <p>NOTE: Check connectors - Clean repair as necessary.</p> <p>Connect the appropriate Load Tool to the Curtain Airbag connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the SIACM active DTC's.</p> <p>Does the DRBIII® show CURTAIN SQUIB CIRCUIT SHORT?</p> <p>Yes → Go To 3</p> <p>No → Replace Curtain Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the SIACM connector.</p> <p>Disconnect the Side Impact Airbag Control Module connector</p> <p>Measure the resistance between the Curtain Squib 1 Line 1 and Line 2 circuits at the Curtain Airbag connector.</p> <p>Is the resistance below 10K ohms?</p> <p>Yes → Repair Curtain Squib 1 Line 1 shorted to Line 2 circuit.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Side Impact Airbag Control Module in accordance with Service Instructions. WARNING: IF THE SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

CURTAIN SQUIB CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

CURTAIN SQUIB SHORT TO BATTERY

When Monitored and Set Condition:

CURTAIN SQUIB SHORT TO BATTERY

When Monitored: When the ignition is on, the SIACM monitors the voltage of the Curtain Squib circuits.

Set Condition: When the SIACM detects high voltage on the Curtain Squib circuits.

POSSIBLE CAUSES

CURTAIN AIRBAG SHORT TO BATTERY

CURTAIN SQUIB 1 LINE 1 OR LINE 2 SHORTED TO BATTERY

SIACM, CURTAIN SQUIB SHORT TO BATTERY

STORED CODE OR INTERMITTENT CONDITION

ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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 ONE:</p> <p>LEFT SIACM - ACTIVE DTC Go To 2</p> <p>LEFT SIACM - STORED DTC Go To 4</p> <p>RIGHT SIACM - ACTIVE DTC Go To 2</p> <p>RIGHT SIACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

CURTAIN SQUIB SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>Disconnect the Curtain Airbag connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Curtain Airbag connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read SIACM active DTC's.</p> <p>Does the DRBIII® display CURTAIN SQUIB SHORT TO BATTERY?</p> <p>Yes → Go To 3</p> <p>No → Replace Curtain Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>Disconnect the Airbag Load Tool Jumper.</p> <p>Disconnect the Side Impact Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool SIACM adaptor to the SIACM connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Measure the voltage of the Curtain Squib 1 Line 1 and Line 2 circuits between the Curtain Airbag connector and ground.</p> <p>Is any voltage present on either circuit?</p> <p>Yes → Repair Curtain Squib 1 Line 1 or Line 2 shorted to battery.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Side Impact Airbag Control Module in accordance with Service Instructions. WARNING: IF THE SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

CURTAIN SQUIB SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:
CURTAIN SQUIB SHORT TO GROUND

When Monitored and Set Condition:

CURTAIN SQUIB SHORT TO GROUND

When Monitored: When the ignition is on, the SIACM monitors the resistance of the Curtain Squib circuits.

Set Condition: When the SIACM detects a short to ground on the Curtain Squib circuits.

POSSIBLE CAUSES

CURTAIN AIRBAG SHORT TO GROUND
 CURTAIN SQUIB 1 LINE 1 OR LINE 2 SHORTED TO GROUND
 SIACM, CURTAIN SQUIB SHORT TO GROUND
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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. SELECT ONE:</p> <p>LEFT SIACM - ACTIVE DTC Go To 2</p> <p>LEFT SIACM - STORED DTC Go To 4</p> <p>RIGHT SIACM - ACTIVE DTC Go To 2</p> <p>RIGHT SIACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

CURTAIN SQUIB SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>Disconnect the Curtain Airbag connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Curtain Airbag connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read SIACM active DTC's.</p> <p>Does the DRBIII® display CURTAIN SQUIB SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the Curtain Airbag in accordance with Service Instructions.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: 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.</p> <p>Disconnect the Airbag Load Tool Jumper.</p> <p>Disconnect the Side Impact Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool SIACM adaptor to the SIACM connector.</p> <p>Measure the resistance of the Curtain Squib 1 Line 1 and Line 2 circuits between the Curtain Squib connector and ground.</p> <p>Is the resistance below 10K ohms on either circuit?</p> <p>Yes → Repair Curtain Squib 1 Line 1 or Line 2 shorted to ground.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Side Impact Airbag Control Module in accordance with Service Instructions. WARNING: IF THE SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

CURTAIN SQUIB SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

DRIVER SEAT BELT SWITCH CIRCUIT OPEN

When Monitored and Set Condition:

DRIVER SEAT BELT SWITCH CIRCUIT OPEN

When Monitored: With the ignition on the ACM monitors the Seat Belt Switch circuit for an open condition.

Set Condition: The code will set if the ACM does not detect the correct circuit voltage.

POSSIBLE CAUSES

DRIVER SEAT BELT SWITCH OPEN
 DRIVER SEAT BELT SWITCH CIRCUITS OPEN
 ACM, DRIVER SEAT BELT SWITCH CIRCUIT OPEN
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>Turn the ignition off. Disconnect the Driver Seat Belt Switch. NOTE: Check connectors - Clean and repair as necessary. Turn the ignition on. Measure the voltage between Driver Seat Belt Switch Line 1 and Line 2 circuits at the SBS connector. Is there any voltage present?</p> <p>Yes → Replace the Driver Seat Belt Switch Buckle Assembly. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

DRIVER SEAT BELT SWITCH CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector. Measure the resistance of the Driver SBS Line 1 and line 2 circuits between the Driver SBS harness connector and Airbag Load Tool adaptor.</p> <p>Is the resistance of both circuits below 10K ohms?</p> <p>Yes → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair the open Driver Seat Belt Switch Line 1 or Line 2.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

DRIVER SEAT BELT SWITCH SHORT TO BATTERY

When Monitored and Set Condition:

DRIVER SEAT BELT SWITCH SHORT TO BATTERY

When Monitored: With the ignition on the ACM monitors the Seat Belt Buckle Switch circuit for an short to battery.

Set Condition: The code will set if the ACM detects high circuit voltage.

POSSIBLE CAUSES

DRIVER SEAT BELT SWITCH SHORT TO BATTERY
 DRIVER SEAT BELT SWITCH CIRCUITS SHORT TO BATTERY
 ACM, DRIVER SEAT BELT SWITCH SHORT TO BATTERY
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p>	All
2	<p>Turn the ignition off. Disconnect the Driver Seat Belt Switch. NOTE: Check connectors - Clean and repair as necessary. Turn the ignition on. With the DRBIII®, read the active Airbag DTCs. Does the DRB show DRIVER SEAT BELT SWITCH CIRCUIT OPEN?</p> <p>Yes → Replace the Driver Seat Belt Switch Buckle Assembly. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

DRIVER SEAT BELT SWITCH SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Measure the voltage on the Driver SBS Line 1 and line 2 circuits at the Driver SBS connector.</p> <p>Is there any voltage present?</p> <p>Yes → Repair the Driver Seat Belt Switch line 1 or line 2 shorted to battery. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

DRIVER SEAT BELT SWITCH SHORT TO GROUND

When Monitored and Set Condition:

DRIVER SEAT BELT SWITCH SHORT TO GROUND

When Monitored: With the ignition on the ACM monitors the Seat Belt Buckle Switch circuit for a shorted together or shorted to ground condition.

Set Condition: The code will set if the ACM detects low circuit voltage.

POSSIBLE CAUSES

DRIVER SEAT BELT SWITCH CIRCUITS SHORT TOGETHER

DRIVER SEAT BELT SWITCH CIRCUITS SHORT TO GROUND

ACM, DRIVER SEAT BELT SWITCH SHORT TO GROUND

STORED CODE OR INTERMITTENT CONDITION

ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p>	All
2	<p>WARNING: TURN 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. Measure the resistance between the Driver SBS Line 1 and line 2 circuits at the Driver SBS connector. Is the resistance below 10K ohms?</p> <p>Yes → Repair the Driver Seat Belt Switch Line 1 and Line 2 shorted together. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

DRIVER SEAT BELT SWITCH SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	<p>Measure the resistance of the Driver SBS Line 1 and Line 2 circuits between the Driver SBS connector and ground. Is the resistance below 10K ohms on either circuit?</p> <p>Yes → Repair the Driver Seat Belt Switch line 1 or line 2 shorted to ground. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged. With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions. Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary. You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem: - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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 SBT CIRCUITS OPEN

DRIVER SEAT BELT TENSIONER LINE 1 OR LINE 2 CIRCUITS OPEN

ACM, DRIVER SEAT BELT TENSIONER CIRCUITS OPEN

STORED CODE OR INTERMITTENT CONDITION

ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>NOTE: Ensure the battery is fully charged. WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Driver SBT. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Driver SBT connector. WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active DTC's. Does the DRBIII® display DRIVER SBT CIRCUIT OPEN?</p> <p>Yes → Go To 3</p> <p>No → Replace Driver Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SEAT BELT TENSIONER CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module Connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool Driver SBT connector.</p> <p>Measure the resistance of the Driver SBT Line 1 and Line 2 circuits between the Load Tool Adaptor and the Driver SBT connector.</p> <p>Is the resistance below 1.0 ohms on both circuit?</p> <p>Yes → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair open or high resistance in Driver Seat Belt Tensioner Line 1 Line 2 circuits.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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	<p>NOTE: 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
2	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Driver SBT connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Driver SBT connector. WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active DTC's. Does the DRBIII® display DRIVER SEAT BELT TENSIONER CIRCUIT SHORT?</p> <p>Yes → Go To 3</p> <p>No → Replace Driver Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SEAT BELT TENSIONER CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Driver SBT connector.</p> <p>Measure the resistance between the Driver SBT Line 1 and Line 2 circuit at the Driver SBT connector.</p> <p>Is the resistance below 10K Ohms?</p> <p>Yes → Repair Driver Seat Belt Tensioner Line 1 circuit shorted to Driver Seat Belt Tensioner Line 2 circuit. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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 CIRCUITS SHORT TO BATTERY
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
2	<p>WARNING: 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 SBT connector. WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active DTC's. Does the DRBIII® display DRIVER SEAT BELT TENSIONER SHORT TO BATTERY?</p> <p>Yes → Go To 3</p> <p>No → Replace Driver Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SEAT BELT TENSIONER SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module Connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Disconnect the Load Tool from the Driver SBT connector.</p> <p>Measure the voltage of the Driver SBT Line 1 and Line 2 circuits between the Driver SBT connector and ground.</p> <p>Is there any voltage present?</p> <p>Yes → Repair Driver Seat Belt Tensioner Line 1 or Line 2 circuit shorted to battery. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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: The ACM has detected a short to ground in the 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 CIRCUITS SHORT TO GROUND

STORED CODE OR INTERMITTENT CONDITION

ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
2	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Driver SBT connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Driver SBT connector. WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active DTC's. Does the DRBIII® display DRIVER SEAT BELT TENSIONER SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the Driver Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SEAT BELT TENSIONER SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module Connector</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Driver SBT connector.</p> <p>Measure the resistance of the Driver SBT Line 1 and Line 2 circuits between the Driver SBT connector and ground.</p> <p>Is the resistance below 10K ohms on either circuit?</p> <p>Yes → Repair Driver Seat Belt Tensioner Line 1 or Line 2 circuits shorted to ground. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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 OPEN
CLOCKSPRING SQUIB CIRCUITS OPEN
DRIVER SQUIB 1 LINE 1 OR LINE 2 CIRCUIT 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 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

DRIVER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Driver Airbag.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Driver Airbag connectors.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT OPEN?</p> <p>Yes → Go To 3</p> <p>No → Replace the Driver Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Clockspring connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Clockspring connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT OPEN?</p> <p>Yes → Go To 4</p> <p>No → Replace the Clockspring in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Clockspring connector.</p> <p>Measure the resistance of the Driver Squib 1 Line 1 and Line 2 circuit between the ACM adaptor and the Clockspring connector.</p> <p>Is the resistance below 1.0 ohms on both circuits?</p> <p>Yes → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair open or high resistance in the Driver Squib 1 Line 1 or Line 2 circuit.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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 CIRCUIT SHORT
 CLOCKSPRING, DRIVER SQUIB 1 CIRCUIT SHORT
 DRIVER SQUIB 1 LINE 1 SHORT TO LINE 2
 ACM, DRIVER SQUIB 1 CIRCUIT SHORT
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 5</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Driver Airbag. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Driver Airbag connectors. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active Airbag DTCs. Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT SHORT?</p> <p>Yes → Go To 3</p> <p>No → Replace Driver Airbag. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 1 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Clockspring connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Clockspring connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRBIII® show DRIVER SQUIB 1 CIRCUIT SHORT?</p> <p>Yes → Go To 4</p> <p>No → Replace Clockspring. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Clockspring connector.</p> <p>Measure the resistance between the Driver Squib 1 Line 1 and Line 2 at the Clockspring connector.</p> <p>Is the resistance below 10K ohms?</p> <p>Yes → Repair the Driver Squib 1 Line 1 circuit shorted to Driver Squib 1 Line 2 circuit. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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 CIRCUIT SHORT TO BATTERY
 CLOCKSPRING, DRIVER SQUIB 1 CIRCUIT SHORT TO BATTERY
 DRIVER SQUIB 1 LINE 1 OR LINE 2 SHORT TO BATTERY
 ACM, DRIVER SQUIB 1 CIRCUITS 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 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	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. Disconnect the Driver Airbag. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Driver Airbag connectors. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active Airbag DTCS. Does the DRBIII® show DRIVER SQUIB 1 SHORT TO BATTERY?</p> <p>Yes → Go To 3</p> <p>No → Replace the Driver Airbag in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Clockspring connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Clockspring connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active Airbag DTCs. Does the DRBIII® show DRIVER SQUIB 1 SHORT TO BATTERY ?</p> <p>Yes → Go To 4</p> <p>No → Replace the Clockspring in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: 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. Disconnect the Airbag Control Module connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool adaptor to the Airbag Control Module connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. Disconnect the Load Tool from the Clockspring connector. 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?</p> <p>Yes → Repair the Driver Squib 1 Line 1 or Line 2 circuits shorted to battery. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 1 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="margin-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="margin-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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: The ACM has detected a short to ground in the Driver Squib 1 circuits.

POSSIBLE CAUSES

DRIVER AIRBAG CIRCUIT SHORT TO GROUND
 CLOCKSPRING, DRIVER SQUIB 1 CIRCUIT SHORT TO GROUND
 DRIVER SQUIB 1 LINE 1 OR LINE 2 SHORTED TO GROUND
 ACM, DRIVER SQUIB 1 CIRCUITS 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

DRIVER SQUIB 1 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Driver Airbag Module.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Driver Airbag connectors.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRBIII® show DRIVER SQUIB 1 SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the Driver Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Clockspring connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Clockspring connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRBIII® show DRIVER SQUIB 1 SHORT TO GROUND?</p> <p>Yes → Go To 4</p> <p>No → Replace the Clockspring.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Clockspring connector.</p> <p>Measure the resistance of the Driver Squib 1 Line 1 and Line 2 circuits between Clockspring connector and ground.</p> <p>Is the resistance below 10K ohms on either circuit?</p> <p>Yes → Repair Driver Squib 1 Line 1 or Line 2 circuits shorted to ground.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 1 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

DRIVER SQUIB 2 CIRCUIT OPEN

When Monitored and Set Condition:

DRIVER SQUIB 2 CIRCUIT OPEN

When Monitored: With the ignition on the ACM monitors the resistance of the Driver Squib 2 circuits.

Set Condition: The ACM has detected an open circuit or high resistance in the Driver Squib 2 circuits.

POSSIBLE CAUSES

DRIVER AIRBAG CIRCUIT OPEN
 CLOCKSPRING, DRIVER SQUIB 2 CIRCUIT OPEN
 DRIVER SQUIB 2 LINE 1 OR LINE 2 CIRCUIT OPEN
 ACM, DRIVER SQUIB 2 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

DRIVER SQUIB 2 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Driver Airbag connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Driver Airbag connectors.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRBIII® show DRIVER SQUIB 2 CIRCUIT OPEN?</p> <p>Yes → Go To 3</p> <p>No → Replace the Driver Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Clockspring connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Clockspring connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRB, read the active Airbag DTCs.</p> <p>Does the DRB show DRIVER SQUIB 2 CIRCUIT OPEN?</p> <p>Yes → Go To 4</p> <p>No → Replace the Clockspring in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control module connector.</p> <p>Disconnect the Load Tool from the Clockspring connector.</p> <p>Measure the resistance of the Driver Squib 2 Line 1 and Line 2 circuits between the ACM adaptor and the Clockspring connector.</p> <p>Is the resistance below 1.0 ohms on both circuits?</p> <p>Yes → Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair the open or high resistance in the Driver Squib 2 Line 1 or Line 2 circuits.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 2 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="margin-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="margin-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom: DRIVER SQUIB 2 CIRCUIT SHORT

When Monitored and Set Condition:

DRIVER SQUIB 2 CIRCUIT SHORT

When Monitored: With the ignition on the ACM monitors the resistance of the Driver Squib 2 circuits.

Set Condition: The ACM has detected low resistance on the Driver Squib 2 circuits.

POSSIBLE CAUSES

DRIVER AIRBAG CIRCUIT SHORT
 CLOCKSPRING, DRIVER SQUIB 2 CIRCUIT SHORT
 DRIVER SQUIB 2 LINE 1 SHORT TO LINE 2
 ACM, DRIVER SQUIB 2 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

DRIVER SQUIB 2 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Driver Airbag.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Driver Airbag connectors.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRB show DRIVER SQUIB 2 CIRCUIT SHORT?</p> <p>Yes → Go To 3</p> <p>No → Replace Driver Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Clockspring connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Clockspring connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRB show DRIVER SQUIB 2 CIRCUIT SHORT?</p> <p>Yes → Go To 4</p> <p>No → Replace Clockspring in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Clockspring connector.</p> <p>Measure the resistance between the Driver Squib 2 Line 1 and Line 2 at the Clockspring connector.</p> <p>Is the resistance below 10K ohms?</p> <p>Yes → Repair the Driver Squib 2 Line 1 circuit shorted to Driver Squib 2 Line 2 circuit.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 2 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none">- Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals.- Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire.- Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:**DRIVER SQUIB 2 SHORT TO BATTERY****When Monitored and Set Condition:****DRIVER SQUIB 2 SHORT TO BATTERY**

When Monitored: With the ignition on the ACM monitors the voltage of the Driver Squib 2 circuits.

Set Condition: The ACM has detected high voltage on the Driver Squib 2 circuits.

POSSIBLE CAUSES

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

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 5</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

DRIVER SQUIB 2 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Driver Airbag.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Driver Airbag connectors.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTC's.</p> <p>Does the DRB show DRIVER SQUIB 2 SHORT TO BATTERY?</p> <p>Yes → Go To 3</p> <p>No → Replace the Driver Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Clockspring connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Clockspring connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRB show DRIVER SQUIB 2 SHORT TO BATTERY ?</p> <p>Yes → Go To 4</p> <p>No → Replace the Clockspring in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Disconnect the Load Tool from the Clockspring connector.</p> <p>Measure the voltage on the Driver Squib 2 Line 1 and Line 2 from the Clockspring connector to ground.</p> <p>Is there any voltage present?</p> <p>Yes → Repair the Driver Squib 2 Line 1 or Line 2 circuits shorted to battery.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 2 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

DRIVER SQUIB 2 SHORT TO GROUND

When Monitored and Set Condition:

DRIVER SQUIB 2 SHORT TO GROUND

When Monitored: With the ignition on the ACM monitors the resistance of the Driver Squib 2 circuits.

Set Condition: The ACM has detected a short to ground in the Driver Squib 2 circuits.

POSSIBLE CAUSES

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

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 5</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

DRIVER SQUIB 2 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Driver Airbag.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Driver Airbag connectors.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRB show DRIVER SQUIB 2 SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the Driver Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Clockspring connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Clockspring connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRB show DRIVER SQUIB 2 SHORT TO GROUND?</p> <p>Yes → Go To 4</p> <p>No → Replace the Clockspring in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Clockspring connector.</p> <p>Measure the resistance of the Driver Squib 2 Line 1 and Line 2 circuits between Clockspring connector and ground.</p> <p>Is the resistance below 10K ohms on either circuit?</p> <p>Yes → Repair Driver Squib 2 Line 1 or Line 2 circuits shorted to ground.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

DRIVER SQUIB 2 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
5	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

INTERROGATE LEFT SIACM

When Monitored and Set Condition:

INTERROGATE LEFT SIACM

When Monitored: With ignition on, the ACM monitors the PCI Bus for a Left SIACM status message containing the airbag warning lamp "On or OFF" request. The status message is sent to the ACM once each second or upon any change in the active DTCs.

Set Condition: The Code will set, if the ACM receives an Lamp On status message from the Left SIACM. **NOTE:** This indicates that there was an active diagnostic trouble code in the Left SIACM.

POSSIBLE CAUSES

INTERROGATE LEFT SIACM
 ACM, NO ACTIVE LEFT SIACM DTCS
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the battery is fully charged. 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:</p> <p style="padding-left: 40px;">ACM - ACTIVE DTC Go To 2</p> <p style="padding-left: 40px;">ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>Turn the ignition on. With the DRBIII® read the Left SIACM active DTCs. Did the DRBIII® show any active DTCs?</p> <p style="padding-left: 40px;">Yes → Refer to symptom list for problems related to Left SIACM. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p style="padding-left: 40px;">No → Go To 3</p>	All

INTERROGATE LEFT SIACM — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

INTERROGATE RIGHT SIACM

When Monitored and Set Condition:

INTERROGATE RIGHT SIACM

When Monitored: With ignition on, the ACM monitors the PCI Bus for a Right SIACM status message containing the airbag warning indicator On - OFF request. The status message is sent to the ACM once each second or upon any change in the active DTCs.

Set Condition: The Code will set, if the ACM receives an Lamp On status message from the Right SIACM. **NOTE:** This indicates that there is an active diagnostic trouble code in the Right SIACM.

POSSIBLE CAUSES

INTERROGATE RIGHT SIACM
NO ACTIVE RIGHT SIACM DTCS
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the battery is fully charged. 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:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>Turn the ignition on. With the DRBIII® read the Right SIACM active DTCs. Did the DRBIII® show any active DTCs?</p> <p>Yes → Refer to symptom list for problems related to Right SIACM. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

INTERROGATE RIGHT SIACM — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom List:**LEFT FRONT IMPACT SENSOR INTERNAL 1****NO LEFT FRONT IMPACT SENSOR COMMUNICATION**

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be **LEFT FRONT IMPACT SENSOR TEST**.

When Monitored and Set Condition:**LEFT FRONT IMPACT SENSOR INTERNAL 1**

When Monitored: The Left Front Impact sensors is equipped with onboard diagnostics to monitor the sensors internal circuits. If a problem is identified the sensor sends the Left Front Impact sensor internal 1 message to the ACM.

Set Condition: The code will set if the ACM receives an internal 1 message from the Left Front Impact Sensor.

NO LEFT FRONT IMPACT SENSOR COMMUNICATION

When Monitored: The ACM continuously communicates with the Left Front Impact Sensor 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 Front Sensor do not establish and maintain valid data communications.

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

LEFT FRONT IMPACT SENSOR TEST — Continued

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on.</p> <p>NOTE: Ensure the battery is fully charged.</p> <p>NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.</p> <p>SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 9</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Left Front Impact Sensor connector.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Measure the voltage of the Left Front Impact Sensor Signal circuit between the Left Sensor connector and ground.</p> <p>Is there any voltage present?</p> <p>Yes → Repair the Left Front Impact Sensor Signal circuit shorted to battery. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition off.</p> <p>Measure the resistance of the Left Impact Sensor Signal circuit between the Left Impact Sensor connector and ground.</p> <p>Is the resistance below 100K ohms?</p> <p>Yes → Repair the Left Impact Sense signal circuit shorted for a short to ground. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Measure the resistance between the Left Front Impact Sensor Signal and Sensor Ground circuits at the Left Impact Sensor connector.</p> <p>Is the resistance below 100K ohms?</p> <p>Yes → Repair the Left Front Impact Sensor circuits shorted together. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Measure the resistance of the Left Front Impact Sensor Ground circuit between the Left Impact Sensor connector and the Load Tool adaptor.</p> <p>Is the resistance below 1 ohm?</p> <p>Yes → Go To 6</p> <p>No → Repair the Left Front Impact Sensor Ground circuit open or high resistance. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

LEFT FRONT IMPACT SENSOR TEST — Continued

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

LEFT FRONT IMPACT SENSOR TEST — Continued

TEST	ACTION	APPLICABILITY
9	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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 or Start position the module monitors the Run - Start circuit for proper system voltage.

Set Condition: The code will set, if the voltage on the Run - Start circuit drops below approximately 4.5 volts for the ACM or 6.7 volts for the SIACM.

POSSIBLE CAUSES

AIRBAG SYSTEM COMPONENT SHORTED TO GROUND
 IGNITION SWITCH RUN-START CIRCUIT OPEN
 FUSED IGNITION SWITCH OUTPUT RUN-START CIRCUIT OPEN
 ACM, FUSED IGNITION OUTPUT RUN-START CIRCUIT OPEN
 MODULE RUN - START SHORTED TO GROUND
 RSIACM, LOW IGNITION RUN - START VOLTAGE
 LSIACM - LOW IGNITION RUN - START VOLTAGE
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>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. From the list below, select the appropriate module and DTC type for the this diagnostic trouble code. SELECT ONE:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 6</p> <p>LEFT SIACM - ACTIVE DTC Go To 7</p> <p>RIGHT SIACM - ACTIVE DTC Go To 8</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

LOSS OF IGNITION RUN - START — Continued

TEST	ACTION	APPLICABILITY
2	<p>Turn ignition off. Remove and inspect the Airbag Run-Start Fuse. NOTE: Check connectors - Clean and repair as necessary. Is the Fuse open?</p> <p>Yes → Go To 3</p> <p>No → Go To 4</p>	All
3	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Measure the resistance of the Fused Ignition Switch Output Run-Start circuit between the Airbag Run-Start Fuse and ground. While monitoring the ohmmeter, disconnect each airbag system component on the Run - Start circuit one at a time. NOTE: Refer to the service information and system schematics to identify component(s) on the run - start circuit. Is the resistance above 10K ohms:</p> <p>Yes - after removing a component? Replace the shorted airbag system component in accordance with Service Instructions and replace the airbag Run - Start fuse. WARNING: IF THE MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No - after all components are removed? Repair the Fused Ignition Run - Start circuit shorted to ground and replace Airbag Run-Start Fuse. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition on. Measure the voltage of the Ignition Switch Output circuit between the Airbag Run-Start Fuse and ground. Is the voltage above approximately 4.5 volts?</p> <p>Yes → Go To 5</p> <p>No → Repair the open Ignition Switch Output Run-Start circuit. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
5	<p>WARNING: 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. Reinstall the previously removed Airbag Run-Start Fuse. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. Measure the voltage of the Fused Ignition Switch Output Run-Start Circuit between the Airbag Control Module connector ground. Is the voltage above approximately 4.5 volts?</p> <p>Yes → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair open Fused Ignition Switch Output Run-Start circuit. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

LOSS OF IGNITION RUN - START — Continued

TEST	ACTION	APPLICABILITY
6	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules. All active codes must be resolved before diagnosing any stored codes. Maintain a safe distance from all airbags while performing the following steps. With the DRBIII® monitor active codes as you work through the system. NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop. NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message. The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All
7	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>If there are no possible causes remaining, view repair.</p> <p style="padding-left: 40px;">Repair</p> <p style="padding-left: 80px;">Replace the Left Side Impact Airbag Control Module in accordance with Service Instructions. WARNING: IF THE MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
8	<p>WARNING: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>If there are no possible causes remaining, view repair.</p> <p style="padding-left: 40px;">Repair</p> <p style="padding-left: 80px;">Replace the Right Side Impact Airbag Control Module in accordance with Service information. WARNING: IF THE MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	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 4.5 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. SELECT 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 the ignition off. Remove and inspect the Airbag Run circuit fuse. Is the Fuse open? Yes → Go To 3 No → Go To 5	All

LOSS OF IGNITION RUN ONLY — Continued

TEST	ACTION	APPLICABILITY
3	<p>Remove the Airbag Run fuse.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Measure the resistance of the Fused Ignition Switch Output Run circuit between the Run Fuse and ground.</p> <p>Is the resistance below 10.0 ohms ?</p> <p>Yes → Go To 4</p> <p>No → Replace the defective fuse.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Measure the resistance of the Fused Ignition Switch Output Run circuit between the ACM connector and ground.</p> <p>Is the resistance below 10K ohms ?</p> <p>Yes → Repair the Fused Ignition Switch Output Run circuit for a short to ground and replace Airbag Run Fuse.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions and replace the Run Only Fuse. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
5	<p>Turn the ignition on.</p> <p>Measure the voltage of the Ignition Switch Output Run circuit between the Airbag Run circuit fuse and ground.</p> <p>Is the voltage above approximately 4.5 volts?</p> <p>Yes → Go To 6</p> <p>No → Repair the open Ignition Switch Output Run circuit.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
6	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Reinstall the airbag Run fuse.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Measure the voltage of the Fused Ignition Switch Output Run circuit at the Airbag Control Module connector.</p> <p>Is the voltage above approximately 4.5 volts?</p> <p>Yes → Go To 7</p> <p>No → Repair the an open or high resistance in the Fused Ignition Switch Output Run circuit.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

LOSS OF IGNITION RUN ONLY — Continued

TEST	ACTION	APPLICABILITY
7	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
8	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

MODULE NOT CONFIGURED FOR SAB

When Monitored and Set Condition:

MODULE NOT CONFIGURED FOR SAB

When Monitored: With ignition on, the ACM monitors the PCI Bus for messages from the Left and Right Side Impact Airbag Control Modules.

Set Condition: The code will set, if the ACM detects a Side Impact Airbag Control Module active on the PCI Bus and the ACM is not configured for side airbags.

POSSIBLE CAUSES

MODULE NOT CONFIGURED

ACM, NOT CONFIGURED FOR SIDE AIRBAGS

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 4 NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.	All
2	Using the DRB select MISCELLANEOUS and then CONFIGURE FOR SIDE AIRBAGS. Then press the continue button to display the current side airbag status. Does the DRBIII® show current status as ACM WITHOUT SIDE AIRBAG? Yes → Using the DRB select ACM WITH SIDE AIRBAGS to configure the ACM for Side Airbags. Perform AIRBAG VERIFICATION TEST - VER 1. No → Go To 3	All

MODULE NOT CONFIGURED FOR SAB — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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	<p>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:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>Turn the ignition on. With the DRBIII®, ensure PCI Bus communications with the Instrument Cluster. Is the Instrument Cluster communicating on the PCI Bus?</p> <p>Yes → Go To 3</p> <p>No → Refer to category COMMUNICATION CATEGORY and select the related symptom INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN.</p>	All

NO CLUSTER MESSAGE — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

NO LEFT SIACM MESSAGE

When Monitored and Set Condition:

NO LEFT SIACM MESSAGE

When Monitored: With ignition on, the ACM monitors the PCI Bus for the Left Side Impact Airbag Control Module status message. The Left SIACM transmits the status message to the ACM at 1 - second intervals.

Set Condition: If the ACM fails to see the Left SIACM status message on the PCI Bus for 10 seconds the code will set.

POSSIBLE CAUSES

NO LEFT SIACM MESSAGE
 ACM, NO LEFT SIACM MESSAGE
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p>	All
2	<p>With the DRBIII® select PASSIVE RESTRAINTS, SIDE AIRBAG then LEFT SIDE from the DRB menu. Does the DRBIII® show NO RESPONSE or BUS +/- SIGNAL OPEN?</p> <p>Yes → Refer to the Communication category for the related symptom. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

NO LEFT SIACM MESSAGE — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	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 PCI BUS.

Set Condition: The code will set if the onboard diagnostic cannot detect the module transmitting information on the PCI BUS for 4 consecutive seconds. NOTE: Any PCI Bus Failure will may cause a stored code to set.

POSSIBLE CAUSES
AIRBAG CONTROL MODULE - ACM
LEFT SIDE IMPACT AIRBAG CONTROL MODULE - LSIACM
RIGHT SIDE IMPACT AIRBAG CONTROL MODULE - RSIACM
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

NO PCI TRANSMISSION — Continued

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the battery is fully charged. IF THE MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Turn the ignition on. From the list below, select the appropriate module and DTC type for the this diagnostic trouble code. NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM. Select the appropriate module and type of DTC</p> <p>ACM - ACTIVE WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Replace the Airbag Control Module in accordance with Service Instructions. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>ACM - STORED Go To 2</p> <p>LEFT SIACM - ACTIVE WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Replace the Left Side Impact Airbag Control Module in accordance with Service Instructions. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>LEFT SIACM - STORED Go To 2</p> <p>RIGHT SIACM - ACTIVE WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Replace the Right Side Impact Airbag Control Module in accordance with Service information. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>RIGHT SIACM - STORED Go To 2</p>	All

NO PCI TRANSMISSION — Continued

TEST	ACTION	APPLICABILITY
2	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom List:

NO RIGHT FRONT IMPACT SENSOR COMMUNICATION RIGHT FRONT IMPACT SENSOR INTERNAL 1

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be **RIGHT FRONT IMPACT SENSOR TEST**.

When Monitored and Set Condition:

NO RIGHT FRONT IMPACT SENSOR COMMUNICATION

When Monitored: The ACM continuously communicates with the Right Front Impact Sensor 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 Front Sensor do not establish and maintain valid data communications.

RIGHT FRONT IMPACT SENSOR INTERNAL 1

When Monitored: The Right Front Impact sensors is equipped with onboard diagnostics to monitor the sensors internal circuits. If a problem is identified the sensor sends the Right Front Impact sensor internal 1 message to the ACM.

Set Condition: The code will set if the ACM receives an internal 1 message from the Right Front Impact Sensor.

POSSIBLE CAUSES

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

RIGHT FRONT IMPACT SENSOR TEST — Continued

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on.</p> <p>NOTE: Ensure the battery is fully charged.</p> <p>NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.</p> <p>SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 9</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Right Front Impact Sensor connector.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Measure the voltage of the Right Front Impact Sensor Signal circuit between the Right Sensor connector and ground.</p> <p>Is there any voltage present?</p> <p>Yes → Repair the Right Front Impact Sensor Signal circuit shorted to battery. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition off.</p> <p>Measure the resistance of the Right Impact Sensor Signal circuit between the Right Impact Sensor connector and ground.</p> <p>Is the resistance below 100K ohms?</p> <p>Yes → Repair the Right Impact Sense signal circuit shorted for a short to ground. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Measure the resistance between the Right Front Impact Sensor Signal and Sensor Ground circuits at the Right Impact Sensor connector.</p> <p>Is the resistance below 100K ohms?</p> <p>Yes → Repair the Right Front Impact Sensor circuits shorted together. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Measure the resistance of the Right Front Impact Sensor Ground circuit between the Right Impact Sensor connector and the Load Tool adaptor.</p> <p>Is the resistance below 1 ohm?</p> <p>Yes → Go To 6</p> <p>No → Repair the Right Front Impact Sensor Ground circuit open or high resistance. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

RIGHT FRONT IMPACT SENSOR TEST — Continued

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

RIGHT FRONT IMPACT SENSOR TEST — Continued

TEST	ACTION	APPLICABILITY
9	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom: NO RIGHT SIACM MESSAGE

When Monitored and Set Condition:

NO RIGHT SIACM MESSAGE

When Monitored: With ignition on, the ACM monitors the PCI Bus for the Right Side Impact Airbag Control Module status message. The Right SIACM transmits the status message to the ACM at 1 - second intervals.

Set Condition: If the ACM fails to see the Right SIACM status message on the PCI Bus for 10 seconds the code will set.

POSSIBLE CAUSES

NO RIGHT SIACM MESSAGE
ACM, NO RIGHT SIACM MESSAGE
STORED CODE OR INTERMITTENT CONDITION
ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>With the DRBIII® select SIDE AIRBAG and the RIGHT SIDE AIRBAG from the DRBIII® menu. Does the DRBIII® show NO RESPONSE or BUS +/- SIGNAL OPEN?</p> <p>Yes → Refer to the COMMUNICATION category for the related symptom. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

NO RIGHT SIACM MESSAGE — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom List:

PASSENGER SEAT BELT SWITCH CIRCUIT OPEN
PASSENGER SEAT BELT SWITCH SHORT TO BATTERY
PASSENGER SEAT BELT SWITCH SHORT TO GROUND

Test Note: All symptoms listed above are diagnosed using the same tests.
The title for the tests will be PASSENGER SEAT BELT SWITCH CIRCUIT TEST.

When Monitored and Set Condition:

PASSENGER SEAT BELT SWITCH CIRCUIT OPEN

When Monitored: The ACM monitors the Passenger Seat Belt Buckle Switch circuit for an open condition.

Set Condition: The code will set if the ACM does not detect the correct circuit voltage.

PASSENGER SEAT BELT SWITCH SHORT TO BATTERY

When Monitored: The ACM monitors the Seat Belt Buckle Switch circuit for an short to battery.

Set Condition: The code will set if the ACM detects high circuit voltage.

PASSENGER SEAT BELT SWITCH SHORT TO GROUND

When Monitored: The ACM monitors the Seat Belt Buckle Switch circuit for a shorted together or shorted to ground condition.

Set Condition: The code will set if the ACM detects low circuit voltage.

POSSIBLE CAUSES

ACM, PASSENGER SEAT BELT SWITCH DTC

PASSENGER SEAT BELT SWITCH CIRCUIT TEST — Continued

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on.</p> <p>NOTE: Ensure the battery is fully charged.</p> <p>NOTE: For the purpose of this test, the AECM and ORC modules will be referred to as an ACM.</p> <p>SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC</p> <p>Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>ACM - STORED DTC</p> <p>Replace the Airbag Control Module in accordance with the Service information. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

Symptom:

PASSENGER SQUIB 1 CIRCUIT OPEN

When Monitored and Set Condition:

PASSENGER SQUIB 1 CIRCUIT OPEN

When Monitored: When the ignition is On, the ACM monitors the resistance of the Passenger Squib 1 circuits.

Set Condition: The ACM has detected an open circuit or high resistance on the Passenger Squib 1 circuits.

POSSIBLE CAUSES

PASSENGER AIRBAG OPEN

PASSENGER SQUIB 1 LINE 1 OR LINE 2 CIRCUIT OPEN

STORED CODE OR INTERMITTENT CONDITION

ACM, PASSENGER SQUIB 1 CIRCUIT OPEN

ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

PASSENGER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Passenger Airbag.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Passenger Airbag connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRBIII® show PASSENGER SQUIB 1 CIRCUIT OPEN?</p> <p>Yes → Go To 3</p> <p>No → Replace the Passenger Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Passenger Airbag connector.</p> <p>Measure the resistance of the Passenger Squib 1 Line 1 and Line 2 circuit between the ACM Adaptor and the Passenger Airbag connector.</p> <p>Is the resistance below 1.0 ohms on both circuits?</p> <p>Yes → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair open or high resistance in Passenger Squib 1 Line 1 or Line 2 circuits.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All

PASSENGER SQUIB 1 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="margin-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="margin-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:**PASSENGER SQUIB 1 CIRCUIT SHORT****When Monitored and Set Condition:****PASSENGER SQUIB 1 CIRCUIT SHORT**

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

Set Condition: The ACM has detected low resistance in the Passenger Squib 1 circuits.

POSSIBLE CAUSES

PASSENGER AIRBAG CIRCUIT SHORT
 PASSENGER SQUIB 1 LINE 1 SHORT TO LINE 2
 ACM, PASSENGER SQUIB 1 CIRCUIT SHORT
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. Disconnect the Passenger Airbag. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Passenger Airbag connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active airbag DTCs. Does the DRBIII® show PASSENGER SQUIB 1 CIRCUIT SHORT?</p> <p>Yes → Go To 3</p> <p>No → Replace Passenger Airbag in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

PASSENGER SQUIB 1 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adapter to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Passenger airbag connector.</p> <p>Measure the resistance between Passenger Squib 1 Line 1 and Squib 1 Line 2 circuit at the Passenger Airbag connector.</p> <p>Is the resistance below 10K ohms?</p> <p>Yes → Repair Passenger Squib 1 Line 1 circuit short to Passenger Squib 1 Line 2 circuit. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>NOTE: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:**PASSENGER SQUIB 1 SHORT TO BATTERY****When Monitored and Set Condition:****PASSENGER SQUIB 1 SHORT TO BATTERY**

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

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

POSSIBLE CAUSES

PASSENGER AIRBAG CIRCUIT SHORT TO BATTERY
 PASSENGER SQUIB 1 LINE 1 OR LINE 2 SHORT TO BATTERY
 ACM, PASSENGER SQUIB 1 CIRCUIT SHORT TO BATTERY
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. Disconnect the Passenger Airbag connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Passenger Airbag connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active Airbag DTCs. Does the DRBIII® show PASSENGER SQUIB 1 CIRCUIT SHORT TO BATTERY?</p> <p>Yes → Go To 3</p> <p>No → Replace Passenger Airbag in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

PASSENGER SQUIB 1 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>WARNING: TURN IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Disconnect the Load Tool from the Passenger Airbag connector.</p> <p>Measure the voltage on the Passenger Squib 1 Line 1 and Line 2 circuits between the Passenger Airbag connector and ground.</p> <p>Is there any voltage present?</p> <p>Yes → Repair Passenger Squib 1 Line 1 or Line 2 circuit short to battery. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:**PASSENGER SQUIB 1 SHORT TO GROUND****When Monitored and Set Condition:****PASSENGER SQUIB 1 SHORT TO GROUND**

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

Set Condition: The ACM has detected a short to ground in the Passenger Squib 1 circuits.

POSSIBLE CAUSES

PASSENGER AIRBAG CIRCUIT SHORT TO GROUND
 PASSENGER SQUIB 1 LINE 1 AND LINE 2 SHORT TO GROUND
 STORED CODE OR INTERMITTENT CONDITION
 ACM, PASSENGER SQUIB 1 CIRCUIT SHORT TO GROUND
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the battery is fully charged. Turn the ignition on. NOTE: Connect the appropriate Load Tool to the Passenger Airbag connector. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. Disconnect the Passenger Airbag connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Passenger Airbag connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active Airbag DTCs. Does the DRBIII® show PASSENGER SQUIB 1 CIRCUIT SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the Passenger Airbag in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

PASSENGER SQUIB 1 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector</p> <p>NOTE: Check connectors - Clean repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Passenger Airbag connector.</p> <p>Measure the resistance of the Passenger Squib 1 Line 1 or Line 2 circuit between the Passenger Airbag Module Connector and ground.</p> <p>Is the resistance below 10K ohms on either circuit?</p> <p>Yes → Repair Passenger Squib 1 Line 1 and Line 2 circuits for a short to ground. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:
PASSENGER SQUIB 2 CIRCUIT OPEN

When Monitored and Set Condition:

PASSENGER SQUIB 2 CIRCUIT OPEN

When Monitored: When the ignition is On, the ACM monitors the resistance of the Passenger Squib 2 circuits.

Set Condition: The ACM has detected an open circuit or high resistance on the Passenger Squib 2 circuits.

POSSIBLE CAUSES

PASSENGER AIRBAG OPEN
 PASSENGER SQUIB 2 LINE 1 OR LINE 2 CIRCUIT OPEN
 ACM, PASSENGER SQUIB 2 CIRCUIT OPEN
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

PASSENGER SQUIB 2 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Passenger Airbag connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool to the Passenger Airbag connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>With the DRBIII®, read the active Airbag DTCs.</p> <p>Does the DRB show PASSENGER SQUIB 2 CIRCUIT OPEN?</p> <p>Yes → Go To 3</p> <p>No → Replace Passenger Airbag in accordance with the Service Information.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Passenger Airbag connector.</p> <p>Measure the resistance of the Passenger Squib 2 Line 1 and Line 2 circuits between the ACM adaptor and the Passenger Airbag connector.</p> <p>Is the resistance below 1.0 ohms on both circuits?</p> <p>Yes → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair open or high resistance in Passenger Squib 2 Line 1 or Line 2 circuits.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

PASSENGER SQUIB 2 CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p style="padding-left: 40px;">Yes → Select appropriate symptom from Symptom List.</p> <p style="padding-left: 40px;">No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

PASSENGER SQUIB 2 CIRCUIT SHORT

When Monitored and Set Condition:

PASSENGER SQUIB 2 CIRCUIT SHORT

When Monitored: When the ignition is on, the ACM monitors the resistance of the Passenger Squib 2 circuits.

Set Condition: The ACM has detected low resistance in the Passenger Squib 2 circuits.

POSSIBLE CAUSES

PASSENGER AIRBAG CIRCUIT SHORT
 PASSENGER SQUIB 1 LINE 1 SHORT TO LINE 2
 STORED CODE OR INTERMITTENT CONDITION
 ACM, PASSENGER SQUIB 2 CIRCUIT SHORT
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. Disconnect the Passenger Airbag. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Passenger Airbag connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active DTCs. Does the DRB show PASSENGER SQUIB 2 CIRCUIT SHORT?</p> <p>Yes → Go To 3</p> <p>No → Replace Passenger Airbag in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

PASSENGER SQUIB 2 CIRCUIT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connectors.</p> <p>Disconnect the Load Tool from the Passenger Airbag connector.</p> <p>Measure the resistance between the Passenger Squib 2 Line 1 and line 2 circuits at the Passenger Airbag connector.</p> <p>Is the resistance below 10K ohms?</p> <p>Yes → Repair Passenger Squib 2 Line 1 circuit short to Passenger Squib 2 Line 2 circuit. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

PASSENGER SQUIB 2 SHORT TO BATTERY

When Monitored and Set Condition:

PASSENGER SQUIB 2 SHORT TO BATTERY

When Monitored: When the ignition is on, the ACM monitors the voltage of the Passenger Squib 2 circuits.

Set Condition: The ACM has detected high voltage on the Passenger Squib 2 circuits.

POSSIBLE CAUSES

PASSENGER AIRBAG CIRCUIT SHORT TO BATTERY
 PASSENGER SQUIB 2 LINE 1 OR LINE 2 SHORTED TO BATTERY
 ACM, PASSENGER SQUIB 2 CIRCUIT SHORT TO BATTERY
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. Disconnect the Passenger Airbag connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Passenger Airbag connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active Airbag DTCs. Does the DRB show PASSENGER SQUIB 2 CIRCUIT SHORT TO BATTERY?</p> <p>Yes → Go To 3</p> <p>No → Replace Passenger Airbag in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

PASSENGER SQUIB 2 SHORT TO BATTERY — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Airbag Control Module connector.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>Disconnect the Load Tool from the Passenger Airbag connector.</p> <p>Measure the voltage on the Passenger Squib 2 Line 1 and Line 2 circuits between the Passenger Airbag connector and ground.</p> <p>Is there any voltage present?</p> <p>Yes → Repair Passenger Squib 2 Line 1 or Line 2 circuit shorted to battery. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

PASSENGER SQUIB 2 SHORT TO GROUND

When Monitored and Set Condition:

PASSENGER SQUIB 2 SHORT TO GROUND

When Monitored: When the ignition is on, the ACM monitors the resistance of the Passenger Squib 2 circuits for low resistance.

Set Condition: The ACM has detected a short to ground in the Passenger Squib 2 circuits.

POSSIBLE CAUSES

PASSENGER AIRBAG CIRCUIT SHORTED TO GROUND
 PASSENGER SQUIB 2 LINE 1 OR LINE 2 SHORT TO GROUND
 ACM, PASSENGER SQUIB 2 CIRCUIT SHORT TO GROUND
 STORED CODE OR INTERMITTENT CONDITION
 ACTIVE CODE PRESENT

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that 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. SELECT ACTIVE or STORED DTC:</p> <p>ACM - ACTIVE DTC Go To 2</p> <p>ACM - STORED DTC Go To 4</p> <p>NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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. Disconnect the Passenger Airbag connector. NOTE: Check connectors - Clean and repair as necessary. Connect the appropriate Load Tool to the Passenger Airbag connector. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY. With the DRBIII®, read the active Airbag DTCs. Does the DRB show PASSENGER SQUIB 2 CIRCUIT SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the Passenger Airbag in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

PASSENGER SQUIB 2 SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	<p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>WARNING: DO NOT PLACE AN INTACT UNDEPLOYED 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.</p> <p>Disconnect the Airbag Control Module connector</p> <p>NOTE: Check connectors - Clean repair as necessary.</p> <p>Connect the appropriate Load Tool adaptor to the Airbag Control Module connector.</p> <p>Disconnect the Load Tool from the Passenger Airbag connector.</p> <p>Measure the resistance of the Passenger Squib 2 Line 1 and Line 2 circuits between the Passenger Airbag Module connector and ground.</p> <p>Is the resistance below 10K ohms on either circuit?</p> <p>Yes → Repair Passenger Squib 2 Line 1 or Line 2 circuit for a shorted to ground. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Replace the Airbag Control Module in accordance with Service Instructions. WARNING: IF THE AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All
4	<p>NOTE: Ensure the battery is fully charged.</p> <p>With the DRBIII®, record and erase all DTCs from all modules.</p> <p>All active codes must be resolved before diagnosing any stored codes.</p> <p>Maintain a safe distance from all airbags while performing the following steps.</p> <p>With the DRBIII® monitor active codes as you work through the system.</p> <p>NOTE: If equipped with Passenger Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>Wiggle the wiring harness and connectors of the appropriate airbag system and rotate the steering wheel from stop to stop.</p> <p>NOTE: Check connectors - Clean and repair as necessary.</p> <p>You have just attempted to simulate the condition that initially set the trouble code message.</p> <p>The following additional checks may assist you in identifying a possible intermittent problem:</p> <ul style="list-style-type: none"> - Visually inspect related wire harness connectors. Look for broken, bent, pushed out, spread, corroded, or contaminated terminals. - Visually inspect the related harnesses. Look for chafed, pierced, pinched or partially broken wire. - Refer to Wiring Diagrams and Technical Service Bulletins that may apply. <p>Did the DTC become active ?</p> <p>Yes → Select appropriate symptom from Symptom List.</p> <p>No → No problem found at this time. Erase all codes before returning vehicle to customer.</p>	All

Symptom:

ALL OUTPUTS SHORT - BASE AUDIO SYSTEM

When Monitored and Set Condition:

ALL OUTPUTS SHORT - BASE AUDIO SYSTEM

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
 LEFT I/P SPEAKER
 LEFT FRONT DOOR SPEAKER
 RIGHT I/P SPEAKER
 RIGHT FRONT DOOR SPEAKER
 LEFT REAR SPEAKER
 RIGHT REAR SPEAKER
 (+) CIRCUIT SHORTED TO GROUND
 SPEAKER SECTION OF RADIO
 (-) CIRCUIT SHORTED TO GROUND
 SPEAKER (+) & (-) CIRCUITS SHORTED TOGETHER

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 - BASE AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
2	<p>Turn the ignition off. Disconnect the Left I/P Speaker harness connector. 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?</p> <p>Yes → Go To 3</p> <p>No → Replace the Left I/P Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. 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?</p> <p>Yes → Go To 4</p> <p>No → Replace the Left Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition off. Disconnect the Right I/P Speaker harness connector. 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?</p> <p>Yes → Go To 5</p> <p>No → Replace the Right I/P Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. 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?</p> <p>Yes → Go To 6</p> <p>No → Replace the Right Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All

ALL OUTPUTS SHORT - BASE AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
6	<p>Turn the ignition off. Disconnect the Left Rear Speaker harness connector. 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?</p> <p>Yes → Go To 7</p> <p>No → Replace the Left Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
7	<p>Turn the ignition off. Disconnect the Right Rear Speaker harness connector. 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?</p> <p>Yes → Go To 8</p> <p>No → Replace the Right Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
8	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left I/P Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right I/P Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (+) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (+) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 9</p>	All
9	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left I/P Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right I/P Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 10</p>	All

ALL OUTPUTS SHORT - BASE AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
10	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left I/P Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right I/P Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 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 shorted together speaker circuits. Perform BODY VERIFICATION TEST - VER 1. No → Go To 11	All
11	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

ALL OUTPUTS SHORT - PREMIUM AUDIO SYSTEM

When Monitored and Set Condition:

ALL OUTPUTS SHORT - PREMIUM AUDIO SYSTEM

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

LEFT FRONT DOOR SPEAKER

RIGHT FRONT DOOR 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
2	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. 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? Yes → Go To 3 No → Replace the Left Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

ALL OUTPUTS SHORT - PREMIUM AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. 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?</p> <p>Yes → Go To 4</p> <p>No → Replace the Right Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (+) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (+) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 6</p>	All
6	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Radio C1 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?</p> <p>Yes → Repair the shorted together speaker circuits. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 7</p>	All
7	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom List:

CASSETTE PLAYER INOP

CD MECHANICAL FAILURE

- *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 CHANGER MECHANICAL FAILURE**

When Monitored and Set Condition:**CD CHANGER MECHANICAL FAILURE**

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

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

POSSIBLE CAUSES

INTERNAL FAILURE

TEST	ACTION	APPLICABILITY
1	NOTE: Erase DTC and attempt to reset. If DTC resets, follow this test. This is an internal CD Changer failure. View repair Repair Replace the CD Changer. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
CD CHANGER READ FAILURE

When Monitored and Set Condition:

CD CHANGER READ FAILURE

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

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

POSSIBLE CAUSES

CD CHANGER READ FAILURE

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

Symptom:
CD CHANGER TEMPERATURE HIGH

When Monitored and Set Condition:

CD CHANGER TEMPERATURE HIGH

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

Set Condition: The code will set if the temperature inside the CD Changer is above +65° C (+145° F).

POSSIBLE CAUSES

HIGH TEMPERATURE FAILURE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase the audio DTC's.</p> <p>Start the engine and allow the engine to reach normal operating temperature.</p> <p>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.</p> <p>The CD Changer will operate between -23° C and 65° C (-10° F and +145° F).</p> <p>With the DRBIII®, read DTC's.</p> <p>Does the DRBIII® display CD CHANGER TEMPERATURE HIGH?</p> <p>Yes → Replace the CD Changer. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Test Complete.</p>	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 is installed in the radio CD player.

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 +70° C (+156° F).

POSSIBLE CAUSES

HIGH TEMPERATURE FAILURE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase the audio DTC's.</p> <p>Start the engine and allow the engine to reach normal operating temperature.</p> <p>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.</p> <p>The radio CD player will operate between -23° C and 70° C (-10° F and +156° F).</p> <p>With the DRBIII®, read DTC's.</p> <p>Does the DRBIII® display CD TEMPERATURE HIGH?</p> <p>Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Test Complete.</p>	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	<p>Check the charging system in accordance with the service information. Is the charging system operating properly?</p> <p>Yes → Go To 2</p> <p>No → Refer to the appropriate service information and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>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?</p> <p>Yes → Go To 3</p> <p>No → Repair the circuit for high resistance. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>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?</p> <p>Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Test Complete.</p>	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. 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:

POWER AMP SHUTDOWN - BASE AUDIO SYSTEM

When Monitored and Set Condition:

POWER AMP SHUTDOWN - BASE AUDIO SYSTEM

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
 LEFT I/P SPEAKER
 LEFT FRONT DOOR SPEAKER
 RIGHT I/P SPEAKER
 RIGHT FRONT DOOR SPEAKER
 LEFT REAR SPEAKER
 RIGHT REAR SPEAKER
 (+) CIRCUIT SHORTED TO GROUND
 SPEAKER SECTION OF RADIO
 (-) CIRCUIT SHORTED TO GROUND
 SPEAKER (+) & (-) CIRCUITS SHORTED TOGETHER

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 - BASE AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
2	<p>Turn the ignition off. Disconnect the Left I/P Speaker harness connector. 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?</p> <p>Yes → Go To 3</p> <p>No → Replace the Left I/P Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. 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?</p> <p>Yes → Go To 4</p> <p>No → Replace the Left Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition off. Disconnect the Right I/P Speaker harness connector. 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?</p> <p>Yes → Go To 5</p> <p>No → Replace the Right I/P Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. 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?</p> <p>Yes → Go To 6</p> <p>No → Replace the Right Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All

POWER AMP SHUTDOWN - BASE AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
6	<p>Turn the ignition off. Disconnect the Left Rear Speaker harness connector. 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?</p> <p>Yes → Go To 7</p> <p>No → Replace the Left Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
7	<p>Turn the ignition off. Disconnect the Right Rear Speaker harness connector. 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?</p> <p>Yes → Go To 8</p> <p>No → Replace the Right Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
8	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left I/P Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right I/P Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (+) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (+) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 9</p>	All
9	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left I/P Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right I/P Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 10</p>	All

POWER AMP SHUTDOWN - BASE AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
10	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left I/P Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right I/P Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 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 shorted together speaker circuits. Perform BODY VERIFICATION TEST - VER 1. No → Go To 11	All
11	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

POWER AMP SHUTDOWN - PREMIUM AUDIO SYSTEM

When Monitored and Set Condition:

POWER AMP SHUTDOWN - PREMIUM AUDIO SYSTEM

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

LEFT FRONT DOOR SPEAKER

RIGHT FRONT DOOR 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
2	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. 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? Yes → Go To 3 No → Replace the Left Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

POWER AMP SHUTDOWN - PREMIUM AUDIO SYSTEM — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. 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?</p> <p>Yes → Go To 4</p> <p>No → Replace the Right Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (+) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (+) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Radio C1 harness connector. Measure the resistance between ground and each speaker (-) circuit. Is the resistance below 1000.0 (1K) ohms?</p> <p>Yes → Repair the speaker (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 6</p>	All
6	<p>Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Radio C1 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?</p> <p>Yes → Repair the shorted together speaker circuits. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 7</p>	All
7	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*REMOTE RADIO SWITCHES INOPERATIVE (IF EQUIPPED)

POSSIBLE CAUSES
<p>ATTEMPT TO COMMUNICATE WITH THE RADIO</p> <p>CHECK OPERATION OF SWITCHES</p> <p>LEFT REMOTE RADIO SWITCH SHORTED TO GROUND</p> <p>RIGHT REMOTE RADIO SWITCH SHORTED TO GROUND</p> <p>RADIO CONTROL MUX CIRCUIT SHORTED TO GROUND AT THE SWITCH</p> <p>RADIO CONTROL MUX CKT SHORTED TO THE RADIO CONTROL MUX RETURN CKT AT THE SWITCH</p> <p>CLOCKSPRING SHORTED TO GROUND</p> <p>RADIO CONTROL MUX CIRCUIT SHORTED TO GROUND</p> <p>RADIO CONTROL MUX CKT SHORTED TO THE RADIO CONTROL MUX RETURN CKT</p> <p>BODY CONTROL MODULE - INTERNAL SHORT</p> <p>CLOCKSPRING OPEN</p> <p>OPEN RADIO CONTROL MUX RETURN CIRCUIT</p> <p>OPEN RADIO CONTROL MUX CIRCUIT</p> <p>BODY CONTROL MODULE - OPEN INTERNALLY</p>

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on.</p> <p>With the DRB, attempt to communicate with the Radio.</p> <p>Was the DRB able to communicate with the Radio?</p> <p>Yes → Go To 2</p> <p>No → Refer to the communication category and perform the appropriate symptom.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition on.</p> <p>Turn the Radio on.</p> <p>Operate all the remote radio switch functions.</p> <p>Is only one function or one switch not operating properly?</p> <p>Yes → Repair the Radio Control MUX circuit or the Radio Control MUX Return circuit for an open between the inoperative switch and the clockspring. If OK, replace the remote radio switch.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

***REMOTE RADIO SWITCHES INOPERATIVE (IF EQUIPPED) — Continued**

TEST	ACTION	APPLICABILITY
3	Turn the ignition on. With the DRB, enter Body Computer then Sensors and monitor the Radio Control SW voltage. Is the voltage above 3.8 volts? Yes → Go To 4 No → Go To 8	All
4	Turn the ignition on. Turn the Radio on. Disconnect the Clockspring C1 harness connector. Connect a jumper wire between the Radio Control MUX circuit and the Radio Control MUX Return circuit. Did the radio change stations? Yes → Repair the Radio Control MUX circuit or the Radio Control MUX Return circuit for an open between the clockspring and the splice to the switches. If OK, replace the Clockspring. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Clockspring C1 harness connector. Disconnect the BCM C2 harness connector. Measure the resistance of the Radio Control MUX Return circuit between the BCM C2 connector and the Clockspring C1 connector. Is the resistance below 5.0 ohms? Yes → Go To 6 No → Repair the Radio Control MUX Return circuit for an open between the clockspring and the BCM. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Clockspring C1 harness connector. Disconnect the BCM C2 harness connector. Measure the resistance of the Radio Control MUX circuit between the BCM C2 connector and the Clockspring C1 connector. Is the resistance below 5.0 ohms? Yes → Go To 7 No → Repair the Radio Control MUX circuit for an open between the clockspring and the BCM. Perform BODY VERIFICATION TEST - VER 1.	All
7	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.	All

***REMOTE RADIO SWITCHES INOPERATIVE (IF EQUIPPED) — Continued**

TEST	ACTION	APPLICABILITY
8	<p>WARNING: Turn the ignition off, disconnect the battery and wait 2 minutes before proceeding.</p> <p>CAUTION: Do not place an intact undeployed airbag module face down on a hard surface, the airbag module will propel into the air if accidentally deployed.</p> <p>Remove the Driver Airbag Module.</p> <p>Disconnect the Left Remote Radio Switch harness connector.</p> <p>Turn the ignition on, reconnect the battery.</p> <p>With the DRB, enter Body Computer then Sensors and monitor the Radio Control SW voltage.</p> <p>Is the voltage above 3.8 volts?</p> <p>Yes → Replace the Left Remote Radio Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 9</p>	All
9	<p>WARNING: Turn the ignition off, disconnect the battery and wait 2 minutes before proceeding.</p> <p>CAUTION: Do not place an intact undeployed airbag module face down on a hard surface, the airbag module will propel into the air if accidentally deployed.</p> <p>Remove the Driver Airbag Module.</p> <p>Disconnect the Right Remote Radio Switch harness connector.</p> <p>Turn the ignition on, reconnect the battery.</p> <p>With the DRB, enter Body Computer then Sensors and monitor the Radio Control SW voltage.</p> <p>Is the voltage above 3.8 volts?</p> <p>Yes → Replace the Right Remote Radio Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 10</p>	All
10	<p>Turn the ignition off.</p> <p>Disconnect the Clockspring C3 harness connector.</p> <p>Turn the ignition on.</p> <p>With the DRB, enter Body Computer then Sensors and monitor the Radio Control SW voltage.</p> <p>Is the voltage above 3.8 volts?</p> <p>Yes → Go To 11</p> <p>No → Go To 12</p>	All
11	<p>Turn the ignition off.</p> <p>Disconnect the Clockspring C3 harness connector.</p> <p>NOTE: Ensure both remote radio switches are disconnected.</p> <p>Measure the resistance between ground and the Radio Control MUX circuit at the clockspring C3 harness connector.</p> <p>Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Radio Control MUX circuit for a short to ground between the clockspring and the remote radio switches. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Radio Control MUX circuit for a short to the Radio Control MUX Return circuit between the clockspring and the remote radio switches. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***REMOTE RADIO SWITCHES INOPERATIVE (IF EQUIPPED) — Continued**

TEST	ACTION	APPLICABILITY
12	Turn the ignition off. Disconnect the Clockspring C1 harness connector. Turn the ignition on. With the DRB, enter Body Computer then Sensors and monitor the Radio Control SW voltage. Is the voltage above 3.8 volts? Yes → Replace the Clockspring in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 13	All
13	Turn the ignition off. Disconnect the Clockspring C1 harness connector. Disconnect the BCM C2 harness connector. Measure the resistance between ground and the Radio Control MUX circuit. Is the resistance below 5.0 ohms? Yes → Repair the Radio Control MUX circuit for a short to ground between the clockspring and the BCM. Perform BODY VERIFICATION TEST - VER 1. No → Go To 14	All
14	Turn the ignition off. Disconnect the Clockspring C1 harness connector. Disconnect the BCM C2 harness connector. Measure the resistance between the Radio Control MUX circuit and the Radio Control MUX Return circuit. Is the resistance below 5.0 ohms? Yes → Repair the Radio Control MUX circuit for a short to the Radio Control MUX Return circuit between the clockspring and the BCM. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:***CHIME INOPERATIVE****POSSIBLE CAUSES**

RELATED CHIME SYMPTOMS

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, actuate the Chime. Does the Chime operate? Yes → Refer to Chime category for the related symptom(s). 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:***CHIME SOUNDS WITH DRIVER DOOR OPEN KEY REMOVED****POSSIBLE CAUSES**

KEY-IN IGN SW STATUS
 KEY-IN IGNITION SWITCH SHORTED
 KEY-IN IGNITION SW SENSE SHORT TO GROUND
 BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure the exterior lamps turn on and off properly and are off before continuing this test. With the DRB III select: Body, Body Computer, Input Output. Remove the key from the ignition switch. Read the Key-In Ignition status. Does the DRB III show Key-In Ign OPEN?</p> <p>Yes → Refer to the service information for other possible causes. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Ignition Switch connector. Did the chime turn off?</p> <p>Yes → Check the Ignition Lock Cylinder for damage. If OK replace the Ignition Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn ignition off. Disconnect the Ignition Switch connector. Disconnect the Body Control Module C1 connector. Measure the resistance of the Key-in Ignition Switch Sense circuit to ground at the Ignition Switch connector. Is the resistance below 100.0 ohms?</p> <p>Yes → Repair the Key-In Ignition Switch Sense wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

***KEY IN IGNITION AND DRIVER'S DOOR OPEN CHIME INOPER-
ATIVE**

POSSIBLE CAUSES
BODY CONTROL MODULE DIAGNOSTIC TROUBLE CODE OBSERVE THE KEY-IN IGNITION SWITCH STATUS KEY-IN IGNITION SWITCH OPEN KEY-IN IGNITION SWITCH GROUND CIRCUIT OPEN KEY-IN IGNITION SWITCH SENSE CIRCUIT OPEN BCM - INCORRECT KEY-IN IGNITION SWITCH STATUS

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, read BCM DTC's. Does the DRBIII® display any Cluster Wake Up Output or Communication DTC's? Yes → Refer to symptom list for the appropriate symptom. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	The driver's door ajar switch must be operational for the result of this test to be valid. NOTE: Ensure that the Key is still in the Ignition Switch. With the DRBIII® enter Body Computer then Input Output and read the Key-In Ignition Switch status. Does the DRB display: KEY-IN IGN: CLOSED? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition on. Back jumper the Key-In Ignition Switch Sense circuit to ground at the ignition switch connector. With the DRBIII®, enter Body Computer then Input/Output and observe the Key-In Ignition Switch status. Does the DRBIII display Key-In Ign SW: Closed? Yes → Replace the Ignition Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Disconnect the Ignition Switch harness connector. Turn all lights off. Measure the resistance between ground and the ground circuit in the ignition switch connector. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

KEY IN IGNITION AND DRIVER'S DOOR OPEN CHIME INOPERATIVE*— Continued**

TEST	ACTION	APPLICABILITY
5	Turn the ignition off. Disconnect the Ignition Switch harness connector. Disconnect the Body Control Module C1 harness connector. Measure the resistance of the Key-In Ignition Switch Sense circuit between the ignition switch connector and the BCM harness C1 connector . Is the resistance below 5.0 ohms? Yes → Go To 6 No → Repair the Key-In Ignition Switch Sense circuit for an open Perform BODY VERIFICATION TEST - VER 1.	All
6	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:***VEHICLE SPEED WARNING CHIME PROBLEM****POSSIBLE CAUSES**

INCORRECT COUNTRY CODE PROGRAMMED IN BCM
BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The high speed warning chime is for Gulf Coast Countries only. With the DRBIII® in Miscellaneous check the Body Control Module country code setting. Is the country code incorrect?</p> <p>Yes → Program the correct country code setting. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

BATTERY IOD DISCONNECT AT BCM

When Monitored and Set Condition:

BATTERY IOD DISCONNECT AT BCM

When Monitored: Each time the DRB request DTC's from the BCM, the BCM checks for battery voltage on the IOD circuit.

Set Condition: The DTC will set if the BCM detects a low or no voltage condition on the IOD circuit.

POSSIBLE CAUSES

VERIFYING ACTIVE DTC
JUNCTION BLOCK FUSE #34
CHECK FUSED B+ FEED TO FUSE
JUNCTION BLOCK IOD FAILURE
BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Connect the DRB to the Data Link Connector. Turn the ignition on. With the DRB, erase BCM DTC's. Turn the ignition off then turn the ignition on. With the DRB, read BCM DTC's. Does the DRB display: Battery IOD Disconnect at BCM?</p> <p>Yes → Go To 2</p> <p>No → No problem found at this time. Use the wiring diagrams located in the service information to help isolate a possible intermittent wiring problem. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Inspect fuse #34 in the Junction Block. Is the fuse open?</p> <p>Yes → Re-install or replace Junction Block fuse #34. Use the wiring diagrams located in the service information to help isolate a possible intermittent wiring problem. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Remove Fuse #34 from the Junction Block. Using a 12-volt test light connected to ground, probe the Fused B+ side of the fuse. Is the test light illuminated?</p> <p>Yes → Go To 4</p> <p>No → Check PDC Fuse #7 for an open. If OK, repair the Fused B+ circuit for an open between the PDC and the Fuse. Perform BODY VERIFICATION TEST - VER 1.</p>	All

BATTERY IOD DISCONNECT AT BCM — Continued

TEST	ACTION	APPLICABILITY
4	<p>Install Fuse #34 in the Junction Block. Remove the BCM from the Junction Block. Using a 12-volt test light connected to ground, probe the Fused B+ circuit in the Junction Block Body Control Module connector cavity 15. NOTE: Make sure all the Junction Block connectors are connected at this time Is the test light illuminated?</p> <p>Yes → Replace the Body Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Junction Block in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
EEPROM CHECKSUM FAILURE

When Monitored and Set Condition:

EEPROM CHECKSUM FAILURE

When Monitored: Each time the DRB request DTC's from the BCM, the BCM runs an EEPROM checksum test.

Set Condition: The DTC will set if the BCM detects an EEPROM checksum failure.

POSSIBLE CAUSES

BCM INTERNAL EEPROM FAILURE

TEST	ACTION	APPLICABILITY
1	Connect the DRB to the Data Link Connector. Turn the ignition on. With the DRB, erase BCM DTC's. Turn the ignition off then turn the ignition on. With the DRB, read BCM DTC's. Did this DTC reset? Yes → Reflash or Replace the Body Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
FLASH CHECKSUM FAILURE

When Monitored and Set Condition:

FLASH CHECKSUM FAILURE

When Monitored: Each time the DRB performs the flash process, the BCM runs a flash checksum test.

Set Condition: The DTC will set if the BCM detects a flash checksum failure.

POSSIBLE CAUSES

BCM INTERNAL FLASH CHECKSUM FAILURE

TEST	ACTION	APPLICABILITY
1	Connect the DRB to the Data Link Connector. Turn the ignition on. With the DRB, erase BCM DTC's. Turn the ignition off then turn the ignition on. With the DRB, read BCM DTC's. Did this DTC reset? Yes → Reflash or Replace the Body Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
ITM MESSAGES NOT RECEIVED

When Monitored and Set Condition:

ITM MESSAGES NOT RECEIVED

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

Set Condition: The BCM does not receive any messages from the Intrusion Transceiver Module (ITM) for at least 30 seconds.

POSSIBLE CAUSES

ATTEMPT TO COMMUNICATE WITH THE INTRUSION TRANSCEIVER MODULE
BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, enter Theft Alarm then Intrusion Module. Was the DRB able to I/D or communicate with the Intrusion Module? 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 Body Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom: PCM MESSAGE NOT RECEIVED

When Monitored and Set Condition:

PCM MESSAGE NOT RECEIVED

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

Set Condition: The BCM does not receive any messages from the PCM for at least 30 seconds.

POSSIBLE CAUSES

PCM MESSAGE NOT 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 Body Computer, System Tests then PCM Monitor. Does the DRB display: PCM is active on BUS? Yes → With the DRB, erase DTCs. Cycle the ignition switch and check for BCM DTCs. If DTC resets, replace the Body Control Module in accordance with the service information. 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

PCM MESSAGE NOT RECEIVED — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the PCM harness connector. CAUTION: IF NGC, 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 DRBIII® from the DLC. Measure the resistance of the PCI Bus circuit between the DLC and the PCM connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Powertrain Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*NO RESPONSE FROM ACM

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

TEST	ACTION	APPLICABILITY
1	<p>Ensure that the battery is fully charged. WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the ACM C1 harness connector. 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 at the ACM connector. NOTE: One open circuit will not cause a NO RESPONSE condition. Is the test light illuminated on both circuits?</p> <p>Yes → Go To 2</p> <p>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.</p> <p>NOTE: When reconnecting airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
2	<p>Ensure that the battery is fully charged. WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the ACM C1 harness connector. 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?</p> <p>Yes → Go To 3</p> <p>No → Repair the Ground circuit for an open. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

***NO RESPONSE FROM ACM — Continued**

TEST	ACTION	APPLICABILITY
3	<p>Note: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.</p> <p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the ACM C1 harness connector.</p> <p>Connect the appropriate Load Tool ACM Adapter to the ACM connector.</p> <p>Turn the ignition on and then reconnect the Battery.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the ACM connector.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Replace the Airbag Control Module in accordance with the Service Information. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

Symptom:

*NO RESPONSE FROM BODY CONTROL MODULE

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH ANOTHER MODULE OPEN GROUND CIRCUIT OPEN PCI BUS CIRCUIT BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, attempt to communicate with the Airbag Control Module. With the DRB, attempt to communicate with the Instrument Cluster. Was the DRB able to I/D or communicate with the ACM and the CAB? Yes → Go To 2 No → Refer to symptom list for problems related to the PCI Bus Communication Failure. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the BCM C1 and C2 harness connectors. Using a 12-volt test light connected to 12-volts, probe the 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	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 BCM 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. Set Probe to x10. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the BCM 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 4 No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

***NO RESPONSE FROM BODY CONTROL MODULE — Continued**

TEST	ACTION	APPLICABILITY
4	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Body Control Module in accordance with the service information.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*NO RESPONSE FROM COMPASS MINI-TRIP COMPUTER

POSSIBLE CAUSES
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
FUSED B+ CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
COMPASS MINI-TRIP COMPUTER

TEST	ACTION	APPLICABILITY
1	<p>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.</p> <p>Turn the ignition off. Disconnect the Compass Mini-Trip Computer harness connector. Using a 12-volt test light connected to 12-volts, probe the ground circuit. Is the test light illuminated?</p> <p>Yes → Go To 2</p> <p>No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>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.</p> <p>Turn the ignition off. Disconnect the Compass Mini-Trip Computer 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?</p> <p>Yes → Go To 3</p> <p>No → Repair the Fused Ignition Switch Output circuit for an open. Refer to the wiring diagrams located in the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>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.</p> <p>Turn the ignition off. Disconnect the Compass Mini-Trip Computer harness connector. Using a 12-volt test light connected to ground, probe the Fused B+ circuit. Is the test light illuminated?</p> <p>Yes → Go To 4</p> <p>No → Repair the Fused B+ circuit for an open. Refer to the wiring diagrams located in the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***NO RESPONSE FROM COMPASS MINI-TRIP COMPUTER — Continued**

TEST	ACTION	APPLICABILITY
4	<p>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.</p> <p>Disconnect the Compass Mini-Trip Computer harness connector.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Compass Mini-Trip Computer connector.</p> <p>Turn the ignition on.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Replace the Compass Mini-Trip Computer in accordance with the service information.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*NO RESPONSE FROM CONTROLLER ANTILOCK BRAKE

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

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

***NO RESPONSE FROM CONTROLLER ANTILOCK BRAKE — Continued**

TEST	ACTION	APPLICABILITY
4	<p>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.</p> <p>Disconnect the CAB harness connector.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the CAB connector.</p> <p>Turn the ignition on.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Go To 5</p> <p>No → Repair the PCI Bus circuit for an open.</p> <p>Perform ABS VERIFICATION TEST - VER 1.</p>	All
5	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Controller Antilock Brake in accordance with the Service Information.</p> <p>Perform ABS VERIFICATION TEST - VER 1.</p>	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	<p>Turn the ignition on.</p> <p>NOTE: As soon as one or more module communicates with the DRB, answer the question.</p> <p>With the DRB, enter Body then Body Computer.</p> <p>With the DRB, enter Anti-Lock Brakes.</p> <p>With the DRB, enter Body then Electro/Mechanical Cluster (MIC).</p> <p>With the DRB, enter Passive Restraints then Airbag.</p> <p>Were you able to establish communications with any of the modules?</p> <p>Yes → Go To 2</p> <p>No → Refer to symptom PCI Bus Communication Failure in the Communications category.</p> <p>Perform ROAD TEST VERIFICATION - VER-2.</p>	All
2	<p>With the DRB read ECM Diagnostic Trouble Codes. This is to ensure power and grounds to the ECM are operational.</p> <p>NOTE: If the DRB will not read ECM DTCs, follow the NO RESPONSE TO ECM (SCI only) symptom path.</p> <p>Turn the ignition off.</p> <p>Disconnect the ECM harness connectors.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to ground. Connect the Red lead to the PCI Bus circuit in the ECM connector.</p> <p>Turn the ignition on.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Replace and program the Engine Control Module in accordance with the Service Information.</p> <p>Perform ROAD TEST VERIFICATION - VER-2.</p> <p>No → Repair the PCI Bus circuit for an open.</p> <p>Perform ROAD TEST VERIFICATION - VER-2.</p>	All

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

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

TEST	ACTION	APPLICABILITY
1	<p>Perform the symptom Checking ECM Power and Ground Circuits in the Driveability category.</p> <p>Did the vehicle pass this test?</p> <p>Yes → Go To 2</p> <p>No → Repair as necessary.</p> <p>Perform ROAD TEST VERIFICATION - VER-2.</p>	All
2	<p>Turn the ignition off.</p> <p>Disconnect the ECM harness connectors.</p> <p>Disconnect the DRB from the DLC.</p> <p>Measure the resistance between ground and the SCI Transmit circuit.</p> <p>Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 3</p> <p>No → Go To 4</p>	All
3	<p>Turn the ignition off.</p> <p>Disconnect the TCM harness connector (if equipped).</p> <p>NOTE: If vehicle is not equipped with a TCM, answer yes to the question.</p> <p>Measure the resistance between ground and the SCI Transmit circuit.</p> <p>Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the SCI Transmit circuit for a short to ground.</p> <p>Perform ROAD TEST VERIFICATION - VER-2.</p> <p>No → Replace the Transmission Control Module in accordance with the service information.</p> <p>Perform ROAD TEST VERIFICATION - VER-2.</p>	All
4	<p>Turn the ignition off.</p> <p>Disconnect the DRB from the DLC.</p> <p>Disconnect the ECM harness connectors.</p> <p>Disconnect the TCM harness connector (if equipped).</p> <p>Turn the ignition on.</p> <p>Measure the voltage of the SCI Transmit circuit at the DLC connector (cav 7).</p> <p>Is the voltage above 1.0 volt?</p> <p>Yes → Repair the SCI Transmit circuit for a short to voltage.</p> <p>Perform ROAD TEST VERIFICATION - VER-2.</p> <p>No → Go To 5</p>	All

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

TEST	ACTION	APPLICABILITY
5	<p>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?</p> <p>Yes → Replace and program the Engine Control Module in accordance with the Service Information. Perform ROAD TEST VERIFICATION - VER-2.</p> <p>No → Repair the SCI Transmit circuit for an open. Perform ROAD TEST VERIFICATION - VER-2.</p>	All

Symptom:

***NO RESPONSE FROM INSTRUMENT CLUSTER**

POSSIBLE CAUSES
<p>OPEN GROUND CIRCUIT</p> <p>OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT</p> <p>OPEN FUSED B+ CIRCUIT</p> <p>OPEN PCI BUS CIRCUIT</p> <p>INSTRUMENT CLUSTER</p>

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition off.</p> <p>Turn all lights off.</p> <p>Disconnect the Instrument Cluster harness connector.</p> <p>Using a 12-volt test light connected to 12-volts, probe the ground circuit.</p> <p>Is the test light illuminated?</p> <p>Yes → Go To 2</p> <p>No → Repair the ground circuit for an open.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off.</p> <p>Disconnect the Instrument Cluster harness connector.</p> <p>Turn the ignition on.</p> <p>Using a 12-volt test light connected to ground, probe the Fused Ignition Switch Output circuit.</p> <p>Is the test light illuminated?</p> <p>Yes → Go To 3</p> <p>No → Repair the Fused Ignition Switch Output circuit for an open.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off.</p> <p>Disconnect the Instrument Cluster harness connector.</p> <p>Using a 12-volt test light connected to ground, probe the Fused B+ circuit.</p> <p>Is the test light illuminated?</p> <p>Yes → Go To 4</p> <p>No → Repair the Fused B+ circuit for an open.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

*NO RESPONSE FROM INSTRUMENT CLUSTER — Continued

TEST	ACTION	APPLICABILITY
4	<p>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.</p> <p>Disconnect the Instrument Cluster harness connector.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>Install DRBIII® SuperCard 2 CH8361 into DRBIII®.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Instrument Cluster connector.</p> <p>Turn the ignition on.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Go To 5</p> <p>No → Repair the PCI Bus circuit for an open.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Instrument Cluster in accordance with the service information.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
***NO RESPONSE FROM INTRUSION TRANSCIEVER MODULE**

POSSIBLE CAUSES
GROUND CIRCUIT OPEN
FUSED B+ CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
INTRUSION TRANSCIEVER MODULE

TEST	ACTION	APPLICABILITY
1	<p>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.</p> <p>Turn the ignition off. Disconnect the Intrusion Transceiver Module harness connector. Using a 12-volt test light connected to 12-volts, probe the ground circuit. Is the test light illuminated?</p> <p>Yes → Go To 2</p> <p>No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>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.</p> <p>Turn the ignition off. Disconnect the Intrusion Transceiver Module harness connector. Using a 12-volt test light connected to ground, probe the Fused B+ circuit. Is the test light illuminated?</p> <p>Yes → Go To 3</p> <p>No → Repair the Fused B+ circuit for an open. Refer to the wiring diagrams located in the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

*NO RESPONSE FROM INTRUSION TRANSCIVER MODULE — Continued

TEST	ACTION	APPLICABILITY
3	<p>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.</p> <p>Disconnect the Intrusion Transceiver Module harness connector.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Intrusion Transceiver Module connector.</p> <p>Turn the ignition on.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Replace the Intrusion Transceiver Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

***NO RESPONSE FROM LEFT SIACM**

POSSIBLE CAUSES
INTERROGATE ACM
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT (RUN/START) OPEN
PCI BUS CIRCUIT OPEN
LEFT SIDE IMPACT AIRBAG CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII® select Passive Restraints. With the DRBIII® select Airbag and read the active DTC's. Is the Loss Of Ignition Run/Start DTC set?</p> <p>Yes → Refer to the symptom list and perform the Loss Of Ignition Run/Start symptom. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Ensure that the battery is fully charged. Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Left Side Impact Airbag Control Module harness connector. Connect the appropriate Load Tool SIACM Adapter to the SIACM 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?</p> <p>Yes → Go To 3</p> <p>No → Repair the Ground circuit for an open. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
3	<p>Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Left Side Impact Airbag Control Module harness connector. Connect the appropriate Load Tool SIACM Adapter to the SIACM connector. Turn the ignition on and then reconnect the Battery. Measure the voltage of the Fused Ignition Switch Output (Run/Start) circuit. Is the voltage above 6.0 volts?</p> <p>Yes → Go To 4</p> <p>No → Repair the Fused Ignition Switch Output (Run/Start) circuit for an open. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

*NO RESPONSE FROM LEFT SIACM — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.</p> <p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Left Side Impact Airbag Control Module harness connector. Connect the appropriate Load Tool SIACM Adapter to the SIACM 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. Set Probe to x10. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Left Side Impact Airbag Control Module connector. Observe the voltage display on the DRB Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Replace the Left Side Impact Airbag Control Module (LSIACM) in accordance with the Service Information. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open. Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

Symptom:

***NO RESPONSE FROM PCM (PCI BUS)**

POSSIBLE CAUSES

PCM PCI NO RESPONSE
 PCI BUS CIRCUIT OPEN
 POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on.</p> <p>NOTE: As soon as one or more module communicates with the DRB, answer the question.</p> <p>With the DRB, enter Body then Body Computer.</p> <p>With the DRB, enter Anti-Lock Brakes.</p> <p>With the DRB, enter Body then Electro/Mechanical Cluster (MIC).</p> <p>With the DRB, enter Passive Restraints then Airbag.</p> <p>Were you able to establish communications with any of the modules?</p> <p>Yes → Go To 2</p> <p>No → Refer to symptom PCI Bus Communication Failure in the Communications category.</p> <p>Perform POWERTRAIN VERIFICATION TEST VER - 1.</p>	All

*NO RESPONSE FROM PCM (PCI BUS) — Continued

TEST	ACTION	APPLICABILITY
2	<p>With the DRB read PCM Diagnostic Trouble Codes. This is to ensure power and grounds to the PCM are operational.</p> <p>NOTE: If the DRB will not read PCM DTC's, follow the NO RESPONSE TO PCM (SCI only) symptom path.</p> <p>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.</p> <p>Turn the ignition off.</p> <p>Disconnect the PCM harness connector.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>Install DRBIII® SuperCard 2 CH8361 into DRBIII®.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the PCM ground. Connect the Red lead to the PCI Bus circuit in the PCM connector.</p> <p>Turn the ignition on.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Replace and program the Powertrain Control Module in accordance with the Service Information. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p> <p>No → Repair the PCI Bus circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p>	All

Symptom:
***NO RESPONSE FROM PCM (SCI ONLY)**
POSSIBLE CAUSES

CHECK PCM POWERS AND GROUNDS
 SCI TRANSMIT CIRCUIT SHORTED TO VOLTAGE
 TRANSMISSION CONTROL MODULE
 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	<p>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?</p> <p>Yes → Go To 2</p> <p>No → Repair as necessary. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p>	All
2	<p>Turn the ignition off. Disconnect the PCM 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?</p> <p>Yes → Go To 3</p> <p>No → Go To 4</p>	All
3	<p>Turn the ignition off. Disconnect the TCM harness connector (if equipped). NOTE: If vehicle is not equipped with a TCM, answer yes to the question. Measure the resistance between ground and the SCI Transmit circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the SCI Transmit circuit for a short to ground. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p> <p>No → Replace the Transmission Control Module in accordance with the service information. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p>	All

*NO RESPONSE FROM PCM (SCI ONLY) — Continued

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition off. Disconnect the DRB from the DLC. Disconnect the PCM harness connectors. Disconnect the TCM harness connector (if equipped). Turn the ignition on. Measure the voltage of the SCI Transmit circuit at the DLC connector (cav 7). Is the voltage above 1.0 volt?</p> <p>Yes → Repair the SCI Transmit circuit for a short to voltage. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off. Disconnect the DRB from the DLC. Disconnect the PCM harness connectors. Turn the ignition on. Measure the voltage of the SCI Receive circuit at the DLC connector (cav 6). Is the voltage above 1.0 volt?</p> <p>Yes → Repair the SCI Receive circuit for a short to voltage. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p> <p>No → Go To 6</p>	All
6	<p>Turn the ignition off. Disconnect the DRB from the DLC. Disconnect the PCM harness connectors. Measure the resistance between the SCI Transmit circuit and the SCI Receive circuit at the PCM connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the short between the SCI Transmit and the SCI Receive circuits. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p> <p>No → Go To 7</p>	All
7	<p>Turn the ignition off. Disconnect the PCM harness connectors. Disconnect the DRB from the DLC. Measure the resistance between ground and the SCI Receive circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the SCI Receive circuit for a short to ground. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p> <p>No → Go To 8</p>	All
8	<p>Turn the ignition off. Disconnect the PCM harness connectors. Disconnect the DRB 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?</p> <p>Yes → Go To 9</p> <p>No → Repair the SCI Receive circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1.</p>	All

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

TEST	ACTION	APPLICABILITY
9	Turn the ignition off. Disconnect the PCM harness connectors. Disconnect the DRB 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 → Go To 10 No → Repair the SCI Transmit circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1.	All
10	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.	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	<p>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 Body Control Module (BCM). Was the DRB able to I/D or establish communications with either of the modules?</p> <p>Yes → Go To 2</p> <p>No → Refer to the Communications category and perform the symptom PCI Bus Communication Failure. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>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?</p> <p>Yes → Go To 3</p> <p>No → 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.</p>	All
3	<p>Turn the ignition off. Disconnect the Radio C1 harness connector. Using a 12-volt test light connected to ground, probe both Fused B+ circuits. Is the test light illuminated for both circuits?</p> <p>Yes → Go To 4</p> <p>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.</p>	All

***NO RESPONSE FROM RADIO — Continued**

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition off. Disconnect the Radio C1 harness connector. Using a 12-volt test light connected to 12-volts, probe both ground circuits. Is the test light illuminated for both circuits?</p> <p>Yes → Go To 5</p> <p>No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>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.</p> <p>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. Install DRBIII® SuperCard 2 CH8361 into DRBIII®. 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. Set Probe to x10. 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?</p> <p>Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

***NO RESPONSE FROM RIGHT SIACM**

POSSIBLE CAUSES
INTERROGATE ACM
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT (RUN/START) OPEN
PCI BUS CIRCUIT OPEN
RIGHT SIDE IMPACT AIRBAG CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII® select Passive Restraints. With the DRBIII® select Airbag and read the active DTC's. Is the Loss Of Ignition Run/Start DTC set?</p> <p>Yes → Refer to the symptom list and perform the Loss Of Ignition Run/Start symptom. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Ensure that the battery is fully charged. Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Right Side Impact Airbag Control Module harness 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?</p> <p>Yes → Go To 3</p> <p>No → Repair the Ground circuit for an open. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All
3	<p>Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING. Disconnect the Right Side Impact Airbag Control Module harness connector. Turn the ignition on and then reconnect the Battery. Measure the voltage of the Fused Ignition Switch Output (Run/Start) circuit. Is the voltage above 6.0 volts?</p> <p>Yes → Go To 4</p> <p>No → Repair the Fused Ignition Switch Output (Run/Start) circuit for an open. Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.</p>	All

***NO RESPONSE FROM RIGHT SIACM — Continued**

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.</p> <p>WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.</p> <p>Disconnect the Right Side Impact Airbag Control Module harness connector.</p> <p>Turn the ignition on and then reconnect the Battery.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope, then enter to select channel.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Right Side Impact Airbag Control Module connector.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Replace the Right Side Impact Airbag Control Module (RSIACM) in accordance with the Service Information. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open.</p> <p>Perform AIRBAG VERIFICATION TEST - VER 1.</p>	All

Symptom:

*NO RESPONSE FROM SENTRY KEY IMMOBILIZER MODULE

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE BCM 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 Body Computer. Was the DRB able to I/D or communicate with the BCM? Yes → Go To 2 No → Refer to the symptom list for problems related to no communication with the BCM. 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 each ground circuit. Does the test light illuminate brightly for each circuit? 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. Does the test light illuminate brightly? 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. Does the test light illuminate brightly? 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	<p>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.</p> <p>Disconnect the SKIM harness connector.</p> <p>Use Scope input cable CH7058, Cable to Probe adapter CH7062, and the red and black test probes.</p> <p>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.</p> <p>With the DRBIII® select Pep Module Tools.</p> <p>Select lab scope.</p> <p>Select Live Data.</p> <p>Select 12 volt square wave.</p> <p>Press F2 for Scope.</p> <p>Press F2 and use the down arrow to set voltage range to 20 volts. Set Probe to x10.</p> <p>Press F2 again when complete.</p> <p>Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the SKIM connector.</p> <p>Turn the ignition on.</p> <p>Observe the voltage display on the DRB Lab Scope.</p> <p>Does the voltage pulse from 0 to approximately 7.5 volts?</p> <p>Yes → Go To 6</p> <p>No → Repair the PCI Bus circuit for an open.</p> <p>Perform SKIS VERIFICATION.</p>	All
6	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace and program the Sentry Key Immobilizer Module in accordance with the Service Information.</p> <p>Perform SKIS VERIFICATION.</p>	All

Symptom:

*NO RESPONSE FROM TRANSMISSION CONTROL MODULE

POSSIBLE CAUSES
NO RESPONSE FROM TRANSMISSION CONTROL MODULE
FUSED IGNITION SWITCH OUTPUT (RUN/ST) CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT (START) CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT (START) CIRCUIT SHORT
FUSED B(+) CIRCUIT OPEN
GROUND CIRCUIT(S) OPEN
OPEN PCI BUS CIRCUIT
TRANSMISSION CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Ignition on, engine not running.</p> <p>Note: As soon as one or more module communicates with the DRB, answer the question.</p> <p>With the DRB, attempt to communicate with the Airbag Control Module (ACM).</p> <p>With the DRB, attempt to communicate with the Instrument Cluster.</p> <p>Was the DRB able to I/D or establish communications with either of the modules?</p> <p>Yes → Go To 2</p> <p>No → Refer to the Body Communication category and perform the symptom PCI Bus Communication Failure.</p> <p>Perform 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off to the lock position.</p> <p>Disconnect the TCM harness connector.</p> <p>Ignition on, engine not running.</p> <p>Using a 12-volt test light connected to ground, check the Fused Ignition Switch Output (Run/St) circuit.</p> <p>NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery.</p> <p>Does the test light illuminate brightly?</p> <p>Yes → Go To 3</p> <p>No → Repair the Fused Ignition Switch Output (Run/St) circuit for an open. Refer to the wiring diagrams location in the Service Information.</p> <p>Perform 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p>	All

***NO RESPONSE FROM TRANSMISSION CONTROL MODULE — Continued**

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off to the lock position. Disconnect the TCM harness connector. Remove the starter relay from the PDC. Using a 12-volt test light connected to ground, check the Fused Ignition Switch Output (Start) circuit. NOTE: The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery. Observe the test light while momentarily turning the ignition switch to the Start position. Does the test light illuminate brightly?</p> <p>Yes → Go To 4</p> <p>No → Repair the Fused Ignition Switch Output (Start) circuit for an open. Refer to the wiring diagrams located in the Service Information. Perform 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition off to the lock position. Disconnect the TCM harness connector. With a voltmeter in the millivolt scale, measure the voltage of the Fused Ignition Switch Output (Start) circuit. NOTE: A no response condition can exist if voltage is present on this circuit with the ignition switch in any position except for the Start position. NOTE: Voltage up to .080 millivolts can cause this condition. NOTE: Check for after market components that could cause this condition. Perform this step with the Ignition Switch in every position except for the Start position. Is any voltage present?</p> <p>Yes → Repair the Fused Ignition Switch Output (Start) circuit for a short to voltage. Refer to the wiring diagrams located in the Service Information. Perform 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p> <p>Note: Reinstall the original Starter Relay.</p>	All
5	<p>Turn the ignition off. Disconnect the TCM harness 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?</p> <p>Yes → Go To 6</p> <p>No → Repair the Fused B(+) circuit for an open. Refer to the wiring diagrams located in the Service Information. Perform 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p>	All

***NO RESPONSE FROM TRANSMISSION CONTROL MODULE — Continued**

TEST	ACTION	APPLICABILITY
6	<p>Turn the ignition off to the lock position. Disconnect the TCM harness connector. Using a 12-volt test light connected to 12-volts, check each ground circuit in the TCM harness connector. 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 at all the ground circuits?</p> <p>Yes → Go To 7</p> <p>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 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p>	All
7	<p>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 TCM 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. Set Probe to x10. Press F2 again when complete. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the TCM 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?</p> <p>Yes → Go To 8</p> <p>No → Repair the PCI Bus circuit for an open. Perform 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p>	All
8	<p>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.</p> <p>Repair</p> <p>Replace the Transmission Control Module in accordance with the service information. WITH THE DRBIII® PERFORM QUICK LEARN. Perform 45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1.</p>	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	<p>Note: Determine which modules this vehicle is equipped with before beginning.</p> <p>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.</p> <p>Turn the ignition on.</p> <p>Using the DRB, attempt to communicate with the following control modules:</p> <ul style="list-style-type: none"> Airbag Control Module Body Control Module MIC (INSTRUMENT CLUSTER) <p>Was the DRBIII® able to communicate with one or more Module(s)?</p> <p>Yes → Go To 2</p> <p>No → Go To 3</p>	All
2	<p>Turn the ignition off.</p> <p>Note: Visually inspect the related wiring harness. Look for any chafed, pierced, pinched, or partially broken wires.</p> <p>Note: Visually inspect the related wire harness connectors. Look for broken, bent, pushed out, or corroded terminals.</p> <p>Note: If the DRB can not communicate with a single module, refer to the category list for the related symptom.</p> <p>Were any problems found?</p> <p>Yes → Repair wiring harness/connectors as necessary. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Test Complete.</p>	All
3	<p>Turn the ignition off.</p> <p>Disconnect the PCM/ECM harness connector.</p> <p>Disconnect the DRB from the Data Link Connector (DLC).</p> <p>Disconnect the negative battery cable.</p> <p>Measure the resistance of the PCI Bus circuit between the Data Link Connector (DLC) and the PCM/ECM harness connector.</p> <p>Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 4</p> <p>No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

*PCI BUS COMMUNICATION FAILURE — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Reconnect the PCM/ECM harness connector and the negative battery cable.</p> <p>Turn the ignition on.</p> <p>Measure the voltage of the PCI Bus circuit at the Data Link Connector (DLC).</p> <p>Is the voltage above 7.0 volts?</p> <p>Yes → Go To 5</p> <p>No → Go To 6</p>	All
5	<p>Turn the ignition off.</p> <p>Using a voltmeter, connect one end to the PCI Bus circuit at the DLC, and the other end to ground.</p> <p>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.</p> <p>Turn the ignition on.</p> <p>While monitoring the voltmeter, disconnect each module the vehicle is equipped with one at a time.</p> <p>Is the voltage steadily above 7.0 volts with all the modules disconnected?</p> <p>Yes → Repair the PCI Bus circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the module that when disconnected the short to voltage was eliminated. Perform BODY VERIFICATION TEST - VER 1.</p>	All
6	<p>Turn the ignition off.</p> <p>Disconnect the negative battery cable.</p> <p>Using a ohmmeter, connect one end to the PCI Bus circuit at the DLC, and the other end to ground.</p> <p>While monitoring the ohmmeter, disconnect each module the vehicle is equipped with one at a time.</p> <p>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.</p> <p>Is the resistance below 150.0 ohms with all the modules disconnected?</p> <p>Yes → Repair the PCI Bus circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the module that when disconnected the short to ground was eliminated. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
BUS MESSAGES MISSING

POSSIBLE CAUSES
<p>NO RESPONSE FROM EVIC</p> <p>INTERMITTENT CONDITION</p> <p>NO RESPONSE - PCI BUS - PCM</p> <p>NO RESPONSE - PCI BUS - BCM</p> <p>ELECTRONIC VEHICLE INFORMATION CENTER</p>

TEST	ACTION	APPLICABILITY
1	<p>NOTE: The EVIC self test can performed manually or by using the DRBIII®.</p> <p>Turn the ignition off.</p> <p>Perform the EVIC self test.</p> <p>Depress and hold the RESET and C/T EVIC buttons while turning the ignition on.</p> <p>Does the EVIC display "PASS"?</p> <p>Yes → Go To 2</p> <p>No → Go To 4</p>	All
2	<p>Turn the ignition on.</p> <p>With the DRBIII®, select Body Computer, System Tests, then PCM Monitor.</p> <p>Does the DRBIII® display "PCM Active on the Bus"?</p> <p>Yes → Go To 3</p> <p>No → Refer to COMMUNICATION for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition on.</p> <p>With the DRBIII®, attempt to I/D or communicate with the BCM.</p> <p>Was the DRBIII® able to I/D or communicate with the BCM?</p> <p>Yes → Replace the EVIC in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to COMMUNICATION for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition off.</p> <p>Perform the EVIC self test.</p> <p>Press and hold the RESET and C/T buttons.</p> <p>Turn the ignition on.</p> <p>Does the EVIC display "BUS"?</p> <p>Yes → Refer to symptom *NO RESPONSE FROM COMPASS in the Communication category. Perform BODY VERIFICATION TEST - VER 1.</p> <p>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.</p>	All

Symptom List:

COMPASS TEST FAILURE

EVIC INTERNAL FAILURE

Test Note: All symptoms listed above are diagnosed using the same tests.
The title for the tests will be **COMPASS TEST FAILURE**.

POSSIBLE CAUSES

ELECTRONIC VEHICLE INFORMATION CENTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Depress and hold the RESET and C/T buttons while turning the ignition on. NOTE: This test may also be performed using the DRBIII®. Does the EVIC or DRBIII® display "FAIL"? Yes → Replace the EVIC in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
NO BCM MESSAGES RECEIVED

When Monitored and Set Condition:

NO BCM MESSAGES RECEIVED

When Monitored: When the ignition is turned on.

Set Condition: No PCI Bus message received for 5 seconds after the ignition is turned on. No PCI Bus message is indicated by dashes in the VF display. When valid data is received, the data will replace the dashes.

POSSIBLE CAUSES

DTC PRESENT

NO RESPONSE - PCI BUS - BCM

ELECTRONIC VEHICLE INFORMATION CENTER

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 1 minute. With the DRBIII®, read DTCs. Did this DTC reset?</p> <p>Yes → Go To 2</p> <p>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.</p>	All
2	<p>Turn the ignition on. With the DRBIII®, attempt to I/D or communicate with the BCM. Was the DRBIII® able to communicate with the BCM?</p> <p>Yes → Replace the EVIC in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to the COMMUNICATION category and perform the appropriate symptom. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom: NO PCM MESSAGES RECEIVED

When Monitored and Set Condition:

NO PCM MESSAGES RECEIVED

When Monitored: When the ignition is turned on.

Set Condition: No PCI Bus message received for 5 seconds after the ignition is turned on. No PCI Bus message is indicated by dashes in the VF display. When valid data is received, the data will replace the dashes.

POSSIBLE CAUSES

DTC PRESENT

NO RESPONSE - PCI BUS - PCM

ELECTRONIC VEHICLE INFORMATION CENTER

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 1 minute. With the DRBIII®, read DTCs. Did this DTC reset?</p> <p>Yes → Go To 2</p> <p>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.</p>	All
2	<p>Turn the ignition on. With the DRBIII®, enter Body Computer, System Tests, then PCM Monitor. Does the DRBIII® display PCM Active on the Bus?</p> <p>Yes → Replace the EVIC in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to the COMMUNICATION category and perform the appropriate symptom. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom List:

- ***ANY SWITCH ON EVIC INOPERATIVE**
- ***AVERAGE FUEL INOPERATIVE OR WRONG**
- ***CMTc FAILS TO RESPOND TO INSTRUMENT PANEL DIMMING**
- ***DISTANCE TO EMPTY INOPERATIVE OR WRONG**
- ***ELAPSED TIME INOPERATIVE OR WRONG**
- ***TRIP ODOMETER INOPERATIVE OR WRONG**
- ***UNIVERSAL GARAGE DOOR OPENER (UGDO) INOPERATIVE**

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be *ANY SWITCH ON EVIC INOPERATIVE.

POSSIBLE CAUSES

ELECTRONIC VEHICLE INFORMATION CENTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Diagnose and repair any BCM, MIC, PCM, or COMMUNICATION DTCs before proceeding</p> <p>If all the possible causes above are operating correctly, view repair.</p> <p>Repair</p> <p>Replace the EVIC in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*EVIC INOPERATIVE

POSSIBLE CAUSES
FUSED B+ CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
GROUND CIRCUIT OPEN
ELECTRONIC VEHICLE INFORMATION CENTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Diagnose and repair any BCM, MIC, PCM, or COMMUNICATION DTCs before proceeding.</p> <p>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?</p> <p>Yes → Go To 2</p> <p>No → Repair the Fused B(+) circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>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 below 10.5 volts?</p> <p>Yes → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition off. Disconnect the Overhead Console harness connector. Measure the resistance between ground and the CMTC ground circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the EVIC in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

***TEMP 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 GROUND CIRCUIT
 AMBIENT TEMPERATURE SENSOR GROUND CIRCUIT OPEN
 BODY CONTROL MODULE
 ELECTRONIC VEHICLE INFORMATION CENTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the EVIC is communicating on the PCI Bus before proceeding with this test.</p> <p>NOTE: The Ambient Temperature Sensor is hardwired to the BCM. Ambient temperature information is transmitted to the EVIC via the PCI Bus.</p> <p>Turn the ignition off.</p> <p>Disconnect the Ambient Temperature Sensor harness connector.</p> <p>Measure the resistance of the Ambient Temperature Sensor using the following temperature/resistance values:</p> <p>10°C (50°F) Sensor Resistance = 17.99 - 21.81 Kilohms</p> <p>20°C (68°F) Sensor Resistance = 11.37 - 13.61 Kilohms</p> <p>25°C (77°F) Sensor Resistance = 9.12 - 10.88 Kilohms</p> <p>30°C (86°F) Sensor Resistance = 7.37 - 8.75 Kilohms</p> <p>40°C (104°F) Sensor Resistance = 4.90 - 5.75 Kilohms</p> <p>50°C (122°F) Sensor Resistance = 3.33 - 3.88 Kilohms</p> <p>Is the Ambient Temperature Sensor resistance measurement between the min/max specifications?</p> <p>Yes → Go To 2</p> <p>No → Replace the Ambient Temperature Sensor. NOTE: After any repair for an Ambient Temperature Sensor problem, the vehicle must be driven over 5 kilometers (3 miles) above 40 km/h (25 MPH) to update the EVIC display.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

*TEMP DISPLAY INOPERATIVE OR WRONG — Continued

TEST	ACTION	APPLICABILITY
2	<p>Turn the ignition off. Ensure that the Interior lights are off. Ensure that the Exterior lights are off. Disconnect the DRBIII®. Ensure that all doors are closed. Disconnect the Ambient Temperature Sensor harness connector. Measure the voltage between the Ambient Temperature Sensor Signal circuit and ground. Is there any voltage present?</p> <p>Yes → Repair the Ambient Temperature Sensor Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Disconnect the Ambient Temperature Sensor harness connector. Turn the ignition on. Measure the voltage between the Ambient Temperature Sensor Signal circuit and the Sensor ground circuit. Is the voltage above 4.5 volts?</p> <p>Yes → Replace the EVIC in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Turn the ignition off. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the BCM C2 harness connector. Measure the resistance between ground and the Ambient Temperature Sensor Signal circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Ambient Temperature Sensor Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the BCM C2 harness connector. Measure the resistance of the Sensor Signal circuit to the Sensor Ground circuit in the Sensor connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Ambient Temperature Sensor Signal circuit for a short to the Ambient Temperature Sensor Ground circuit. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 6</p>	All

***TEMP DISPLAY INOPERATIVE OR WRONG — Continued**

TEST	ACTION	APPLICABILITY
6	<p>Turn the ignition off. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the BCM C2 harness connector. Measure the resistance of the Ambient Temperature Sensor Signal circuit between the Sensor connector and the BCM C2 connector. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Ambient Temperature Sensor Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 7</p>	All
7	<p>Turn the ignition off. Disconnect the Ambient Temperature Sensor harness connector. Disconnect the BCM C2 harness connector. Measure the resistance of the Sensor Ground circuit between the Sensor connector and the BCM C2 connector. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Ambient Temperature Sensor Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***FLIP-UP GLASS AJAR CIRCUIT OPEN****POSSIBLE CAUSES**

FLIP-UP GLASS AJAR SWITCH GROUND CIRCUIT OPEN

INTERMITTENT CONDITION

FLIP-UP GLASS AJAR SWITCH

FLIP-UP GLASS AJAR SWITCH SENSE CIRCUIT OPEN

BODY CONTROL MODULE INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>Open the Flip-up Glass. With the DRBIII® in Inputs/Outputs, read the FLIP-UP AJAR SW state. Does the DRBIII® display CLOSED?</p> <p>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.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Tailgate Flip-up Glass Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity. Does the light illuminate?</p> <p>Yes → Go To 3</p> <p>No → Repair the Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Disconnect the Tailgate Flip-up Glass Ajar Switch connector. With the DRBIII® in Inputs/Outputs, read the FLIP-UP AJAR SW state. Connect a jumper wire between Sense circuit and the Ground circuit. Does the DRBIII® display FLIP-UP AJAR SW: CLOSED?</p> <p>Yes → Replace the Flip-up Glass Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Disconnect the Body Control Module C1 harness connector. Disconnect the Flip-up Glass Ajar Switch harness connector. Measure the resistance of the Sense circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Flip-up Glass Ajar Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***FLIP-UP GLASS AJAR CIRCUIT SHORTED TO GROUND****POSSIBLE CAUSES**

FLIP-UP GLASS AJAR SWITCH SHORTED TO GROUND

FLIP-UP GLASS AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Inputs/Outputs, read the FLIP-UP AJAR SW state. Disconnect the Tailgate Flip-up Glass Ajar Switch harness connector. With the DRBIII® in Inputs/Outputs, read the FLIP-UP AJAR SW state. Does the Switch State change from CLOSED to OPEN?</p> <p>Yes → Replace the Flip-up Glass Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Body Control Module C1 harness connector. Disconnect the Tailgate Flip-up Glass Ajar Switch harness connector. Using a 12-volt Test Light connected to 12-volts, test the Sense circuit for a short to ground. Does the Test Light illuminate?</p> <p>Yes → Repair the Flip-up Glass Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*HOOD AJAR CIRCUIT OPEN

POSSIBLE CAUSES
HOOD AJAR SWITCH GROUND CIRCUIT OPEN
INTERMITTENT CONDITION
HOOD AJAR SWITCH
HOOD AJAR SWITCH SENSE CIRCUIT OPEN
BODY CONTROL MODULE INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>Open the Hood.</p> <p>With the DRBIII® in Inputs/Outputs, read the HOOD AJAR SW state.</p> <p>Does the DRBIII® display CLOSED?</p> <p>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.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Hood Ajar switch connector.</p> <p>Using a 12-volt Test Light connected to 12-volts, test the Ground circuit for continuity.</p> <p>Does the light illuminate?</p> <p>Yes → Go To 3</p> <p>No → Repair the Ground circuit for an open.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Disconnect the Hood Ajar Switch connector.</p> <p>With the DRBIII® in Inputs/Outputs, read the HOOD AJAR SW state.</p> <p>Connect a jumper wire between Sense circuit and the Ground circuit.</p> <p>Does the DRBIII® display HOOD AJAR SW: CLOSED?</p> <p>Yes → Replace the Hood Ajar Switch.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Disconnect the Body Control Module C1 harness connector.</p> <p>Disconnect the Hood Ajar Switch harness connector.</p> <p>Measure the resistance of the Sense circuit.</p> <p>Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Body Control Module.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Hood Ajar Switch Sense circuit for an open.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***HOOD AJAR CIRCUIT SHORTED TO GROUND- EXPORT ONLY****POSSIBLE CAUSES**

HOOD AJAR SWITCH SHORTED TO GROUND

HOOD AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND

BODY CONTROL MODULE INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Inputs/Outputs, read the HOOD AJAR SW state. Disconnect the Hood Ajar Switch harness connector. With the DRBIII® in Inputs/Outputs, read the HOOD AJAR SW state. Does the Switch State change from CLOSED to OPEN?</p> <p>Yes → Replace the Hood Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Body Control Module C1 harness connector. Disconnect the Hood Ajar Switch harness connector. Using a 12-volt Test Light connected to 12-volts, test the Sense circuit for a short to ground. Does the Test Light illuminate?</p> <p>Yes → Repair the Hood Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

DOOR AJAR

Symptom:

*LEFT FRONT DOOR AJAR CIRCUIT OPEN

POSSIBLE CAUSES

LEFT FRONT DOOR AJAR SWITCH GROUND CIRCUIT OPEN

LEFT FRONT DOOR AJAR SWITCH

LEFT FRONT DOOR AJAR SWITCH SENSE CIRCUIT OPEN

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	Disconnect the Left Front 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 2 No → Repair the Left Front Door Ajar Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Left Front Door Ajar Switch connector. Connect a jumper wire between the Sense circuit and the Ground circuit. NOTE: For the Left Front Door Ajar state the DRBIII will read "PASS" for RHD. With the DRBIII® in Inputs/Outputs, read the DR DOOR AJAR SW state. Does the DRBIII® display CLOSED? Yes → Replace the Left Front Door Lock Motor/Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Disconnect the Left Front Door Ajar Switch connector. Disconnect the BCM C1 harness connector. Measure the resistance of the Sense circuit between the BCM connector and the Door Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Left Front Door Ajar Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:***LEFT FRONT DOOR AJAR CIRCUIT SHORTED TO GROUND****POSSIBLE CAUSES**

LEFT FRONT DOOR AJAR SWITCH SHORTED TO GROUND

LEFT FRONT DOOR AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>NOTE: For the Left Front Door Ajar state the DRBIII will read "PASS" for RHD.</p> <p>With the DRBIII® in Inputs/Outputs, read the DR or PASS DOOR AJAR SW state. While monitoring the DRBIII®, disconnect the Left Front Door Ajar Switch harness connector.</p> <p>Did the Switch State change from CLOSED to OPEN?</p> <p>Yes → Replace the Left Front Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Left Front Door Ajar Switch harness connector.</p> <p>Disconnect the BCM C1 harness connector.</p> <p>Using a 12-volt test light connected to 12-volts, probe the Sense circuit and test for a short to ground.</p> <p>Does the test light illuminate?</p> <p>Yes → Repair the Left Front Door Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*LEFT REAR DOOR AJAR CIRCUIT OPEN

POSSIBLE CAUSES
LEFT REAR DOOR AJAR SWITCH GROUND CIRCUIT OPEN
LEFT REAR DOOR AJAR SWITCH
LEFT REAR DOOR AJAR SWITCH SENSE CIRCUIT OPEN
BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>Disconnect the Left Rear Door Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, probe the Ground circuit and test for continuity. Does the light illuminate?</p> <p>Yes → Go To 2</p> <p>No → Repair the Left Rear Door Ajar Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Disconnect the Left Rear Door Ajar Switch connector. Connect a jumper wire between the Sense circuit and the Ground circuit. With the DRBIII® in Inputs/Outputs, read the LR DOOR AJAR SW state. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace the Left Rear Door Lock Motor/Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Disconnect the Left Rear Door Ajar Switch connector. Disconnect the BCM C2 connector. Measure the resistance of the Sense circuit between the BCM C2 connector and the Door Ajar Switch connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Left Rear Door Ajar Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***LEFT REAR DOOR AJAR CIRCUIT SHORTED TO GROUND****POSSIBLE CAUSES**

LEFT REAR DOOR AJAR SWITCH SHORTED TO GROUND

LEFT REAR DOOR AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Inputs/Outputs, read the LR DOOR AJAR SW state. While monitoring the DRBIII®, disconnect the Left Rear Door Ajar Switch harness connector.</p> <p>Did the Switch State change from CLOSED to OPEN?</p> <p>Yes → Replace the Left Rear Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Left Rear Door Ajar Switch harness connector.</p> <p>Disconnect the BCM C2 harness connector.</p> <p>Using a 12-volt test light connected to 12-volts, probe the Sense circuit and test for a short to ground.</p> <p>Does the test light illuminate?</p> <p>Yes → Repair the Left Rear Door Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*RIGHT FRONT DOOR AJAR CIRCUIT OPEN

POSSIBLE CAUSES
RIGHT FRONT DOOR AJAR SWITCH GROUND CIRCUIT OPEN
RIGHT FRONT DOOR AJAR SWITCH
RIGHT FRONT DOOR AJAR SWITCH SENSE CIRCUIT OPEN
BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>Disconnect the Right Front Door Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, probe the Ground circuit and test for continuity. Does the light illuminate?</p> <p>Yes → Go To 2</p> <p>No → Repair the Right Front Door Ajar Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Disconnect the Right Front Door Ajar Switch connector. Connect a jumper wire between the Sense circuit and the Ground circuit. NOTE: For the Right Front Door Ajar state the DRBIII will read "DR" for RHD. With the DRBIII® in Inputs/Outputs, read the PASS or DR DOOR AJAR SW state. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace the Right Front Door Lock Motor/Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Disconnect the Right Front Door Ajar Switch harness connector. Disconnect the BCM C1 harness connector. Measure the resistance of the Sense circuit between the BCM C1 connector and the Door Ajar Switch connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Right Front Door Ajar Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***RIGHT FRONT DOOR AJAR CIRCUIT SHORTED TO GROUND****POSSIBLE CAUSES**

RIGHT FRONT DOOR AJAR SWITCH SHORTED TO GROUND

RIGHT FRONT DOOR AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>NOTE: For the Right Front Door Ajar state the DRBIII will read "DR" for RHD.</p> <p>With the DRBIII® in Inputs/Outputs, read the PASS or DR DOOR AJAR SW state. While monitoring the DRBIII®, disconnect the Right Front Door Ajar Switch harness connector.</p> <p>Did the Switch State change from CLOSED to OPEN?</p> <p>Yes → Replace the Right Front Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Right Front Door Ajar Switch connectors.</p> <p>Disconnect the BCM C1 harness connector.</p> <p>Using a 12-volt test light connected to 12-volts, probe the Sense circuit and test for a short to ground.</p> <p>Does the test light illuminate?</p> <p>Yes → Repair the Right Front Door Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*RIGHT REAR DOOR AJAR CIRCUIT OPEN

POSSIBLE CAUSES
RIGHT REAR DOOR AJAR SWITCH GROUND CIRCUIT OPEN
RIGHT REAR DOOR AJAR SWITCH
RIGHT REAR DOOR AJAR SWITCH SENSE CIRCUIT OPEN
BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>Disconnect the Right Rear Door Ajar switch connector. Using a 12-volt Test Light connected to 12-volts, probe the Ground circuit and test for continuity. Does the light illuminate?</p> <p>Yes → Go To 2</p> <p>No → Repair the Right Rear Door Ajar Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Disconnect the Right Rear Door Ajar Switch connector. Connect a jumper wire between the Sense circuit and the Ground circuit. With the DRBIII® in Inputs/Outputs, read the RR DOOR AJAR SW state. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace the Right Rear Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Disconnect the Right Rear Door Ajar Switch harness connector. Disconnect the BCM C1 harness connector. Measure the resistance of the Sense circuit between the BCM connector and the Door Ajar Switch connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Right Rear Door Ajar Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***RIGHT REAR DOOR AJAR CIRCUIT SHORTED TO GROUND****POSSIBLE CAUSES**

RIGHT REAR DOOR AJAR SWITCH SHORTED TO GROUND

RIGHT REAR DOOR AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Inputs/Outputs, read the RR DOOR AJAR SW state. While monitoring the DRBIII®, disconnect the Right Rear Door Ajar Switch connector. Did the Switch State change from CLOSED to OPEN?</p> <p>Yes → Replace the Right Rear Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Right Rear Door Ajar Switch connectors. Disconnect the BCM C1 harness connector. Using a 12-volt test light connected to 12-volts, probe the Sense circuit and test for a short to ground. Does the test light illuminate?</p> <p>Yes → Repair the Right Rear Door Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***TAILGATE AJAR CIRCUIT OPEN****POSSIBLE CAUSES**

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TAILGATE AJAR SWITCH

TAILGATE AJAR SWITCH SENSE CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Tailgate Lock Motor/Ajar Switch connector. Connect a jumper wire between the Sense circuit and the Ground circuit. With the DRBIII® in Inputs/Outputs, read the TAILGATE AJAR SW state. Does the DRBIII® display CLOSED? Yes → Replace the Tailgate Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Tailgate Lock Motor/Ajar Switch connector. Disconnect the BCM C1 harness connector. Measure the resistance of the Sense circuit between the BCM connector and the Tailgate Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Tailgate Ajar Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:***TAILGATE AJAR CIRCUIT SHORTED TO GROUND****POSSIBLE CAUSES**

TAILGATE AJAR SWITCH SHORTED TO GROUND

TAILGATE AJAR SWITCH SENSE CIRCUIT SHORTED TO GROUND

BODY CONTROL MODULE - INTERNAL MALFUNCTION

TEST	ACTION	APPLICABILITY
1	Disconnect the Tailgate Lock Motor/Ajar Switch harness connector. With the DRBIII® in Inputs/Outputs, read the TAILGATE AJAR SW state. Does the DRBIII® display CLOSED? Yes → Go To 2 No → Replace the Tailgate Ajar Switch. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Tailgate Lock Motor/Ajar Switch harness connector. Disconnect the BCM C1 harness connector. Using a 12-volt test light connected to 12-volts, probe the Sense circuit and test for a short to ground. Does the test light illuminate? Yes → Repair the Tailgate Ajar Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**REAR DEFOGGER RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND****When Monitored and Set Condition:****REAR DEFOGGER RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND**

When Monitored: With the ignition on.

Set Condition: When the BCM detects no voltage on the Rear Window Defogger Control circuit due to an open or short to ground.

POSSIBLE CAUSES

JUNCTION BLOCK FUSE 39

CODE ACTIVE

RELAY OPEN OR SHORTED

JUNCTION BLOCK - REAR WINDOW DEFOGGER RELAY CONTROL SHORT TO GROUND

FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN

JUNCTION BLOCK - REAR WINDOW DEFOGGER RELAY CONTROL OPEN

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Attempt to operate the Rear Window Defogger. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW DEFOGGER RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Ensure the relay is completely plugged in. Perform BODY VERIFICATION TEST - VER 1.	All
2	Check Junction Block fuse 39. Is the fuse open? Yes → Check for a short to ground and replace the Junction Block fuse. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

REAR DEFOGGER RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition on. Using a 12-volt test light connected to ground, check the Fused Ignition Switch Output circuit at Fuse 39. The test light must illuminate brightly. Compare the brightness to that of a direct connection to the battery. Does the test light illuminate brightly?</p> <p>Yes → Go To 4</p> <p>No → Repair the open Fused Ignition Switch Output circuit as necessary. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Remove the Rear Window Defogger Relay from the Junction Block. Install fuse if previously removed. Install a substitute relay in place of the Rear Window Defogger Relay. With the DRBIII®, erase DTCs. Attempt to operate the Rear Window Defogger. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW DEFOGGER RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND?</p> <p>Yes → Go To 5</p> <p>No → Replace the original relay. Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>Turn the ignition off. Remove the Rear Window Defogger Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Measure the resistance between ground and the Rear Window Defogger Relay Control circuit in the relay connector of the Junction Block. Is the resistance below 100.0 ohms?</p> <p>Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 6</p>	All
6	<p>Turn the ignition off. Remove the Rear Window Defogger Relay from the Junction Block. Remove the Body Control Module from the Junction Block. Measure the resistance of the Rear Window Defogger Relay Control circuit between the Relay connector and the Junction Block - BCM connector. Is the resistance below 2.0 ohms?</p> <p>Yes → Go To 7</p> <p>No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p>	All
7	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**REAR DEFOGGER RELAY CONTROL CIRCUIT SHORT TO VOLTAGE**

When Monitored and Set Condition:**REAR DEFOGGER RELAY CONTROL CIRCUIT SHORT TO VOLTAGE**

When Monitored: With the ignition on.

Set Condition: When the BCM detects unwanted voltage on the rear window defogger control circuit.

POSSIBLE CAUSES

CODE ACTIVE

REAR DEFOGGER RELAY SHORTED

JUNCTION BLOCK - REAR DEFOGGER RELAY CONTROL CIRCUIT SHORT TO VOLTAGE

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Attempt to operate the Rear Window Defogger. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW DEFOGGER RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Remove the Rear Window Defogger Relay from the Junction Block. Install a substitute relay in place of the Rear Window Defogger Relay. With the DRBIII®, erase DTCs. Attempt to operate the Rear Window Defogger. With the DRBIII®, read DTCs. Does the DRBIII® display REAR WINDOW DEFOGGER RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 3 No → Replace the original relay. Perform BODY VERIFICATION TEST - VER 1.	All

**REAR DEFOGGER RELAY CONTROL CIRCUIT SHORT TO VOLTAGE —
Continued**

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Remove the Rear Window Defogger Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Turn the ignition on. Measure the voltage of the Rear Window Defogger Relay Control circuit in the relay connector of the Junction Block. Is there any voltage present?</p> <p>Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***REAR WINDOW DEFOGGER INOPERATIVE****POSSIBLE CAUSES**

JUNCTION BLOCK FUSE 30
 PDC FUSE 19
 REAR DEFOGGER RELAY DTC'S
 REAR WINDOW DEFOGGER RELAY OUTPUT CIRCUIT OPEN
 REAR WINDOW DEFOGGER RELAY
 REAR WINDOW DEFOGGER GRID OPEN
 FUSED B(+) CKT OPEN AT RELAY
 A/C-HEATER CONTROL
 OPEN GROUND CIRCUIT
 FUSED REAR WINDOW DEFOGGER RELAY OUTPUT CIRCUIT OPEN
 REAR WINDOW DEFOGGER CONTROL OPEN
 BODY CONTROL MODULE
 A/C-HEATER CONTROL LED

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, read the Body Control Module DTC's. Are there any Rear Defogger Relay DTC's present? Yes → Refer to the symptom list for problems related to Rear Defogger Relay DTC's. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Toggle the Rear Defogger switch and observe the indicator. Does the indicator toggle on and off when the switch is pressed? Yes → Go To 3 No → Go To 4	All
3	Turn the ignition on. Turn the Rear Window Defogger on. Measure the voltage between the Rear Window Defogger Relay Output circuit at the defogger grid on the rear window to ground. Is the voltage above 12.0 volts? Yes → Repair the open in the Rear Window Defogger Grid or the Grid Ground circuit. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Rear Window Defogger Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

***REAR WINDOW DEFOGGER INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
4	<p>With the DRBIII® in Inputs/Outputs, read the R Defogger SW state. Cycle the Rear Defogger On/Off button and observe the DRBIII. Did the DRBIII® display change from Open to Closed?</p> <p>Yes → Go To 5</p> <p>No → Go To 10</p>	All
5	<p>Check the Power Distribution Center fuse 19. Is the fuse open.</p> <p>Yes → Check for a short to ground and replace the PDC fuse. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 6</p>	All
6	<p>Check Junction Block fuse 30. Is the fuse open.</p> <p>Yes → Check for a short to ground and replace the Junction Block fuse. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 7</p>	All
7	<p>Remove the Rear Window Defogger Relay from the Junction Block. Measure the voltage of the Fused B(+) circuit in the Rear Window Defogger Relay connector. Is the voltage above 10.0 volts?</p> <p>Yes → Go To 8</p> <p>No → Repair the open Fused B(+) circuit from PDC fuse #19. Perform BODY VERIFICATION TEST - VER 1.</p>	All
8	<p>Remove the Rear Window Defogger Relay from the Junction Block. Install a known good relay in the Rear Window Defogger Relay connector. Turn the ignition on. Toggle the Rear Window Defogger switch and observe the indicator. Does the Rear Window Defogger indicator illuminate?</p> <p>Yes → Replace the original Rear Window Defogger Relay. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 9</p>	All
9	<p>Gain access to the A/C Heater Control C2 connector. Toggle the Rear Window Defogger switch in the next step. While back probing, measure the voltage of the Fused Rear Window Defogger Relay Output circuit. Is there any voltage present?</p> <p>Yes → Replace the A/C-Heater Control. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Fused Rear Window Defogger Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***REAR WINDOW DEFOGGER INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
10	<p>Turn the ignition off. Disconnect the A/C-Heater Control C2 connector. Turn of all interior lights. Measure the resistance of the Ground circuit in the C2 connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 11</p> <p>No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
11	<p>Turn the ignition off. Disconnect the A/C-Heater Control C2 connector. With the DRBIII® in Inputs/Outputs, read the R Defogger SW state. Connect a jumper wire between Rear Window Defogger Control and ground. Did the DRBIII® display change from Open to Closed?</p> <p>Yes → Replace the A/C-Heater Control. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 12</p>	All
12	<p>Turn the ignition off. Disconnect the A/C-Heater Control C2 connector. Disconnect the Body Control Module C1 connector. Measure the resistance of the Rear Window Defogger Control circuit between the A/C- Heater Control C2 connector and the Body Control Module C1 connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Rear Window Defogger Control circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
FRONT FOG RELAY CIRCUIT HIGH

When Monitored and Set Condition:

FRONT FOG RELAY CIRCUIT HIGH

When Monitored: With ignition on(if equipped)

Set Condition: BCM detects battery on the Front Fog Relay when it is attempting to turn on the Front Fog Lamps for more than 5 seconds. The BCM learns that the Front Fog Options exists on a vehicle when it detects a ground on the Front Fog Switch Input circuit.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MISSING RELAY

OPEN FUSE

FOG LAMP RELAY

BODY CONTROL MODULE

FOG LAMP RELAY CONTROL CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Fog Lamps on. With the DRBIII®, read the DTC information. Does the DRBIII® read: FRONT FOG RELAY CKT HIGH? 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 that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Check the Junction Block to make certain the Fog Lamp Relay is present. Is the Fog Lamp Relay present? Yes → Go To 3 No → Replace the missing Fog Lamp Relay. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Check Junction Block fuse #19. Is the fuse open? Yes → Replace the open fuse. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

FRONT FOG RELAY CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Install a known good relay in place of the fog lamp relay. Turn the Fog Lamps On. Do the Fog Lamps operate normally? Yes → Replace the Fog Lamp Relay. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off Remove the Fog Lamp Relay. Measure the voltage of the Fused B+ circuit of the fog lamp relay. Is the voltage above 10 volts? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Fog Lamp Relay Control Circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
FRONT FOG RELAY CIRCUIT LOW

When Monitored and Set Condition:

FRONT FOG RELAY CIRCUIT LOW

When Monitored: With the ignition on.

Set Condition: BCM detects a low (ground) on the Front Fog Relay even though it is not attempting to turn on the Front Fog Lamps for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

FRONT FOG RELAY SHORT TO GROUND

FRONT FOG RELAY

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Fog Lamps on. With the DRBIII®, read the DTC information. Does the DRBIII® read: FRONT FOG RELAY CKT LOW? 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 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 Front Fog Relay. Measure the resistance between ground and the Front Fog Relay Control circuit. Is the resistance below 5.0 ohms? Yes → Repair the Front Fog Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Front Fog Relay harness connector. Measure the voltage of the Front Fog Relay harness connector coil side feed circuit to ground. Is the voltage above 10.0 volts? Yes → Replace the Fog Lamp Relay. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

HEADLAMP SWITCH INPUT CIRCUIT HIGH

When Monitored and Set Condition:

HEADLAMP SWITCH INPUT CIRCUIT HIGH

When Monitored: Ignition ON

Set Condition: The BCM detects a voltage greater than 4.75 V on the Headlamp Switch Input for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

HEADLAMP SWITCH OPEN

HEADLAMP SWITCH MUX CIRCUIT OPEN

HEADLAMP SWITCH RETURN CIRCUIT OPEN

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, erase all BCM DTC's. Turn the headlamps to the ON position. With the DRBIII®, read DTCs. Does the DRBIII® display: HEADLAMP SWITCH INPUT CKT HIGH?</p> <p>Yes → Go To 2</p> <p>No → The condition is not present at this time. Monitor DRBIII parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the Headlamp Switch harness connector. Connect a jumper wire between the Headlamp Switch MUX circuit and the Headlamp Switch Return circuit in the Headlamp Switch harness connector. Turn the ignition on. With the DRBIII®, select Body, Body Controller and read: Headlamp Switch volts. Does the DRBIII® display Headlamp Switch voltage below 0.5volts?</p> <p>Yes → Replace the Headlamp Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

HEADLAMP SWITCH INPUT CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Body Control Module harness connector. Disconnect the Headlamp Switch harness connector. Measure resistance of the Headlamp Switch MUX circuit from the Body Control Module connector to the Headlamp Switch harness connector. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Headlamp Switch MUX circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Turn the ignition off. Disconnect the Body Control Module harness connector. Disconnect the Headlamp Switch harness connector. Measure resistance of the Headlamp Switch Return circuit from the Body Control Module connector to the Headlamp Switch harness connector. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Headlamp Switch Return circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

HEADLAMP SWITCH INPUT CIRCUIT LOW

When Monitored and Set Condition:

HEADLAMP SWITCH INPUT CIRCUIT LOW

When Monitored: Ignition On

Set Condition: BCM detects a voltage less than 0.25 volts on the Headlamp Switch Input for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

HEADLAMP SWITCH SHORTED

HEADLAMP SWITCH MUX CIRCUIT SHORT TO RETURN CIRCUIT

HEADLAMP SWITCH MUX CIRCUIT SHORT TO GROUND

HEADLAMP SWITCH RETURN CIRCUIT SHORT TO GROUND

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the headlamps to the ON position. With the DRBIII®, read DTCs. Does the DRBIII® display: HEADLAMP SWITCH INPUT CKT LOW?</p> <p>Yes → Go To 2</p> <p>No → The condition is not present at this time. Monitor DRBIII parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the Headlamp Switch harness connector. Turn the ignition on. With the DRBIII®, select Body, Body Control Module and read: Headlamp Switch voltage.. Does the DRBIII® display Headlamp Switch voltage above 4.8 volts?</p> <p>Yes → Replace the Headlamp Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

HEADLAMP SWITCH INPUT CIRCUIT LOW — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Body Control Module harness connector. Disconnect the Headlamp Switch harness connector. Measure resistance between the Headlamp Switch Return circuit and the Headlamp Switch MUX circuit. Is the resistance below 5.0 ohms? Yes → Repair the Headlamp Switch MUX circuit for a short to the Headlamp Switch Return circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Disconnect the Body Control Module harness connector. Disconnect the Headlamp Switch harness connector. Measure resistance between ground and the Headlamp Switch MUX circuit. Is the resistance above 5.0 ohms? Yes → Repair the Headlamp Switch MUX Circuit for a short to ground condition. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Body Control Module harness connector. Disconnect the Headlamp Switch harness connector. Measure resistance between ground and the Headlamp Switch Return circuit. Is the resistance below 5.0 ohms? Yes → Repair the Headlamp Switch Return Circuit for a short to ground condition. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

EXTERIOR LIGHTING

Symptom: HIGH BEAM RELAY CIRCUIT HIGH

When Monitored and Set Condition:

HIGH BEAM RELAY CIRCUIT HIGH

When Monitored: With ignition on

Set Condition: BCM detects battery on the High Beam Relay when it is attempting to turn on the High Beams for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MISSING RELAY

OPEN FUSE

HIGH BEAM RELAY

MULTIFUNCTION SWITCH

HIGH BEAM SWITCH SENSE CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the High Beams on. With the DRBIII®, read the DTC information. Does the DRBIII® read: HIGH BEAM RELAY CIRCUIT HIGH? 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 that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Check the Junction Block to make certain the High Beam Relay is present. Is the High Beam Relay present? Yes → Go To 3 No → Replace the missing High Beam Relay. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Check the Junction Block High Beam fuses #26 and #27. Are any of the fuses open? Yes → Replace the open fuse. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

HIGH BEAM RELAY CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Install a known good relay in place of the High Beam Relay. Turn the High Beams On. Do the High Beams operate normally? Yes → Replace the High Beam Relay. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off Disconnect the Multifunction Switch harness connector C1. Disconnect the BCM C2 connector. Measure the resistance of the High Beam Switch Sense circuit. Is the resistance below 5.0 ohms? Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1. No → Repair the High Beam Switch Sense circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.	All

EXTERIOR LIGHTING

Symptom:

LOW BEAM RELAY CIRCUIT HIGH

When Monitored and Set Condition:

LOW BEAM RELAY CIRCUIT HIGH

When Monitored: With ignition on

Set Condition: BCM detects battery on the Low Beam Relay when it is attempting to turn on the Low Beams for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MISSING RELAY

OPEN FUSE

LOW BEAM RELAY

BODY CONTROL MODULE

FUSED LOW BEAM RELAY OUTPUT CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Low Beams on. With the DRBIII®, read the DTC information. Does the DRBIII® read: LOW BEAM RELAY CIRCUIT HIGH? 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 that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Check the Junction Block to make certain the Low Beam Relay is present. Is the Low Beam Relay present? Yes → Go To 3 No → Replace the missing Low Beam Relay. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Check the Junction Block Low Beam fuses #4 and #5. Are any of the fuses open? Yes → Replace the open fuse. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

LOW BEAM RELAY CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Install a known good relay in place of the Low Beam Relay. Turn the Low Beams On. Do the Low Beams operate normally? Yes → Replace the Low Beam Relay. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off Remove the Low Beam Relay. Measure the voltage of the Fused B+ circuit of the Low Beam Relay. Is the voltage above 10 volts? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Fused Low Beam Relay Output circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.	All

EXTERIOR LIGHTING

Symptom:

LOW BEAM RELAY CIRCUIT LOW

When Monitored and Set Condition:

LOW BEAM RELAY CIRCUIT LOW

When Monitored: With ignition on

Set Condition: BCM detects a low (ground) on the Low Beam Relay even though it is not attempting to turn on the Low Beams for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

LOW BEAM RELAY SHORT TO GROUND

LOW BEAM RELAY

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Low Beams on. With the DRBIII®, read the DTC information. Does the DRBIII® read: LOW BEAM RELAY CKT LOW? 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 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 Low Beam Relay. Measure the resistance between ground and the Low Beam Relay Control circuit. Is the resistance below 5.0 ohms? Yes → Repair the Low Beam Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Low Beam Relay harness connector. Measure the voltage of the Low Beam Relay harness connector coil side feed circuit to ground. Is the voltage above 10.0 volts? Yes → Replace the Low Beam Relay. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
PARK LAMP RELAY CIRCUIT HIGH

When Monitored and Set Condition:

PARK LAMP RELAY CIRCUIT HIGH

When Monitored: With the ignition on

Set Condition: BCM detects battery on the Park Lamp Relay when it is attempting to turn on the Park Lamps for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MISSING RELAY

OPEN FUSE

PARK LAMP RELAY

BODY CONTROL MODULE

FUSED PARK LAMP RELAY OUTPUT CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Park Lamps on. With the DRBIII®, read the DTC information. Does the DRBIII® read: PARK LAMP RELAY CKT HIGH? 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 that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Check the Junction Block to make certain the Park Lamp Relay is present. Is the Park Lamp Relay present? Yes → Go To 3 No → Replace the missing Park Lamp Relay. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Check the Junction Block Park Lamp fuses #23 and #9. Are any of the fuses open? Yes → Replace the open fuse. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

PARK LAMP RELAY CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition off. Install a known good relay in place of the Park Lamp Relay. Turn the Park Lamps On. Do the Park Lamps operate normally?</p> <p>Yes → Replace the Park Lamp Relay. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off Remove the Park Lamp Relay. Measure the voltage of the Fused B+ circuit of the Park Lamp Relay. Is the voltage above 10 volts?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Fused Park Lamp Relay Output circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
PARK LAMP RELAY CIRCUIT LOW

When Monitored and Set Condition:

PARK LAMP RELAY CIRCUIT LOW

When Monitored: With ignition on.

Set Condition: BCM detects a low (ground) on the Park Lamp Relay even though it is not attempting to turn on the Park Lamps for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

PARK LAMP RELAY SHORT TO GROUND

PARK LAMP RELAY

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Park Lamps on. With the DRBIII®, read the DTC information. Does the DRBIII® read: PARK LAMP RELAY CKT LOW? 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 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 Park Lamp Relay. Measure the resistance between ground and the Park Lamp Relay Control circuit. Is the resistance below 5.0 ohms? Yes → Repair the Park lamp Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Park Lamp Relay harness connector. Measure the voltage of the Park Lamp Relay harness connector coil side feed circuit to ground. Is the voltage above 10.0 volts? Yes → Replace the Park Lamp Relay. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom: REAR FOG RELAY CIRCUIT HIGH

When Monitored and Set Condition:

REAR FOG RELAY CIRCUIT HIGH

When Monitored: With the ignition on.

Set Condition: BCM detects battery on the Rear Fog Relay when it is attempting to turn on the Front Fog Lamps for more than 5 seconds. The BCM is programmed per Country Code whether or not a vehicle is equipped with a Rear Fog Relay.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MISSING RELAY

OPEN FUSE

FOG LAMP RELAY

BODY CONTROL MODULE

FOG LAMP RELAY CONTROL CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Fog Lamps on. With the DRBIII®, read the DTC information. Does the DRBIII® read: REAR FOG RELAY CIRCUIT HIGH? 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 that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Check the Junction Block to make certain the Rear Fog Lamp Relay is present. Is the Rear Fog Lamp Relay present? Yes → Go To 3 No → Replace the missing Fog Lamp Relay. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Check Junction Block fuse 2. Is the fuse open? Yes → Replace the open fuse. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

REAR FOG RELAY CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Install a known good relay in place of the Rear Fog Lamp Relay. Turn the Fog Lamps On. Do the Rear Fog Lamps operate normally? Yes → Replace the Fog Lamp Relay. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off Remove the Fog Lamp Relay. Measure the voltage of the Fused B+ circuit of the Fog Lamp Relay. Is the voltage above 10 volts? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Fog Lamp Relay Control Circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom: REAR FOG RELAY CIRCUIT LOW

When Monitored and Set Condition:

REAR FOG RELAY CIRCUIT LOW

When Monitored: With the ignition on.

Set Condition: BCM detects a low (ground) on the Fog Relay even though it is not attempting to turn on the Rear Fog Lamps for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

REAR FOG RELAY SHORT TO GROUND

REAR FOG RELAY

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Fog Lamps on. With the DRBIII®, read the DTC information. Does the DRBIII® read: Rear Fog Relay Circuit Low? 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 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 Rear Fog Relay. Measure the resistance between ground and the Rear Fog Relay Control circuit. Is the resistance below 5.0 ohms? Yes → Repair the Rear Fog Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Rear Fog Relay harness connector from the Junction Block. Measure the voltage of the Rear Fog Relay harness connector coil side feed circuit to ground. Is the voltage above 10.0 volts? Yes → Replace the Rear Fog Lamp Relay. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:***LOW BEAM HEADLAMPS INOPERATIVE****POSSIBLE CAUSES**

INTERMITTENT CONDITION

LOW BEAM RELAY

OPEN FUSED B+ CIRCUIT

LOW BEAM RELAY CONTROL CIRCUIT

LOW BEAM RELAY

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the Low Beams on. Do the Low Beam Headlamps operate properly?</p> <p>Yes → The condition is not present at this time. Monitor DRBIII parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Remove the Low Beam Relay from the Junction Block. Install a known good relay in place of the Low Beam Relay. With the DRBIII®, actuate the Low Beam Relay. Do the Headlamps flash while actuating the Low Beam Relay?</p> <p>Yes → Replace the Low Beam Relay. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Remove the Low Beam Relay from the Junction Block. Measure the voltage of the Fused B(+) circuit at the Low Beam Relay connector. Is the voltage above 10.0 volts?</p> <p>Yes → Go To 4</p> <p>No → Repair the open fused B+ circuit. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Remove the BCM from the junction block. Connect a jumper wire between the Fused B(+) circuit and the Low Beam Relay Control circuit at the Low Beam Relay connector. Measure the voltage of the Low Beam Relay Control circuit to the BCM Junction Block connector. Is the voltage above 10.0 volts?</p> <p>Yes → Go To 5</p> <p>No → Repair the Low Beam Relay Control circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***LOW BEAM HEADLAMPS INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
5	<p>Disconnect the jumper wire. Reinstall the Low Beam Relay in the Junction Block. Remove the BCM from the junction block. Measure the voltage of the Low Beam Relay Control circuit to the BCM internal connector. Is the voltage above 10.0 volts?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Low Beam Relay. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom List:

ABS LAMP CIRCUIT SHORT
ABS LAMP OPEN
AIRBAG LAMP CIRCUIT SHORT
AIRBAG LAMP OPEN
BRAKE LAMP CIRCUIT OPEN
BRAKE LAMP CIRCUIT SHORT
MIL LAMP CIRCUIT OPEN
MIL LAMP CIRCUIT SHORT
SEATBELT LAMP CIRCUIT OPEN
SEATBELT LAMP CIRCUIT SHORT

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

When Monitored and Set Condition:

ABS LAMP CIRCUIT SHORT

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

ABS LAMP OPEN

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

AIRBAG LAMP CIRCUIT SHORT

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

AIRBAG LAMP OPEN

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

BRAKE LAMP CIRCUIT OPEN

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

ABS LAMP CIRCUIT SHORT — Continued

BRAKE LAMP CIRCUIT SHORT

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

MIL LAMP CIRCUIT OPEN

When Monitored: With the ignition in the Ru/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open during internal self test.

MIL LAMP CIRCUIT SHORT

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

SEATBELT LAMP CIRCUIT OPEN

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

SEATBELT LAMP CIRCUIT SHORT

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects Indicator short/open fault during internal self test.

POSSIBLE CAUSES

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: The Instrument Cluster performs internal tests on the MIL, Seatbelt, Brake, ABS, and Airbag indicators during each ignition cycle. Instrument Cluster LEDs are not serviceable.</p> <p>With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 1 minute. With the DRBIII®, read DTCs. Did the Indicator lamp circuit Open or Short DTC reset?</p> <p>Yes → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Test Complete.</p>	All

Symptom:

BRAKE FLUID SWITCH CIRCUIT OPEN

When Monitored and Set Condition:

BRAKE FLUID SWITCH CIRCUIT OPEN

When Monitored: With the ignition in the Run/Start position.

Set Condition: The cluster performs open circuit detection on the Brake Fluid Level (Red Brake Warning Indicator Driver) switch and the sense circuit. Fault sets if an open circuit is detected. When this fault is detected the cluster will illuminate the Brake warning indicator.

POSSIBLE CAUSES

INTERMITTENT CONDITION
BRAKE FLUID LEVEL SWITCH
BRAKE FLUID LEVEL SWITCH GROUND CIRCUIT
RED BRAKE WARNING INDICATOR DRIVER CIRCUIT
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the Brake Fluid Level Switch harness connector is properly connected. With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 15 seconds. With the DRBIII®, read DTCs. Does the DRBIII® display BRAKE FLUID SWITCH CIRCUIT OPEN?</p> <p>Yes → Go To 2</p> <p>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 connectors. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the Brake Fluid Level Switch harness connector. Check connectors - Clean/repair as necessary. Measure the internal resistance of the Brake Fluid Level (Red Brake Warning Indicator Driver) Switch. Is the resistance above 1.1k (1,100) ohms?</p> <p>Yes → Replace the Brake Fluid Level (Red Brake Warning Indicator Driver) Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

BRAKE FLUID SWITCH CIRCUIT OPEN — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Brake Fluid Level Switch harness connector. Check connectors - Clean/repair as necessary. Measure the resistance between ground and the Brake Fluid Level Switch Ground circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Brake Fluid Level (Red Brake Warning Indicator Driver) Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Turn the ignition off. Disconnect the Brake Fluid Level Switch harness connector. Disconnect the Instrument Cluster harness connector. Measure the resistance of the Red Brake Warning Indicator Driver circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Red Brake Warning Indicator Driver circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**CLUSTER BUS TRANSMIT SHUTDOWN****When Monitored and Set Condition:****CLUSTER BUS TRANSMIT SHUTDOWN**

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects loss of internal bus transmission for 4 seconds.

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

INSTRUMENT CLUSTER

Symptom: CLUSTER WAKE UP OUTPUT HIGH

When Monitored and Set Condition:

CLUSTER WAKE UP OUTPUT HIGH

When Monitored: With the ignition in the OFF position.

Set Condition: When the BCM receives an input from the driver door switch or an input from exterior lamp control switch. Symptoms will include: No fast chime with key in ignition or Park Lamps on and driver door open. No VF odometer display when door open. No cluster, high beam indicator, front or rear fog lamp indicator illumination.

POSSIBLE CAUSES

INSTRUMENT CLUSTER WAKE UP SIGNAL CIRCUIT SHORT TO VOLTAGE
INTERMITTENT CONDITION
BODY CONTROL MODULE
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the BCM C1 harness connector. Disconnect the Instrument Cluster harness connector. Measure the voltage between the Instrument Cluster Wake Up Signal circuit and ground. Is there any voltage present? Yes → Repair the Instrument Cluster Wake Up Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition off. Disconnect the Instrument Cluster harness connector. Ensure that the BCM C1 harness connector is connected. Measure the voltage between the Cluster Wake Up circuit and ground. Is there any voltage present? Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

CLUSTER WAKE UP OUTPUT HIGH — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Ensure that the Instrument Cluster and BCM C1 harness connectors are connected. Turn the ignition on. With the DRBIII®, read DTCs. Did this DTC reset?</p> <p>Yes → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → The condition is not present at this time. Monitor DRBIII® DTCs 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.</p>	All

INSTRUMENT CLUSTER

Symptom: CLUSTER WAKE UP OUTPUT LOW

When Monitored and Set Condition:

CLUSTER WAKE UP OUTPUT LOW

When Monitored: With the ignition in the OFF position.

Set Condition: When the BCM receives an input from the driver door switch or an input from exterior lamp control switch. Symptoms will include: No fast chime with key in ignition or Park Lamps on and driver door open. No VF odometer display when door open. No cluster, high beam indicator, front or rear fog lamp indicator illumination.

POSSIBLE CAUSES

FUSED B(+) CIRCUIT OPEN
INSTRUMENT CLUSTER WAKE UP SIGNAL CIRCUIT OPEN
INTERMITTENT CONDITION
INSTRUMENT CLUSTER WAKE UP SIGNAL CIRCUIT SHORT TO GROUND
BODY CONTROL MODULE
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Instrument Cluster 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. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Instrument Cluster harness connector. Disconnect the BCM C1 harness connector. Measure the resistance of the Instrument Cluster Wake Up Signal circuit. Is the resistance above 5.0 ohms? Yes → Repair the Instrument Cluster Wake Up Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

CLUSTER WAKE UP OUTPUT LOW — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Instrument Cluster harness connector. Disconnect the BCM C1 harness connector. Measure the resistance between ground and the Cluster Wake Up circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Instrument Cluster Wake Up Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Turn the ignition off. Disconnect the Instrument Cluster harness connector. Ensure that the BCM C1 harness connector is connected. Install a DVOM between the Cluster Wake Up circuit of the Instrument Cluster harness connector and ground. Set the DVOM to read resistance. Turn the ignition on. With the DRBIII®, select Body Control Module, then Actuators. Observe the DVOM while using the DRBIII® to actuate the Cluster Wake Up "on." Did the DVOM indicate a brief (2 second) continuity to ground?</p> <p>Yes → Go To 5</p> <p>No → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>Turn the ignition off. Ensure that the Instrument Cluster and BCM C1 harness connectors are connected. Open the driver door or actuate the High Beam Headlamps with the key off. With the DRBIII®, read DTCs. Did this DTC reset?</p> <p>Yes → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → The condition is not present at this time. Monitor DRBIII® DTCs 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.</p>	All

Symptom:
NO ABS BUS MESSAGES RECEIVED

When Monitored and Set Condition:

NO ABS BUS MESSAGES RECEIVED

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects no ABS bus messages for 6 continuous seconds. The cluster will illuminate the ABS warning indicator.

POSSIBLE CAUSES

NO RESPONSE - PCI BUS - CAB MODULE

INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, attempt to communicate with the CAB module. Was the DRBIII® able to I/D or communicate with the CAB module?</p> <p>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.</p> <p>No → Refer to the COMMUNICATION category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
NO BCM BUS MESSAGES RECEIVED

When Monitored and Set Condition:

NO BCM BUS MESSAGES RECEIVED

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects no BCM bus message for 6 seconds.

POSSIBLE CAUSES

NO RESPONSE - PCI BUS - BCM

INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, attempt to communicate with the BCM. Was the DRBIII® able to I/D or communicate with the BCM?</p> <p>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.</p> <p>No → Refer to the COMMUNICATION category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
NO ORC BUS MESSAGES RECEIVED

When Monitored and Set Condition:

NO ORC BUS MESSAGES RECEIVED

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects no ORC bus message for 6 seconds. The cluster will illuminate the Airbag warning indicator.

POSSIBLE CAUSES

NO RESPONSE - PCI BUS - ORC

INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, attempt to communicate with the ACM. Was the DRBIII® able to I/D or communicate with the ACM?</p> <p>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.</p> <p>No → Refer to the COMMUNICATION category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
NO PCI BUS MESSAGES RECEIVED

When Monitored and Set Condition:

NO PCI BUS MESSAGES RECEIVED

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects no PCI Bus messages for 4 continuous seconds. The VF will display "no bus." The cluster will illuminate the ABS, Fuel, SKIM, Airbag, and MIL warning indicators. All gauge needles will default to the lowest indication.

POSSIBLE CAUSES

NO RESPONSE - PCI BUS
 INTERMITTENT CONDITION
 NO RESPONSE - PCI BUS - INSTRUMENT CLUSTER
 INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. NOTE: When the Instrument Cluster detects no PCI Bus, the VF will display "no bus". With the DRBIII®, attempt to communicate with other modules on the PCI Bus. Was the DRBIII® able to communicate with other modules? 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. Does the DRBIII® display MIC PRESENT on the BUS? Yes → Go To 3 No → Refer to symptom "No Response from Instrument Cluster in the Communication" category. Perform BODY VERIFICATION TEST - VER 1.	All

NO PCI BUS MESSAGES RECEIVED — Continued

TEST	ACTION	APPLICABILITY
3	<p>With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 1 minute. With the DRBIII®, read DTCs. Did this DTC reset?</p> <p>Yes → Replace the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>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.</p>	All

Symptom:
NO PCM BUS MESSAGES RECEIVED

When Monitored and Set Condition:

NO PCM BUS MESSAGES RECEIVED

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects no PCM bus message for 20 seconds. The cluster will illuminate the MIL indicator.

POSSIBLE CAUSES

NO RESPONSE - PCI BUS - PCM

INTERMITTENT CONDITION

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 → 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 → Refer to the COMMUNICATION category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
NO SKIM BUS MESSAGES RECEIVED

When Monitored and Set Condition:

NO SKIM BUS MESSAGES RECEIVED

When Monitored: With the ignition in the Run/Start position.

Set Condition: The Instrument Cluster detects no SKIM bus message for 20 seconds. The cluster will illuminate the SKIM warning indicator.

POSSIBLE CAUSES

NO RESPONSE - PCI BUS - SKIM

INTERMITTENT CONDITION

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on.</p> <p>NOTE: Ensure that the vehicle is equipped with the SKIM feature before proceeding with this test.</p> <p>With the DRBIII®, attempt to communicate with the SKIM module.</p> <p>Was the DRBIII® able to I/D or communicate with the SKIM module?</p> <p>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.</p> <p>No → Refer to the COMMUNICATION category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:
TIRE SIZE NOT PROGRAMMED

When Monitored and Set Condition:

TIRE SIZE NOT PROGRAMMED

When Monitored: When the battery is connected.

Set Condition: Tire size is not programmed to a valid size. The default condition for a new BCM is un-programmed. The BCM must be programmed with a valid tire size or the speedometer will default to Zero and this code will set.

POSSIBLE CAUSES

PROGRAM TIRE SIZE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Body Computer, select Miscellaneous, then select Program Tire Size. Program the appropriate tire size. With the DRBIII®, erase DTCs. Turn the ignition off, wait 15 seconds, then turn the ignition on. With the DRBIII®, read DTCs. Did this DTC reset?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Test Complete.</p>	All

Symptom: VEHICLE SPEED SENSOR FAILURE

When Monitored and Set Condition:

VEHICLE SPEED SENSOR FAILURE

When Monitored: With ignition on.

Set Condition: If the BCM detects the current on the Vehicle Speed Sensor (rear wheel speed sensor) input is out of range for more than 5 seconds, this code will set. The sensor supplies a square wave signal to the BCM whose period varies with the vehicle speed.

POSSIBLE CAUSES

ABS DTC'S PRESENT
 VEHICLE SPEED SENSOR FAILURE DTC PRESENT - ABS
 VEHICLE SPEED SENSOR FAILURE DTC PRESENT- NON/ABS
 VEHICLE SPEED SENSOR SUPPLY CIRCUIT SHORT TO GROUND
 VEHICLE SPEED SIGNAL CIRCUIT SHORT TO GROUND
 VEHICLE SPEED SIGNAL SHORT TO GROUND - NON/ABS
 VEHICLE SPEED SENSOR SUPPLY CIRCUIT OPEN
 VEHICLE SPEED SIGNAL CIRCUIT SHORT TO VOLTAGE
 VEHICLE SPEED SIGNAL SHORT TO VOLTAGE - NON/ABS
 VEHICLE SPEED SIGNAL CIRCUIT OPEN
 VEHICLE SPEED SIGNAL OPEN - NON/ABS
 VEHICLE SPEED SENSOR
 BODY CONTROL MODULE - VEHICLE SPEED SENSOR SUPPLY OPEN
 BODY CONTROL MODULE - VEHICLE SPEED SIGNAL OPEN
 BODY CONTROL MODULE - VEHICLE SPEED SIGNAL OPEN - NON/ABS

TEST	ACTION	APPLICABILITY
1	Is this vehicle equipped with the Antilock Brake System? Yes → Go To 2 No → Go To 8	All
2	With the DRBIII®, read DTCs in Antilock Brakes. Does the DRBIII® display any Antilock Brake DTC's? Yes → Refer to the appropriate category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

VEHICLE SPEED SENSOR FAILURE — Continued

TEST	ACTION	APPLICABILITY
3	<p>With the DRBIII®, record and erase DTC's. Turn the ignition off. Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display VEHICLE SPEED SENSOR FAILURE?</p> <p>Yes → Go To 4</p> <p>No → The DTC is intermittent. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Disconnect the Controller Antilock Brake connector. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Vehicle Speed Signal circuit. Is the resistance below 1000.0 ohms?</p> <p>Yes → Repair the Vehicle Speed Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Disconnect the Controller Antilock Brake connector. Disconnect the Body Control Module C2 connector. Measure the voltage between the Vehicle Speed Signal circuit and ground. Is there any voltage present?</p> <p>Yes → Repair the Vehicle Speed Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 6</p>	All
6	<p>Disconnect the Controller Antilock Brake connector. Connect a jumper wire between Vehicle Speed Signal circuit in the CAB connector and ground. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Vehicle Speed Signal circuit in the BCM connector.. Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 7</p> <p>No → Repair the Vehicle Speed Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
7	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All
8	<p>With the DRBIII®, record and erase DTC's. Drive the vehicle for a short distance. With the DRBIII®, read DTCs. Does the DRBIII® display VEHICLE SPEED SENSOR FAILURE?</p> <p>Yes → Go To 9</p> <p>No → The DTC is intermittent. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors. Perform BODY VERIFICATION TEST - VER 1.</p>	All

VEHICLE SPEED SENSOR FAILURE — Continued

TEST	ACTION	APPLICABILITY
9	<p>Turn the ignition on. Disconnect the Rear Wheel Speed Sensor connector. Measure the voltage between the Vehicle Speed Sensor Supply circuit and ground. Is the voltage above 10.0 volts?</p> <p>Yes → Go To 10</p> <p>No → Go To 15</p>	All
10	<p>Turn the ignition on. Disconnect the Rear Wheel Speed Sensor connector. Measure the resistance between ground and the Vehicle Speed Signal circuit in the harness connector. Is the resistance between 100.0 and 300.0 ohms?</p> <p>Yes → Replace the Vehicle Speed Sensor in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 11</p>	All
11	<p>Disconnect the Rear Vehicle Speed Sensor connector. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Vehicle Speed Signal circuit in the harness connector. Is the resistance below 1000.0 ohms?</p> <p>Yes → Repair the Vehicle Speed Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 12</p>	All
12	<p>Disconnect the Vehicle Speed Sensor connector. Disconnect the Body Control Module C2 connector. Measure the voltage between the Vehicle Speed Signal circuit and ground. Is there any voltage present?</p> <p>Yes → Repair the Vehicle Speed Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 13</p>	All
13	<p>Disconnect the Vehicle Speed Sensor connector. Connect a jumper wire between Vehicle Speed Signal circuit in the Vehicle Speed Sensor connector and ground. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Vehicle Speed Signal circuit in the BCM connector.. Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 14</p> <p>No → Repair the Vehicle Speed Signal circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
14	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

VEHICLE SPEED SENSOR FAILURE — Continued

TEST	ACTION	APPLICABILITY
15	Turn the ignition off. Disconnect the Rear Wheel Speed Sensor connector. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Vehicle Speed Sensor Supply circuit. Is the resistance below 100.0 ohms? Yes → Repair the Vehicle Speed Sensor Supply circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 16	All
16	Turn the ignition off. Disconnect the Rear Wheel Speed Sensor connector. Connect a jumper wire between Vehicle Speed Sensor Supply circuit and ground. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Vehicle Speed Sensor Supply circuit. Is the resistance below 5.0 ohms? Yes → Go To 17 No → Repair the Vehicle Speed Sensor Supply circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
17	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

INSTRUMENT CLUSTER

Symptom:

*4WD INDICATOR INACCURATE

POSSIBLE CAUSES
4WD MODE SENSOR DTC PRESENT
INTERMITTENT CONDITION
TRANSFER CASE POSITION SENSOR
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: With the DRBIII®, ensure that the Instrument Cluster is configured for the correct transfer case before proceeding with this test.</p> <p>With the DRBIII®, read DTCs.</p> <p>Does the DRBIII® display any 4WD Mode Sensor DTCs?</p> <p>Yes → Refer to the DRIVEABILITY category and perform the appropriate symptom.</p> <p>No → Go To 2</p>	All
2	<p>Perform the Instrument Cluster Self Test.</p> <p>Depress and hold the Trip Odometer reset button while turning the ignition from the off to the on position.</p> <p>Did the 4WD indicator in question illuminate?</p> <p>Yes → Go To 3</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition on.</p> <p>With the DRBIII® in Sensors, read the T-Case Position while moving the transfer case shift lever through all of the positions.</p> <p>The DRBIII® should display the following values:</p> <p>4WD Lo: 0.96 - 1.35 volts</p> <p>Neutral: 2.39 - 2.76 volts</p> <p>Full Time: 3.2 - 3.5 volts</p> <p>Part Time: 3.7 - 4.0 volts</p> <p>2WD: 4.17 - 4.45 volts</p> <p>Is the Transfer Case Position voltage within the specified ranges?</p> <p>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.</p> <p>No → Replace the Transfer Case Position Sensor in accordance with the Service Information.</p> <p>Perform POWERTRAIN VERIFICATION TEST VER - 2.</p>	All

Symptom:***4WD INDICATOR INACCURATE - DIESEL ONLY**

POSSIBLE CAUSES
4WD MODE SENSOR DTC PRESENT
INTERMITTENT CONDITION
TRANSFER CASE POSITION SENSOR
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: With the DRBIII®, ensure that the Instrument Cluster is configured for the correct transfer case before proceeding with this test.</p> <p>With the DRBIII®, read DTCs.</p> <p>Does the DRBIII® display any 4WD Mode Sensor DTCs?</p> <p>Yes → Refer to the DRIVEABILITY category and perform the appropriate symptom.</p> <p>No → Go To 2</p>	All
2	<p>Perform the Instrument Cluster Self Test.</p> <p>Depress and hold the Trip Odometer reset button while turning the ignition from the off to the on position.</p> <p>Did the 4WD indicator in question illuminate?</p> <p>Yes → Go To 3</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition on.</p> <p>With the DRBIII® in Sensors, read the T-Case Position while moving the transfer case shift lever through all of the positions.</p> <p>The DRBIII® should display the following values:</p> <p>4WD Lo: 0.15 - 0.40 volts</p> <p>Neutral: 0.68 - 0.98 volts</p> <p>Full Time: 1.23 - 1.56 volts</p> <p>Part Time: 1.78 - 2.12 volts</p> <p>2WD: 2.43 - 2.77 volts</p> <p>Is the Transfer Case Position voltage within the specified ranges?</p> <p>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.</p> <p>No → Replace the Transfer Case Position Sensor in accordance with the Service Information.</p> <p>Perform POWERTRAIN VERIFICATION TEST VER - 2.</p>	All

INSTRUMENT CLUSTER

Symptom:

***ALL GAUGES INOPERATIVE**

POSSIBLE CAUSES

NO RESPONSE - PCI BUS

NO RESPONSE - PCI BUS - POWERTRAIN CONTROL MODULE

NO RESPONSE - PCI BUS - INSTRUMENT CLUSTER

FUSED IGNITION SWITCH OUTPUT CIRCUIT SHORT TO GROUND

INSTRUMENT CLUSTER GROUND CIRCUIT OPEN

FUSED IGNITION 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

***ALL GAUGES INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition off. Inspect the #13 Fuse in the Junction Block. If the fuse is open, replace with proper rated fuse. Turn the ignition on for one minute. Turn the ignition off. Inspect the #13 Fuse in the Junction Block. Is the fuse open?</p> <p>Yes → Repair the Fused Ignition Switch Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off. Disconnect the Instrument Cluster 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?</p> <p>Yes → Go To 6</p> <p>No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
6	<p>Turn the ignition off. Disconnect the Instrument Cluster harness connector. Measure the resistance between ground and the Instrument Cluster Ground circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Instrument Cluster Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

INSTRUMENT CLUSTER

Symptom:

*ANY PCI BUS INDICATOR INOPERATIVE

POSSIBLE CAUSES
INDICATOR MESSAGE NOT RECEIVED
NO RESPONSE - INSTRUMENT CLUSTER
NO RESPONSE - PCI BUS
NO RESPONSE - PCI BUS - POWERTRAIN CONTROL MODULE
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, select System Monitors, then J1850 Module Scan. Does the DRBIII® display MIC PRESENT on the BUS?</p> <p>Yes → Go To 2</p> <p>No → Refer to the COMMUNICATION category and perform the appropriate symptom.</p>	All
2	<p>Turn the ignition on. With the DRBIII®, select MIC, then MODULE DISPLAY. Does the DRBIII® display NO RESPONSE from MIC?</p> <p>Yes → Refer to the symptom list for problems related to *NO RESPONSE FROM THE INSTRUMENT CLUSTER.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition on. With the DRBIII®, select Body, MIC, MONITORS, PCI BUS MONITORS. Does the DRBIII® display PCM INACTIVE on the BUS?</p> <p>Yes → Refer to the symptom list for problems related to *NO RESPONSE FROM THE POWERTRAIN CONTROL MODULE.</p> <p>No → Go To 4</p>	All
4	<p>NOTE: Diagnose and repair any PCM or BCM DTCs before proceeding with this test.</p> <p>Perform the Instrument Cluster Self Test. Depress and hold the Trip Odometer button while turning the ignition from the off to the on position. Observe the indicator in question. Did the indicator illuminate?</p> <p>Yes → Refer to the appropriate Service Information category to diagnose the related system.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***BRAKE INDICATOR ALWAYS ON****POSSIBLE CAUSES**

BRAKE FLUID LEVEL SWITCH CIRCUIT DTC PRESENT

BRAKE FLUID LEVEL SWITCH

RED BRAKE WARNING INDICATOR DRIVER CIRCUIT SHORT TO GROUND

PARK BRAKE SWITCH

PARK BRAKE SWITCH SENSE CIRCUIT SHORT TO GROUND

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the Brake Fluid Level is properly filled and the Brake Fluid Level Switch harness connector is properly connected.</p> <p>With the DRBIII®, erase DTCs. Cycle the ignition and wait approximately 15 seconds. With the DRBIII®, read DTCs. Does the DRBIII® display "BRAKE FLUID LEVEL SWITCH CIRCUIT OPEN?"</p> <p>Yes → Refer to symptom list for problems related to "BRAKE FLUID SWITCH CIRCUIT OPEN".</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition off. Disconnect the Brake Fluid Level Switch harness connector. Measure the resistance of the Brake Fluid Level Switch. Is the resistance below 900 ohms?</p> <p>Yes → Replace the Brake Fluid Level Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition off. Disconnect the Brake Fluid Level Switch harness connector. Disconnect the Instrument Cluster harness connector. Measure the resistance between ground and the Red Brake Warning Indicator Driver circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Red Brake Warning Indicator Driver circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All

*BRAKE INDICATOR ALWAYS ON — Continued

TEST	ACTION	APPLICABILITY
4	<p>NOTE: Ensure that the Brake Fluid Level Switch and Instrument Cluster harness connectors are properly connected.</p> <p>Disconnect the Park Brake Switch harness connector.</p> <p>With the DRBIII® in Inputs/Outputs, read the Park Brake Switch state.</p> <p>Does the DRBIII® display "Open"?</p> <p>Yes → Replace the Park Brake Switch in accordance with the Service Information.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off.</p> <p>Disconnect the Park Brake Switch harness connector.</p> <p>Disconnect the Instrument Cluster harness connector.</p> <p>Measure the resistance between ground and the Park Brake Switch Sense circuit.</p> <p>Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Park Brake Switch Sense circuit for a short to ground.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***BRAKE INDICATOR INOPERATIVE****POSSIBLE CAUSES**

BRAKE FLUID LEVEL SWITCH

PARK BRAKE SWITCH

PARK BRAKE SWITCH SENSE CIRCUIT OPEN

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>Is the BRAKE indicator only inoperative with the Park Brake engaged?</p> <p>Yes → Go To 2</p> <p>No → Replace the Brake Fluid Level Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Disconnect the Park Brake Switch harness connector. Connect a jumper wire between the Park Brake Switch Sense circuit and ground. Turn the ignition on. Observe the BRAKE indicator. Did the BRAKE indicator illuminate?</p> <p>Yes → Replace the Park Brake Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition off. Disconnect the Park Brake Switch harness connector. Disconnect the Instrument Cluster harness connector. Measure the resistance of the Park Brake Switch Sense circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Park Brake Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

INSTRUMENT CLUSTER

Symptom:

*FUEL GAUGE INACCURATE

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

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Diagnose and repair any PCM Fuel Level DTCs before proceeding with this test.</p> <p>With the DRBIII®, read DTCs. Does the DRBIII® display any Fuel Level Sensor DTCs?</p> <p>Yes → Refer to symptom list for problems related to Fuel Level Sensor DTCs.</p> <p>No → Go To 2</p>	All
2	<p>Perform the Instrument Cluster Self Test. Depress and hold the Trip Odometer reset button while turning the ignition on. NOTE: The Instrument Cluster Self Test can also be performed using the DRBIII®.</p> <p>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: "1/4" Calibration Point 2: "1/2" Calibration Point 3: "F" Calibration Point 4: "3/4" Calibration Point 5: "1/2" Calibration Point 6: "1/4" Calibration Point 7: "E"</p> <p>Did the Fuel Gauge needle pause at the correct calibration points?</p> <p>Yes → Go To 3</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***FUEL GAUGE INACCURATE — Continued**

TEST	ACTION	APPLICABILITY
3	<p>With the DRBIII®, select Body, MIC, then Monitors. Read the Fuel Tank Level Volts. Compare the Fuel Tank Level Volts displayed by the DRBIII® to the Fuel Gauge using the following values: 4.3 - 3.19 Volts (Approximately 270 - 200 Ohms of Fuel Sensor Resistance) = "E" 2.56 Volts (Approximately 160 Ohms of Fuel Sensor Resistance) = "1/4" 1.91 Volts (Approximately 120 Ohms of Fuel Sensor Resistance) = "1/2" 1.27 Volts (Approximately 80 Ohms of Fuel Sensor Resistance) = "3/4" 0.319 - .646 Volts (Approximately 20 - 40 Ohms of Fuel Sensor Resistance) = "F" NOTE: Fuel Tank Level Voltage should be within +/- 0.2 volts. Is the displayed Fuel Tank Level voltage correct?</p> <p>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.</p> <p>No → Replace the Fuel Level Sensor in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

INSTRUMENT CLUSTER

Symptom:

*INSTRUMENT CLUSTER INOPERATIVE

POSSIBLE CAUSES
FUSED IGNITION SWITCH OUTPUT CIRCUIT SHORT TO GROUND
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
INSTRUMENT CLUSTER GROUND CIRCUIT OPEN
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Remove and inspect the #13 Fuse in the Junction Block. If the fuse is open, replace with proper rated fuse. Turn the ignition on for 1 minute. Turn the ignition off. Remove and inspect the #13 Fuse in the Junction Block. Is the fuse open? Yes → Repair the Fused Ignition Switch Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition off. Disconnect the Instrument Cluster harness connector. Turn the ignition on. Measure the voltage between 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. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Instrument Cluster harness connector. Measure the resistance between ground and the Instrument Cluster Ground circuit. Is the resistance below 5.0 ohms? Yes → Replace and configure 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:***LOW COOLANT INDICATOR ALWAYS ON - DIESEL ONLY****POSSIBLE CAUSES**

LOW COOLANT SWITCH

LOW COOLANT FLUID LEVEL SENSE CIRCUIT SHORT TO GROUND

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the coolant is filled to the proper level before proceeding with this test.</p> <p>Disconnect the Low Coolant Level Switch harness connector. With the DRBIII® in Inputs/Outputs, read the Low Coolant Switch state. Does the DRBIII® display "Closed"?</p> <p>Yes → Go To 2</p> <p>No → Replace the Low Coolant Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the Low Coolant Level Switch harness connector. Disconnect the Instrument Cluster harness connector. Measure the resistance between ground and the Low Coolant Fluid Level Sense circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Low Coolant Fluid Level Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

INSTRUMENT CLUSTER

Symptom:

***LOW COOLANT INDICATOR INOPERATIVE - DIESEL ONLY**

POSSIBLE CAUSES
LOW COOLANT SWITCH LOW COOLANT FLUID LEVEL SENSE CIRCUIT OPEN LOW COOLANT SWITCH GROUND CIRCUIT OPEN INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Perform the Instrument Cluster Self Test before proceeding with this test. If the Indicator does not illuminate, replace the Cluster.</p> <p>Turn the ignition off. Disconnect the Low Coolant Switch harness connector. Connect a jumper wire between cavity 1 and cavity 2. Turn the ignition on and wait approximately 1 minute. With the DRBIII® in Inputs/Outputs, read the Low Coolant Switch state. Does the DRBIII® display "Closed"?</p> <p>Yes → Replace the Low Coolant Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition off. Disconnect the Low Coolant Switch harness connector. Measure the resistance between ground and the Low Coolant Switch Ground circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Low Coolant Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition off. Disconnect the Low Coolant Switch harness connector. Disconnect the Instrument Cluster harness connector. Measure the resistance of the Low Coolant Fluid Level Sense circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Low Coolant Fluid Level Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***LOW WASH MESSAGE NOT OPERATING PROPERLY****POSSIBLE CAUSES**

WASHER FLUID LEVEL SWITCH ALWAYS CLOSED

LOW WASHER FLUID SENSE CIRCUIT OPEN

LOW WASHER FLUID SENSE CIRCUIT SHORT TO GROUND

WASHER FLUID LEVEL SWITCH ALWAYS OPEN

WASHER FLUID LEVEL SWITCH GROUND CIRCUIT OPEN

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the Washer Fluid reservoir is filled and the Fluid Level Switch connector is properly connected before proceeding with this test.</p> <p>Turn the ignition on and wait approximately 1 minute. Is the "Lowash" message always displayed?</p> <p>Yes → Go To 2</p> <p>No → Go To 3</p>	All
2	<p>Turn the ignition off. Disconnect the Washer Fluid Level Switch harness connector. Turn the ignition on and wait approximately 1 minute. Does the VF display "LOWASH"?</p> <p>Yes → Repair the Low Washer Fluid Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Washer Fluid Level Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off. Disconnect the Washer Fluid Level Switch harness connector. Connect a jumper wire between cavity 1 and cavity 2. Turn the ignition on and wait approximately 1 minute. Does the VF display "LOWASH"?</p> <p>Yes → Replace the Washer Fluid Level Switch in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Turn the ignition off. Disconnect the Washer Fluid Level Switch harness connector. Measure the resistance between ground and the Washer Fluid Level Switch Ground circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 5</p> <p>No → Repair the Washer Fluid Level Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***LOW WASH MESSAGE NOT OPERATING PROPERLY — Continued**

TEST	ACTION	APPLICABILITY
5	<p>Turn the ignition off. Disconnect the Washer Fluid Level Switch harness connector. Disconnect the Instrument Cluster harness connector. Measure the resistance of the Low Washer Fluid Sense circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Low Washer Fluid Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***ONE GAUGE INOPERATIVE****POSSIBLE CAUSES**

POWERTRAIN CONTROL MODULE DTCS

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display any PCM DTCs? Yes → Refer to the DRIVEABILITY category and perform the appropriate symptom. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition off. Perform the Instrument Cluster Self Test. NOTE: The Self Test can be initiated manually by depressing and holding the Trip Reset button while turning the ignition on, or by using the DRBIII®. Observe the gauge in question while the Instrument Cluster performs the Self Test. The gauges should position at the following calibrations points: Speedometer MPH: 0, 30, 60, 90, 120, 90, 60, 30, 0 Speedometer kPH: 0, 60, 120, 180, 240, 180, 120, 60, 0 Tachometer Gas: 0, 1000, 3000, 5000, 7000, 5000, 3000, 1000, 0 Tachometer Diesel: 0, 1000, 3000, 5000, 3000, 1000, 0 Fuel: 1/4, 1/2, 3/4, F, 3/4, 1/2, 1/4, E Coolant: Lo, 1/4, 1/2, 3/4, HI, 3/4, 1/2, 1/4, Lo Did the gauge in question operate properly? Yes → Test Complete. No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

INSTRUMENT CLUSTER

Symptom:

*PANEL DIMMING INOPERATIVE

POSSIBLE CAUSES
PANEL ILLUMINATION DTC PRESENT
ILLUMINATION BULB(S)
FUSED PARK LAMP RELAY OUTPUT CIRCUIT SHORT TO GROUND
FUSED PARK LAMP RELAY OUTPUT CIRCUIT OPEN
PARK LAMP RELAY OUTPUT CIRCUIT OPEN
FUSED PANEL LAMPS DIMMER SWITCH SIGNAL SHORT TO VOLTAGE
ILLUMINATED COMPONENT INTERNALLY SHORTED
FUSED PANEL LAMPS DIMMER SWITCH SIGNAL CIRCUIT SHORT TO GROUND
INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, read DTCs. Does the DRBIII® display any MIC or BCM DTCs?</p> <p>Yes → Refer to symptom list for problems related to BCM or Instrument Cluster DTCs</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition on. Turn the Park Lamps on and adjust the dimming switch to maximum brightness. Are all of the Instrument Cluster illumination bulbs inoperative?</p> <p>Yes → Go To 3</p> <p>No → Replace the Illumination Bulb(s) as necessary in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off. Remove and inspect the #9 Fuse in the Junction Block. If the fuse is open, replace with proper rated fuse. Turn the Park Lamps on for 1 minute. Turn the ignition off. Remove and inspect the #9 Fuse in the Junction Block. Is the #9 Fuse in the Junction Block open?</p> <p>Yes → Using the wiring diagram/schematic as a guide, repair the Fused Park Lamp Relay Output circuit for a short to ground (between the Junction Block and the Instrument Cluster). Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All

***PANEL DIMMING INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition on. Turn the Park Lamps on. Measure the voltage between the #9 Fuse in the Junction Block and ground. Is the voltage above 10.5 volts?</p> <p>Yes → Go To 5</p> <p>No → Repair the Park Lamp Relay Output circuit for an open (between the Park Lamp Relay and the #9 Fuse in the Junction Block). Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>Turn the ignition off. Disconnect the Instrument Cluster harness connector. Turn the ignition on. Turn the Park Lamps on. Measure the voltage between the Fused Park Lamp Relay Output circuit and ground. Is the voltage above 10.5 volts?</p> <p>Yes → Go To 6</p> <p>No → Repair the Fused Park Lamp Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
6	<p>Turn the ignition off. Disconnect the Instrument Cluster harness connector. Check connectors - Clean/repair as necessary. Measure the voltage between the Fused Panel Lamps Dimmer Switch circuit and ground. Is there any voltage present?</p> <p>Yes → Repair the Fused Panel Lamps Dimmer Switch Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 7</p>	All
7	<p>Turn the ignition off. Ensure that the Instrument Cluster harness connector is connected. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors to all of the illuminated components. Turn the ignition on. Turn the Park Lamps on. While disconnecting components, inspect for Instrument Cluster illumination. Does the Instrument Cluster illumination operate after disconnecting any component?</p> <p>Yes → Replace the illuminated component as necessary. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 8</p>	All

*PANEL DIMMING INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
8	<p>Turn the ignition off. Disconnect the Instrument Cluster harness connector. Using the wiring diagram/schematic as a guide, ensure that all illuminated components are disconnected. Measure the resistance between ground and the Fused Panel Lamps Dimmer Switch circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Fused Panel Lamps Dimmer Switch Signal circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***SEAT BELT INDICATOR ALWAYS ON****POSSIBLE CAUSES**

ACM DTC PRESENT

INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Ensure that the seat belt buckles are not damaged and are buckled. With the DRBIII® select MIC, in Inputs/Outputs, read the Seatbelt Lamp state. Does the DRBIII® display "On"? Yes → Refer to Seat Belt symptom(s) in the Airbag category. No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.	All

INSTRUMENT CLUSTER

Symptom:

*VTSS INDICATOR INOPERATIVE

POSSIBLE CAUSES
BCM OR ITM DTC PRESENT VTSS INDICATOR DRIVER CIRCUIT OPEN BODY CONTROL MODULE INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Ensure that the VTSS is enabled before proceeding with this test. Turn the ignition on. With the DRBIII®, read Body Control Module and Intrusion Transceiver Module DTCs. Does the DRBIII® display any DTCs?</p> <p>Yes → Refer to the VEHICLE THEFT / SECURITY category and perform the appropriate symptom.</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition off. Disconnect the BCM C1 harness connector. Measure the voltage between the VTSS Indicator Driver circuit and ground. Is the voltage above 10.5 volts?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the ignition off. Disconnect the Instrument Cluster Harness connector. Disconnect the BCM C1 harness connector. Measure the resistance of the VTSS Indicator Driver circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the VTSS Indicator Driver circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and configure the Instrument Cluster in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

DIMMING LEVEL SWITCH INPUT CIRCUIT HIGH

When Monitored and Set Condition:

DIMMING LEVEL SWITCH INPUT CIRCUIT HIGH

When Monitored: Ignition on.

Set Condition: BCM detects a voltage greater than 4.75 volts on the dimming level switch input for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

PANEL LAMPS DIMMER SWITCH MUX OPEN

SHORT TO BATTERY

MULTIFUNCTION SWITCH

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Actuate the Dimming Level Switch. With the DRBIII®, read the DTC information. Does the DRBIII® read: Dimming Level Switch Input CKT High?</p> <p>Yes → Go To 2</p> <p>No → The condition is not present at this time. Monitor DRBIII parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the BCM C2 harness connector. Turn the ignition on to check the Courtesy Lamp operation. Did the Courtesy Lamps come on?</p> <p>Yes → Go To 3</p> <p>No → Repair the Panel Lamps Dimmer Switch MUX circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p>	All

DIMMING LEVEL SWITCH INPUT CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
3	<p>Ensure the Junction Block C24 harness connector on the front of the junction block is connected.</p> <p>Turn on all overhead, map and rear rearing lamps by their own individual switches. This will disconnect each lamp from the Courtesy Lamp Driver Circuit.</p> <p>Did any lamp fail to light when it was turned on by it's own switch?</p> <p>Yes → Repair the short to battery condition. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Turn the ignition off.</p> <p>Disconnect the Junction Block C24 harness connector from the front of the junction block.</p> <p>Remove the Body Control Module from the junction block.</p> <p>Measure the voltage of the Courtesy Lamps Driver circuit.</p> <p>Is there any voltage on the Courtesy Lamps Driver Circuit?</p> <p>Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

DIMMING LEVEL SWITCH INPUT CIRCUIT LOW

When Monitored and Set Condition:

DIMMING LEVEL SWITCH INPUT CIRCUIT LOW

When Monitored: Ignition ON.

Set Condition: BCM detects a voltage less than 0.25 volts on the dimming level switch input for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

PANEL LAMPS DIMMER SWITCH MUX OPEN

PANEL LAMPS DIMMER SWITCH MUX CIRCUIT SHORT TO GROUND

MULTIFUNCTION SWITCH

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Actuate the Dimming Level Switch. With the DRBIII®, read the DTC information. Does the DRBIII® read: Dimming Level Switch Input CKT Low?</p> <p>Yes → Go To 2</p> <p>No → The condition is not present at this time. Monitor DRBIII parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the BCM C2 harness connector. Cycle the ignition switch off than back on. Did any of the Courtesy Lamps come on?</p> <p>Yes → Go To 3</p> <p>No → Repair the Panel Lamps Dimmer Switch MUX for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p>	All

DIMMING LEVEL SWITCH INPUT CIRCUIT LOW — Continued

TEST	ACTION	APPLICABILITY
3	<p>Ensure the Junction Block C24 harness connector on the front of the junction block is connected.</p> <p>Turn on all overhead, map and rear rearing lamps by their own individual switches. This will disconnect each lamp from the Courtesy Lamp Driver Circuit. Did any lamp fail to light when it was turned on by it's own switch?</p> <p>Yes → Repair the Panel Lamps Dimmer Switch MUX circuit for a short to ground condition. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Turn the ignition off.</p> <p>Disconnect the Junction Block C24 harness connector from the front of the junction block.</p> <p>Remove the Body Control Module from the junction block.</p> <p>Measure the voltage of the Courtesy Lamps Driver circuit.</p> <p>Is voltage present on the Courtesy Lamps Driver Circuit?</p> <p>Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

***COURTESY LAMPS INOPERATIVE-ALL LAMPS**

POSSIBLE CAUSES

JUNCTION BLOCK

COURTESY LAMPS DRIVER CIRCUIT OPEN

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Gain access to the junction block C24 Harness connector. While back probing, measure the voltage of the Courtesy Lamp Driver circuit. Is the voltage above 10.0 volts?</p> <p>Yes → Go To 2</p> <p>No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Using a jumper wire, test the Courtesy Lamps Driver circuit to the Junction Block C24 connector and ground. Do the courtesy lamps come on?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Courtesy Lamp Driver circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*COURTESY LAMPS INOPERATIVE-OVERHEAD LAMPS

POSSIBLE CAUSES
INTERMITTENT CONDITION
JUNCTION BLOCK
OPEN BULB
COURTESY LAMP DRIVER CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Turn the Courtesy Lamps on. Verify that the Courtesy Lamps are inoperative. Do the Courtesy Lamps operate normally? Yes → The condition that caused the 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 → Go To 2	All
2	Remove and inspect any inoperative courtesy lamp bulbs. Are any of the inspected bulbs open or shorted? Yes → Replace the applicable open bulb. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition on. Measure the voltage of the Courtesy Lamp Driver circuit to ground. Is the voltage above 10.0 volts? Yes → Repair the Courtesy Lamps Driver circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***COURTESY LAMPS STAY ON AT ALL TIMES**

POSSIBLE CAUSES
COURTESY LAMPS DRIVER HEADLINER CIRCUIT SHORT TO GROUND
COURTESY LAMPS DRIVER CIRCUIT BODY HARNESS SHORT TO GROUND
PANEL LAMPS DIMMER SWITCH MUX SHORT TO GROUND
MULTIFUNCTION SWITCH
BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Ensure the Dimmer Switch is off. Close all the passenger doors. Disconnect the Junction Block C24 connector from the front of the junction block. Observe the Courtesy Lamps. Did the Courtesy Lamps turn off?</p> <p>Yes → Repair the Courtesy Lamps Driver circuit in the headliner harness for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Ensure the Dimmer Switch is off. Close all the passenger doors. Disconnect the Junction Block C24 harness connector from the Junction Block. Observe the Courtesy Lamps. Did Courtesy Lamps turn off?</p> <p>Yes → Repair the Courtesy Lamps Driver circuit in the Body Harness for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Disconnect the Body Control Module C2 connector. Disconnect the Multifunction Switch harness connector. Measure the resistance of the Panel Lamps Dimmer Switch MUX circuit to ground. Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the Panel Lamps Dimmer Switch MUX circuit for a short to ground condition. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All

***COURTESY LAMPS STAY ON AT ALL TIMES — Continued**

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition off. Disconnect the Body Control Module C2 connector. Disconnect the Multifunction Switch harness connector. Turn the ignition on. Measure the resistance of the Multifunction Switch Ground circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**DOOR LOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND****When Monitored and Set Condition:****DOOR LOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND**

When Monitored: With ignition on.

Set Condition: The BCM detects a low circuit on the Door Lock Relay Control circuit even though it is not attempting to lock the doors for more than 5 seconds. If the BCM is not grounding its side of the relay coil, the output should be high.

POSSIBLE CAUSES

RELAY OPEN OR SHORTED

CODE ACTIVE

JUNCTION BLOCK - DOOR LOCK RELAY CONTROL SHORT TO GROUND

JUNCTION BLOCK - DOOR LOCK RELAY CONTROL OPEN

BODY CONTROL MODULE - OPEN OR SHORTED

TEST	ACTION	APPLICABILITY
1	<p>NOTE: If the door locks are totally inoperative, check fuse #6 before proceeding.</p> <p>Turn the ignition on.</p> <p>With the DRBIII®, erase DTCs.</p> <p>Operate the door locks several times.</p> <p>With the DRBIII®, read DTCs.</p> <p>Does the DRBIII® display DOOR LOCK RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND?</p> <p>Yes → Go To 2</p> <p>No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Ensure the relay is completely plugged in.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Remove the Door Lock Relay from the Junction Block.</p> <p>Install a substitute relay in place of the Door Lock Relay.</p> <p>With the DRBIII®, erase DTCs.</p> <p>Operate the Door Locks several times.</p> <p>With the DRBIII®, read DTCs.</p> <p>Does the DRBIII® display DOOR LOCK RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the original relay.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

DOOR LOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND

— Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Remove the Door Lock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Measure the resistance between ground and the Door Lock Relay Control circuit in the relay connector of the Junction Block.. Is the resistance below 100.0 ohms? Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Remove the Door Lock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. Measure the resistance of the Door Lock Relay Control circuit between the Relay connector and the Junction Block - BCM connector. Is the resistance below 2.0 ohms? Yes → Go To 5 No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.	All
5	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**DOOR LOCK RELAY CONTROL SHORT TO VOLTAGE****When Monitored and Set Condition:****DOOR LOCK RELAY CONTROL SHORT TO VOLTAGE**

When Monitored: With ignition on.

Set Condition: The BCM detects a high circuit on the Door Lock Relay Control circuit when it is attempting to lock the doors for more than 5 seconds. If the BCM is not able to ground its side of the relay coil, the control circuit remains high.

POSSIBLE CAUSES

RELAY SHORTED

CODE ACTIVE

JUNCTION BLOCK - DOOR LOCK RELAY CONTROL SHORT TO VOLTAGE

BODY CONTROL MODULE - SHORTED

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DOOR LOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Remove the Door Lock Relay from the Junction Block. Install a substitute relay in place of the Door Lock Relay. With the DRBIII®, erase DTCs. Operate the Door Locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DOOR LOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 3 No → Replace the original relay. Perform BODY VERIFICATION TEST - VER 1.	All

DOOR LOCK RELAY CONTROL SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Remove the Door Lock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Turn the ignition on. Measure the voltage of the Door Lock Relay Control circuit in the relay connector of the Junction Block.. Is there any voltage present?</p> <p>Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**DOOR LOCK SWITCH OPEN OR SHORT TO VOLTAGE****When Monitored and Set Condition:****DOOR LOCK SWITCH OPEN OR SHORT TO VOLTAGE**

When Monitored: Whenever the ignition is on.

Set Condition: When the BCM detects a voltage of greater than 4.75 volts on the door lock switch mux input for over 5 seconds, this code will set. The normal voltage on the circuit is between 0.25 and 4.75 volts depending on switch positions. NOTE: Left and right switches are in parallel.

POSSIBLE CAUSES

CODE ACTIVE

LEFT DOOR LOCK SWITCH GND WIRE OPEN

LEFT DOOR LOCK SWITCH MUX WIRE OPEN

LEFT DOOR LOCK SWITCH MUX WIRE SHORT TO VOLTAGE

RIGHT DOOR LOCK SWITCH GND WIRE OPEN

RIGHT DOOR LOCK SWITCH MUX WIRE OPEN

RIGHT DOOR LOCK SWITCH MUX WIRE SHORT TO VOLTAGE

LEFT DOOR LOCK SWITCH - OPEN

LEFT DOOR LOCK SWITCH - SHORTED

RIGHT DOOR LOCK SWITCH - OPEN

RIGHT DOOR LOCK SWITCH - SHORTED

JUNCTION BLOCK OPEN

BODY CONTROL MODULE - DOOR LOCK SWITCH MUX OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times from both door lock switches With the DRBIII®, read DTCs. Does the DRBIII® display DRIVER DOOR LOCK SWITCH OPEN OR SHORT TO VOLTAGE? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All

DOOR LOCK SWITCH OPEN OR SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
2	<p>Disconnect the Junction Block C2 connector. Measure the voltage between ground and the Door Lock Switch Mux circuit cavity 14 in the C2 connector. Measure the voltage between ground and the Door Lock Switch Mux circuit cavity 10 in the C2 connector.. Which cavity had greater than 0.5 volts?</p> <p style="padding-left: 40px;">Cavity 14 - Left Door Go To 3</p> <p style="padding-left: 40px;">Cavity 10 - Right Door Go To 4</p> <p style="padding-left: 40px;">Neither circuit over 0.5 volts. Go To 5</p>	All
3	<p>Disconnect the Junction Block C2 connector. Disconnect the Left Door Lock Switch connector. Measure the voltage between ground and the Door Lock Switch Mux circuit cavity 14 in the C2 connector.. Is there any voltage present?</p> <p style="padding-left: 40px;">Yes → Repair the Door Lock Switch Mux wire for a short to voltage. Perform BODY VERIFICATION TEST - VER 1.</p> <p style="padding-left: 40px;">No → Replace the Left Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Disconnect the Junction Block C2 connector. Disconnect the Right Door Lock Switch connector. Measure the voltage between ground and the Door Lock Switch Mux circuit cavity 10 in the C2 connector.. Is there any voltage present?</p> <p style="padding-left: 40px;">Yes → Repair the Door Lock Switch Mux wire for a short to voltage.. Perform BODY VERIFICATION TEST - VER 1.</p> <p style="padding-left: 40px;">No → Replace the Right Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>Disconnect the Junction Block C2 connector. Measure the resistance between the Door Lock Switch Ground cavity 5 and the Door Lock Switch Mux circuit cavity 10 in the C2 connector.. Measure the resistance between the Door Lock Switch Ground cavity 11 and the Door Lock Switch Mux circuit cavity 14 in the C2 connector.. Which circuit was NOT between 4500 and 5500 ohms?</p> <p style="padding-left: 40px;">Cavities 5 & 10 - Right Door Go To 6</p> <p style="padding-left: 40px;">Cavities 11 & 14 - Left Door Go To 9</p> <p style="padding-left: 40px;">Both were approximately 5000 ohms. Go To 12</p>	All

DOOR LOCK SWITCH OPEN OR SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
6	Disconnect the Junction Block C2 connector. Disconnect the Right Door Lock Switch connector. Measure the resistance of the Door Lock Switch Mux circuit between cavity 10 in the C2 connector and the Right Door Lock Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 7 No → Repair the Door Lock Switch Mux wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
7	Disconnect the Junction Block C2 connector. Disconnect the Right Door Lock Switch connector. Measure the resistance of the Door Lock Switch Ground circuit between cavity 5 in the C2 connector and the Right Door Lock Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 8 No → Repair the Door Lock Switch Ground wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
8	If there are no possible causes remaining, view repair. Repair Replace the Right Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All
9	Disconnect the Junction Block C2 connector. Disconnect the Left Door Lock Switch connector. Measure the resistance of the Door Lock Switch Mux circuit between cavity 14 in the C2 connector and the Left Door Lock Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 10 No → Repair the Door Lock Switch Mux wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
10	Disconnect the Junction Block C2 connector. Disconnect the Left Door Lock Switch connector. Measure the resistance of the Door Lock Switch Ground circuit between cavity 11 in the C2 connector and the Left Door Lock Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 11 No → Repair the Door Lock Switch Ground wire for an open. Perform BODY VERIFICATION TEST - VER 1.	All
11	If there are no possible causes remaining, view repair. Repair Replace the Left Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All

DOOR LOCK SWITCH OPEN OR SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
12	<p>Disconnect the battery ground cable.</p> <p>Disconnect all the Junction Block connectors and remove the Junction Block.</p> <p>Remove the Body Control Module from the Junction Block.</p> <p>Measure the resistance of the Door Lock Switch Mux circuit between cavity 23 in the Junction Block - Body Control Module connector and cavity 10 in the Junction Block C2.</p> <p>Measure the resistance of the Door Lock Switch Mux circuit between cavity 23 in the Junction Block - Body Control Module connector and cavity 14 in the Junction Block C2.</p> <p>Measure the resistance of the Door Lock Switch Ground circuit between cavity 12 in the Junction Block - Body Control Module connector and cavity 5 in the Junction Block C2.</p> <p>Measure the resistance of the Door Lock Switch Ground circuit between cavity 12 in the Junction Block - Body Control Module connector and cavity 11 in the Junction Block C2.</p> <p>Is the resistance below 1.0 ohm for each circuit?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**DOOR LOCK SWITCH SHORT TO GROUND****When Monitored and Set Condition:****DOOR LOCK SWITCH SHORT TO GROUND**

When Monitored: Whenever the ignition is on.

Set Condition: When the BCM detects a voltage of less than 0.25 volts on the door lock switch mux input for over 5 seconds, this code will set. The normal voltage on the circuit is between 0.25 and 4.75 volts depending on switch positions. NOTE: Left and right switches are in parallel.

POSSIBLE CAUSES

CODE ACTIVE

LEFT DOOR LOCK SWITCH MUX WIRE SHORT TO GROUND

RIGHT DOOR LOCK SWITCH MUX WIRE SHORT TO GROUND

LEFT DOOR LOCK SWITCH

RIGHT DOOR LOCK SWITCH

JUNCTION BLOCK SHORT TO GROUND

BODY CONTROL MODULE - DOOR LOCK SWITCH MUX SHORT TO GROUND

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DOOR LOCK SWITCH SHORT TO GROUND? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Junction Block C2 connector. Measure the resistance between ground and the Door Lock Switch Mux circuit cavity 14 in the C2 connector.. Is the resistance below 100 ohms? Yes → Go To 3 No → Go To 4	All

DOOR LOCK SWITCH SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	Disconnect the Junction Block C2 connector. Disconnect the Left Door Lock Switch connector. Measure the resistance between ground and the Door Lock Switch Mux circuit cavity 14 in the C2 connector.. Is the resistance below 100 ohms? Yes → Repair the Door Lock Switch Mux wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Left Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All
4	Disconnect the Junction Block C2 connector. Measure the resistance between ground and the Door Lock Switch Mux circuit cavity 10 in the C2 connector.. Is the resistance below 100 ohms? Yes → Go To 5 No → Go To 6	All
5	Disconnect the Junction Block C2 connector. Disconnect the Right Door Lock Switch connector. Measure the resistance between ground and the Door Lock Switch Mux circuit cavity 10 in the C2 connector.. Is the resistance below 100 ohms? Yes → Repair the Door Lock Switch Mux wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Right Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1.	All
6	Disconnect the Junction Block C2 connector. Remove the Body Control Module from the Junction Block. Measure the resistance between ground and the Door Lock Switch Mux circuit cavity 23 in the Junction Block - Body Control Module connector.. Is the resistance below 100 ohms? Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND****When Monitored and Set Condition:****DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND**

When Monitored: With ignition on.

Set Condition: The BCM detects a low circuit on the Door Unlock Relay Control circuit even though it is not attempting to unlock the doors for more than 5 seconds. If the BCM is not grounding its side of the relay coil, the output should be high.

POSSIBLE CAUSES

RELAY OPEN OR SHORTED

CODE ACTIVE

JUNCTION BLOCK - DOOR UNLOCK RELAY CONTROL SHORT TO GROUND

JUNCTION BLOCK - DOOR UNLOCK RELAY CONTROL OPEN

BODY CONTROL MODULE - OPEN OR SHORTED

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times. NOTE: NOTE: If the door locks are totally inoperative, check fuse #6 before proceeding. With the DRBIII®, read DTCs. Does the DRBIII® display DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Ensure the relay is completely plugged in. Perform BODY VERIFICATION TEST - VER 1.	All
2	Remove the Door Unlock Relay from the Junction Block. Install a substitute relay in place of the Door Unlock Relay. With the DRBIII®, erase DTCs. Operate the Door Locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND? Yes → Go To 3 No → Replace the original relay. Perform BODY VERIFICATION TEST - VER 1.	All

DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Remove the Door Unlock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Measure the resistance between ground and the Door Unlock Relay Control circuit in the relay connector of the Junction Block.. Is the resistance below 100.0 ohms? Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Remove the Door Unlock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. Measure the resistance of the Door Unlock Relay Control circuit between the Relay connector and the Junction Block - BCM connector. Is the resistance below 2.0 ohms? Yes → Go To 5 No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.	All
5	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**DOOR UNLOCK RELAY CONTROL SHORT TO VOLTAGE****When Monitored and Set Condition:****DOOR UNLOCK RELAY CONTROL SHORT TO VOLTAGE**

When Monitored: With ignition on.

Set Condition: The BCM detects a high circuit on the Door Unlock Relay Control circuit when it is attempting to unlock the doors for more than 5 seconds. If the BCM is not able to ground its side of the relay coil, the control circuit remains high.

POSSIBLE CAUSES

RELAY SHORTED

CODE ACTIVE

JUNCTION BLOCK - DOOR UNLOCK RELAY CONTROL SHORT TO VOLTAGE

BODY CONTROL MODULE - SHORTED

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DOOR UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Remove the Door Unlock Relay from the Junction Block. Install a substitute relay in place of the Door Unlock Relay. With the DRBIII®, erase DTCs. Operate the Door Locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DOOR UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 3 No → Replace the original relay. Perform BODY VERIFICATION TEST - VER 1.	All

DOOR UNLOCK RELAY CONTROL SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Remove the Door Unlock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Turn the ignition on. Measure the voltage of the Door Unlock Relay Control circuit in the relay connector of the Junction Block.. Is there any voltage present?</p> <p>Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND****When Monitored and Set Condition:****DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND**

When Monitored: With ignition on.

Set Condition: The BCM detects a low circuit on the Driver Door Unlock Relay Control circuit even though it is not attempting to unlock the doors for more than 5 seconds. If the BCM is not grounding its side of the relay coil, the output should be high.

POSSIBLE CAUSES

RELAY OPEN OR SHORTED

CODE ACTIVE

JUNCTION BLOCK - DRIVER DOOR UNLOCK RELAY CONTROL SHORT TO GROUND

JUNCTION BLOCK - DRIVER DOOR UNLOCK RELAY CONTROL OPEN

BODY CONTROL MODULE - OPEN OR SHORTED

TEST	ACTION	APPLICABILITY
1	<p>NOTE: NOTE: If the door locks are totally inoperative, check fuse #6 before proceeding.</p> <p>Turn the ignition on.</p> <p>With the DRBIII®, erase DTCs.</p> <p>Operate the door locks several times.</p> <p>With the DRBIII®, read DTCs.</p> <p>Does the DRBIII® display DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND?</p> <p>Yes → Go To 2</p> <p>No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Ensure the relay is completely plugged in.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Remove the Driver Door Unlock Relay from the Junction Block.</p> <p>Install a substitute relay in place of the Driver Door Unlock Relay.</p> <p>With the DRBIII®, erase DTCs.</p> <p>Operate the Door Locks several times.</p> <p>With the DRBIII®, read DTCs.</p> <p>Does the DRBIII® display DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN/SHORT TO GROUND?</p> <p>Yes → Go To 3</p> <p>No → Replace the original relay.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT OPEN OR SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Remove the Driver Door Unlock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Measure the resistance between ground and the Driver Door Unlock Relay Control circuit in the relay connector of the Junction Block.. Is the resistance below 100.0 ohms? Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Remove the Driver Door Unlock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. Measure the resistance of the Driver Door Unlock Relay Control circuit between the Relay connector and the Junction Block - BCM connector. Is the resistance below 2.0 ohms? Yes → Go To 5 No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.	All
5	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE****When Monitored and Set Condition:****DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE**

When Monitored: With ignition on.

Set Condition: The BCM detects a high circuit on the Driver Door Unlock Relay Control circuit when it is attempting to unlock the driver door for more than 5 seconds. If the BCM is not able to ground its side of the relay coil, the control circuit remains high.

POSSIBLE CAUSES

RELAY SHORTED

CODE ACTIVE

JUNCTION BLOCK - DRIVER UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE

BODY CONTROL MODULE - SHORTED

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Remove the Driver Door Unlock Relay from the Junction Block. Install a substitute relay in place of the Driver Door Unlock Relay. With the DRBIII®, erase DTCs. Operate the Door Locks several times. With the DRBIII®, read DTCs. Does the DRBIII® display DRIVER UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE? Yes → Go To 3 No → Replace the original relay. Perform BODY VERIFICATION TEST - VER 1.	All

DRIVER DOOR UNLOCK RELAY CONTROL CIRCUIT SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Remove the Driver Door Unlock Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Turn the ignition on. Measure the voltage of the Driver Unlock Relay Control circuit in the relay connector of the Junction Block.. Is there any voltage present?</p> <p>Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**LEFT CYLINDER LOCK SWITCH SHORT TO GROUND****When Monitored and Set Condition:****LEFT CYLINDER LOCK SWITCH SHORT TO GROUND**

When Monitored: Whenever the ignition is on.

Set Condition: When the BCM detects a voltage of less than 0.25 volts on the left cylinder lock switch mux input for over 5 seconds, this code will set. The normal voltage on the circuit is between 0.25 and 5.0 volts depending on switch position.

POSSIBLE CAUSES

BCM - LEFT CYLINDER LOCK SWITCH CIRCUIT SHORT TO GROUND.

CODE ACTIVE

LEFT CYLINDER LOCK SWITCH WIRE SHORT TO GROUND.

LEFT CYLINDER LOCK SWITCH - SHORTED

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Operate the door locks several times from both cylinder lock switches With the DRBIII®, read DTCs. Does the DRBIII® display LEFT CYLINDER LOCK SWITCH SHORT TO GROUND? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Left Cylinder Lock Switch Mux circuit. Is the resistance below 1000 ohms? Yes → Go To 3 No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

LEFT CYLINDER LOCK SWITCH SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Body Control Module C2 connector. Disconnect the Left Cylinder Lock Switch connector. Measure the resistance between ground and the Left Cylinder Lock Switch Mux circuit. Is the resistance below 1000 ohms ohms?</p> <p>Yes → Repair the Left Cylinder Lock Switch wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Left Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**RKE KEY FOB #1 BATTERY VOLTAGE LOW****When Monitored and Set Condition:****RKE KEY FOB #1 BATTERY VOLTAGE LOW**

When Monitored: Anytime an RKE message is received from the RKE #1 transmitter.

Set Condition: RKE receiver detects an RKE FOB battery low signal (less than 3 volts) for 5 consecutive button presses.

POSSIBLE CAUSES

BATTERIES LOW

CODE ACTIVE

TRANSMITTER - LOW VOLTAGE OUTPUT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Using the RKE transmitter #1, press the UNLOCK button six times or more. With the DRBIII®, read DTCs. Does the DRBIII® display RKE KEY FOB #1 BATTERY VOLTAGE LOW? Yes → Go To 2 No → Problem is intermittent and not present at this time. Check the voltage of each battery in FOB #1 and ensure they above 3.0 volts each. Perform BODY VERIFICATION TEST - VER 1.	All
2	Test the voltage of each battery in the RKE #1 transmitter.. Is the voltage at or above 3.0 in each battery? Yes → Replace the RKE Transmitter. Perform BODY VERIFICATION TEST - VER 1. No → Replace the batteries and press the unlock button on the transmitter six times to clear the DTC.. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**RKE KEY FOB #2 BATTERY VOLTAGE LOW****When Monitored and Set Condition:****RKE KEY FOB #2 BATTERY VOLTAGE LOW**

When Monitored: Anytime an RKE message is received from the RKE #2 transmitter.

Set Condition: RKE receiver detects an RKE FOB battery low signal (less than 3 volts) for 5 consecutive button presses.

POSSIBLE CAUSES

BATTERIES LOW

CODE ACTIVE

TRANSMITTER - LOW VOLTAGE OUTPUT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Using the RKE transmitter #2, press the UNLOCK button six times or more. With the DRBIII®, read DTCs. Does the DRBIII® display RKE KEY FOB #2 BATTERY VOLTAGE LOW? Yes → Go To 2 No → Problem is intermittent and not present at this time. Check the voltage of each battery in FOB #2 and ensure they above 3.0 volts each. Perform BODY VERIFICATION TEST - VER 1.	All
2	Test the voltage of each battery in the RKE #2 transmitter.. Is the voltage at or above 3.0 in each battery? Yes → Replace the RKE Transmitter. Perform BODY VERIFICATION TEST - VER 1. No → Replace the batteries and press the unlock button on the transmitter six times to clear the DTC.. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**RKE KEY FOB #3 BATTERY VOLTAGE LOW****When Monitored and Set Condition:****RKE KEY FOB #3 BATTERY VOLTAGE LOW**

When Monitored: Anytime an RKE message is received from the RKE #3 transmitter.

Set Condition: RKE receiver detects an RKE FOB battery low signal (less than 3 volts) for 5 consecutive button presses.

POSSIBLE CAUSES

BATTERIES LOW

CODE ACTIVE

TRANSMITTER - LOW VOLTAGE OUTPUT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Using the RKE transmitter #3, press the UNLOCK button six times or more. With the DRBIII®, read DTCs. Does the DRBIII® display RKE KEY FOB #3 BATTERY VOLTAGE LOW? Yes → Go To 2 No → Problem is intermittent and not present at this time. Check the voltage of each battery in FOB #3 and ensure they above 3.0 volts each. Perform BODY VERIFICATION TEST - VER 1.	All
2	Test the voltage of each battery in the RKE #3 transmitter.. Is the voltage at or above 3.0 in each battery? Yes → Replace the RKE Transmitter. Perform BODY VERIFICATION TEST - VER 1. No → Replace the batteries and press the unlock button on the transmitter six times to clear the DTC.. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**RKE KEY FOB #4 BATTERY VOLTAGE LOW**

When Monitored and Set Condition:**RKE KEY FOB #4 BATTERY VOLTAGE LOW**

When Monitored: Anytime an RKE message is received from the RKE #4 transmitter.

Set Condition: RKE receiver detects an RKE FOB battery low signal (less than 3 volts) for 5 consecutive button presses.

POSSIBLE CAUSES

BATTERIES LOW

CODE ACTIVE

TRANSMITTER - LOW VOLTAGE OUTPUT

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Using the RKE transmitter #4, press the UNLOCK button six times or more. With the DRBIII®, read DTCs. Does the DRBIII® display RKE KEY FOB #3 BATTERY VOLTAGE LOW? Yes → Go To 2 No → Problem is intermittent and not present at this time. Check the voltage of each battery in FOB #4 and ensure they above 3.0 volts each. Perform BODY VERIFICATION TEST - VER 1.	All
2	Test the voltage of each battery in the RKE #4 transmitter.. Is the voltage at or above 3.0 in each battery? Yes → Replace the RKE Transmitter. Perform BODY VERIFICATION TEST - VER 1. No → Replace the batteries and press the unlock button on the transmitter six times to clear the DTC.. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**RKE UNABLE TO ENTER PROGRAM MODE****When Monitored and Set Condition:****RKE UNABLE TO ENTER PROGRAM MODE**

When Monitored: While attempting to program RKE.

Set Condition: Lack of response from the RKE module while attempting to put it in program mode.

POSSIBLE CAUSES

CODE ACTIVE

RKE MODULE

RKE UNABLE TO ENTER PROGRAM MODE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. With the DRBIII®, attempt to enter RKE PROGRAM mode. With the DRBIII®, read DTCs. Does the DRBIII® display RKE UNABLE TO ENTER PROGRAM MODE? Yes → Go To 2 No → Problem is intermittent and not present at this time. Perform BODY VERIFICATION TEST - VER 1.	All
2	Note: This DTC will only set when attempting to enter the program RKE mode. Replace the Remote Keyless Entry Module. With the DRB, Clear DTC's With the DRB, attempt to enter the RKE program mode. With the DRB, check DTC's. Did this DTC reset? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → The original RKE module was defective. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:**TAILGATE CYLINDER LOCK SWITCH SHORT TO GROUND**

When Monitored and Set Condition:**TAILGATE CYLINDER LOCK SWITCH SHORT TO GROUND**

When Monitored: Whenever the ignition is on.

Set Condition: When the BCM detects a voltage of less than 0.25 volts on the tailgate cylinder lock switch mux input for over 5 seconds, this code will set. The normal voltage on the circuit is between 0.25 and 5.0 volts depending on switch position.

POSSIBLE CAUSES

BCM - TAILGATE CYLINDER LOCK SWITCH CIRCUIT SHORT TO GROUND.

CODE ACTIVE

TAILGATE CYLINDER LOCK SWITCH WIRE SHORT TO GROUND.

TAILGATE CYLINDER LOCK SWITCH - SHORTED

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, erase DTCs. Lock and unlock the tailgate several times from the tailgate cylinder lock switch. With the DRBIII®, read DTCs. Does the DRBIII® display TAILGATE CYLINDER LOCK SWITCH SHORT TO GROUND?</p> <p>Yes → Go To 2</p> <p>No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Tailgate Cylinder Lock Switch Mux circuit. Is the resistance below 1000 ohms?</p> <p>Yes → Go To 3</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

TAILGATE CYLINDER LOCK SWITCH SHORT TO GROUND — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Body Control Module C2 connector. Disconnect the Tailgate Cylinder Lock Switch connector. Measure the resistance between ground and the Tailgate Cylinder Lock Switch Mux circuit. Is the resistance below 1000 ohms?</p> <p>Yes → Repair the Tailgate Cylinder Lock Switch wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Tailgate Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

TAILGATE LOCK MOTOR SHORT TO VOLTAGE

When Monitored and Set Condition:

TAILGATE LOCK MOTOR SHORT TO VOLTAGE

When Monitored: Whenever the ignition is on.

Set Condition: When the BCM detects voltage on either the Tailgate Lock Driver or Unlock Driver circuit for longer than 5 seconds when the Tailgate is not being actuated. If there is, the BCM will disable the lock functions to protect the BCM.

POSSIBLE CAUSES

TAILGATE LOCK OR UNLOCK CIRCUIT SHORT TO VOLTAGE

CODE ACTIVE

JUNCTION BLOCK - SHORT TO VOLTAGE

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase DTCs. Cycle the ignition switch from Off to On and wait 10 seconds. With the DRBIII®, read DTCs. Does the DRBIII® display TAILGATE LOCK MOTOR SHORT TO VOLTAGE? Yes → Go To 2 No → Problem is intermittent and not present at this time. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors and repair as necessary. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Junction Block C2 connector. Measure the voltage between Tailgate Lock Driver circuit and ground. Is there any voltage present? Yes → Repair the Tailgate Lock or Unlock Driver for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

TAILGATE LOCK MOTOR SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block C connectors are connected at this time. Turn the ignition on. Measure the voltage between the Tailgate Lock Driver circuit in the Junction Block - BCM connector and ground. Measure the voltage between the Tailgate Unlock Driver circuit in the Junction Block - BCM connector and ground. Is there any voltage present?</p> <p>Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

***ALL DOORS FAIL TO LOCK**

POSSIBLE CAUSES
DTC'S PRESENT KEY-IN IGNITION SWITCH SHORTED DOOR LOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND DOOR LOCK RELAY

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, read DTCs. Are there any Power Door Lock related codes present?</p> <p>Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Close both front doors. Insert the key in the ignition switch but do not turn the switch on. Does the Chime continue to sound?</p> <p>Yes → Refer to symptom list for problems related to CHIME.. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Remove the Door Lock, the Door Unlock and the Driver Door Unlock relays from the Junction Block. Measure the resistance between ground and the Lock Relay Output circuit in the Lock relay connector. Is the resistance below 1000.0 ohms?</p> <p>Yes → Repair the Lock Relay Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Door Lock Relay. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***ALL PASSENGER DOORS FAIL TO LOCK AND UNLOCK****POSSIBLE CAUSES**

DTC'S PRESENT

DOOR UNLOCK RELAY OUTPUT CIRCUIT OPEN

DOOR UNLOCK RELAY

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, read DTCs. Are there any Power Door Lock related codes present?</p> <p>Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Remove the Door Unlock Relay from the Junction Block. Using a 12-volt test light connected to ground, check the Door Unlock Relay Output circuit (cavity 30) in the relay connector.. With the DRBIII®, actuate the Door Lock Relay. Does the test light illuminate brightly when the relay is actuated?</p> <p>Yes → Replace the Door Unlock Relay. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Door Unlock Relay Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***ALL PASSENGER DOORS FAIL TO UNLOCK****POSSIBLE CAUSES**

DTC'S PRESENT

DOOR UNLOCK RELAY OUTPUT CIRCUIT SHORT TO GROUND

DOOR UNLOCK RELAY

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, read DTCs. Are there any Power Door Lock related codes present? Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition off. Remove the Door Lock, the Door Unlock and the Driver Door Unlock relays from the Junction Block. Measure the resistance between ground and the Door Unlock Relay Output circuit (cavity 30) in the Door Unlock relay connector.. 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 Door Unlock Relay. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:***AUTO DOOR LOCKS INOPERATIVE****POSSIBLE CAUSES**

AUTO (ROLLING) DOOR LOCKS NOT ENABLED

DOOR AJAR STATUS

PCM DTC'S PRESENT

BODY CONTROL MODULE - AUTO LOCKS INOPERATIVE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII select: "Body Controller", "Miscellaneous", "Auto Door Locks" Does the DRBIII® show "Auto Door Locks: ENABLED"?</p> <p>Yes → Go To 2</p> <p>No → With the DRBIII, enable the Auto (Rolling) Door Locks, open and close the driver door at least once and retest the System. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Ensure all doors are closed. With the DRBIII read all DOOR AJAR states Do any door ajar states show CLOSED?</p> <p>Yes → Refer to symptom list for problems related to DOOR AJAR. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>With the DRBIII read "Engine" DTC's. Are there any TPS DTC's present?</p> <p>Yes → Refer to symptom list for problems related to DRIVEABILITY.. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*DRIVER DOOR FAILS TO LOCK AND UNLOCK

POSSIBLE CAUSES

DOOR LOCK MOTOR - OPEN

DRIVER DOOR UNLOCK RELAY OUTPUT WIRE OPEN

DOOR LOCK RELAY OUTPUT WIRE OPEN

TEST	ACTION	APPLICABILITY
1	<p>Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Driver Door Lock Motor connector. Remove the key from the ignition switch. Connect a test light between the 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 brightly when the lock switch was pressed in both directions?</p> <p>Yes → Replace the Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Turn ignition off. Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Using a 12-volt test light connected to ground, check the Driver Door Unlock Relay Output circuit. With the DRBIII®, actuate the DRIVER DOOR UNLOCK RELAY. Does the test light illuminate brightly when the relay is actuated?</p> <p>Yes → Go To 3</p> <p>No → Repair the Driver Door Unlock Relay Output wire. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn ignition off. Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door 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. Does the test light illuminate brightly when the relay is actuated?</p> <p>Yes → Test Complete.</p> <p>No → Repair the Door Lock Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***DRIVER DOOR FAILS TO UNLOCK****POSSIBLE CAUSES**

DTC'S PRESENT

DRIVER DOOR UNLOCK RELAY

DRIVER DOOR UNLOCK RELAY OUTPUT WIRE SHORT TO GROUND

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, read DTCs. Are there any Power Door Lock related codes present?</p> <p>Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Install a substitute Relay in place of the Driver Door Unlock Relay. Remove the key from the ignition switch. Press the door lock switch to the Lock and Unlock positions. Did the Driver Door Lock and Unlock?</p> <p>Yes → Replace the Driver Door Unlock Relay. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn ignition off. Remove the Driver Door Unlock relay from the Junction Block. Remove the Driver Door inner trim panel and gain access to the door lock motor connector. Disconnect the Driver Door Lock Motor connector. Measure the resistance between ground and the Driver Door Unlock Relay Output circuit (cavity 30) in the relay connector. Is the resistance below 1000.0 ohms?</p> <p>Yes → Repair the Driver Door Unlock Relay Output wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Test Complete.</p>	All

Symptom:***FLIP-UP GLASS RELEASE INOPERATIVE****POSSIBLE CAUSES**

FLIP-UP GLASS RELEASE MOTOR
 FLIP-UP GLASS RELEASE SWITCH
 GROUND CIRCUIT OPEN
 TAILGATE SWITCH GROUND
 FLIP-UP GLASS RELEASE MOTOR DRIVER WIRE OPEN
 FLIP-UP GLASS RELEASE SWITCH SENSE OPEN
 BODY CONTROL MODULE - FLIP-UP GLASS RELEASE MOTOR DRIVER OPEN
 BODY CONTROL MODULE - FLIP-UP GLASS RELEASE SWITCH SENSE OPEN

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Inputs/Outputs, read the FLIP-UP GLASS REL SW state. Observe the DRBIII® and move the tailgate handle from open to close positions. Does the DRBIII® display OPEN then CLOSED as the handle is moved?</p> <p>Yes → Go To 2</p> <p>No → Go To 6</p>	All
2	<p>Disconnect the Flip-Up Glass Release Motor connector. Connect a 12-volt test light between the Flip-Up Glass Release Motor Driver circuit and the ground circuit in the motor connector. With the DRBIII®, actuate the RELEASE FLIP-UP GLASS. Does the test light illuminate brightly when the motor is actuated?</p> <p>Yes → Replace the Flip-Up Glass Release Motor. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Disconnect the Flip-Up Glass Release Motor connector. Using a 12-volt test light connected to 12-volts, check the Ground circuit in the motor connector. Does the test light illuminate brightly?</p> <p>Yes → Go To 4</p> <p>No → Repair the Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***FLIP-UP GLASS RELEASE INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition off. Disconnect the Flip-Up Glass Release Motor connector. Connect a jumper wire between Flip-Up Glass Release Motor Driver circuit and ground in the motor connector. Disconnect the Body Control Module C1 connector. Measure the resistance between ground and the Flip-Up Glass Release Motor Driver circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 5</p> <p>No → Repair the Flip-Up Glass Release Motor Driver circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
5	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All
6	<p>Remove the tailgate trim panel. Disconnect the Flip-Up Glass Release Switch. connector. Connect a jumper wire between Flip-Up Glass Release Switch. circuit and Tailgate Switch Ground circuit in the switch connector. With the DRBIII® in Inputs/Outputs, read the Flip-Up Glass Rel Sw state. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace the Flip-Up Glass Release Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 7</p>	All
7	<p>Remove the tailgate trim panel. Disconnect the Flip-Up Glass Release Switch. connector. Using a 12-volt test light connected to 12-volts, check the Tailgate Switch Ground circuit. Does the test light illuminate brightly?</p> <p>Yes → Go To 8</p> <p>No → Repair the Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
8	<p>Remove the tailgate trim panel. Disconnect the Flip-Up Glass Release Switch. connector. Connect a jumper wire between Flip-Up Glass Release Switch. Sense circuit and ground. Disconnect the Body Control Module C1 connector. Measure the resistance between ground and the Flip-Up Glass Release Switch Sense circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 9</p> <p>No → Repair the Flip-Up Glass Release Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***FLIP-UP GLASS RELEASE INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
9	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module. 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

TEST	ACTION	APPLICABILITY
1	<p>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 Lock Relay Output and the 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?</p> <p>Yes → Replace the Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>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. Using a 12-volt test light connected to ground, check the Door Unlock Relay Output circuit. With the DRBIII®, actuate the DOOR UNLOCK RELAY. Does the test light illuminate brightly when the relay is actuated?</p> <p>Yes → Go To 3</p> <p>No → Repair the Door Unlock Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>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. Using a 12-volt test light connected to ground, check the Door Lock Relay Output circuit. With the DRBIII®, actuate the Door Lock Relay. Does the test light illuminate brightly when the relay is actuated?</p> <p>Yes → Test Complete.</p> <p>No → Repair the Door Lock Relay Output wire for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*RKE INOPERATIVE

POSSIBLE CAUSES

RKE DTC'S PRESENT
 TEST TRANSMITTER WITH TESTER
 RKE TRANSMITTER NOT PROGRAMMED
 RKE TRANSMITTER NOT PROGRAMMED
 RKE TRANSMITTER DEFECTIVE
 REMOTE KEYLESS ENTRY MODULE
 RKE MODULE - RECEIVER INOPERABLE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, read DTCs. Are there any RKE related codes present?</p> <p>Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>NOTE: Ensure the voltage of each battery in the transmitter is greater than 3.0 volts before proceeding. Do you have access to the Miller Tool "9001 RF DETECTOR"? ?</p> <p>Yes → Go To 3</p> <p>No → Go To 5</p>	All
3	<p>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"?</p> <p>Yes → Go To 4</p> <p>No → Replace the transmitter. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition on Place transmission in the Park position. With the DRBIII® select, BODY, BODY COMPUTER, 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?</p> <p>Yes → Repair complete. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Remove the Body Control Module from the Junction Block. Remove the RKE module from the BCM. Check the connections. If the connections are okay, replace the RKE Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

***RKE INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
5	<p>With the DRBIII® select BODY, BODY COMPUTER, MISCELLANEOUS, then PROGRAM RKE. Follow instructions on the screen. Exit PROGRAM RKE. Try the Door Locks using the Transmitter. Did the Door Locks respond properly to the Transmitter commands ?</p> <p>Yes → Repair complete. Using the DRB, program all other Transmitters used with this Vehicle. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 6</p>	All
6	<p>Secure a known good Transmitter. Using the DRBII® select BODY, BODY COMPUTER, MISCELLANEOUS then PROGRAM RKE. Follow the instructions on the DRBIII® screen. Exit PROGRAM RKE. Try the Door Locks using the Transmitter. Did the Door Locks respond properly to the Transmitter commands ?</p> <p>Yes → Replace the Transmitter. Program all Transmitters that will be used with this Vehicle. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 7</p>	All
7	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Remove the Body Control Module from the Junction Block. Remove the RKE module from the BCM. Check the connections. If the connections are okay, replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***RKE RANGE TO SHORT FROM ALL TRANSMITTERS**

POSSIBLE CAUSES
DTC'S PRESENT
RKE ANTENNA CIRCUIT OPEN
RKE ANTENNA CIRCUIT SHORT TO GROUND
RKE MODULE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, read DTCs. Are there any Power Door Lock related codes present?</p> <p>Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition off. Disconnect the Body Control Module C2 connector. Measure the resistance of the RKE Antenna circuit between cavities 1 and '12 in the BCM C2 connector. Is the resistance below 2.0 ohms?</p> <p>Yes → Go To 3</p> <p>No → Repair the RKE Antenna circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the RKE Antenna circuit in the BCM C2 connector. Is the resistance below 1000.0 ohms?</p> <p>Yes → Repair the RKE Antenna circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>If there are no possible causes remaining, view repair.</p> <p>Repair</p> <p>Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***TAILGATE CYLINDER LOCK SWITCH INOPERATIVE****POSSIBLE CAUSES**

DTC'S PRESENT

TAILGATE SWITCH GROUND CIRCUIT OPEN

TAILGATE CYLINDER LOCK SWITCH MUX WIRE OPEN

TAILGATE CYLINDER LOCK SWITCH OPEN

BODY CONTROL MODULE -TAILGATE CYLINDER LOCK SWITCH OPEN

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, read DTCs. Are there any Tailgate related codes present?</p> <p>Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Disconnect the Tailgate Cylinder Lock Switch connector. Turn the ignition and all lights off. Measure the resistance between ground and the Tailgate Switch Ground circuit. Is the resistance below 15.0 ohms?</p> <p>Yes → Go To 3</p> <p>No → Repair the Tailgate Switch Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Disconnect the Tailgate Cylinder Lock Switch connector. Turn the ignition on. Measure the voltage between ground and the Tailgate Cylinder Lock Switch circuit. Is the voltage above 4.9 volts?</p> <p>Yes → Replace the Tailgate Cylinder Lock Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Disconnect the Tailgate Cylinder Lock Switch connector. Connect a jumper wire between the Tailgate Cylinder Lock Switch Mux circuit in the Lock Motor connector and ground. Disconnect the Body Control Module C2 connector. Measure the resistance between ground and the Tailgate Cylinder Lock Switch Mux circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Tailgate Cylinder Lock Switch Mux wire for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

*TAILGATE LOCK INOPERATIVE

POSSIBLE CAUSES

DTC'S PRESENT
 TAILGATE LOCK DRIVER OPEN
 TAILGATE LOCK MOTOR OPEN
 TAILGATE LOCK DRIVER SHORT TO GROUND
 TAILGATE UNLOCK DRIVER OPEN
 TAILGATE UNLOCK DRIVER SHORT TO GROUND
 JUNCTION BLOCK OPEN
 BODY CONTROL MODULE - TAILGATE DRIVER OPEN

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, read DTCs. Are there any Tailgate related codes present? Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Tailgate Lock Motor connector. Connect a test light between the Tailgate Lock Driver circuit and the Tailgate Unlock Driver circuit in the Lock Motor connector. With the DRBIII actuate the UNLOCK TAILGATE. With the DRBIII actuate the LOCK TAILGATE. Did the test light illuminate when the motor was actuated in both directions? Yes → Replace the Tailgate Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Disconnect the Tailgate Lock Motor connector. Connect a jumper wire between Tailgate Lock Driver circuit and ground in the Lock Motor connector. Disconnect the Junction Block C2 connector. Measure the resistance between ground and the Tailgate Lock Driver circuit in the Junction Block C2 connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the Tailgate Lock Driver circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

***TAILGATE LOCK INOPERATIVE — Continued**

TEST	ACTION	APPLICABILITY
4	Disconnect the Tailgate Lock Motor connector. Disconnect the Junction Block C2 connector. Measure the resistance between ground and the Tailgate Lock Driver circuit in the Junction Block C2 connector. Is the resistance below 1000.0 ohms? Yes → Repair the Tailgate Lock Driver circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Disconnect the Tailgate Lock Motor connector. Connect a jumper wire between Tailgate Unlock Driver circuit and ground in the Lock Motor connector. Disconnect the Junction Block C2 connector. Measure the resistance between ground and the Tailgate Unlock Driver circuit in the Junction Block C2 connector. Is the resistance below 5.0 ohms? Yes → Go To 6 No → Repair the Tailgate Unlock Driver circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	Disconnect the Tailgate Lock Motor connector. Disconnect the Junction Block C2 connector. Measure the resistance between ground and the Tailgate Unlock Driver circuit in the Junction Block C2 connector. Is the resistance below 1000.0 ohms? Yes → Repair the Tailgate Unlock Driver circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Remove the Junction Block. Remove the Body Control Module from the Junction Block. Measure the resistance of the Tailgate Lock Driver circuit between Junction Block C2 connector and the Junction Block - BCM connector. Measure the resistance of the Tailgate Unlock Driver circuit between Junction Block C2 connector and the Junction Block - BCM connector. Is the resistance below 1.0 ohm on both circuits? Yes → Go To 8 No → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.	All
8	If there are no possible causes remaining, view repair. Repair Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom List:

BCM MESSAGE NOT RECEIVED (EXPORT ONLY)

PRE-ARM TIMEOUT FAILURE (EXPORT ONLY)

Test Note: All symptoms listed above are diagnosed using the same tests.
The title for the tests will be BCM MESSAGE NOT RECEIVED (EXPORT ONLY).

When Monitored and Set Condition:

BCM MESSAGE NOT RECEIVED (EXPORT ONLY)

When Monitored: Whenever the ITM sends bus messages to the BCM.

Set Condition: If the ITM does not receive status messages from the BCM.

PRE-ARM TIMEOUT FAILURE (EXPORT ONLY)

When Monitored: During the VTSS pre-arm process.

Set Condition: If the ITM does not receive arm message from the BCM after sixty seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

ITM COMMUNICATION WITH THE BCM

INTRUSION TRANSCEIVER MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRB, enter Body Computer. Was the DRB able to I/D or communicate with the Body Computer? Yes → Go To 2 No → Refer to the Communication category for the related symptom(s). Perform BODY VERIFICATION TEST - VER 1.	All

BCM MESSAGE NOT RECEIVED (EXPORT ONLY) — Continued

TEST	ACTION	APPLICABILITY
2	<p>With the DRB, erase ITM DTC's. Turn the ignition off. Arm the VTSS and wait 1 minute. Disarm the VTSS and turn the ignition on. With the DRB, read Intrusion Transceiver Module DTC's. Did this DTC reset?</p> <p>Yes → Replace the Intrusion Transceiver Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → 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 or partially broken wires. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

HORN RELAY CONTROL CIRCUIT SHORT TO VOLTAGE

When Monitored and Set Condition:

HORN RELAY CONTROL CIRCUIT SHORT TO VOLTAGE

When Monitored: With the ignition on.

Set Condition: When the BCM detects unwanted voltage on the horn relay control circuit.

POSSIBLE CAUSES

CODE ACTIVE

HORN RELAY SHORTED

JUNCTION BLOCK - HORN RELAY CONTROL CIRCUIT SHORT TO VOLTAGE

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, erase DTCs. Attempt to operate the VTSS horn by actuating with the DRBIII®. With the DRBIII®, read DTCs. Does the DRBIII® display HORN RELAY CONTROL CIRCUIT SHORT TO VOLTAGE?</p> <p>Yes → Go To 2</p> <p>No → The condition that caused this symptom is not currently present. Inspect the related wiring harness for a possible intermittent condition. Look for any chafed, pierced, pinched or partially broken wires. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Remove the Horn Relay from the Junction Block. Install a substitute relay in place of the Horn Relay. With the DRBIII®, erase DTCs. With the DRBIII®, actuate the Horn Relay. With the DRBIII®, read DTCs. Does the DRBIII® display HORN RELAY CONTROL CIRCUIT SHORT TO VOLTAGE?</p> <p>Yes → Go To 3</p> <p>No → Replace the original relay. Perform BODY VERIFICATION TEST - VER 1.</p>	All

HORN RELAY CONTROL CIRCUIT SHORT TO VOLTAGE — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Remove the Horn Relay from the Junction Block. Remove the Body Control Module from the Junction Block. NOTE: Ensure the Junction Block connectors are reconnected at this time. Turn the ignition on. Measure the voltage of the Horn Relay Control circuit in the relay connector of the Junction Block. Is there any voltage present?</p> <p>Yes → Replace the Junction Block. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom List:

ITM - EEPROM FAILURE (EXPORT ONLY)

LOOPBACK FAILURE (EXPORT ONLY)

Test Note: All symptoms listed above are diagnosed using the same tests.
The title for the tests will be **ITM - EEPROM FAILURE (EXPORT ONLY)**.

When Monitored and Set Condition:

ITM - EEPROM FAILURE (EXPORT ONLY)

When Monitored: Continuously while the VTSS is armed and during change of the VTSS state.

Set Condition: If the EEPROM erase/write does not correctly complete the operation.

LOOPBACK FAILURE (EXPORT ONLY)

When Monitored: Continuously while the VTSS is armed, pre-armed or reset.

Set Condition: If an internal ITM bus test performed fails.

POSSIBLE CAUSES

INTERMITTENT CONDITION

INTRUSION TRANSCIEVER MODULE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase the current Intrusion Transceiver Module DTC's. Turn the ignition off. Arm the VTSS and wait 1 minute. Disarm the VTSS and turn the ignition on. With the DRBIII®, read Intrusion Transceiver Module DTC's. Does the DRBIII® display the same DTC?</p> <p>Yes → Replace the Intrusion Transceiver Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → The condition that caused this symptom is currently not present. Test complete. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:**ITM - TRANSDUCER FAILURE (EXPORT ONLY)****When Monitored and Set Condition:****ITM - TRANSDUCER FAILURE (EXPORT ONLY)**

When Monitored: Continuously during VTSS pre-arm mode.

Set Condition: The ITM sends a test ultrasonic signal during the pre-arm process. If the test signal is not correctly received, the code will be set.

POSSIBLE CAUSES

BLOCKED INTRUSION TRANSCIEVER MODULE SENSORS

INTERMITTENT CONDITION

INTRUSION TRANSCIEVER MODULE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase the current Intrusion Transceiver Module DTC's. Turn the ignition off. Arm the VTSS and wait 1 minute. Disarm the VTSS and turn the ignition on. With the DRBIII®, read Intrusion Transceiver Module DTC's. Does the DRBIII® display: ITM Transducer Failure?</p> <p>Yes → Go To 2</p> <p>No → The condition that caused this symptom is currently not present. Test complete. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Inspect the louvers of the Intrusion Transceiver Module for blockage from dust or debris. Were there any problems found?</p> <p>Yes → Clean as necessary. Perform VTSS VERIFICATION TEST - 1A.</p> <p>No → Replace the Intrusion Transceiver Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

ITM - VIN MISMATCH (EXPORT ONLY)

When Monitored and Set Condition:

ITM - VIN MISMATCH (EXPORT ONLY)

When Monitored: While the ITM is being disarmed.

Set Condition: If the ITM stored VIN does not match with the BCM.

POSSIBLE CAUSES

INTRUSION TRANSCIEVER MODULE

BODY CONTROL MODULE

CHECK VIN IN BCM AND ITM WITH VIN IN PCM

TEST	ACTION	APPLICABILITY
1	<p>NOTE: Do not attempt to use either an ITM and/or a Siren from another vehicle.</p> <p>With the DRBIII® display and record the VIN in the Intrusion Transceiver Module.</p> <p>With the DRBIII® select Body Computer.</p> <p>Display and record the VIN in the BCM.</p> <p>With the DRBIII® select Engine.</p> <p>Display and record the VIN in the PCM.</p> <p>Does the VIN in the ITM and the VIN in the BCM match the VIN in the PCM?</p> <p>Yes → Go To 2</p> <p>No → Replace the Module(s) with the incorrect VIN.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>With the DRBIII®, erase the current Intrusion Transceiver Module DTC's.</p> <p>Turn the ignition off.</p> <p>Arm the VTSS and wait 1 minute.</p> <p>Disarm the VTSS using the RKE and turn the ignition on.</p> <p>With the DRBIII®, read Intrusion Transceiver Module DTC's.</p> <p>Does the DRBIII® display: ITM VIN Mismatch?</p> <p>Yes → Replace the Intrusion Transceiver Module.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → The condition that caused this symptom is currently not present.</p> <p>Test complete.</p> <p>Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom List:

NO SERIAL COMMUNICATION (EXPORT ONLY)
SIREN COMMUNICATION FAILURE (EXPORT ONLY)

Test Note: All symptoms listed above are diagnosed using the same tests.
The title for the tests will be **NO SERIAL COMMUNICATION (EXPORT ONLY)**.

When Monitored and Set Condition:

NO SERIAL COMMUNICATION (EXPORT ONLY)

When Monitored: Continuously while the VTSS is armed.

Set Condition: If the Intrusion Transceiver Module does not receive messages from the Siren.

SIREN COMMUNICATION FAILURE (EXPORT ONLY)

When Monitored: Continuously while the VTSS is armed.

Set Condition: If the Siren does not receive messages from the Intrusion Transceiver Module.

POSSIBLE CAUSES

INTERMITTENT CONDITION
OPEN FUSED B+ CIRCUIT
SIREN SIGNAL CONTROL CIRCUIT OPEN
SIREN SIGNAL CONTROL CIRCUIT SHORT TO GROUND
INTRUSION TRANSCEIVER MODULE
OPEN GROUND CIRCUIT
VTSS SIREN

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase the current Intrusion Transceiver Module DTC's. Turn the ignition off. Arm the VTSS and wait 1 minute. Disarm the VTSS and turn the ignition on. Does the DRBIII® display the same DTC?</p> <p>Yes → Go To 2</p> <p>No → 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 BODY VERIFICATION TEST - VER 1.</p>	All

NO SERIAL COMMUNICATION (EXPORT ONLY) — Continued

TEST	ACTION	APPLICABILITY
2	<p>Gain access to the VTSS Siren. Disconnect the Siren connector. Measure the voltage of the Fused B(+) circuit in the Siren connector. Is the voltage above 10.0 volts?</p> <p>Yes → Go To 3</p> <p>No → Repair the Fused B+ circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Disconnect the Siren connector. Using a 12-volt test light connected to 12-volts, check the ground circuit. Does the test light illuminate brightly?</p> <p>Yes → Go To 4</p> <p>No → Repair the ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.</p>	All
4	<p>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 Signal Control circuit in the Siren connector. Start the engine and hold the engine RPM's above 600. Observe the voltage displayed on the DRBIII® Lab Scope. Is there a voltage square wave present 1 to 2 seconds?</p> <p>Yes → Replace the VTSS Siren. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Disconnect the Siren harness connector. Disconnect the Intrusion Transceiver Module harness connector. Measure the resistance between ground and the Siren Signal Control circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Go To 6</p> <p>No → Repair the Siren Signal Control circuit for a short to ground. Perform VTSS VERIFICATION TEST - 1A.</p>	All

NO SERIAL COMMUNICATION (EXPORT ONLY) — Continued

TEST	ACTION	APPLICABILITY
6	<p>Disconnect the Siren harness connector. Disconnect the Intrusion Transceiver Module harness connector. Measure the resistance of the Siren Signal Control circuit between the Intrusion Transceiver Module and the Siren connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Intrusion Transceiver Module. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Siren Signal Control circuit for an open. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

PCM MESSAGE NOT RECEIVED (EXPORT ONLY)

When Monitored and Set Condition:

PCM MESSAGE NOT RECEIVED (EXPORT ONLY)

When Monitored: With the ignition on.

Set Condition: The ITM does not receive PCI bus messages from the PCM for 12 seconds.

POSSIBLE CAUSES

PCM MESSAGE NOT RECEIVED
ATTEMPT TO COMMUNICATE WITH THE PCM
PCI BUS CIRCUIT OPEN
POWERTRAIN CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRB enter System Tests then PCM Monitor. Does the DRB display: PCM is active on BUS?</p> <p>Yes → With the DRB, erase ITM DTCs. Cycle the ignition switch, wait 1 minute then recheck for ITM DTCs. If DTC resets, replace the Intrusion Transceiver Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition on. With the DRB, attempt to communicate with the PCM. Was the DRB able to communicate with the PCM?</p> <p>Yes → Go To 3</p> <p>No → Refer to the communication category and perform the appropriate symptom. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off. Disconnect the PCM C3 harness connector. Disconnect the DRBIII® from the Data Link connector. Measure the resistance of the PCI Bus circuit between the Data Link connector and the PCM connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Powertrain Control Module in accordance with the service information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

SIREN BATTERY HAS BEEN TAMPERED (EXPORT ONLY)

When Monitored and Set Condition:

SIREN BATTERY HAS BEEN TAMPERED (EXPORT ONLY)

When Monitored: Continuously while the VTSS is armed.

Set Condition: If the siren detects the loss of vehicle battery voltage.

POSSIBLE CAUSES

INTERMITTENT CONDITION

HARNESS TAMPERING

INTRUSION TRANSCIEVER MODULE

TEST	ACTION	APPLICABILITY
1	<p>Inspect the wiring harness to the siren for any signs of tampering or damage. Were there any problems found?</p> <p>Yes → Repair wiring as necessary. Perform VTSS VERIFICATION TEST - 1A.</p> <p>No → Go To 2</p>	All
2	<p>With the DRBIII®, erase the current Intrusion Transceiver Module DTC's. Turn the ignition off. Arm the VTSS and wait 1 minute. Disarm the VTSS and turn the ignition on. With the DRBIII®, read Intrusion Transceiver Module DTC's. Does the DRBIII® display: Siren Battery Has Been Tampered?</p> <p>Yes → Replace the Siren in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → 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 or partially broken wires. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom List:

SIREN EEPROM FAILURE (EXPORT ONLY)
SIREN INTERNAL BATTERY (EXPORT ONLY)
SIREN ROM FAILURE (EXPORT ONLY)

Test Note: All symptoms listed above are diagnosed using the same tests.
The title for the tests will be **SIREN EEPROM FAILURE (EXPORT ONLY)**.

When Monitored and Set Condition:

SIREN EEPROM FAILURE (EXPORT ONLY)

When Monitored: Continuously while the VTSS is armed.

Set Condition: If the checksum of the EEPROM does not calculate to the correct value.

SIREN INTERNAL BATTERY (EXPORT ONLY)

When Monitored: Continuously with engine rpm over 600.

Set Condition: When the internal battery within the siren does not charge as expected, the ITM sets this code.

SIREN ROM FAILURE (EXPORT ONLY)

When Monitored: Continuously while the VTSS is armed.

Set Condition: If the checksum of the ROM does not calculate to the correct value.

POSSIBLE CAUSES

INTERMITTENT CONDITION
SIREN

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, erase the current Intrusion Transceiver Module DTC's. Turn the ignition off. Arm the VTSS and wait 1 minute. Disarm the VTSS and turn the ignition on. With the DRBIII®, read Intrusion Transceiver Module DTC's. Does the DRBIII® display the same DTC?</p> <p>Yes → Replace the Siren. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → The condition that caused this symptom is currently not present. Test complete. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

***ALARM TRIPS ON ITS OWN**

POSSIBLE CAUSES
<p>LAST ALARM CAUSE</p> <p>ATTEMPT TO TRIP ALARM</p> <p>INTERMITTENT CONDITION</p>

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Inputs/Outputs, read the Last Alarm Caused By state. Were there any causes displayed?</p> <p>Yes → Check for a possible intermittent condition with the circuit indicated by the DRBIII®. Perform VTSS VERIFICATION TEST - 1A.</p> <p>No → Go To 2</p>	All
2	<p>Is this an export vehicle equipped with a hood ajar switch?</p> <p>Yes → Go To 3</p> <p>No → Go To 4</p>	All
3	<p>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?</p> <p>Yes → Replace the hood ajar switch. Perform VTSS VERIFICATION TEST - 1A.</p> <p>No → Go To 4</p>	All
4	<p>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?</p> <p>Yes → Repair as necessary Perform VTSS VERIFICATION TEST - 1A.</p> <p>No → Test Complete.</p>	All

Symptom:

***DRIVER DOOR DOES NOT TRIP VTSS**

POSSIBLE CAUSES

DRIVER DOOR AJAR CIRCUIT

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The VTSS must arm properly for the result of this test to be valid. With the DRBIII®, read the DRVR DOOR AJAR SW status. Open the driver door. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to symptom DRIVER DOOR AJAR CIRCUIT OPEN in the DOOR AJAR section. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:***FLIP-UP GLASS DOES NOT TRIP VTSS****POSSIBLE CAUSES**

FLIP-UP GLASS AJAR CIRCUIT

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The VTSS must arm properly for the result of this test to be valid. With the DRBIII®, read the FLIP-UP GLASS AJAR SW status. Open the Tailgate. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to symptom FLIP-UP GLASS AJAR CIRCUIT OPEN in the DOOR AJAR section. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

*HAZARD LAMPS INOPERATIVE WITH VTSS

POSSIBLE CAUSES
HAZARD SWITCH
ACTUATE HAZARD LAMPS WITH DRB
HAZARD LAMP CONTROL CIRCUIT
HAZARD LAMP CONTROL OPEN
HAZARD LAMP OPERATION
BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Attempt to operate the Hazard Lamps with the Hazard Lamp switch. Do the hazard lamps operate from the Hazard Lamp switch?</p> <p>Yes → Go To 2</p> <p>No → Refer to the Service Information to repair the Hazard Lamps. Perform VTSS VERIFICATION TEST - 1A.</p>	All
2	<p>Turn the Hazard Lamp switch off. With the DRBIII®, actuate the Hazard Lamps. Do the Hazard Lamps operate while actuating?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All
3	<p>Turn the Hazard Lamp switch off. Disconnect the Body Control Module C1 connector. Connect a jumper wire between Hazard Lamp Control circuit and ground. Did the Hazard Lamps operate?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All
4	<p>Disconnect the Hazard Switch connector. Disconnect the Body Control Module C1 connector. Measure the resistance of the Hazard Lamp Control circuit between the BCM C1 connector and the Hazard Switch connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace the Hazard Switch. Perform VTSS VERIFICATION TEST - 1A.</p> <p>No → Repair the Hazard Lamp Control circuit for an open between the BCM and the Hazard Switch. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

***HEADLAMPS FAIL TO FLASH WITH VTSS**

POSSIBLE CAUSES

INCORRECT COUNTRY CODE PROGRAMMED IN BCM

LOW BEAM HEADLAMPS INOPERATIVE

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the Low Beam Headlamps on. Do the Low Beam Headlamps operate properly?</p> <p>Yes → Go To 2</p> <p>No → Refer to symptom LOW BEAM HEADLAMPS WILL NOT TURN ON in the EXTERIOR LIGHTING category. Perform VTSS VERIFICATION TEST - 1A.</p>	All
2	<p>With the DRBIII® in Miscellaneous check the Body Control Module country code setting. Is the country code correct?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Program the correct country code setting. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

***HOOD DOES NOT TRIP VTSS (EXPORT ONLY)**

POSSIBLE CAUSES

HOOD AJAR SWITCH CIRCUIT
BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The VTSS must arm properly for the result of this test to be valid. With the DRBIII®, read the HOOD AJAR SW status. Open the hood. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to symptom HOOD AJAR CIRCUIT OPEN in the DOOR AJAR section.</p>	All

Symptom:

***HORN FAILS TO SOUND WITH VTSS**

POSSIBLE CAUSES
INCORRECT COUNTRY CODE PROGRAMMED IN BCM
HORN OPERATION
BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>The Horn must be operational from the horn button for the results of this test to be valid.</p> <p>Open the Drivers door window.</p> <p>Remove the key from the Ignition switch.</p> <p>Lock the doors with the RKE transmitter or power door lock switch.</p> <p>Close all the doors and tailgate.</p> <p>Wait approximately 15 seconds for the VTSS indicator to flash at a slower rate indicating the Vehicle Theft Security System is armed.</p> <p>Manually unlock the driver door lock.</p> <p>Trip the VTSS by opening the drivers door.</p> <p>Did the Horn sound when the VTSS was tripped?</p> <p>Yes → The condition that caused this symptom is not currently 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.</p> <p>No → Go To 2</p>	All
2	<p>With the DRBIII® in Miscellaneous check the Body Control Module country code setting.</p> <p>Is the country code correct?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Program the correct country code setting. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

***INTRUSION TRANSCIEVER MODULE SENSITIVITY (EXPORT ONLY)**

POSSIBLE CAUSES

INTERIOR TYPE SELECTED IN ITM

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII® in Miscellaneous, check the Current Status of the Interior Type. Is the Interior Type selected correct?</p> <p>Yes → Test Complete.</p> <p>No → Program the correct interior type. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***LEFT REAR DOOR DOES NOT TRIP VTSS****POSSIBLE CAUSES**

PASSENGER DOOR AJAR CIRCUIT

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The VTSS must arm properly for the result of this test to be valid. With the DRBIII®, read the PASS DOOR AJAR SW status. Open the Left Rear door. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to symptom LEFT REAR DOOR AJAR CIRCUIT OPEN in the DOOR AJAR section. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

***PASSENGER DOOR DOES NOT TRIP VTSS**

POSSIBLE CAUSES

PASSENGER DOOR AJAR CIRCUIT

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The VTSS must arm properly for the result of this test to be valid. With the DRBIII®, read the PASS DOOR AJAR SW status. Open the passenger door. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to symptom PASSENGER DOOR AJAR CIRCUIT OPEN in the DOOR AJAR section. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:***RIGHT REAR DOOR DOES NOT TRIP VTSS****POSSIBLE CAUSES**

PASSENGER DOOR AJAR CIRCUIT MALFUNCTION

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The VTSS must arm properly for the result of this test to be valid. With the DRBIII®, read the PASS DOOR AJAR SW status. Open the Right Rear door. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to symptom RIGHT REAR DOOR AJAR CIRCUIT OPEN in the DOOR AJAR section. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

***TAILGATE DOES NOT TRIP VTSS**

POSSIBLE CAUSES

TAILGATE AJAR SWITCH CIRCUIT

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Note: The VTSS must arm properly for the result of this test to be valid. Open the Liftgate. Does the DRBIII® display CLOSED?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Refer to symptom TAILGATE AJAR CIRCUIT OPEN in the DOOR AJAR section. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:

***VTSS DOES NOT DISARM WITH THE LEFT CYLINDER LOCK SWITCH**

POSSIBLE CAUSES

DISARM SWITCHES DISABLED
 DTC'S PRESENT
 DOOR LOCK SWITCH GROUND CIRCUIT OPEN
 LEFT CYLINDER LOCK SWITCH MUX WIRE OPEN
 LEFT CYLINDER LOCK SWITCH OPEN
 BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, read DTCs. Are there any Left Cylinder Lock Switch related codes present? Yes → Refer to symptom list for problems related to POWER DOOR LOCKS/RKE. Perform VTSS VERIFICATION TEST - 1A. No → Go To 2	All
2	With the DRBIII® in Inputs/Outputs, read the Disarm SW state. Does the DRBIII® display Enabled? Yes → Go To 3 No → With the DRBIII®, enable the Disarm Switches. Perform BODY VERIFICATION TEST - VER 1.	All
3	Disconnect the Left Door Cylinder Lock Switch connector. Turn the ignition and all lights off. Measure the resistance between ground and the Door Lock Switch Ground circuit. Is the resistance below 15.0 ohms? Yes → Go To 4 No → Repair the Door Lock Switch Ground circuit for an open. Perform VTSS VERIFICATION TEST - 1A.	All
4	Disconnect the Left Cylinder Lock Switch connector. Turn the ignition on. Measure the voltage between ground and the Left Cylinder Lock Switch circuit. Is the voltage above 4.9 volts? Yes → Replace the Left Cylinder Lock Switch. Perform VTSS VERIFICATION TEST - 1A. No → Go To 5	All

***VTSS DOES NOT DISARM WITH THE LEFT CYLINDER LOCK SWITCH**

— Continued

TEST	ACTION	APPLICABILITY
5	<p>Disconnect the Left Cylinder Lock Switch connector. Disconnect the Body Control Module C2 connector. Connect a jumper wire between the Left Cylinder Lock Switch MUX circuit in the Left Cylinder Lock Switch connector and ground. Measure the resistance between ground and the Left Cylinder Lock Switch MUX circuit. Is the resistance below 5.0 ohms?</p> <p>Yes → Replace and program the Body Control Module in accordance with the Service Information. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Left Cylinder Lock Switch MUX wire for an open. Perform VTSS VERIFICATION TEST - 1A.</p>	All

Symptom:***VTSS WILL NOT ARM****POSSIBLE CAUSES**

CHECK THE VTSS STATUS

CHECK FOR DTCS AND VTSS ARMING INHIBITORS

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>With the DRBIII®, check that the Theft Alarm is enabled. Was the Theft Alarm enabled?</p> <p>Yes → Go To 2</p> <p>No → With the DRBIII®, enable the Vehicle Theft Security System VTSS. Perform VTSS VERIFICATION TEST - 1A.</p>	All
2	<p>Ensure the tailgate, flip-up glass and all doors are closed. With the DRBIII®, read the active DTC's and the ajar switch states. Does the DRBIII® display any closed switches or VTSS related DTC's?</p> <p>Yes → Refer to the Symptom List and diagnose the appropriate symptom in the DOOR AJAR or VTSS category. Perform VTSS VERIFICATION TEST - 1A.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

WIPER HIGH/LOW RELAY OUTPUT CIRCUIT HIGH

When Monitored and Set Condition:

WIPER HIGH/LOW RELAY OUTPUT CIRCUIT HIGH

When Monitored: With ignition on.

Set Condition: BCM detects a high level on the Wiper High/Low relay output when it is attempting to turn the wipers on for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MISSING RELAY

OPEN CIRCUIT BREAKER

WIPER HIGH/LOW RELAY

BODY CONTROL MODULE

FRONT WIPER PARK SWITCH SENSE CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Front Wipers on. With the DRBIII®, read the DTC information. Does the DRBIII® read: WIPER HIGH/LOW RELAY CIRCUIT HIGH? 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 that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Check the PDC to make certain the Wiper High/Low Relay is present. Is the Wiper High/Low Relay present? Yes → Go To 3 No → Replace the missing Wiper High/Low Relay. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Check the Junction Block Circuit Breaker #3. Is the Circuit Breaker open? Yes → Replace the open Circuit Breaker. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

WIPER HIGH/LOW RELAY OUTPUT CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Install a known good relay in place of the Wiper High/Low Relay. Turn the Wipers On. Do the Wipers operate normally? Yes → Replace the Wiper High/Low Relay. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off Remove the Wiper High/Low Relay. Measure the voltage of the Fused B+ circuit of the Wiper High/Low Relay. Is the voltage above 10 volts? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Front Wiper Park Switch Sense circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

WIPER HIGH/LOW RELAY OUTPUT CIRCUIT LOW

When Monitored and Set Condition:

WIPER HIGH/LOW RELAY OUTPUT CIRCUIT LOW

When Monitored: With ignition on.

Set Condition: BCM detects a low (ground) signal on the wiper on/off relay output even though it is not attempting to drive the output for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

WIPER HIGH/LOW RELAY SHORT TO GROUND

WIPER HIGH/LOW RELAY

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Wipers on. With the DRBIII®, read the DTC information. Does the DRBIII® read: WIPER HIGH/LOW RELAY OUTPUT CIRCUIT LOW? 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 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 Wiper High/Low Relay. Measure the resistance between ground and the Wiper High/Low Relay Control circuit. Is the resistance below 5.0 ohms? Yes → Repair the Wiper High/Low Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

WIPER HIGH/LOW RELAY OUTPUT CIRCUIT LOW — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Wiper High/Low Relay harness connector. Measure the voltage of the Wiper High/Low Relay harness connector coil side feed circuit to ground. Is the voltage above 10.0 volts?</p> <p>Yes → Replace the Wiper High/Low Relay. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

WIPER MODE SWITCH CIRCUIT HIGH

When Monitored and Set Condition:

WIPER MODE SWITCH CIRCUIT HIGH

When Monitored: With the ignition on.

Set Condition: BCM detects a voltage greater than 4.75 volts on the Wiper Mode Switch Input for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MULTIFUNCTION SWITCH

FRONT WIPER SWITCH MUX CIRCUIT OPEN

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition on. With the DRBIII®, erase all BCM DTC's. Turn the Wipers on. With the DRBIII®, read DTCs. Does the DRBIII® display: WIPER MODE SWITCH CIRCUIT HIGH?</p> <p>Yes → Go To 2</p> <p>No → The condition is not present at this time. Monitor DRBIII parameters while wiggling the related wire harness. Refer to any Technical Service Bulletins that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.</p>	All
2	<p>Turn the ignition off. Disconnect the Multifunction Switch harness connector. Connect a jumper wire between the Front Wiper Switch MUX circuit to ground. Turn the ignition on. With the DRBIII®, select Body, Body Controller and read: Wiper Switch volts. Does the DRBIII® display: Multifunction Switch voltage below 0.5volts?</p> <p>Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 3</p>	All

WIPER MODE SWITCH CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Body Control Module harness connector. Disconnect the Multifunction Switch harness connector. Measure resistance of the Front Wiper Switch MUX circuit from the Body Control Module connector to the Multifunction Switch harness connector. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Front Wiper Switch MUX circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom: WIPER MODE SWITCH CIRCUIT LOW

When Monitored and Set Condition:

WIPER MODE SWITCH CIRCUIT LOW

When Monitored: With the ignition on.

Set Condition: BCM detects a voltage less than 0.25 volts on the Wiper Mode Switch Input for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MULTIFUNCTION SWITCH SHORTED

FRONT WIPER SWITCH MUX CIRCUIT SHORT TO GROUND

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Wipers on. With the DRBIII®, read DTCs. Does the DRBIII® display: WIPER MODE SWITCH CIRCUIT LOW? 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 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 Multifunction Switch harness connector. Turn the ignition on. With the DRBIII®, select Body, Body Control Module and read: Multifunction Switch voltage.. Does the DRBIII® display: Multifunction Switch voltage above 4.75 volts? Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

WIPER MODE SWITCH CIRCUIT LOW — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Body Control Module harness connector. Disconnect the Multifunction Switch harness connector. Measure resistance between ground and the Front Wiper Switch MUX circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Front Wiper Switch MUX Circuit for a short to ground condition. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:

WIPER ON/OFF RELAY OUTPUT CIRCUIT HIGH

When Monitored and Set Condition:

WIPER ON/OFF RELAY OUTPUT CIRCUIT HIGH

When Monitored: With the ignition on.

Set Condition: BCM detects a high level on the Wiper On/Off Relay output when it is attempting to turn the wipers on for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

MISSING RELAY

OPEN CIRCUIT BREAKER

WIPER ON/OFF RELAY

BODY CONTROL MODULE

FRONT WIPER PARK SWITCH SENSE CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Front Wipers on. With the DRBIII®, read the DTC information. Does the DRBIII® read: WIPER ON/OFF RELAY CIRCUIT HIGH? 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 that may apply. Visually inspect the related wiring harness and connector terminals. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Check the PDC to make certain the Wiper On/Off Relay is present. Is the Wiper On/Off Relay present? Yes → Go To 3 No → Replace the missing Wiper On/Off Relay. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Check the Junction Block Circuit Breaker #3. Is the Circuit Breaker open? Yes → Replace the open Circuit Breaker. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

WIPER ON/OFF RELAY OUTPUT CIRCUIT HIGH — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Install a known good relay in place of the Wiper On/Off Relay. Turn the Wipers On. Do the Wipers operate normally? Yes → Replace the Wiper On/Off Relay. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off Remove the Wiper On/Off Relay. Measure the voltage of the Fused B+ circuit of the Wiper On/Off Relay. Is the voltage above 10 volts? Yes → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1. No → Repair the Front Wiper Park Switch Sense circuit for an open condition. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

WIPER ON/OFF RELAY OUTPUT CIRCUIT LOW

When Monitored and Set Condition:

WIPER ON/OFF RELAY OUTPUT CIRCUIT LOW

When Monitored: With the ignition on.

Set Condition: BCM detects a low (ground) signal on the Wiper On/Off Relay output even though it is not attempting to drive the output for more than 5 seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

WIPER ON/OFF RELAY SHORT TO GROUND

WIPER ON/OFF RELAY

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, clear all BCM DTC's. Turn the Wipers on. With the DRBIII®, read the DTC information. Does the DRBIII® read: WIPER ON/OFF RELAY OUTPUT CIRCUIT LOW? 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 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 Wiper On/Off Relay. Measure the resistance between ground and the Wiper On/Off Relay Control circuit. Is the resistance below 5.0 ohms? Yes → Repair the Wiper On/Off Relay Control circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Wiper On/Off Relay harness connector. Measure the voltage of the Wiper On/Off Relay harness connector coil side feed circuit to ground. Is the voltage above 10.0 volts? Yes → Replace the Wiper On/Off Relay. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
WIPER PARK SWITCH FAILURE

When Monitored and Set Condition:

WIPER PARK SWITCH FAILURE

When Monitored: With the Wipers on (any speed).

Set Condition: BCM fails to detect a park signal from the wiper motor for 8 consecutive seconds.

POSSIBLE CAUSES

INTERMITTENT CONDITION

FRONT WIPER PARK SWITCH SENSE CIRCUIT SHORT TO VOLTAGE

FRONT WIPER PARK SWITCH SENSE CIRCUIT OPEN

FRONT WIPER PARK SWITCH SENSE CIRCUIT SHORT TO GROUND

GROUND CIRCUIT OPEN

WIPER MOTOR

BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. With the DRBIII®, erase all BCM DTC's. Turn the Wipers on. With the DRBIII®, read DTCs. Does the DRBIII® display: WIPER PARK SWITCH FAILURE? 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 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 Front Wiper Motor harness connector. Disconnect the Junction Block C3 harness connector. Turn the ignition on. Measure the voltage of the Wiper Park Switch Sense circuit in the Front Wiper Motor harness connector. Is there any voltage present? Yes → Repair the Wiper Park Switch Sense circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

WIPER PARK SWITCH FAILURE — Continued

TEST	ACTION	APPLICABILITY
3	<p>Turn the ignition off. Disconnect the Front Wiper Motor harness connector. Disconnect the Junction Block C3 harness connector. Measure the resistance of the Wiper Park Switch Sense circuit between the Junction Block C3 harness connector and the Wiper Motor harness connector. Is the resistance below 5.0 ohms?</p> <p>Yes → Go To 4</p> <p>No → Repair the Front Wiper Park Switch Sense circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
4	<p>Turn the ignition off. Disconnect the Front Wiper Motor harness connector. Disconnect the Junction Block C3 harness connector. Measure the resistance between ground and the Wiper Park Switch Sense circuit in the Junction Block C3 harness connector. Is the resistance below 100.0 ohms?</p> <p>Yes → Repair the Front Wiper Park Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 5</p>	All
5	<p>Turn the ignition off. Disconnect the Front Wiper Motor harness connector. Using a 12-volt test light connected to 12-volts, test the Ground circuit in the Front Wiper Motor harness connector. Does the test light illuminate brightly?</p> <p>Yes → Go To 6</p> <p>No → Repair the Wiper Motor Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
6	<p>Turn the ignition off. Disconnect the Front Wiper Motor harness connector. Turn the ignition on. Connect a jumper wire from the Wiper Park Switch Sense circuit to ground. With the DRBIII® in Inputs/Outputs read: Wiper Park Switch state. Did the Wiper Park Switch Input change state when connected to ground?</p> <p>Yes → Replace the Wiper Motor. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Symptom:***FRONT WASHER PUMP INOPERATIVE****POSSIBLE CAUSES**

FRONT WASHER PUMP
 FRONT WASHER PUMP GROUND CIRCUIT OPEN
 MULTIFUNCTION SWITCH
 FRONT WASHER PUMP SENSE CIRCUIT OPEN
 FRONT WASHER PUMP DRIVER CIRCUIT OPEN
 FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
 BODY CONTROL MODULE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the Front Washer Pump harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, check the Front Washer Pump Driver circuit. Actuate the Front Washers. Does the test light illuminate brightly? Yes → Replace the Front Washer Pump. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn the ignition off. Disconnect the Front Washer Pump. Using a 12-volt test light connected to 12-volts, check the Front Washer Pump Ground circuit. Does the test light illuminate brightly? Yes → Go To 3 No → Repair the Front Washer Pump Ground Circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the right side Multifunction Switch harness connector. Connect a jumper wire between the Fused Ignition Switch Output circuit and the Front Washer Pump Sense circuit in the Multifunction Switch harness connector. Turn the ignition on. Does the Front Washer Pump operate? Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

WINDSHIELD WIPER & WASHER

*FRONT WASHER PUMP INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the right side Multifunction Switch. Disconnect the Body Control Module. Measure the resistance of the Front Washer Pump Sense circuit. Is the resistance above 5.0 ohms? Yes → Repair the Front Washer Pump Sense Circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Front Washer Pump. Disconnect the Body Control Module from the Junction Block. Measure the resistance of the Front Washer Pump Driver circuit. Is the resistance above 5.0 ohms? Yes → Repair the Front Washer Pump Driver Circuit for an open. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect the Multifunction Switch. Using a 12-volt test light connected to ground, check the Fused Ignition Switch Output circuit. Does the test light illuminate brightly? Yes → Repair the Fused Ignition Switch Output circuit for an open. If the fuse is open make sure to check for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Body Control Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:***FRONT WIPER LOW SPEED INOPERATIVE****POSSIBLE CAUSES**

MULTIFUNCTION SWITCH
 FRONT WIPER MOTOR GROUND CIRCUIT OPEN
 FRONT WIPER MOTOR LOW DRIVER CIRCUIT OPEN
 FRONT WIPER MOTOR
 FUSED IGNITION SWITCH OUTPUT CIRCUIT

TEST	ACTION	APPLICABILITY
1	<p>Turn the ignition off. Disconnect the right side Multifunction Switch harness connector. Connect a jumper wire between the Fused Ignition Switch Output circuit and the Front Wiper Motor Low Driver circuit in the Multifunction Switch harness connector. Turn the ignition on. Does the Front Wiper Motor function normally?</p> <p>Yes → Replace the Multifunction Switch. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition off. Disconnect the Front Wiper Motor. Using a 12-volt test light connected to 12-volts, check the Front Wiper Motor Ground circuit. Does the test light illuminate brightly?</p> <p>Yes → Go To 3</p> <p>No → Repair the Front Wiper Motor Ground Circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All
3	<p>Turn the ignition off. Disconnect the Front Wiper Motor. Disconnect the right side Multifunction Switch. Measure the resistance of the Front Wiper Motor Low Driver circuit. Is the resistance above 5.0 ohms?</p> <p>Yes → Repair the Front Wiper Motor Low Driver Circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Go To 4</p>	All

*FRONT WIPER LOW SPEED INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
4	<p>Turn the ignition off. Disconnect the Front Wiper Motor harness connector. Turn the ignition on. Using a 12-volt test light connected to ground, check the Front Wiper Motor Low Driver circuit. Turn the Front Wipers on to Low. Does the test light illuminate brightly?</p> <p>Yes → Replace the Front Wiper Motor. Perform BODY VERIFICATION TEST - VER 1.</p> <p>No → Repair the Fused B+ Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.</p>	All

Verification Tests

45RFE/545RFE TRANSMISSION VERIFICATION TEST - VER 1	APPLICABILITY
<ol style="list-style-type: none"> 1. Connect the DRBIII® to the Data Link Connector. 2. Reconnect any disconnected components. 3. With the DRBIII®, erase DTC's. 4. With the DRBIII®, display Transmission Temperature. Start and run the engine until the Transmission Temperature is HOT above 43° Celsius 110° Fahrenheit. 5. Check the Transmission fluid and adjust if necessary. Refer to the Service Information for the Fluid Fill procedure. 6. NOTE: If the TCM has been replaced or if the transmission has been repaired or replaced it is necessary to perform the DRBIII® Quick Learn Procedure. 7. Road test the vehicle. With the DRBIII®, monitor TPS. Make fifteen to twenty 1-2, 2-3, and 3-4 upshifts and (4 - 4 Prime for 545RFE only). 8. Perform these shifts from a standing start to 97 Km/h 60 MPH with a constant throttle opening of 20 to 25 degrees. 9. Below 40 Km/h 25 MPH, make five to eight wide open throttle kickdowns to 1st gear. Allow at least 5 seconds each in 2nd and 3rd gear between each kickdown. 10. Check for DTC's during the road test. 11. 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. 12. Perform the Battery Disconnect with the DRBIII®, this will clear the EATX EVENT DATA. Were any Trouble Codes set during the road test? <ul style="list-style-type: none"> Yes → Refer to the Symptom List for the appropriate diagnostic tests. No → Repair is complete. 	All

ABS VERIFICATION TEST - VER 1	APPLICABILITY
<ol style="list-style-type: none"> 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. 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. 8. Caution: Ensure braking capability is available before road testing. 9. Again, with the DRBIII® read DTC's. If any DTC's are present, return to Symptom list. 10. If there are no Diagnostic Trouble Codes (DTC's) present, and the customer's concern can no longer be duplicated, the repair is complete. <p>Are any DTC's present or is the original concern still present?</p> <ul style="list-style-type: none"> Yes → Repair is not complete, refer to appropriate symptom. No → Repair is complete. 	All

Verification Tests — Continued

AIRBAG VERIFICATION TEST - VER 1	APPLICABILITY
<p>1. Remove any special tools or jumper wires and reconnect all previously disconnected components - except the Battery.</p> <p>2. WARNING: TURN THE IGNITION ON, THEN RECONNECT THE BATTERY.</p> <p>3. Connect the DRBIII® to the Data Link Connector - use the most current software available.</p> <p>4. Use the DRBIII® and erase the stored codes in all airbag system modules.</p> <p>5. Turn the Ignition Off, and wait 15 seconds before turning the Ignition On.</p> <p>6. Wait one minute, and read active codes and if there are none present read the stored codes.</p> <p>7. Note: If equipped with Airbag On-Off switch, read the DTC's in all switch positions.</p> <p>8. Note: Read the DTC's in all airbag system related modules.</p> <p>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?</p> <p>YES</p> <p>Repair is not complete, refer to appropriate symptom list.</p> <p>NO</p> <p>Repair is complete.</p>	All

BODY VERIFICATION TEST - VER 1	APPLICABILITY
<p>1. Disconnect all jumper wires and reconnect all previously disconnected components and connectors.</p> <p>2. NOTE: If the SKIM or PCM/ECM was replaced, refer to the service information for proper programming procedures.</p> <p>3. If the Instrument Cluster was replaced, use the DRBIII® to insure the proper warning indicators are configured.</p> <p>4. If the Body Control Module was replaced, turn the ignition on for 15 seconds (to learn VIN). If the vehicle is equipped with VTSS, use the DRBIII® and enable VTSS.</p> <p>5. Program tire size, country code, radio EQ setting and all RKE transmitters (if RKE Module was replaced) and other options as necessary.</p> <p>6. (Export only) If the Intrusion Transceiver Module ITM was replaced, use the DRBIII® to enable ITM and Program Interior Type.</p> <p>7. (Export only) If the Siren was replaced perform the DRBIII® Siren Replacement procedure.</p> <p>8. Ensure all accessories are turned off and the battery is fully charged.</p> <p>9. 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.</p> <p>10. Turn the ignition off and wait 5 seconds. Turn the ignition on and using the DRBIII®, read DTC's from ALL modules.</p> <p>Are any DTC's present or is the original condition still present?</p> <p>Yes → Repair is not complete, refer to the appropriate symptom.</p> <p>No → Repair is complete.</p>	All

Verification Tests — Continued

POWERTRAIN VERIFICATION TEST VER - 1	APPLICABILITY
<ol style="list-style-type: none"> 1. Inspect the vehicle to ensure that all engine components are properly installed and connected. Reassemble and reconnect components as necessary. 2. Inspect the engine oil for contamination. If oil contamination is suspected, change the oil and filter. 3. If the PCM was not replaced skip steps 4 through 6 and continue the verification. 4. If the PCM was replaced the correct VIN and mileage must be programmed or a DTC will set in the ABS and Air Bag modules. In addition, if the vehicle is equipped with Sentry Key Immobilizer Module (SKIM), Secret Key data must be updated to enable start. 5. For ABS and Air Bag systems: Enter correct VIN and Mileage in PCM. Erase codes in ABS and Air Bag modules. 6. For SKIM theft alarm: Connect DRBIII® to data link conn. Go to Theft Alarm, SKIM, Misc. and place SKIM in secured access mode, by using the appropriate PIN code for this vehicle. Select Update the Secret Key data. Data will be transferred from SKIM to PCM 7. Attempt to start the engine. 8. If the conditions cannot be duplicated, erase all DTCs with the DRBIII® <p>Is the vehicle still unable to start and/or are there any DTCs or symptoms remaining?</p> <p>Yes → Check for any related Technical Service Bulletins and/or refer to the appropriate Symptoms list (Diagnostic Procedure).</p> <p>No → Repair is complete.</p>	All

POWERTRAIN VERIFICATION TEST VER - 2	APPLICABILITY
<ol style="list-style-type: none"> 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 NO TROUBLE CODE repair, perform steps 3 and 4. 3. Check to see if the initial symptom still exists. If there are no trouble codes or the symptom no longer exists, the repair was successful and testing is complete. 4. If the initial or another symptom exists, the repair is not complete. Check all technical service bulletins or flash updates and return to Symptoms if necessary. 5. If this verification procedure is being performed after a DTC repair, perform steps 6 through 13. 6. Connect the DRBIII® to the data link connector. Using the DRBIII® erase any diagnostic trouble codes and reset all values. 7. If the PCM was not replaced, skip steps 8 through 10 and continue with the verification. 8. If the PCM was replaced the correct VIN and mileage must be programmed or a DTC will set in the ABS and Air Bag modules. In addition, if the vehicle is equipped with Sentry Key Immobilizer System (SKIS), Secret Key data must be updated to enable start. 9. For ABS and Air Bag systems: Enter correct VIN and Mileage in PCM. Erase codes in ABS and Air Bag modules. 10. For SKIM theft alarm: Connect DRBIII® to data link conn. Go to Theft Alarm, SKIM, Misc. and place SKIM in secured access mode, by using the appropriate PIN code for this vehicle. Select Update the Secret Key data. Data will be transferred from SKIM to PCM 11. Road test the vehicle. If the test is for an A/C DTC, ensure it is operating during the following test. 12. Drive the vehicle for at least 5 minutes at or around 64 Km/h (40 mph). Ensure the transmission shifts through all gears. At some point stop the vehicle and turn off the engine for at least 10 seconds. 13. With the DRBIII®, read DTCs. <p>Are there any DTC(s) present?</p> <p>Yes → Check for any related Technical Service Bulletins and/or refer to the appropriate Symptom list (Diagnostic Procedure).</p> <p>No → Repair is complete.</p>	All

Verification Tests — Continued

ROAD TEST VERIFICATION - VER-2	APPLICABILITY
<ol style="list-style-type: none"> 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. 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. <p>Are any DTCs or symptoms remaining?</p> <p>Yes → Repair is not complete, refer to appropriate symptom.</p> <p>No → Repair is complete.</p>	All

SKIS VERIFICATION	APPLICABILITY
<ol style="list-style-type: none"> 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 PINs are entered, the SKIM will Lock Out the DRB 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, select Theft Alarm, SKIM and Miscellaneous. Then, select the 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 customer, perform a module scan to be sure that all DTCs are erased. Erase any DTCs that are found. 8. With the DRB, erase all DTCs. Perform 5 ignition key cycles leaving the key on for at least 90 seconds per cycle. 9. With the DRB, read the SKIM DTCs. <p>Are there any SKIM DTCs?</p> <p>Yes → Repair is not complete, refer to appropriate symptom.</p> <p>No → Repair is complete.</p>	All

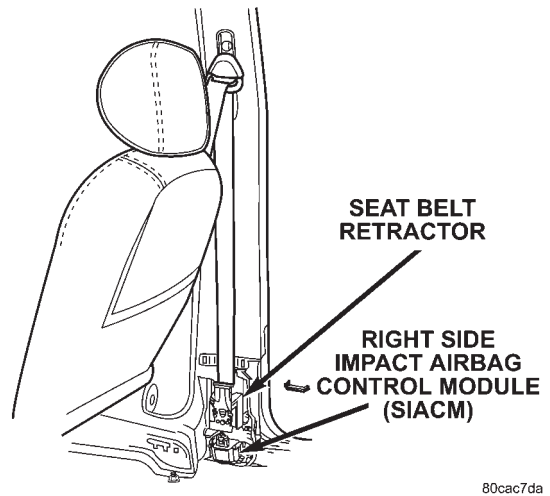
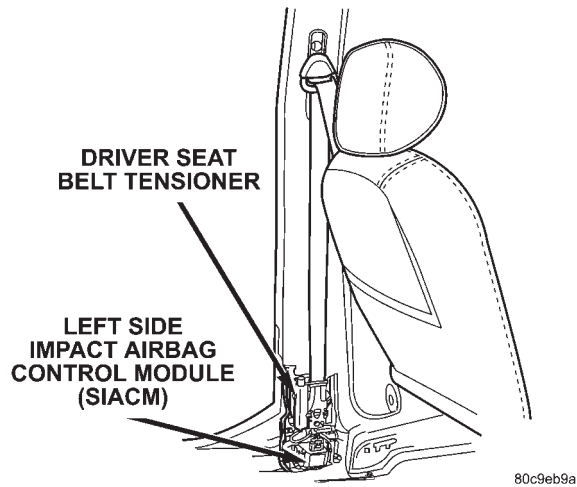
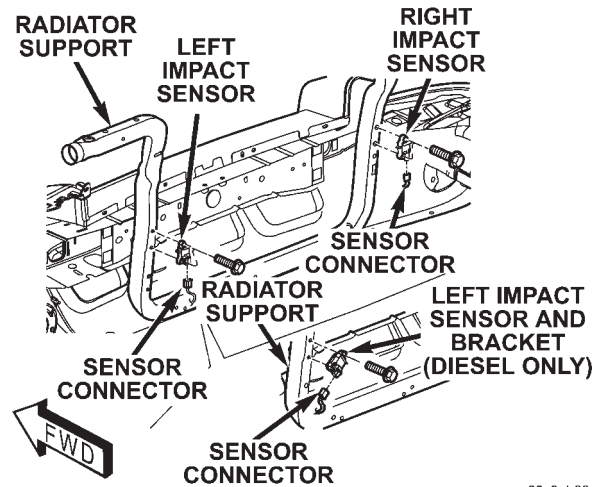
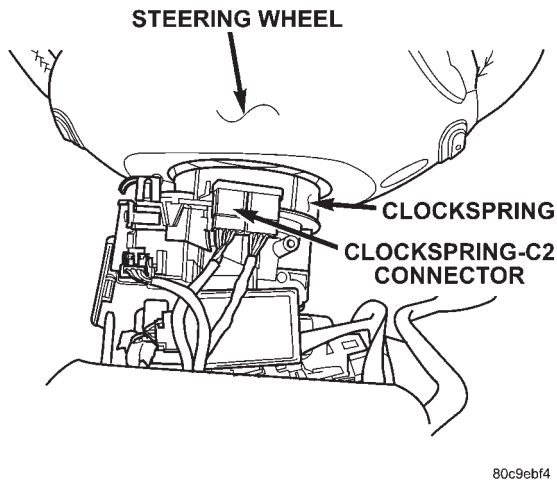
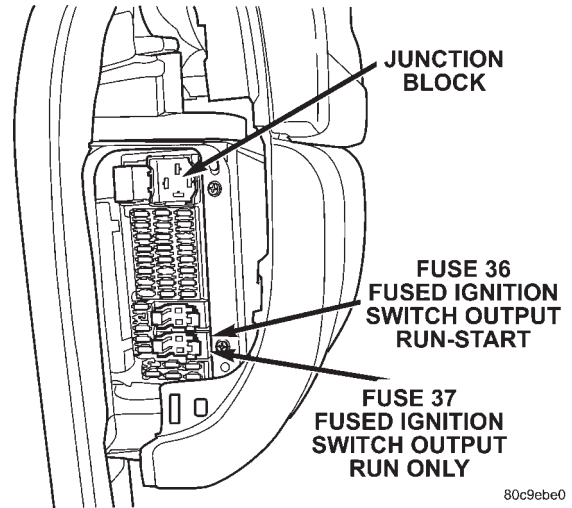
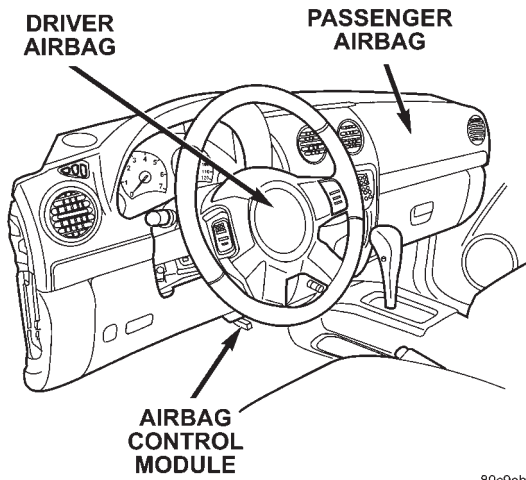
Verification Tests — Continued

VTSS VERIFICATION TEST - 1A	APPLICABILITY
<ol style="list-style-type: none"> 1. Ensure all doors, tailgate, and tailgate flip-up glass are closed. 2. Open the driver door. 3. Remove the ignition key (but keep in hand). 4. Lock the doors with RKE transmitter or power door lock switch. 5. Close the driver door. 6. - If the VTSS Indicator Lamp flashes rapidly and after approximately 16 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. <p>Does the VTSS Indicator Lamp flash as specified?</p> <p style="padding-left: 40px;">Yes → Repair is complete.</p> <p style="padding-left: 40px;">No → Repair is not complete, refer to appropriate symptom.</p>	<p style="text-align: center;">All</p>

[illegible]

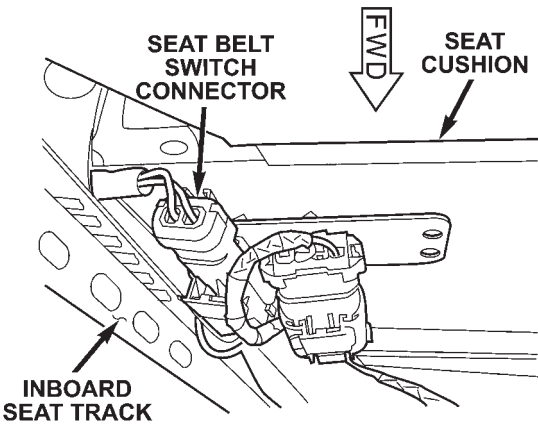
8.0 COMPONENT LOCATIONS

8.1 AIRBAG SYSTEM

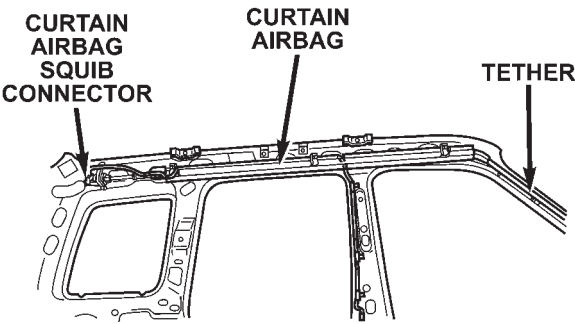


COMPONENT LOCATIONS

8.1 AIRBAG SYSTEM (Continued)



80c9eba2

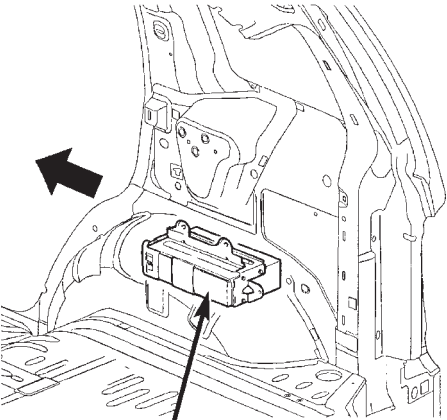


LEFT SIDE SHOWN

80cab0f7

8.2 AUDIO

8.2.1 CD CHANGER

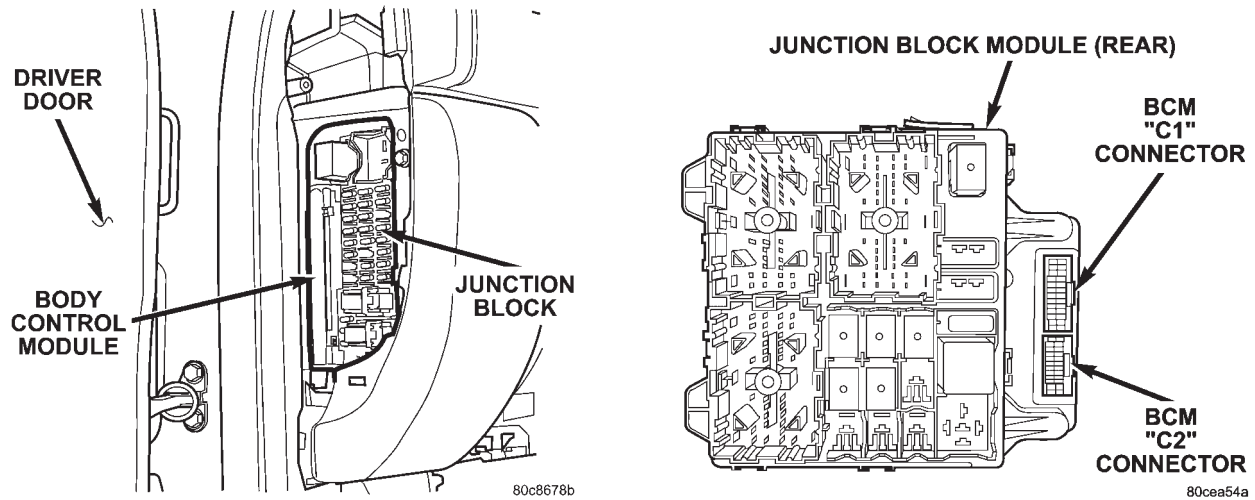


CD CHANGER

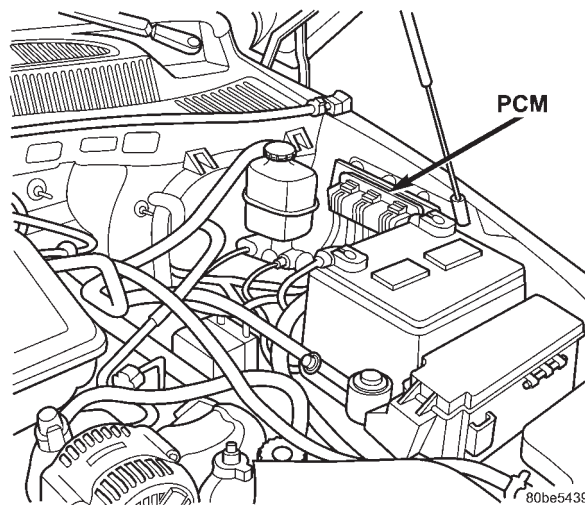
80c87lbd

8.3 COMMUNICATION

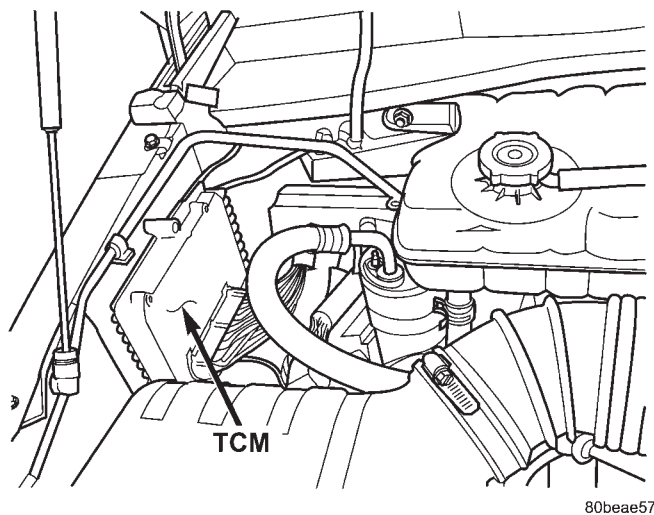
8.3.1 BODY CONTROL MODULE AND JUNCTION BLOCK (JUNCTION BLOCK MODULE)



8.3.2 POWERTRAIN CONTROL MODULE

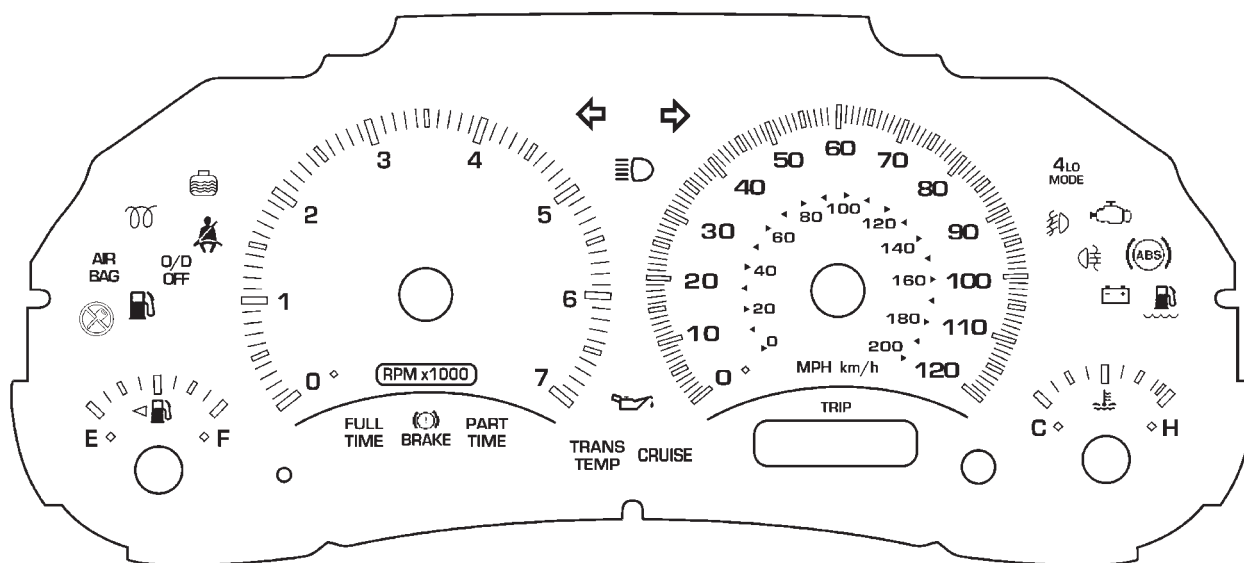


8.3.3 TRANSMISSION CONTROL MODULE



COMPONENT LOCATIONS

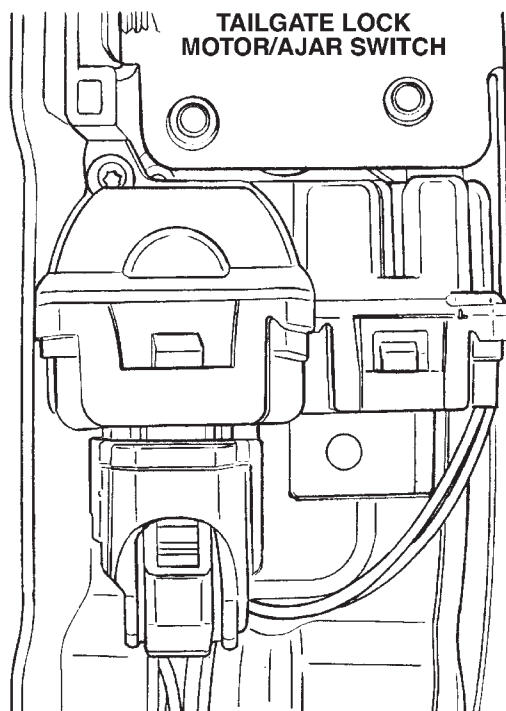
8.4 INSTRUMENT CLUSTER



80c9f3fd

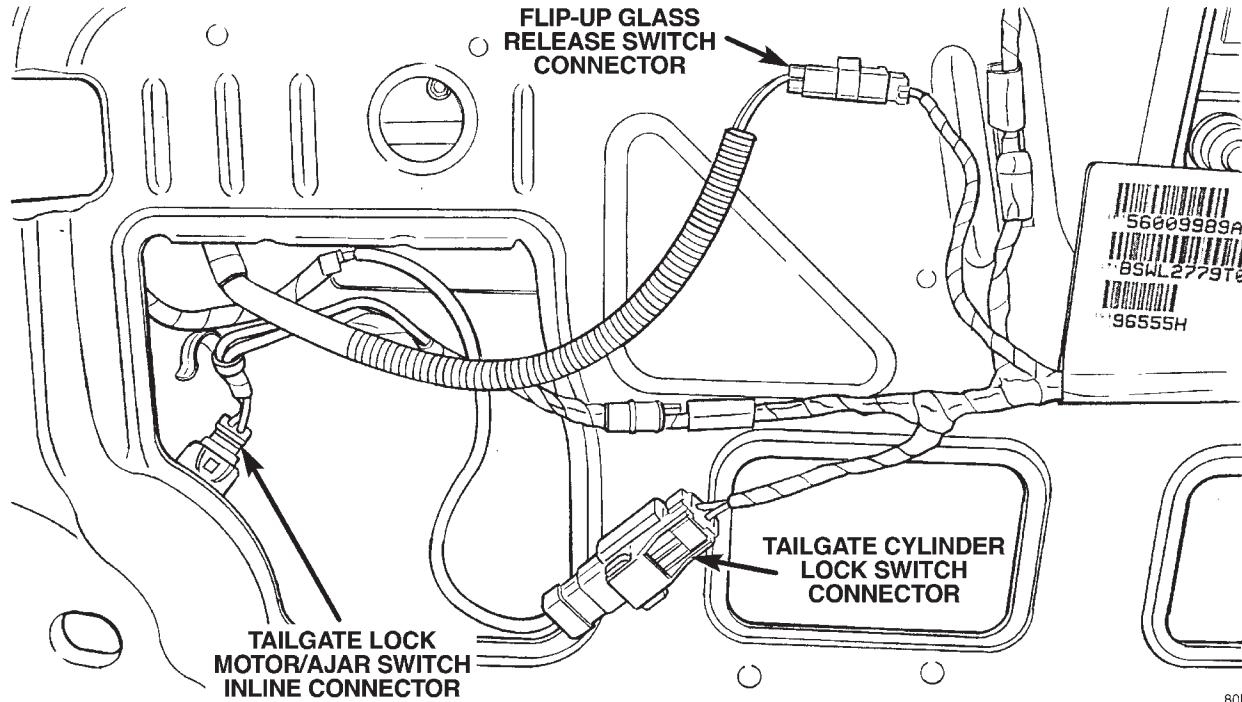
8.5 POWER DOOR LOCKS

8.5.1 TAILGATE LOCK MOTOR



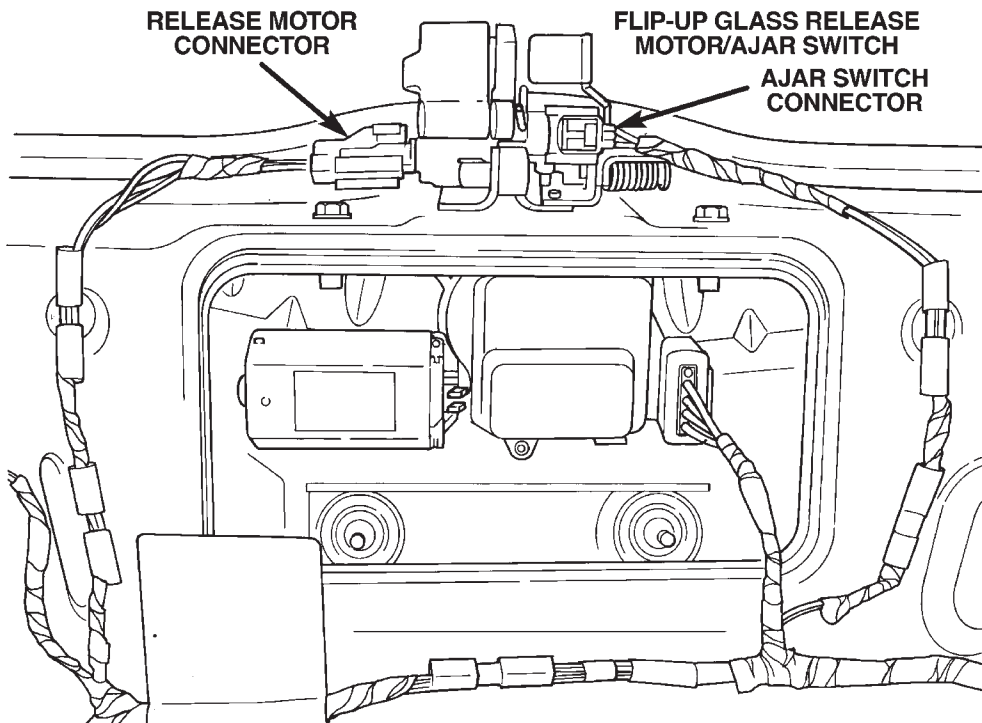
80bf1f0c

8.5.2 TAILGATE CONNECTORS



80b1141

8.5.3 FLIP-UP GLASS RELEASE

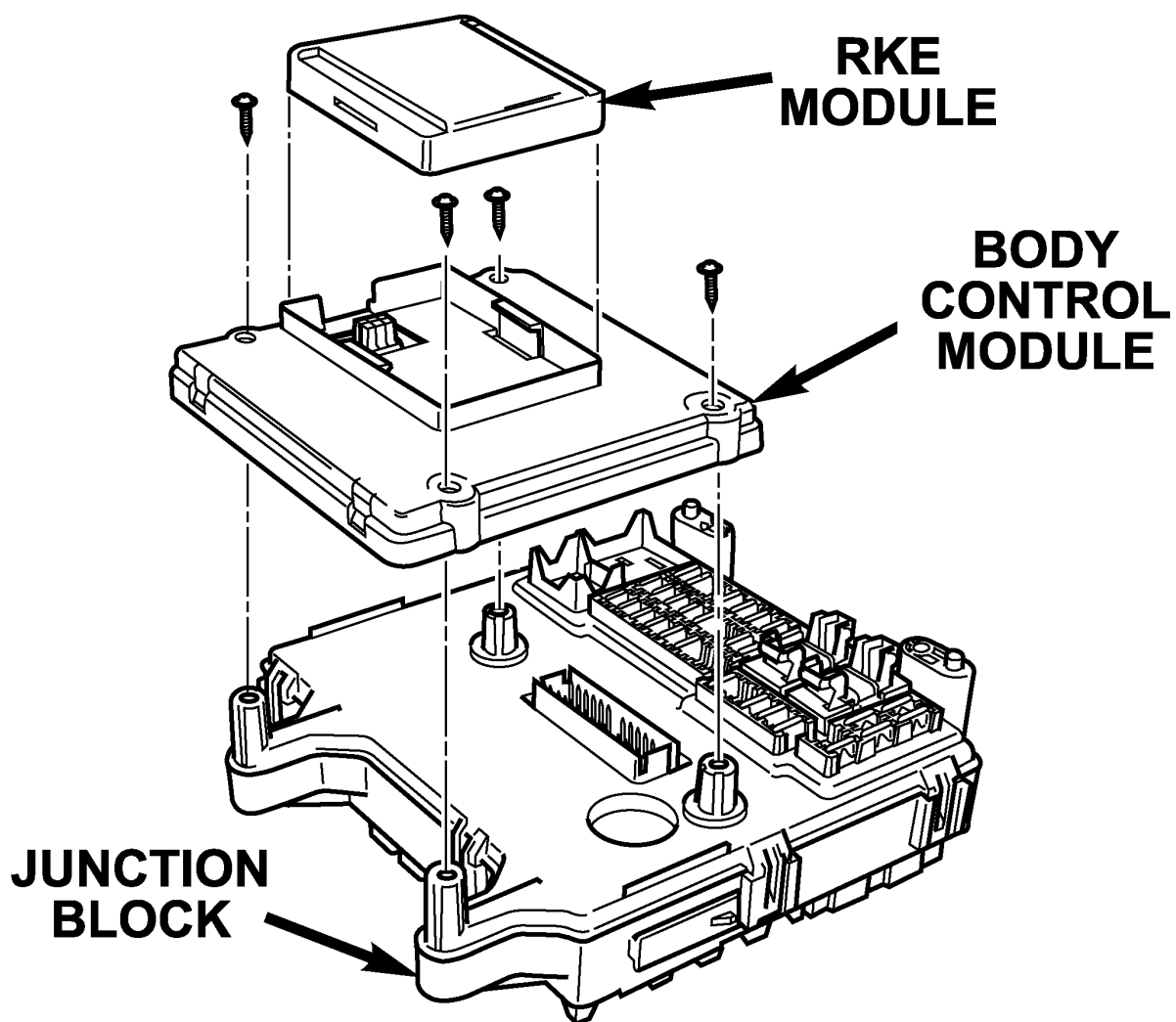


80b1162

COMPONENT LOCATIONS

8.5 POWER DOOR LOCKS (Continued)

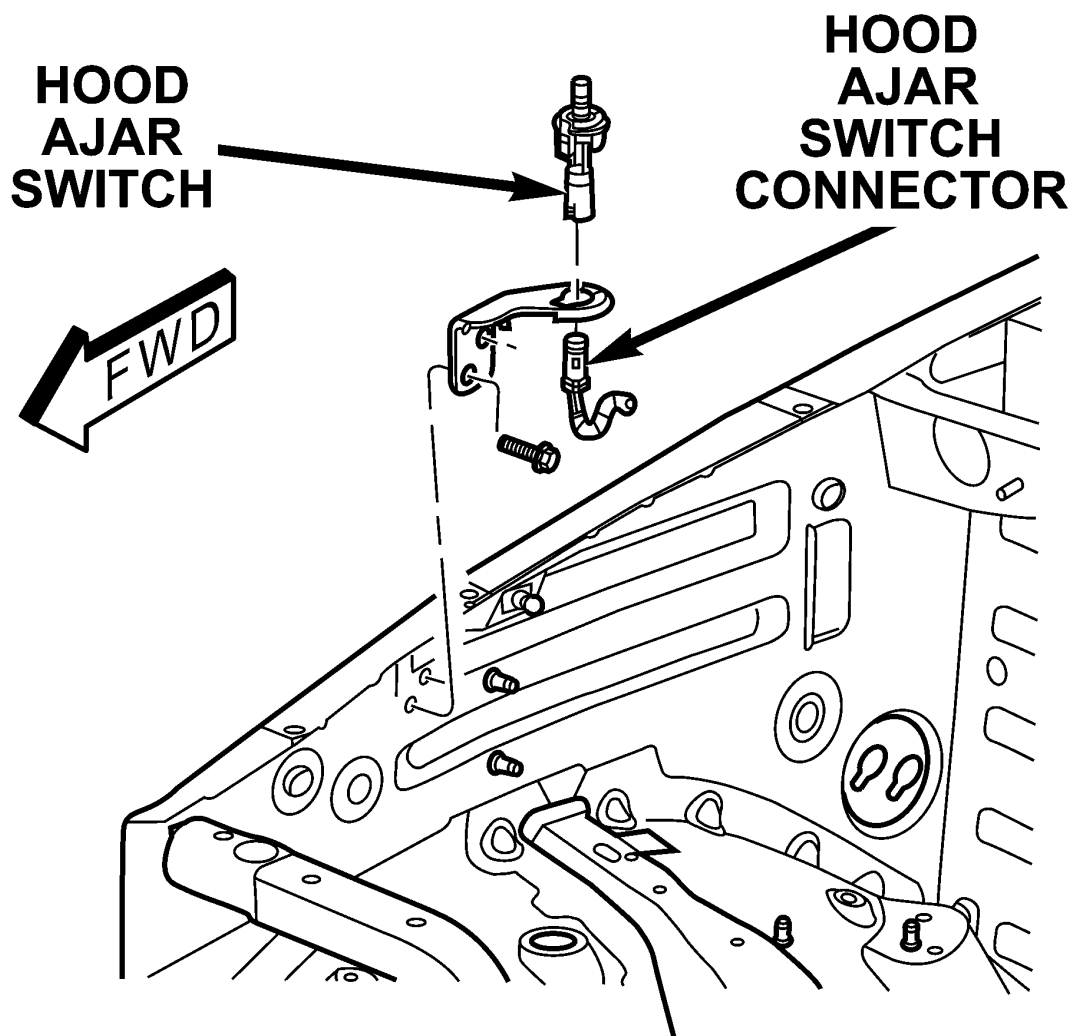
8.5.4 RKE MODULE



80ee924b

8.6 VEHICLE THEFT SECURITY SYSTEM

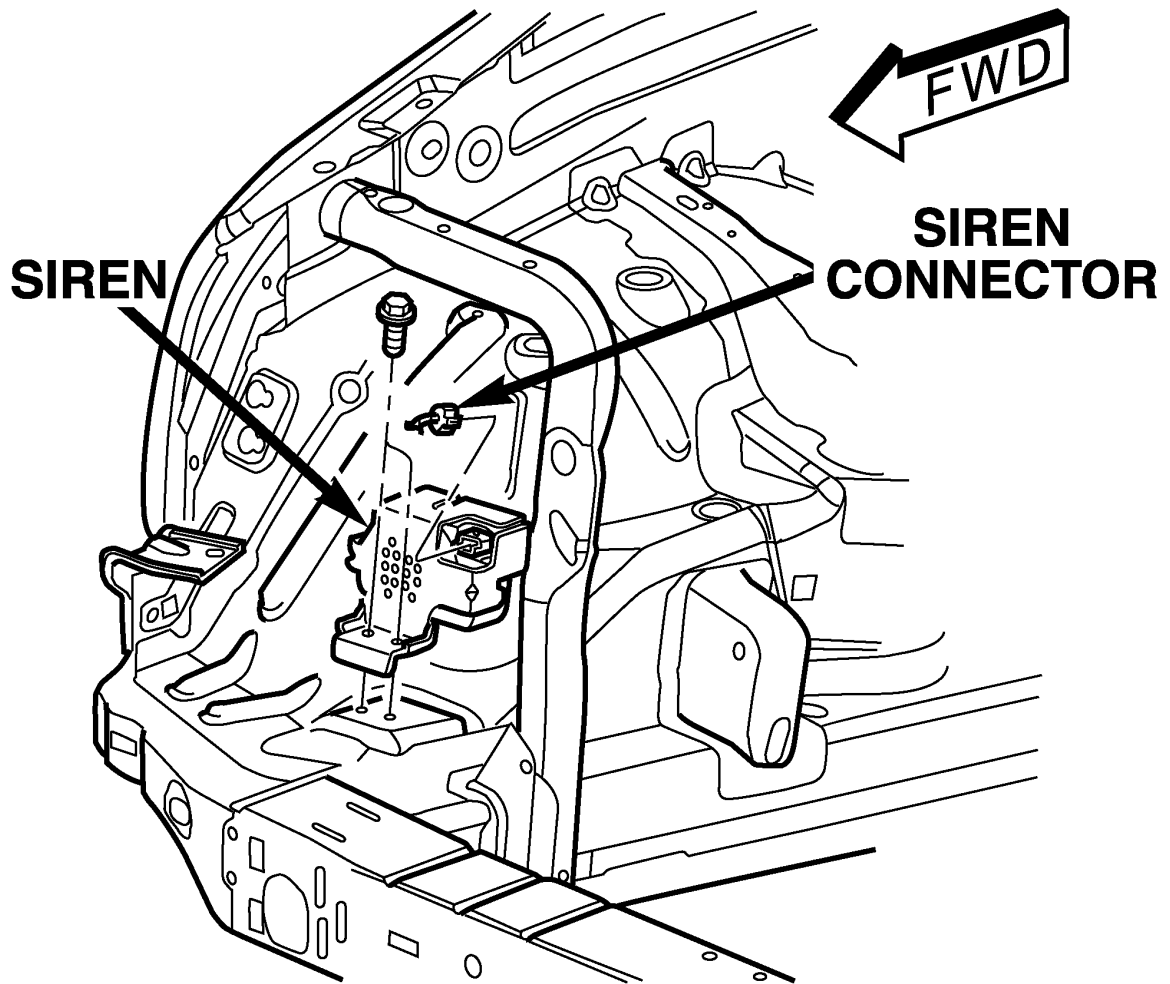
8.6.1 HOOD AJAR SWITCH (EXPORT)



80f4bf04

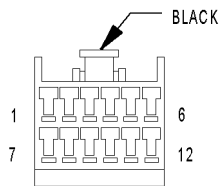
COMPONENT LOCATIONS

8.6.2 SIREN (EXPORT)



80f46e7d

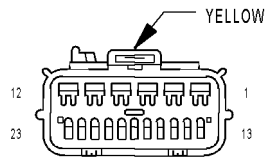
9.0 CONNECTOR PINOUTS



A/C-HEATER
CONTROL
C2

A/C-HEATER CONTROL C2

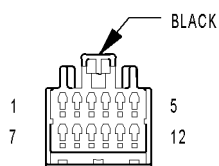
CAV	CIRCUIT	FUNCTION
1	C35 20DG/YL	MODE DOOR DRIVER (A)
2	V23 20BR/PK	FUSED IGNITION SWITCH OUTPUT (RUN)
3	-	-
4	-	-
5	-	-
6	C79 20VT/BK	REAR WINDOW DEFOGGER CONTROL
7	-	-
8	Z12 20BK/TN	GROUND
9	-	-
10	-	-
11	-	-
12	C16 20LB/YL	FUSED REAR WINDOW DEFOGGER RELAY OUTPUT



AIRBAG
CONTROL
MODULE C1
(ORC C1)

AIRBAG CONTROL MODULE C1 (ORC C1)

CAV	CIRCUIT	FUNCTION
1	R45 18DG/LB	DRIVER SQUIB 1 LINE 2
2	R43 18BK/LB	DRIVER SQUIB 1 LINE 1
3	-	-
4	-	-
5	R53 18OR/YL	DRIVER SEAT BELT TENSIONER LINE 2
6	R55 18OR/BK	DRIVER SEAT BELT TENSIONER LINE 1
7	R61 18OR/LB	DRIVER SQUIB 2 LINE 1
8	R63 18TN/LB	DRIVER SQUIB 2 LINE 2
9	R62 18OR/YL	PASSENGER SQUIB 2 LINE 2
10	R64 18TN/YL	PASSENGER SQUIB 2 LINE 1
11	R42 18BK/YL	PASSENGER SQUIB 1 LINE 1
12	R44 18DG/YL	PASSENGER SQUIB 1 LINE 2
13	-	-
14	F14 18LG/YL	FUSED IGNITION SWITCH OUTPUT (RUN-START)
15	F23 18DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN)
16	Z6 18BK/PK	GROUND
17	-	-
18	-	-
19	-	-
20	-	-
21	D25 18YL/VT/OR	PCI BUS
22	-	-
23	-	-

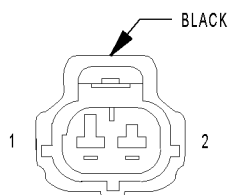


AIRBAG
CONTROL
MODULE C2
(ORC C2)

AIRBAG CONTROL MODULE C2 (ORC C2)

CAV	CIRCUIT	FUNCTION
1	-	-
2	R59 20LB	DRIVER SEAT BELT SWITCH GROUND
3	R57 20DG	DRIVER SEAT BELT SWITCH SENSE
4	-	-
5	R60 20VT	PASSENGER SEAT BELT SWITCH GROUND
6	R58 20GY	PASSENGER SEAT BELT SWITCH SENSE
7	R48 20TN	RIGHT FRONT IMPACT SENSOR SIGNAL
8	R46 20BR/LB	RIGHT FRONT IMPACT SENSOR GROUND
9	-	-
10	-	-
11	R47 20DB/LB	LEFT FRONT IMPACT SENSOR GROUND
12	R49 20LB/OR	LEFT FRONT IMPACT SENSOR SIGNAL

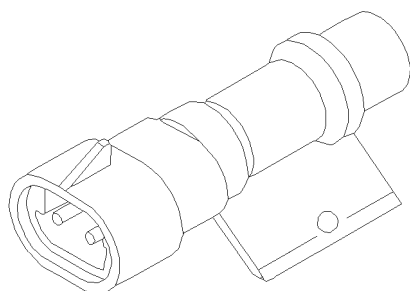
CONNECTOR PINOUTS



AMBIENT
TEMPERATURE
SENSOR

AMBIENT TEMPERATURE SENSOR

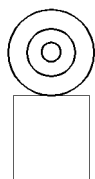
CAV	CIRCUIT	FUNCTION
1	G31 18VT/LG	AMBIENT TEMPERATURE SENSOR SIGNAL
2	G32 18DB/OR	AMBIENT TEMPERATURE SENSOR RETURN



AMBIENT
TEMPERATURE
SENSOR
(SENSOR SIDE)

AMBIENT TEMPERATURE SENSOR (SENSOR SIDE)

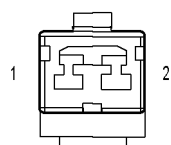
CAV	CIRCUIT	FUNCTION
1	-	AMBIENT TEMPERATURE SENSOR SIGNAL
2	-	AMBIENT TEMPERATURE SENSOR RETURN



ANTENNA
(EXCEPT
EXPORT)

ANTENNA (EXCEPT EXPORT)

CAV	CIRCUIT	FUNCTION
1	X30 BK	RADIO ANTENNA CORE
2	X31 BK	RADIO ANTENNA SHIELD



ANTENNA
MODULE
C1
(EXPORT)

ANTENNA MODULE C1 (EXPORT)

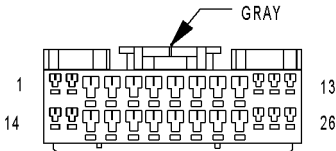
CAV	CIRCUIT	FUNCTION
1	F85 16VT/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
2	-	-

CONNECTOR VIEW
NOT
AVAILABLE

ANTENNA
MODULE
C2
(EXPORT)

ANTENNA MODULE C2 (EXPORT)

CAV	CIRCUIT	FUNCTION
1	X30 BK	RADIO ANTENNA CORE
2	X31 BK	RADIO ANTENNA SHIELD

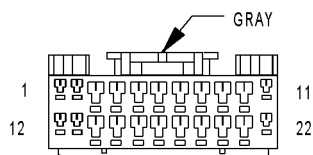


BODY
CONTROL
MODULE C1

BODY CONTROL MODULE C1

CAV	CIRCUIT	FUNCTION
1	Z103 16BK/OR	GROUND
2	V22 20BR/YL	REAR WIPER INTERMITTENT DRIVER
3	Y98 20GY/DB	INSTRUMENT CLUSTER WAKE UP SIGNAL
4	G75 20TN	LEFT FRONT DOOR AJAR SWITCH SENSE
5	G74 20TN/RD	RIGHT FRONT DOOR AJAR SWITCH SENSE
6	G70 20BR/TN (EXCEPT BASE)	HOOD AJAR SWITCH SENSE
7	G78 20TN/BK	TAILGATE AJAR SWITCH SENSE
8	G26 20LB	KEY-IN IGNITION SWITCH SENSE
9	G80 20YL/WT	FLIP-UP GLASS AJAR SWITCH SENSE
10	M3 20PK/DB	REAR COURTESY LAMP CONTROL
11	V10 18BR	WASHER PUMP DRIVER
12	L91 20DB/PK	HAZARD LAMP CONTROL
13	V21 20DB/RD	REAR WIPER ON DRIVER
14	Z231 16BK/WT	SIGNAL GROUND
15	D25 18YL/VT/WT	PCI BUS
16	D19 20VT/OR	BODY CONTROL MODULE FLASH ENABLE
17	P101 20OR/PK	FLIP-UP GLASS RELEASE SWITCH SENSE
18	-	-
19	L118 20BR/YL (RENEGADE)	LIGHTBAR SWITCH SENSE
20	B22 18LG/YL (DIESEL)	VEHICLE SPEED SIGNAL
20	B22 18LG/YL (GAS)	VEHICLE SPEED OUTPUT
21	G69 20BK/OR	VTSS INDICATOR DRIVER
22	G76 20TN/YL	RIGHT REAR DOOR AJAR SWITCH SENSE
23	C79 20VT/BK	REAR WINDOW DEFOGGER CONTROL
24	C19 18BR	A/C ON/OFF CONTROL
25	Z3 16BK/OR	GROUND
26	P100 18OR/BR	FLIP-UP GLASS RELEASE MOTOR DRIVER

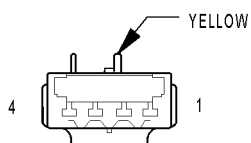
CONNECTOR PINOUTS



BODY
CONTROL
MODULE C2

CONNECTOR VIEW
NOT
AVAILABLE

BODY
CONTROL
MODULE C3
(PREMIUM)



C202

BODY CONTROL MODULE C2

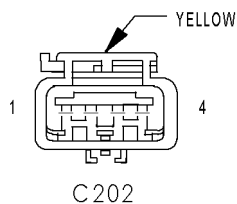
CAV	CIRCUIT	FUNCTION
1	Y66 20GY (EXCEPT BASE)	RKE ANTENNA
2	G910 20VT/BR	TAILGATE SWITCH GROUND
3	G77 20TN/OR	LEFT REAR DOOR AJAR SWITCH SENSE
4	L80 20WT/DG	HEADLAMP SWITCH RETURN
5	L307 20LG/OR	HEADLAMP SWITCH MUX
6	G73 18LG/OR (RHD)	LEFT CYLINDER LOCK SWITCH MUX
6	G72 18DG/OR (LHD EX-CEPT BASE)	RIGHT CYLINDER LOCK SWITCH MUX
7	L27 20WT/TN (EXCEPT BASE)	FRONT FOG LAMP SWITCH SENSE
8	E21 20OR/RD	PANEL LAMPS DIMMER SWITCH MUX
9	G72 18DG/OR (RHD)	RIGHT CYLINDER LOCK SWITCH MUX
9	G73 18LG/OR (LHD EX-CEPT BASE)	LEFT CYLINDER LOCK SWITCH MUX
10	V52 20DG/RD	FRONT WIPER SWITCH MUX
11	X10 20RD/DB (EXCEPT BASE)	RADIO CONTROL MUX RETURN
12	Y66 20GY (EXCEPT BASE)	RKE ANTENNA
13	-	-
14	-	-
15	G32 20DB/OR (EXCEPT BASE)	AMBIENT TEMPERATURE SENSOR RETURN
16	Z20 20BK/WT (RHD)	GROUND
17	G71 18VT/YL	TAILGATE CYLINDER LOCK SWITCH MUX
18	G31 20VT/LG (EXCEPT BASE)	AMBIENT TEMPERATURE SENSOR SIGNAL
19	L324 20WT/LG	HIGH BEAM SWITCH SENSE
20	F512 18PK/OR	VEHICLE SPEED SENSOR SUPPLY
21	B12 18DG/OR	VEHICLE SPEED SIGNAL
22	X20 20RD/BK (EXCEPT BASE)	RADIO CONTROL MUX

BODY CONTROL MODULE C3 (PREMIUM)

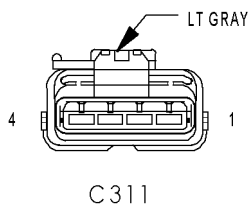
CAV	CIRCUIT	FUNCTION
1	Y60	RKE DATA
2	Y62	RKE SUPPLY
3	Y61	RKE PROGRAM
4	Y63	RKE GROUND
5	Y64	RKE ANTENNA (+)
6	Y65	RKE ANTENNA (-)

C202

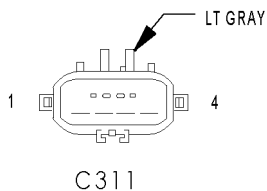
CAV	CIRCUIT
1	-
2	-
3	R53 18OR/YL
4	R55 18OR/BK



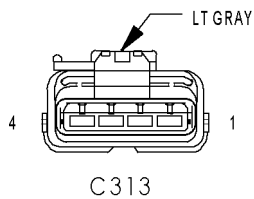
C202	
CAV	CIRCUIT
1	-
2	-
3	R53 18OR/YL
4	R55 18OR/BK



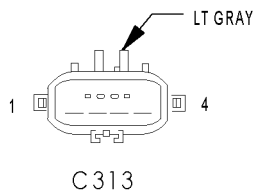
C311	
CAV	CIRCUIT
1	F37 14RD/LB (MIDLINE/HIGHLINE)
2	R57 18DG (LHD)
2	R58 18GY (RHD)
3	Z238 14BK/WT (MIDLINE/HIGHLINE)
4	R59 18LB (LHD)
4	R60 18VT (RHD)



C311	
CAV	CIRCUIT
1	F37 18RD/LB (EXCEPT BASE)
2	R57 18DG (LHD)
2	R58 18GY (RHD)
3	Z238 14BK/WT (EXCEPT BASE)
4	R59 18LB (LHD)
4	R60 18VT (RHD)

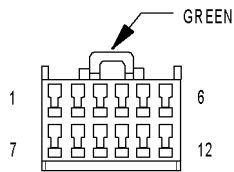


C313	
CAV	CIRCUIT
1	F37 14RD/LB (HIGHLINE)
2	R58 18GY (LHD)
2	R57 18DG (RHD)
3	Z238 14BK/WT (HIGHLINE)
4	R60 18VT (LHD)
4	R59 18LB (RHD)



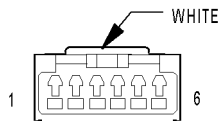
C313	
CAV	CIRCUIT
1	F34 14RD/LB (HIGHLINE)
2	R58 18GY (LHD EXCEPT BASE)
2	R57 DG (RHD)
2	R58 18DG (LHD BASE)
3	Z238 14BK/WT (HIGHLINE)
4	R60 18LB (LHD BASE)
4	R60 18VT (LHD EXCEPT BASE)
4	R59 18LB (RHD)

CONNECTOR PINOUTS



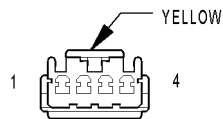
CD
CHANGER

CD CHANGER		
CAV	CIRCUIT	FUNCTION
1	X41 20WT/DG	AUDIO OUT LEFT
2	-	-
3	-	-
4	Z17 20BK	GROUND
5	X112 20RD	IGNITION SWITCH OUTPUT
6	X160 20YL	B(+)
7	X40 20WT/RD	AUDIO OUT RIGHT
8	Z30 20WT/BK	GROUND
9	-	-
10	-	-
11	Z9 20BK/DB	GROUND
12	D25 20YL/VT	PCI BUS



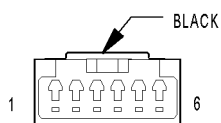
CLOCKSPRING
C1

CLOCKSPRING C1		
CAV	CIRCUIT	FUNCTION
1	-	-
2	X3 20BK/RD	HORN RELAY CONTROL
3	X20 20RD/BK (PREMIUM)	RADIO CONTROL MUX
4	X10 20RD/DB (PREMIUM)	RADIO CONTROL MUX RETURN
5	K4 20BK/LB	SENSOR GROUND
6	V37 20RD/LG	SPEED CONTROL SWITCH SIGNAL



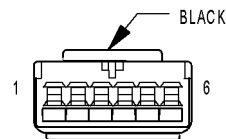
CLOCKSPRING
C2

CLOCKSPRING C2		
CAV	CIRCUIT	FUNCTION
1	R45 18DG/LB	DRIVER SQUIB 1 LINE 2
2	R43 18BK/LB	DRIVER SQUIB 1 LINE 1
3	R63 18TN/LB	DRIVER SQUIB 2 LINE 2
4	R61 18OR/LB	DRIVER SQUIB 2 LINE 1



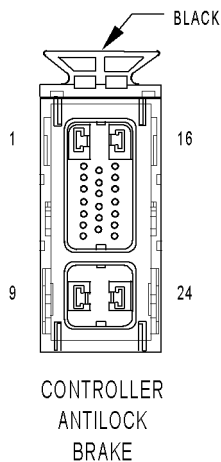
CLOCKSPRING
C3

CLOCKSPRING C3		
CAV	CIRCUIT	FUNCTION
1	-	-
2	X3 20BK/RD	HORN RELAY CONTROL
3	X20 20RD/BK (PREMIUM)	RADIO CONTROL MUX
4	X10 20RD/DB (PREMIUM)	RADIO CONTROL MUX RETURN
5	K4 20BK/LB (EXCEPT BASE)	SENSOR GROUND
6	V37 20RD/LG (EXCEPT BASE)	SPEED CONTROL SWITCH SIGNAL



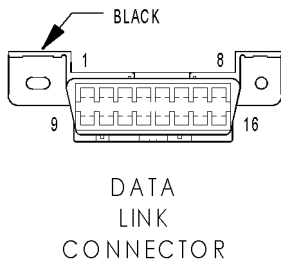
COMPASS MINI-TRIP
COMPUTER
(PREMIUM)

COMPASS MINI-TRIP COMPUTER (PREMIUM)		
CAV	CIRCUIT	FUNCTION
1	-	-
2	D25 20YL/VT	PCI BUS
3	M1 20PK	FUSED B(+)
4	Z2 20BK/LG	CLEAN GROUND
5	F87 20WT/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
6	-	-



CONTROLLER ANTILOCK BRAKE

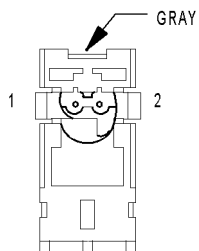
CAV	CIRCUIT	FUNCTION
1	Z101 12BK/OR	GROUND
2	-	-
3	-	-
4	-	-
5	D25 18YL/VT	PCI BUS
6	B6 18WT/DB	RIGHT FRONT WHEEL SPEED SENSOR SIGNAL
7	B7 18WT	RIGHT FRONT WHEEL SPEED SENSOR 12 VOLT SUPPLY
8	D24 18WT/DG	FLASH ABS
9	A20 12RD/DB	FUSED B(+)
10	F22 18DB/PK	FUSED IGNITION SWITCH OUTPUT (RUN)
11	-	-
12	-	-
13	B12 18DG/OR	VEHICLE SPEED SIGNAL
14	-	-
15	-	-
16	Z102 12BK/OR	GROUND
17	-	-
18	L50 18WT/TN	BRAKE LAMP SWITCH OUTPUT
19	B1 18YL/DB	REAR WHEEL SPEED SENSOR SIGNAL
20	B2 18YL	REAR WHEEL SPEED SENSOR 12 VOLT SUPPLY
21	-	-
22	B8 18RD/DB	LEFT FRONT WHEEL SPEED SENSOR SIGNAL
23	B9 18RD	LEFT FRONT WHEEL SPEED SENSOR 12 VOLT SUPPLY
24	A10 12RD/DG	FUSED B(+)



DATA LINK CONNECTOR

CAV	CIRCUIT	FUNCTION
1	-	-
2	D25 18YL/VT	PCI BUS
3	-	-
4	Z252 18BK/GY	GROUND
5	Z252 18BK/GY	GROUND
6	D32 20LG/DG (GAS)	SCI RECEIVE
6	D32 20LG/DG (GAS)	SCI RECEIVE
7	D21 20PK/RD	SCI TRANSMIT
8	D24 18WT/DG	FLASH ABS
9	D19 20VT/OR	BODY CONTROL MODULE FLASH ENABLE
10	-	-
11	-	-
12	-	-
13	-	-
14	D20 20LG	SCI RECEIVE
15	-	-
16	F33 20PK/RD	FUSED B(+)

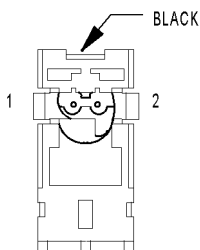
CONNECTOR PINOUTS



DRIVER
AIRBAG
SQUIB 1

DRIVER AIRBAG SQUIB 1

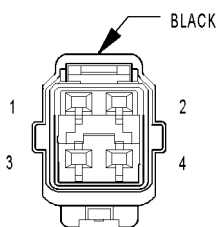
CAV	CIRCUIT	FUNCTION
1	R45 18DG/LB	DRIVER SQUIB 1 LINE 2
2	R43 18BK/LB	DRIVER SQUIB 1 LINE 1



DRIVER
AIRBAG
SQUIB 2

DRIVER AIRBAG SQUIB 2

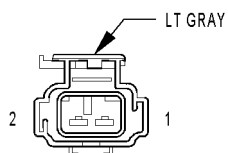
CAV	CIRCUIT	FUNCTION
1	R63 18TN/LB	DRIVER SQUIB 2 LINE 2
2	R61 18OR/LB	DRIVER SQUIB 2 LINE 1



DRIVER
DOOR LOCK MOTOR/
AJAR SWITCH
(EXCEPT BASE)

DRIVER DOOR LOCK MOTOR/AJAR SWITCH (EXCEPT BASE)

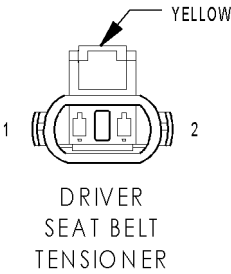
CAV	CIRCUIT	FUNCTION
1	G75 20TN (LHD)	LEFT FRONT DOOR AJAR SWITCH SENSE
1	G74 20TN/RD (RHD)	RIGHT FRONT DOOR AJAR SWITCH SENSE
2	Z350 20BK/LG (LHD)	GROUND
2	Z351 20BK/LG (RHD)	GROUND
3	P34 18PK/BK	DRIVER DOOR UNLOCK RELAY OUTPUT
4	P33 18OR/BK	LOCK RELAY OUTPUT



DRIVER
SEAT BELT
SWITCH

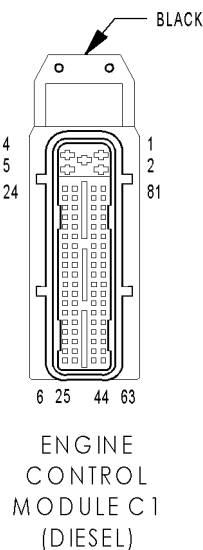
DRIVER SEAT BELT SWITCH

CAV	CIRCUIT	FUNCTION
1	R57 18DG	DRIVER SEAT BELT SWITCH SENSE
2	R59 18LB	DRIVER SEAT BELT SWITCH GROUND



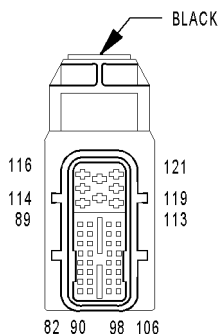
DRIVER SEAT BELT TENSIONER		
CAV	CIRCUIT	FUNCTION
1	R55 180R/BK	DRIVER SEAT BELT TENSIONER LINE 1
2	R53 180R/YL	DRIVER SEAT BELT TENSIONER LINE 2

CONNECTOR PINOUTS

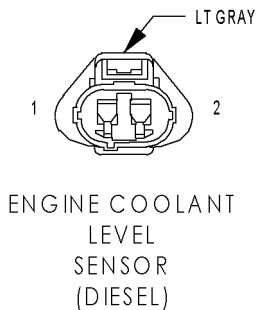


ENGINE CONTROL MODULE C1 (DIESEL)

CAV	CIRCUIT	FUNCTION
1	Z108 14BK/DG	GROUND
2	Z108 14BK/DG	GROUND
3	K20 18DG	GENERATOR FIELD CONTROL
4	A142 14DG/OR	AUTO SHUT DOWN RELAY OUTPUT
5	A142 14DG/OR	AUTO SHUT DOWN RELAY OUTPUT
6	-	-
7	D25 20VT/YL	PCI BUS
8	K944 20BK/LB	CAMSHAFT POSITION SENSOR GROUND
9	K44 20TN/YL	CAMSHAFT POSITION SENSOR SIGNAL
10	-	-
11	K37 20DB/YL	BOOST PRESSURE SENSOR SIGNAL
12	-	-
13	K78 20GY	FUEL PRESSURE SENSOR SIGNAL
14	-	-
15	K81 20VT/TN	ACCELERATOR PEDAL POSITION SENSOR SIGNAL
16	K80 20BK/VT	FUEL PRESSURE SENSOR GROUND
17	-	-
18	-	-
19	F92 20YL/BR	FUSED B(+)
20	Z109 20BK/DB	GROUND
21	K4 20BK/LB	SENSOR GROUND
22	F1 20DB	FUSED IGNITION SWITCH OUTPUT (RUN-START)
23	K6 20VT/WT	SENSOR REFERENCE VOLTAGE B
24	K3 20LB/BK	CRANKSHAFT POSITION SENSOR SIGNAL 1
25	-	-
26	-	-
27	-	-
28	-	-
29	K77 20BR/WT	TRANSFER CASE POSITION SENSOR INPUT
30	G60 20GY/YL	ENGINE OIL PRESSURE SENSOR SIGNAL
31	G123 20DG/WT	WATER IN FUEL SENSOR SIGNAL
32	K118 20PK/YL	BATTERY TEMPERATURE SENSOR SIGNAL
33	-	-
34	K255 20WT/DG	ACCELERATOR PEDAL POSITION SENSOR GROUND
35	K852 20VT/WT	ACCELERATOR PEDAL POSITION SENSOR 5 VOLT SUPPLY
36	-	-
37	-	-
38	V37 20RD/LG	SPEED CONTROL SWITCH SIGNAL
39	K226 20DB/WT	FUEL LEVEL SENSOR SIGNAL
40	K2 20TN/BK	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL
41	K21 20BK/RD	INTAKE AIR TEMPERATURE SENSOR SIGNAL
42	Y101 18BK/OR	CRANKSHAFT POSITION SENSOR SHIELD
43	K24 20GY/BK	CRANKSHAFT POSITION SENSOR SIGNAL 2
44	-	-
45	-	-
46	-	-
47	L50 20WT/TN	PRIMARY BRAKE SWITCH SIGNAL
48	K29 20WT/PK	SECONDARY BRAKE SWITCH SIGNAL
49	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	-	-
55	B22 20DG/YL	VEHICLE SPEED SIGNAL
56	-	-
57	T10 20/YL/DG (A/T)	TORQUE MANAGEMENT REQUEST SENSE
58	-	-
59	-	-
60	K7 20OR	FUEL PRESSURE SENSOR 5 VOLT SUPPLY
61	K51 20DB/YL	AUTO SHUT DOWN RELAY CONTROL
62	-	-
63	-	-
64	K151 20WT	LOW IDLE POSITION SWITCH SENSE
65	-	-
66	-	-
67	-	-
68	-	-
69	C13 20DB/OR	A/C CLUTCH RELAY CONTROL
70	-	-
71	-	-
72	K236 20GY/PK	GLOW PLUG RELAY NO. 2 CONTROL
73	-	-
74	K90 20TN (M/T)	CLUTCH SWITCH OVERRIDE RELAY CONTROL
75	K132 20DG/LB	CABIN HEATER RELAY CONTROL
76	-	-
77	K152 20WT	GLOW PLUG RELAY NO. 1 CONTROL
78	-	-
79	-	-
80	K46 20OR/BK	FUEL PRESSURE SOLENOID CONTROL
81	K46 20OR/BK	FUEL PRESSURE SOLENOID CONTROL



ENGINE
CONTROL
MODULE C2
(DIESEL)



ENGINE COOLANT
LEVEL
SENSOR
(DIESEL)

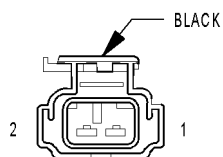
ENGINE CONTROL MODULE C2 (DIESEL)

CAV	CIRCUIT	FUNCTION
100	-	-
101	C18 20DB	A/C HIGH PRESSURE SWITCH SIGNAL
102	-	-
103	-	-
104	-	-
105	-	-
106	-	-
107	-	-
108	-	-
109	-	-
110	-	-
111	-	-
112	T411 18WT/PK (A/T)	TRS T41 SENSE (P/N)
113	-	-
114	-	-
115	K14 2.5mmLB/BR	FUEL INJECTOR NO. 4 CONTROL
116	K63 2.5mmDB/BK	COMMON INJECTOR DRIVER
117	-	-
118	K11 2.5mmWT/DB	FUEL INJECTOR NO. 1 CONTROL
119	K12 2.5mmTN	FUEL INJECTOR NO. 2 CONTROL
120	K13 2.5mmYL/WT	FUEL INJECTOR NO. 3 CONTROL
121	-	-
82	D21 20PK	SCI TRANSMIT
83	K244 20BR/WT (A/T)	ENGINE SPEED SIGNAL
84	-	-
85	-	-
86	-	-
87	-	-
88	-	-
89	K35 20GY/YL	EGR SOLENOID CONTROL
90	-	-
91	-	-
92	-	-
93	-	-
94	-	-
95	-	-
96	-	-
97	-	-
98	-	-
99	-	-

ENGINE COOLANT LEVEL SENSOR (DIESEL)

CAV	CIRCUIT	FUNCTION
1	G18 18PK/BK	LOW COOLANT FLUID LEVEL SENSE
2	Z246 18BK/GY	GROUND

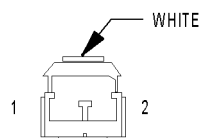
CONNECTOR PINOUTS



FLIP-UP
GLASS RELEASE
MOTOR

FLIP-UP GLASS RELEASE MOTOR

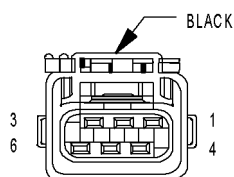
CAV	CIRCUIT	FUNCTION
1	Z235 18BK	GROUND
2	P100 18OR/BR	FLIP-UP GLASS RELEASE MOTOR DRIVER



FLIP-UP
GLASS RELEASE
SWITCH

FLIP-UP GLASS RELEASE SWITCH

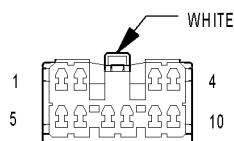
CAV	CIRCUIT	FUNCTION
1	G910 20VT/BR	TAILGATE SWITCH GROUND
2	P101 20OR/PK	FLIP-UP GLASS RELEASE SWITCH SENSE



FRONT WIPER
MOTOR

FRONT WIPER MOTOR

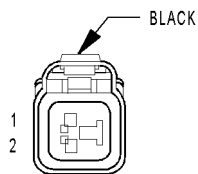
CAV	CIRCUIT	FUNCTION
1	V6 16DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
2	V55 16TN/RD	FRONT WIPER PARK SWITCH SENSE
3	-	-
4	Z141 14BK	GROUND
5	V3 14BR/WT	FRONT WIPER HIGH/LOW RELAY LOW SPEED OUTPUT
6	V4 14RD/YL	FRONT WIPER HIGH/LOW RELAY HIGH SPEED OUTPUT



HAZARD SWITCH/
COMBINATION
FLASHER

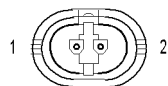
HAZARD SWITCH/COMBINATION FLASHER

CAV	CIRCUIT	FUNCTION
1	A15 18PK/OR	FUSED B(+)
2	Z3 18BK/OR	GROUND
3	L62 18BR/RD	RIGHT TURN SIGNAL
4	L91 20DB/PK	HAZARD LAMP CONTROL
5	L305 20LB/WT	LEFT TURN SWITCH SENSE
6	-	-
7	L63 18DG/RD	LEFT TURN SIGNAL
8	F15 18DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN)
9	L302 20LB/YL	RIGHT TURN SWITCH SENSE
10	E2 20OR	PANEL LAMPS DRIVER



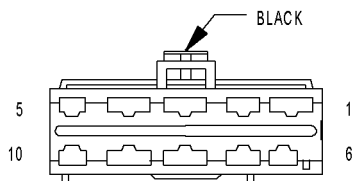
HIGH NOTE
HORN

HIGH NOTE HORN		
CAV	CIRCUIT	FUNCTION
1	X2 18DG/RD	HORN RELAY OUTPUT
2	Z141 18BK	GROUND



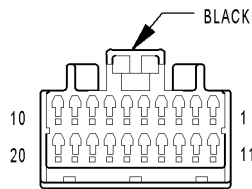
HOOD AJAR
SWITCH
(EXCEPT BASE)

HOOD AJAR SWITCH (EXCEPT BASE)		
CAV	CIRCUIT	FUNCTION
1	G70 18BR/TN	HOOD AJAR SWITCH SENSE
2	Z142 18BK/WT	GROUND



IGNITION
SWITCH

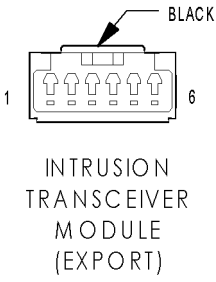
IGNITION SWITCH		
CAV	CIRCUIT	FUNCTION
1	A1 12RD	FUSED B(+)
2	A21 12RD/DB	IGNITION SWITCH OUTPUT (RUN-START)
3	F81 12TN	IGNITION SWITCH OUTPUT (RUN-ACC)
4	A25 12DB	FUSED B(+)
5	G26 20LB	KEY-IN IGNITION SWITCH SENSE
6	A41 12YL	IGNITION SWITCH OUTPUT (START)
7	A31 12BK/WT	IGNITION SWITCH OUTPUT (RUN-ACC)
8	A22 12BK/OR	IGNITION SWITCH OUTPUT (RUN)
9	A2 12PK/BK	FUSED B(+)
10	Z232 16BK/LB	GROUND



INSTRUMENT
CLUSTER

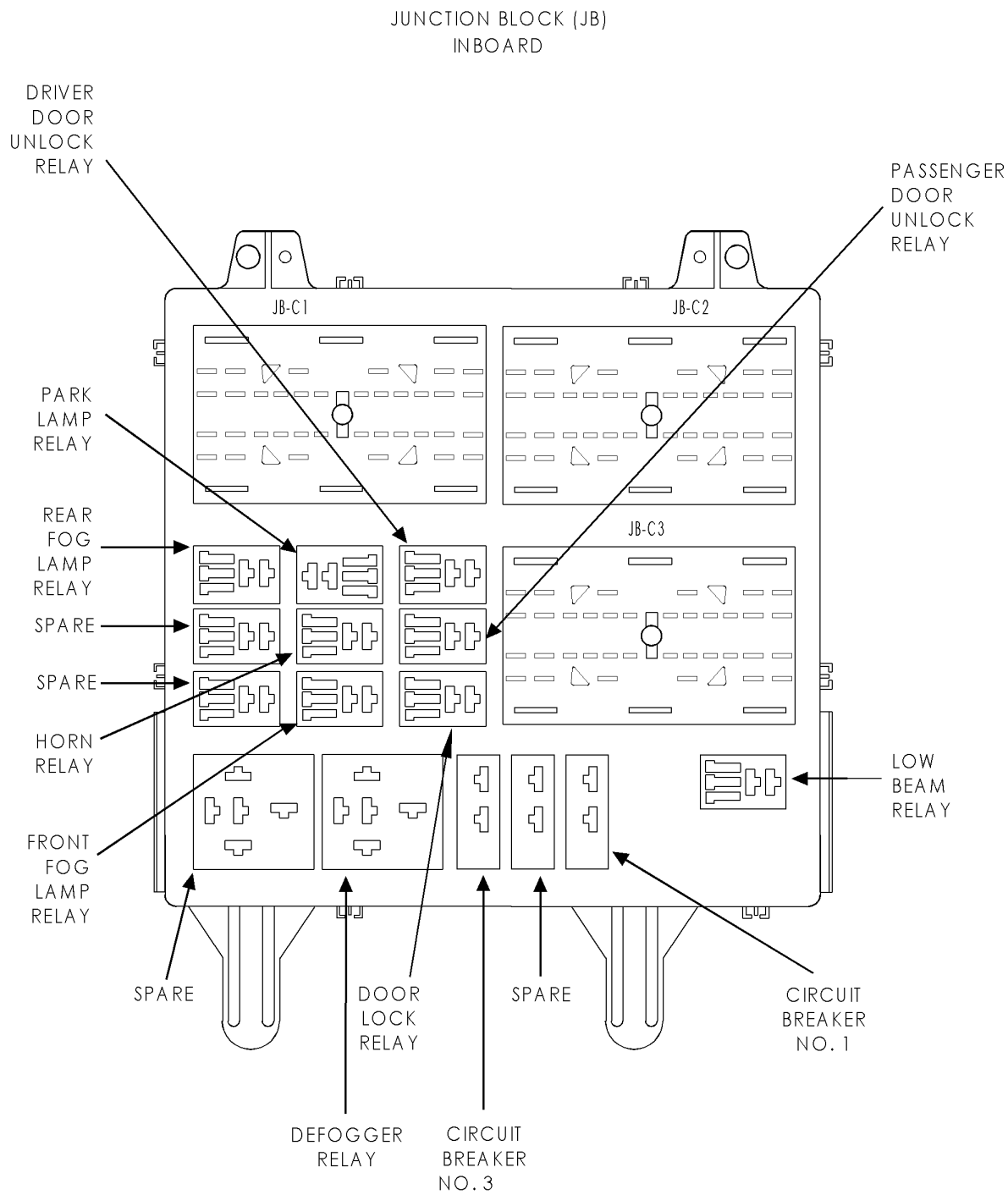
INSTRUMENT CLUSTER		
CAV	CIRCUIT	FUNCTION
1	Z105 20BK/LG	GROUND
2	-	-
3	Y98 20GY/DB	INSTRUMENT CLUSTER WAKE UP SIGNAL
4	-	-
5	G18 20PK/BK	LOW COOLANT FLUID LEVEL SENSE
6	L63 20DG/RD	LEFT TURN SIGNAL
7	G9 20GY/BK	PARK BRAKE SWITCH SENSE
8	G69 20BK/OR	VTSS INDICATOR DRIVER
9	-	-
10	M1 20PK	FUSED B(+)
11	L78 20DG/YL	FUSED PARK LAMP RELAY OUTPUT
12	E2 20OR	PANEL LAMPS DRIVER
13	-	-
14	D25 20YL/VT/RD	PCI BUS
15	-	-
16	L62 20BR/RD	RIGHT TURN SIGNAL
17	G11 20WT/BK	RED BRAKE WARNING INDICATOR DRIVER
18	G29 20BK/TN	LOW WASHER FLUID SENSE
19	F87 20TN/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
20	-	-

CONNECTOR PINOUTS



INTRUSION TRANSCIVER MODULE (EXPORT)

CAV	CIRCUIT	FUNCTION
1	Z2 20BK/LG	GROUND
2	-	-
3	X75 20DG	SIREN SIGNAL CONTROL
4	-	-
5	D25 20YL/VT	PCI BUS
6	M1 20PK	FUSED B(+)



CONNECTOR PINOUTS

FUSES (JB)

FUSE NO.	AMPS	FUSED CIRCUIT	FUNCTION
1	20A	F38 16RD/WT	FUSED B(+)
2	10A	INTERNAL	FUSED B(+)
3	15A	INTERNAL	FUSED B(+)
4	10A	L44 18VT/RD	FUSED RIGHT LOW BEAM OUTPUT
5	10A	L43 18VT	FUSED LEFT LOW BEAM OUTPUT
6	20A	INTERNAL	FUSED B(+)
7	-	SPARE	-
8	-	SPARE	-
9	10A	INTERNAL	FUSED PARK LAMP RELAY OUTPUT
10	-	SPARE	-
11	15A	A15 18PK/OR	FUSED B(+)
12	15A	F32 18PK/DB	FUSED B(+)
13	10A	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN-START)
14	-	SPARE	-
15	10A	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN-START)
16	20A	F41 16PK/VT	FUSED B(+)
17	15A	F70 18PK/BK	FUSED B(+)
18	20A	F60 16DG/RD	FUSED B(+)
19	15A	INTERNAL	FUSED B(+)
20	20A	F85 16VT/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
21	-	SPARE	-
22	10A	F88 20BR/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
23	10A	INTERNAL	FUSED PARK LAMP RELAY OUTPUT
24	10A	F20 18WT	FUSED IGNITION SWITCH OUTPUT (RUN)
25	10A	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN)
26	10A	L34 18RD/OR	FUSED RIGHT HIGH BEAM OUTPUT
27	10A	L33 18LG/BR	FUSED LEFT HIGH BEAM OUTPUT
28	-	SPARE	-
29	30A	A3 16RD/WT (HIGHLINE)	FUSED B(+)
30	10A	INTERNAL	FUSED REAR WINDOW DEFOGGER RELAY OUTPUT
31	20A	F30 16RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
32	10A	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
33	10A	INTERNAL	FUSED B(+)
34	15A	INTERNAL	FUSED B(+)
35	-	SPARE	-
36	10A	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN-START)
37	10A	F23 18DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN)
38	10A	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN)
39	10A	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN)

DEFOGGER RELAY

CAV	CIRCUIT	FUNCTION
30	INTERNAL	FUSED B (+)
85	INTERNAL	REAR WINDOW DEFOGGER RELAY CONTROL
86	INTERNAL	FUSED IGNITION SWITCH OUTPUT (RUN)
87	INTERNAL	REAR WINDOW DEFOGGER RELAY OUTPUT
87A	-	-

DOOR LOCK RELAY

CAV	CIRCUIT	FUNCTION
30	P33 18OR/BK	LOCK RELAY OUTPUT
85	INTERNAL	FUSED B(+)
86	INTERNAL	DOOR LOCK RELAY CONTROL
87	INTERNAL	FUSED B(+)
87A	INTERNAL	GROUND

DRIVER DOOR UNLOCK RELAY

CAV	CIRCUIT	FUNCTION
30	P34 18PK/BK	DRIVER DOOR UNLOCK RELAY OUTPUT
85	INTERNAL	DRIVER DOOR UNLOCK RELAY CONTROL
86	INTERNAL	FUSED B(+)
87	INTERNAL	FUSED B(+)
87A	INTERNAL	GROUND

FRONT FOG LAMP RELAY

CAV	CIRCUIT	FUNCTION
30	INTERNAL	FUSED B(+)
85	INTERNAL	FRONT FOG LAMP RELAY CONTROL
86	INTERNAL	FUSED B(+)
87	L39 16LB	FRONT FOG LAMP RELAY OUTPUT
87A	-	-

HIGH BEAM RELAY

CAV	CIRCUIT	FUNCTION
30	INTERNAL	FUSED B(+)
85	INTERNAL	FUSED B(+)
86	INTERNAL	HIGH BEAM RELAY CONTROL
87	INTERNAL	HIGH BEAM RELAY OUTPUT
87A	-	-

LOW BEAM RELAY

CAV	CIRCUIT	FUNCTION
30	INTERNAL	FUSED B(+)
85	INTERNAL	FUSED B(+)
86	INTERNAL	LOW BEAM RELAY CONTROL
87	INTERNAL	LOW BEAM RELAY OUTPUT
87A	-	-

PARK LAMP RELAY

CAV	CIRCUIT	FUNCTION
30	INTERNAL	PARK LAMP RELAY OUTPUT
85	INTERNAL	PARK LAMP RELAY CONTROL
86	INTERNAL	FUSED B(+)
87	INTERNAL	FUSED B(+)
87A	INTERNAL	GROUND

PASSENGER DOOR UNLOCK RELAY

CAV	CIRCUIT	FUNCTION
30	INTERNAL	PASSENGER DOOR UNLOCK RELAY OUTPUT
85	INTERNAL	PASSENGER DOOR UNLOCK RELAY CONTROL
86	INTERNAL	FUSED B(+)
87	INTERNAL	FUSED B(+)
87A	INTERNAL	GROUND

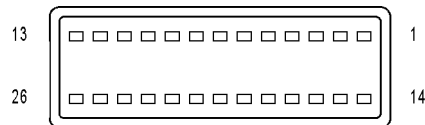
CONNECTOR PINOUTS

REAR FOG LAMP RELAY

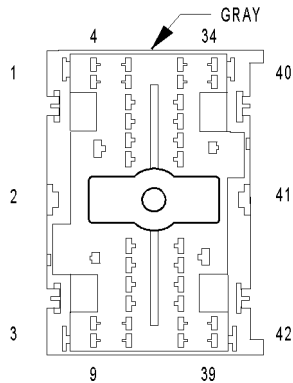
CAV	CIRCUIT	FUNCTION
30	INTERNAL	FUSED B(+)
85	INTERNAL	REAR FOG LAMP RELAY CONTROL
86	INTERNAL	FUSED B(+)
86	INTERNAL	FUSED B(+)
87A	-	-
87	L38 18BR/WT	REAR FOG LAMP RELAY OUTPUT

JUNCTION BLOCK BODY CONTROL MODULE-JB

CAV	CIRCUIT	FUNCTION
1	X3	HORN RELAY CONTROL
2	P334	DOOR UNLOCK RELAY CONTROL
3	L308	PARK LAMP RELAY CONTROL
4	L96 (PREMIUM)	REAR FOG LAMP RELAY CONTROL
5	P109 (EXCEPT BASE)	DRIVER DOOR UNLOCK RELAY CONTROL
6	C80	REAR WINDOW DEFOGGER RELAY CONTROL
7	-	-
8	Z300	GROUND
9	F35	FUSED B(+)
10	L309	HIGH BEAM RELAY CONTROL
11	P31	TAILGATE UNLOCK DRIVER
12	P37	DOOR LOCK SWITCH GROUND
13	L94	LOW BEAM RELAY CONTROL
14	F89	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
15	M1	FUSED B(+)
16	F87	FUSED IGNITION SWITCH OUTPUT (RUN-START)
17	L26 (EXCEPT BASE)	FRONT FOG LAMP RELAY CONTROL
18	P333	DOOR LOCK RELAY CONTROL
19	V16	FRONT WIPER HIGH/LOW RELAY CONTROL
20	V55	FRONT WIPER PARK SWITCH SENSE
21	V14	FRONT WIPER ON/OFF RELAY CONTROL
22	P30	TAILGATE LOCK DRIVER
23	P36	DOOR LOCK SWITCH MUX
24	M2	COURTESY LAMP DRIVER
25	Z131	GROUND
26	M20	COURTESY LAMP LOAD SHED



JUNCTION BLOCK
BODY CONTROL MODULE-JB

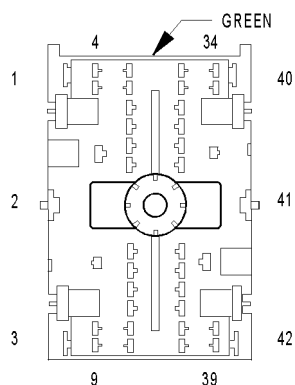


JUNCTION BLOCK C1

JUNCTION BLOCK C1

CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	A21 12RD/DB	IGNITION SWITCH OUTPUT (RUN-START)
4	E2 200R	PANEL LAMPS DRIVER
5	E2 200R	PANEL LAMPS DRIVER
6	-	-
7	X3 20BK/RD	HORN RELAY CONTROL
8	L78 20DG/YL (EXCEPT EXPORT)	FUSED PARK LAMP RELAY OUTPUT
8	L78 18DG/YL (EXPORT)	FUSED PARK LAMP RELAY OUTPUT
9	F1 20DB (PREMIUM)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
10	E2 200R	PANEL LAMPS DRIVER
11	E2 200R	PANEL LAMPS DRIVER
12	M1 20PK	FUSED B(+)
13	F33 20PK/RD	FUSED B(+)
14	-	-
15	M1 20PK	FUSED B(+)
16	L50 18WT/TN	BRAKE LAMP SWITCH OUTPUT
17	Z300 16BK	GROUND
18	-	-
19	-	-
20	Z131 10BK/GY	GROUND
21	L309 20LG/WT	HIGH BEAM RELAY CONTROL
22	F14 18LG/YL	FUSED IGNITION SWITCH OUTPUT (RUN-START)
23	M2 20YL	COURTESY LAMP DRIVER
24	M2 20YL	COURTESY LAMP DRIVER
25	F33 20PK/RD (PREMIUM)	FUSED B(+)
26	F88 20BR/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
27	M1 20PK	FUSED B(+)
28	V23 20BR/PK	FUSED IGNITION SWITCH OUTPUT (RUN)
29	V23 20BR/PK	FUSED IGNITION SWITCH OUTPUT (RUN)
30	-	-
31	F87 20TN/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
32	-	-
33	F38 16RD/WT	FUSED B(+)
34	C16 20LB/YL	FUSED REAR WINDOW DEFOGGER RELAY OUTPUT
35	F30 16RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
36	-	-
37	F32 18PK/DB	FUSED B(+)
38	F15 18DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN)
39	F23 18DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN)
40	A31 12BK/WT	IGNITION SWITCH OUTPUT (RUN-ACC)
41	A15 18PK/OR	FUSED B(+)
42	A22 12BK/OR	IGNITION SWITCH OUTPUT (RUN)

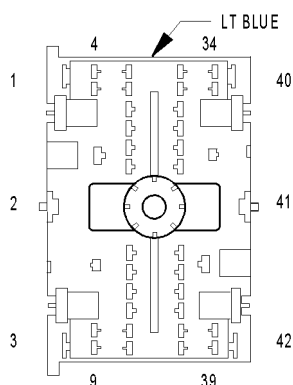
CONNECTOR PINOUTS



JUNCTION BLOCK C2

JUNCTION BLOCK C2

CAV	CIRCUIT	FUNCTION
1	F37 14RD/LB (MIDLINE/HIGHLINE)	FUSED B(+)
2	-	-
3	C15 12BK/WT	REAR WINDOW DEFOGGER RELAY OUTPUT
4	F89 18OR/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
5	P37 20LG (EXCEPT BASE)	DOOR LOCK SWITCH GROUND
6	P33 18OR/BK (EXCEPT BASE)	LOCK RELAY OUTPUT
7	F22 18DB/PK	FUSED IGNITION SWITCH OUTPUT (RUN)
8	P34 18PK/BK (EXCEPT BASE)	DRIVER DOOR UNLOCK RELAY OUTPUT
9	P35 18OR/VT (EXCEPT BASE)	UNLOCK RELAY OUTPUT
10	P36 20PK/VT (EXCEPT BASE)	DOOR LOCK SWITCH MUX
11	P37 20LG (EXCEPT BASE)	DOOR LOCK SWITCH GROUND
12	M20 20BR	COURTESY LAMP LOAD SHED
13	L50 18WT/TN	BRAKE LAMP SWITCH OUTPUT
14	P36 20PK/VT (EXCEPT BASE)	DOOR LOCK SWITCH MUX
15	P30 16OR/WT	TAILGATE LOCK DRIVER
16	F70 18PK/BK	FUSED B(+)
17	L77 18BK/YL	FUSED LEFT INBOARD TAIL LAMP
18	M1 20PK	FUSED B(+)
19	M1 20PK	FUSED B(+)
20	E2 20OR	PANEL LAMPS DRIVER
21	E2 20OR	PANEL LAMPS DRIVER
22	-	-
23	V23 20BR/PK (HIGHLINE)	FUSED IGNITION SWITCH OUTPUT (RUN)
24	V23 20BR/PK (EXCEPT BASE)	FUSED IGNITION SWITCH OUTPUT (RUN)
25	V23 20BR/PK (MIDLINE/HIGHLINE)	FUSED IGNITION SWITCH OUTPUT (RUN)
26	L78 18DG/YL	FUSED PARK LAMP RELAY OUTPUT
27	-	-
28	A6 16RD/BK (MIDLINE/HIGHLINE)	FUSED B(+)
29	-	-
30	M2 18YL	COURTESY LAMP DRIVER
31	C16 18LB/YL (EXCEPT BASE)	FUSED REAR WINDOW DEFOGGER RELAY OUTPUT
32	F14 18LG/YL (SIDE AIR-BAG)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
33	F14 18LG/YL (SIDE AIR-BAG)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
34	L38 18BR/WT (HIGHLINE)	REAR FOG LAMP RELAY OUTPUT
35	P31 16PK/WT	TAILGATE UNLOCK DRIVER
36	-	-
37	F60 16DG/RD (MIDLINE/HIGHLINE)	FUSED B(+)
38	F87 20WT/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
39	C16 18LB/YL (EXCEPT BASE)	FUSED REAR WINDOW DEFOGGER RELAY OUTPUT
40	F85 16VT/WT (MIDLINE/HIGHLINE)	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
41	F41 16PK/VT	FUSED B(+)
42	A3 16RD/WT (HIGHLINE)	FUSED B(+)

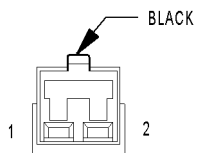


JUNCTION BLOCK C3

JUNCTION BLOCK C3

CAV	CIRCUIT	FUNCTION
1	A12 10RD/TN	FUSED B(+)
2	A13 10PK/WT	FUSED B(+)
3	A4 12BK/PK	FUSED B(+)
4	L44 18VT/RD	FUSED RIGHT LOW BEAM OUTPUT
5	L43 18VT	FUSED LEFT LOW BEAM OUTPUT
6	-	-
7	V55 16TN/RD	FRONT WIPER PARK SWITCH SENSE
8	F1 20DB (RHD)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
8	F1 18DB (LHD)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
9	V6 16DB/YL (LHD)	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
9	V6 14DB/YL (RHD)	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
10	-	-
11	A12 10RD/TN	FUSED B(+)
12	-	-
13	-	-
14	-	-
15	V14 18RD/VT	FRONT WIPER ON/OFF RELAY CONTROL
16	L34 18RD/OR	FUSED RIGHT HIGH BEAM OUTPUT
17	-	-
18	V16 18VT/YL	FRONT WIPER HIGH/LOW RELAY CONTROL
19	F20 18WT	FUSED IGNITION SWITCH OUTPUT (RUN)
20	-	-
21	-	-
22	-	-
23	-	-
24	L50 18WT/TN	BRAKE LAMP SWITCH OUTPUT
25	-	-
26	-	-
27	-	-
28	L77 18BK/YL	FUSED LEFT INBOARD TAIL LAMP
29	M1 18PK	FUSED B(+)
30	L78 18DG/YL	FUSED PARK LAMP RELAY OUTPUT
31	-	-
32	F15 18DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN)
33	L39 18LB	FRONT FOG LAMP RELAY OUTPUT
34	A18 10PK	FUSED B(+)
35	-	-
36	-	-
37	L33 18LG/BR	FUSED LEFT HIGH BEAM OUTPUT
38	F22 18DB/PK (ABS)	FUSED IGNITION SWITCH OUTPUT (RUN)
39	X2 18DG/RD	HORN RELAY OUTPUT
40	A18 10PK	FUSED B(+)
41	-	-
42	A7 10RD/BK	FUSED B(+)

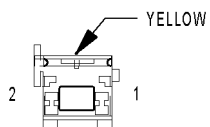
CONNECTOR PINOUTS



LEFT
COURTESY
LAMP

LEFT COURTESY LAMP

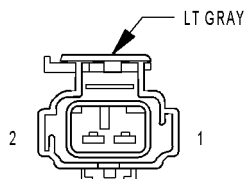
CAV	CIRCUIT	FUNCTION
1	M1 20PK	FUSED B(+)
2	M2 20YL	COURTESY LAMP DRIVER



LEFT
CURTAIN
AIRBAG
SQUIB

LEFT CURTAIN AIRBAG SQUIB

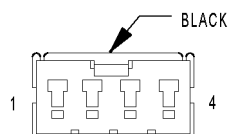
CAV	CIRCUIT	FUNCTION
1	R77 18YL/RD	LEFT CURTAIN SQUIB 1 LINE 2
2	R75 18YL/BK	LEFT CURTAIN SQUIB 1 LINE 1



LEFT
CYLINDER LOCK
SWITCH
(LHD EXCEPT
BASE)

LEFT CYLINDER LOCK SWITCH (LHD EXCEPT BASE)

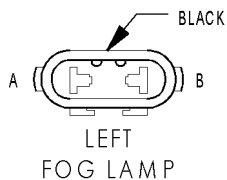
CAV	CIRCUIT	FUNCTION
1	P37 18LG	DOOR LOCK SWITCH GROUND
2	G73 18LG/OR	LEFT CYLINDER LOCK SWITCH MUX



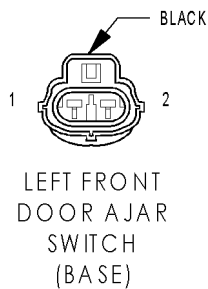
LEFT
DOOR LOCK
SWITCH
(EXCEPT BASE)

LEFT DOOR LOCK SWITCH (EXCEPT BASE)

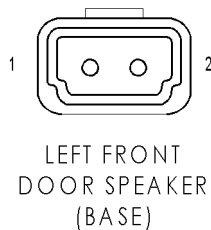
CAV	CIRCUIT	FUNCTION
1	P36 20PK/VT	DOOR LOCK SWITCH MUX
2	Z350 20BK/LG	GROUND
3	F89 200R/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
4	P37 20LG	DOOR LOCK SWITCH GROUND



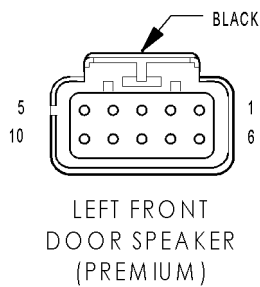
LEFT FOG LAMP		
CAV	CIRCUIT	FUNCTION
A	Z141 18BK	GROUND
B	L39 18LB	FRONT FOG LAMP RELAY OUTPUT



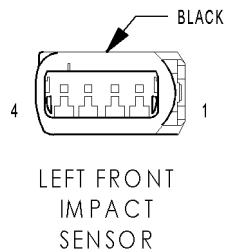
LEFT FRONT DOOR AJAR SWITCH (BASE)		
CAV	CIRCUIT	FUNCTION
1	G75 20TN	LEFT FRONT DOOR AJAR SWITCH SENSE
2	Z350 20BK/LG	GROUND



LEFT FRONT DOOR SPEAKER (BASE)		
CAV	CIRCUIT	FUNCTION
1	X53 18DG	LEFT FRONT SPEAKER (+)
2	X55 18BR/RD	LEFT FRONT SPEAKER (-)

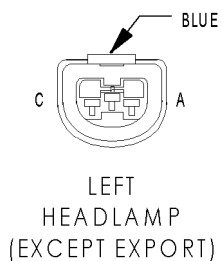


LEFT FRONT DOOR SPEAKER (PREMIUM)		
CAV	CIRCUIT	FUNCTION
1	X53 18DG	LEFT FRONT SPEAKER (+)
2	X55 18BR/RD	LEFT FRONT SPEAKER (-)
3	Z9 16BK	GROUND
4	X81 18YL/BK	AMPLIFIED HIGH LEFT FRONT SPEAKER (-)
5	X91 18WT/BK	AMPLIFIED LOW LEFT REAR SPEAKER (-)
6	X57 18BR/LB	LEFT REAR SPEAKER (-)
7	X51 18BR/YL	LEFT REAR SPEAKER (+)
8	X13 16BK/RD	RADIO CHOKE OUTPUT
9	X83 18YL/RD	AMPLIFIED HIGH LEFT FRONT SPEAKER (+)
10	X93 18WT/RD	AMPLIFIED LOW LEFT REAR SPEAKER (+)

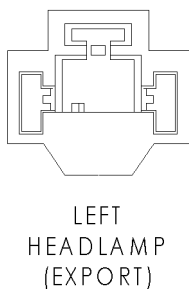


LEFT FRONT IMPACT SENSOR		
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	R47 18DB/LB	LEFT FRONT IMPACT SENSOR GROUND
4	R49 18LB	LEFT FRONT IMPACT SENSOR SIGNAL

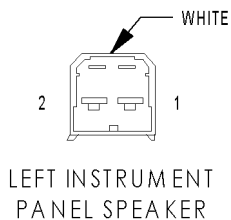
CONNECTOR PINOUTS



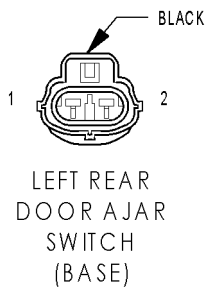
LEFT HEADLAMP (EXCEPT EXPORT)		
CAV	CIRCUIT	FUNCTION
A	L43 18VT	FUSED LEFT LOW BEAM OUTPUT
B	Z141 18BK	GROUND
C	L33 18LG/BR	FUSED LEFT HIGH BEAM OUTPUT



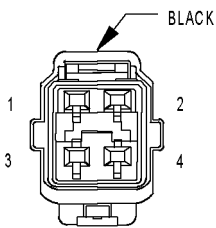
LEFT HEADLAMP (EXPORT)		
CAV	CIRCUIT	FUNCTION
1	L33 18LG/BR	FUSED LEFT HIGH BEAM OUTPUT
2	L43 18VT	FUSED LEFT LOW BEAM OUTPUT
3	Z141 18BK	GROUND



LEFT INSTRUMENT PANEL SPEAKER		
CAV	CIRCUIT	FUNCTION
1	X53 18DG (BASE/LOWLINE)	LEFT FRONT SPEAKER (+)
1	X83 18YL/RD (MIDLINE/PREMIUM)	AMPLIFIED HIGH LEFT FRONT SPEAKER (+)
2	X81 18YL/BK (MIDLINE/PREMIUM)	AMPLIFIED HIGH LEFT FRONT SPEAKER (-)
2	X55 18BR/RD (BASE/LOWLINE)	LEFT FRONT SPEAKER (-)

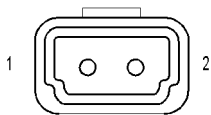


LEFT REAR DOOR AJAR SWITCH (BASE)		
CAV	CIRCUIT	FUNCTION
1	G77 20TN/WT	LEFT REAR DOOR AJAR SWITCH SENSE
2	Z350 20BK/LG	GROUND



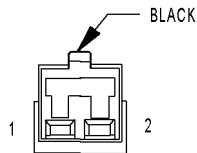
LEFT REAR
DOOR LOCK MOTOR/
AJAR SWITCH
(EXCEPT BASE)

LEFT REAR DOOR LOCK MOTOR/AJAR SWITCH (EXCEPT BASE)		
CAV	CIRCUIT	FUNCTION
1	G77 20TN/WT	LEFT REAR DOOR AJAR SWITCH SENSE
2	Z350 20BK/LG	GROUND
3	P35 18OR/VT	UNLOCK RELAY OUTPUT
4	P33 18OR/BK	LOCK RELAY OUTPUT



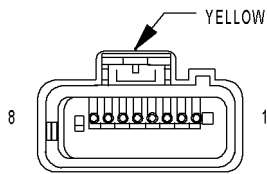
LEFT REAR
DOOR SPEAKER

LEFT REAR DOOR SPEAKER		
CAV	CIRCUIT	FUNCTION
1	X93 18WT/RD (PREMIUM)	AMPLIFIED LOW LEFT REAR SPEAKER (+)
1	X51 18BR/YL (BASE)	LEFT REAR DOOR SPEAKER (+)
2	X57 18BR/LB (BASE)	LEFT REAR DOOR SPEAKER (-)
2	X91 18WT (PREMIUM)	AMPLIFIED LOW LEFT REAR SPEAKER (-)



LEFT
REMOTE RADIO
SWITCH
(PREMIUM)

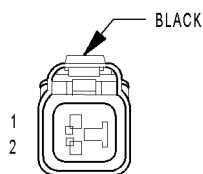
LEFT REMOTE RADIO SWITCH (PREMIUM)		
CAV	CIRCUIT	FUNCTION
1	X10 20RD/DB	RADIO CONTROL MUX RETURN
2	X20 20RD/BK	RADIO CONTROL MUX



LEFT SIDE IMPACT
AIRBAG CONTROL
MODULE (LSIACM)

LEFT SIDE IMPACT AIRBAG CONTROL MODULE (LSIACM)		
CAV	CIRCUIT	FUNCTION
1	F14 18LG/YL	FUSED IGNITION SWITCH OUTPUT (RUN-START)
2	-	-
3	R77 18YL/RD	LEFT CURTAIN SQUIB 1 LINE 2
4	R75 18YL/BK	LEFT CURTAIN SQUIB 1 LINE 1
5	Z104 18BK/YL	GROUND
6	-	-
7	-	-
8	D25 18YL/VT	PCI BUS

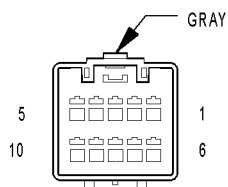
CONNECTOR PINOUTS



LOW NOTE
HORN

LOW NOTE HORN

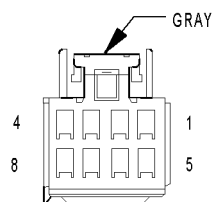
CAV	CIRCUIT	FUNCTION
1	X2 18DG/RD	HORN RELAY OUTPUT
2	Z141 18BK	GROUND



MULTI-FUNCTION
SWITCH
C1

MULTI-FUNCTION SWITCH C1

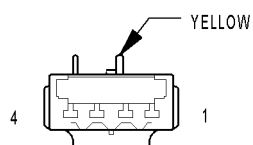
CAV	CIRCUIT	FUNCTION
1	E21 200R/RD	PANEL LAMPS DIMMER SWITCH MUX
2	L27 20WT/TN (EXCEPT BASE)	FRONT FOG LAMP SWITCH SENSE
3	-	-
4	L80 20WT/DG	HEADLAMP SWITCH RETURN
5	L307 20LG/OR	HEADLAMP SWITCH MUX
6	L305 20LB/WT	LEFT TURN SWITCH SENSE
7	L309 20LG/WT	HIGH BEAM RELAY CONTROL
8	Z12 18BK/TN	GROUND
9	L324 20WT/LG	HIGH BEAM SWITCH SENSE
10	L302 20LB/YL	RIGHT TURN SWITCH SENSE



MULTI-FUNCTION
SWITCH
C2

MULTI-FUNCTION SWITCH C2

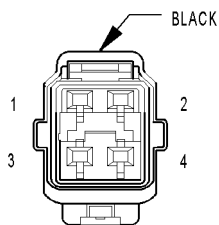
CAV	CIRCUIT	FUNCTION
1	V21 20DB/RD	REAR WIPER ON DRIVER
2	V22 20BR/YL	REAR WIPER INTERMITTENT DRIVER
3	V20 18BK/WT	WASHER MOTOR SENSE
4	V52 20DG/RD	FRONT WIPER SWITCH MUX
5	F88 20BR/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
6	-	-
7	V10 18BR	WASHER PUMP DRIVER
8	-	-



PASSENGER
AIRBAG

PASSENGER AIRBAG

CAV	CIRCUIT	FUNCTION
1	R62 18OR/YL	PASSENGER SQUIB 2 LINE 2
2	R64 18TN/YL	PASSENGER SQUIB 2 LINE 1
3	R42 18BK/YL	PASSENGER SQUIB 1 LINE 1
4	R44 18DG/YL	PASSENGER SQUIB 1 LINE 2

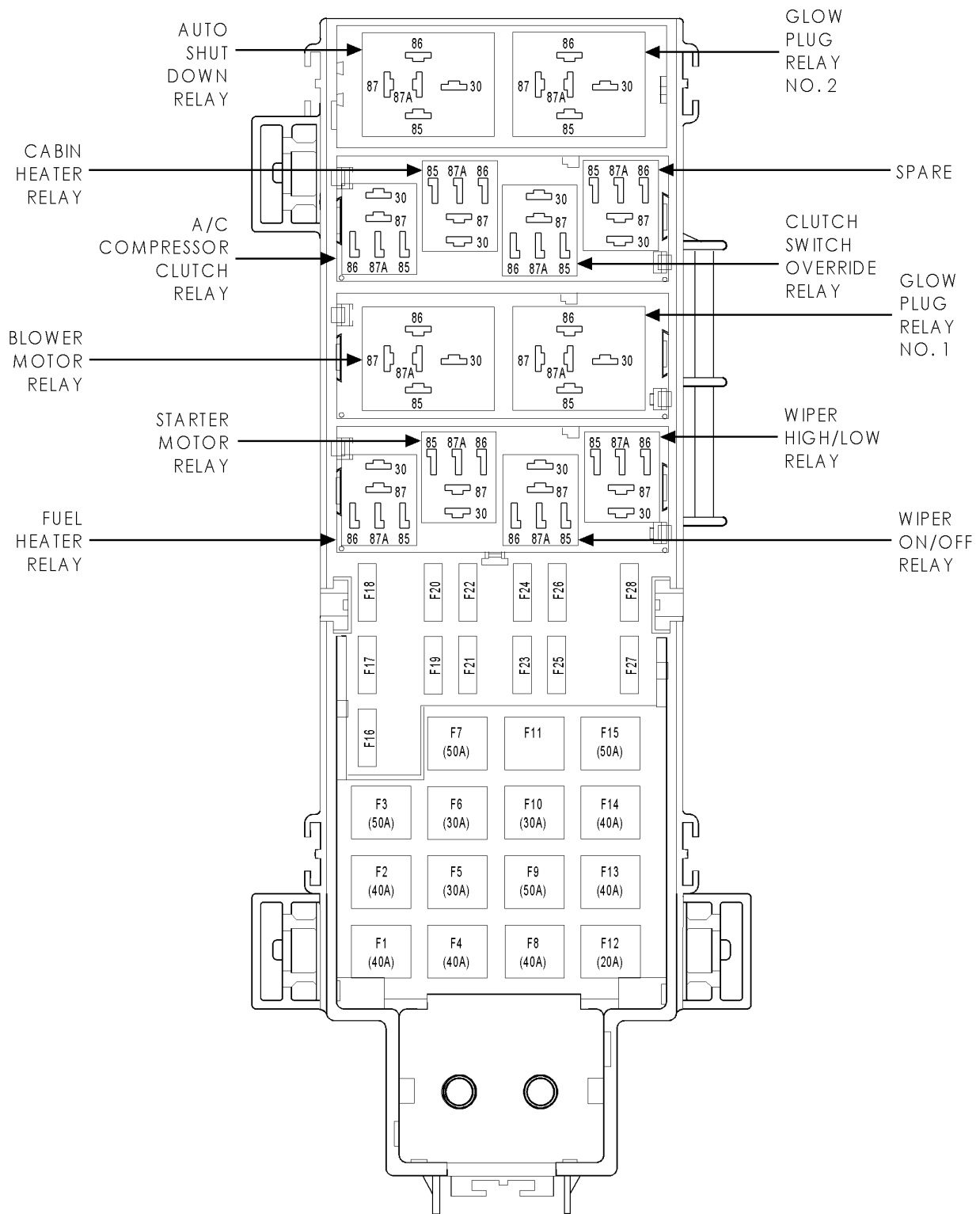


PASSENGER
DOOR LOCK MOTOR/
AJAR SWITCH
(EXCEPT BASE)

PASSENGER DOOR LOCK MOTOR/AJAR SWITCH (EXCEPT BASE)		
CAV	CIRCUIT	FUNCTION
1	G74 20TN/WT (LHD)	RIGHT FRONT DOOR AJAR SWITCH SENSE
1	G75 20TN/WT (RHD)	LEFT FRONT DOOR AJAR SWITCH SENSE
2	Z350 20BK/LG (RHD)	GROUND
2	Z351 20BK/LG (LHD)	GROUND
3	P35 180R/VT	UNLOCK RELAY OUTPUT
4	P33 180R/BK	LOCK RELAY OUTPUT

CONNECTOR PINOUTS

POWER DISTRIBUTION CENTER DIESEL

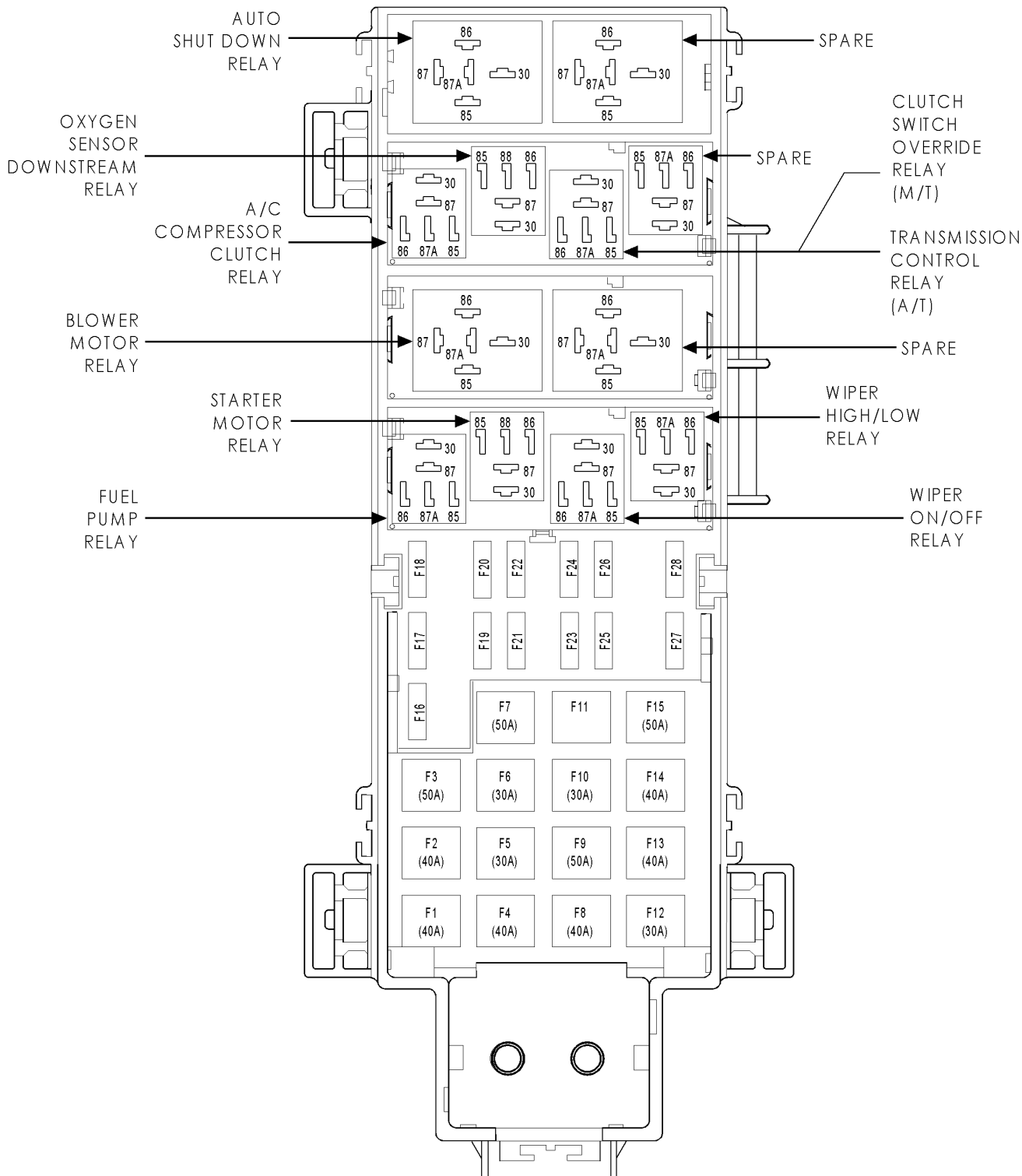


FUSES (DIESEL)

FUSE NO.	AMPS	FUSED CIRCUIT	FUNCTION
1	40A	A122 120R	FUSED B(+)
2	30A	A99 14RD/VT (M/T)	FUSED B(+)
2	30A	A32 14RD/DB (A/T)	FUSED B(+)
3	50A	A13 10PK/WT	FUSED B(+)
4	40A	A10 12RD/DG	FUSED B(+)
5	30A	A32 14RD/DB	FUSED B(+)
6	30A	A9 14RD/YL	FUSED B(+)
6	-	A9 14RD/YL	FUSED B(+)
7	50A	A7 10RD/BK	FUSED B(+)
8	40A	A2 12PK/BK	FUSED B(+)
9	50A	A18 10PK	FUSED B(+)
10	50A	A54 10RD	FUSED B(+)
11	50A	A58 10RD/GY	FUSED B(+)
12	20A	A34 16LB/RD	FUSED B(+)
13	40A	A25 12DB	FUSED B(+)
14	40A	A1 12RD	FUSED B(+)
15	50A	A12 10RD/TN	FUSED B(+)
16	15A	A71 18DG/RD	FUSED AUTO SHUT DOWN RELAY OUTPUT
17	-	-	-
18	-	-	-
19	30A	A4 12BK/PK	FUSED B(+)
20	-	-	-
21	20A	A17 18RD/BK	FUSED B(+)
21	-	A17 18RD/BK	FUSED B(+)
22	-	-	-
23	-	-	-
24	-	-	-
25	20A	A20 12RD/DB	FUSED B(+)
26	10A	F92 18YL/BR	FUSED B(+)
27	-	-	-
28	15A	F45 18YL/BR	FUSED IGNITION SWITCH OUTPUT (START)
28	-	F45 18YL/BR	FUSED IGNITION SWITCH OUTPUT (START)

CONNECTOR PINOUTS

POWER DISTRIBUTION CENTER GAS



FUSES (GAS)

FUSE NO.	AMPS	FUSED CIRCUIT	FUNCTION
1	40A	A122 120R	FUSED B(+)
2	40A	C24 12DB/PK	FUSED B(+)
3	50A	A13 10PK/WT	FUSED B(+)
4	40A	A10 12RD/DG (ABS)	FUSED B(+)
5	30A	A30 14RD/WT (A/T)	FUSED B(+)
5	30A	A30 14RD/WT (A/T)	FUSED B(+)
6	30A	A9 14RD/YL	FUSED B(+)
7	50A	A7 10RD/BK	FUSED B(+)
8	40A	A2 12PK/BK	FUSED B(+)
9	50A	A18 10PK	FUSED B(+)
10	30A	A99 14RD/VT	FUSED B(+)
11	-	-	-
12	30A	A32 14RD/DB (SECURITY A/T)	FUSED B(+)
13	40A	A25 12DB	FUSED B(+)
14	40A	A1 12RD	FUSED B(+)
15	50A	A12 10RD/TN	FUSED B(+)
16	15A	A71 18DG/RD	FUSED AUTO SHUT DOWN RELAY OUTPUT
16	15A	A71 18DG/RD	FUSED AUTO SHUT DOWN RELAY OUTPUT
17	-	-	-
18	-	-	-
19	30A	A4 12BK/PK	FUSED B(+)
20	-	-	-
21	20A	A17 18RD/BK	FUSED B(+)
22	-	-	-
23	-	-	-
24	20A	A14 16RD/WT	FUSED B(+)
24	20A	A14 16RD/WT	FUSED B(+)
25	20A	A20 12RD/DB (ABS)	FUSED B(+)
26	15A	F142 180R/DG	FUSED AUTO SHUT DOWN RELAY OUTPUT
26	15A	F142 180R/DG	FUSED AUTO SHUT DOWN RELAY OUTPUT
27	-	-	-
28	15A	F45 18YL/BR	FUSED IGNITION SWITCH OUTPUT (START)
28	15A	F45 18YL/BR	FUSED IGNITION SWITCH OUTPUT (START)

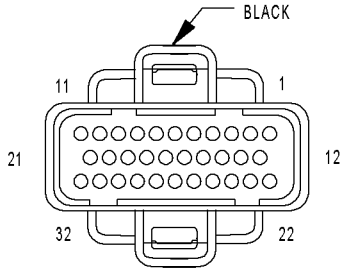
WIPER HIGH/LOW RELAY

CAV	CIRCUIT	FUNCTION
30	V60 16YL/DG	FRONT WIPER ON/OFF RELAY OUTPUT
85	V16 18VT/YL	FRONT WIPER HIGH/LOW RELAY CONTROL
86	V6 16DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
86	V6 16DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
87A	V3 14BR/WT	FRONT WIPER HIGH/LOW RELAY LOW SPEED OUTPUT
87	V4 14RD/YL	FRONT WIPER HIGH/LOW RELAY HIGH SPEED OUTPUT

WIPER ON/OFF RELAY

CAV	CIRCUIT	FUNCTION
30	V60 16YL/DG	FRONT WIPER ON/OFF RELAY OUTPUT
85	V14 18RD/VT	FRONT WIPER ON/OFF RELAY CONTROL
86	V6 16DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
86	V6 16DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
87A	V55 16TN/RD	FRONT WIPER PARK SWITCH SENSE
87	V6 16DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
87A	V55 16TN/RD	FRONT WIPER PARK SWITCH SENSE
87	V6 16DB/YL	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)

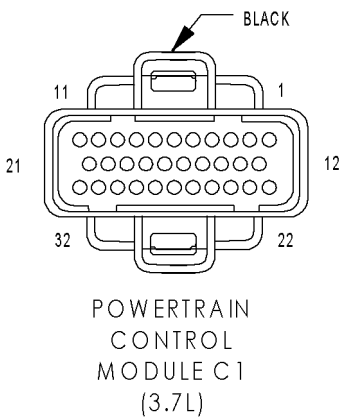
CONNECTOR PINOUTS



POWERTRAIN
CONTROL
MODULE C1
(2.4L)

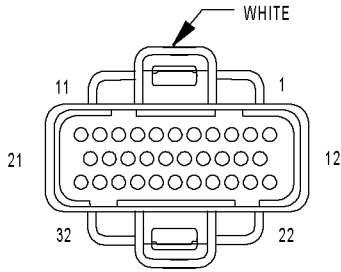
POWERTRAIN CONTROL MODULE C1 (2.4L)

CAV	CIRCUIT	FUNCTION
1	-	-
2	F1 18DB	FUSED IGNITION SWITCH OUTPUT (RUN-START)
3	-	-
4	K4 18BK/LB	SENSOR GROUND
5	-	-
6	-	-
7	K19 18BK/GY	IGNITION COIL NO. 1 DRIVER
8	K24 18GY/BK	CRANKSHAFT POSITION SENSOR SIGNAL
9	-	-
10	K60 18YL/BK	IDLE AIR CONTROL NO. 2 DRIVER
11	K40 18BR/WT	IDLE AIR CONTROL NO. 1 DRIVER
12	K10 18DB/OR	POWER STEERING PRESSURE SWITCH SENSE
13	T141 18YL/RD	CLUTCH INTERLOCK RELAY OUTPUT
14	K77 18BR/WT	TRANSFER CASE POSITION SENSOR INPUT
15	K21 18BK/RD	INTAKE AIR TEMPERATURE SENSOR SIGNAL
16	K2 18TN/BK	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL
17	K7 18OR	5 VOLT SUPPLY
18	K44 18TN/YL	CAMSHAFT POSITION SENSOR SIGNAL
19	K39 18GY/RD	IDLE AIR CONTROL NO. 3 DRIVER
20	K59 18VT/BK	IDLE AIR CONTROL NO. 4 DRIVER
21	-	-
22	A14 16RD/WT	FUSED B(+)
23	K22 18OR/DB	THROTTLE POSITION SENSOR SIGNAL
24	K41 18BK/DG	OXYGEN SENSOR 1/1 SIGNAL
25	K141 18TN/WT	OXYGEN SENSOR 1/2 SIGNAL
26	-	-
27	K1 18DG/RD	MANIFOLD ABOLUTE PRESSURE SENSOR SIGNAL
28	-	-
29	-	-
30	-	-
31	Z107 14BK/DB	GROUND
32	Z107 14BK/DB	GROUND



POWERTRAIN CONTROL MODULE C1 (3.7L)		
CAV	CIRCUIT	FUNCTION
1	K93 14TN/OR	COIL ON PLUG DRIVER NO. 3
2	F1 18DB	FUSED IGNITION SWITCH OUTPUT (RUN-START)
3	K94 14TN/LG	COIL ON PLUG DRIVER NO. 4
4	K4 18BK/LB	SENSOR GROUND
5	K96 14TN/LB	COIL ON PLUG DRIVER NO. 6
6	T41 18BK/WT (A/T)	PARK/NEUTRAL POSITION SWITCH SENSE
7	K91 14TN/RD	COIL ON PLUG DRIVER NO. 1
8	K24 18GY/BK	CRANKSHAFT POSITION SENSOR SIGNAL
9	-	-
10	K60 18YL/BK	IDLE AIR CONTROL NO. 2 DRIVER
11	K40 18BR/WT	IDLE AIR CONTROL NO. 1 DRIVER
12	K10 18DB/OR	POWER STEERING PRESSURE SWITCH SENSE
13	F45 18YL/BR (A/T)	FUSED IGNITION SWITCH OUTPUT (START)
13	T141 18YL/RD (M/T)	CLUTCH INTERLOCK RELAY OUTPUT
14	K77 18BR/WT	TRANSFER CASE POSITION SENSOR INPUT
15	K21 18BK/RD	INTAKE AIR TEMPERATURE SENSOR SIGNAL
16	K2 18TN/BK	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL
17	K7 18OR	5 VOLT SUPPLY
18	K44 18TN/YL	CAMSHAFT POSITION SENSOR SIGNAL
19	K39 18GY/RD	IDLE AIR CONTROL NO. 3 DRIVER
20	K59 18VT/BK	IDLE AIR CONTROL NO. 4 DRIVER
21	K95 14TN/DG	COIL ON PLUG DRIVER NO. 5
22	A14 16RD/WT	FUSED B(+)
23	K22 18OR/DB	THROTTLE POSITION SENSOR SIGNAL
24	K41 18BK/DG	OXYGEN SENSOR 1/1 SIGNAL
25	K141 18TN/WT	OXYGEN SENSOR 1/2 SIGNAL
26	K241 18LG/RD	OXYGEN SENSOR 2/1 SIGNAL
27	K1 18DG/RD	MANIFOLD ABOLUTE PRESSURE SENSOR SIGNAL
28	-	-
29	K341 18TN/WT	OXYGEN SENSOR 2/2 SIGNAL
30	-	-
31	Z107 14BK/DB	GROUND
31	Z107 14BK/DG (M/T)	GROUND
32	Z107 14BK/DG (M/T)	GROUND
32	Z107 14BK/DB	GROUND

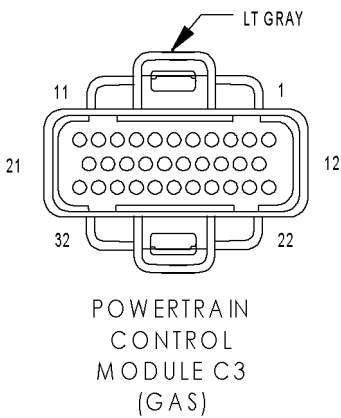
CONNECTOR PINOUTS



POWERTRAIN
CONTROL
MODULE C2
(GAS)

POWERTRAIN CONTROL MODULE C2 (GAS)

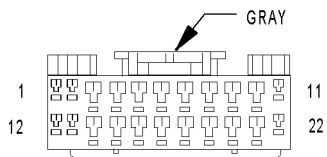
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	-	-
4	K11 18WT/DB	FUEL INJECTOR NO. 1 DRIVER
5	K13 18YL/WT	FUEL INJECTOR NO. 3 DRIVER
6	K38 18GY (3.7L)	FUEL INJECTOR NO. 5 DRIVER
7	-	-
8	-	-
9	K17 18DB/TN (2.4L)	IGNITION COIL NO. 2 DRIVER
9	K92 14TN/PK (3.7L)	COIL ON PLUG DRIVER NO. 2
10	K20 18DG	GENERATOR FIELD
11	-	-
12	K58 18BR/DB (3.7L)	FUEL INJECTOR NO. 6 DRIVER
13	-	-
14	-	-
15	K12 18TN	FUEL INJECTOR NO. 2 DRIVER
16	K14 18LB/BR	FUEL INJECTOR NO. 4 DRIVER
17	K173 18LG	RADIATOR FAN RELAY CONTROL
18	-	-
19	C18 18DB	A/C PRESSURE SIGNAL
20	-	-
21	-	-
22	-	-
23	G60 18GY/YL	ENGINE OIL PRESSURE SWITCH SIGNAL
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	K6 18VT/WT	5 VOLT SUPPLY
32	-	-



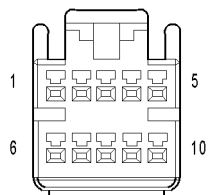
POWERTRAIN CONTROL MODULE C3 (GAS)

CAV	CIRCUIT	FUNCTION
1	C13 18DG	A/C CLUTCH RELAY CONTROL
2	-	-
3	K51 18DB/YL	AUTO SHUT DOWN RELAY CONTROL
4	V36 18TN/RD	SPEED CONTROL VACUUM SOLENOID CONTROL
5	V35 18LG/RD	SPEED CONTROL VENT SOLENOID CONTROL
6	K90 18TN (M/T)	CLUTCH SWITCH OVERRIDE RELAY CONTROL
7	K42 18DB/LB (3.7L)	KNOCK SENSOR NO. 1 SIGNAL
7	K42 18DB/LB (2.4L)	NOT USED
8	K99 18BR/OR	OXYGEN SENSOR 1/1 HEATER CONTROL
9	K512 18RD/YL	OXYGEN SENSOR DOWNSTREAM RELAY CONTROL
10	K106 18WT/DG	LEAK DETECTION PUMP SOLENOID CONTROL
11	V32 18YL/RD	SPEED CONTROL SUPPLY
12	F142 18OR/DG	FUSED AUTO SHUT DOWN RELAY SENSE INPUT
13	T10 18YL/DG	TORQUE MANAGEMENT REQUEST SENSE
14	K107 18OR	LEAK DETECTION PUMP SWITCH SENSE
15	K118 18PK/YL	BATTERY TEMPERATURE SENSOR SIGNAL
16	K299 18BR/WT (2.4L)	OXYGEN SENSOR 1/2 HEATER CONTROL
16	K299 18BR/WT (3.7L)	OXYGEN SENSOR 2/1 HEATER CONTROL
17	B22 18DG/YL	VEHICLE SPEED OUTPUT
18	K142 18GY/BK (3.7L)	KNOCK SENSOR NO. 2 SIGNAL
18	K142 18GY/BK (2.4L)	NOT USED
19	K31 18BR	FUEL PUMP RELAY CONTROL
20	K52 18PK/BK	EVAP/PURGE SOLENOID CONTROL
21	-	-
22	C21 18DB/OR	A/C SWITCH SENSE
23	-	-
24	K29 18WT/PK	BRAKE SWITCH SENSE
25	K125 18WT/DB	GENERATOR SOURCE
26	K226 18DB/WT	FUEL LEVEL SENSOR SIGNAL
27	D21 18PK	SCI TRANSMIT
28	-	-
29	D32 18LG	SCI RECEIVE (PCM)
30	D25 18YL/VT	PCI BUS
31	-	-
32	V37 18RD/LG	SPEED CONTROL SWITCH SIGNAL

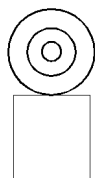
CONNECTOR PINOUTS



RADIO C1



RADIO C2



RADIO C3

RADIO C1

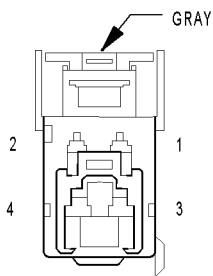
CAV	CIRCUIT	FUNCTION
1	M1 20PK	FUSED B(+)
2	F89 18OR/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
3	E2 20OR	PANEL LAMPS DRIVER
4	-	-
5	-	-
6	-	-
7	X54 18VT	RIGHT FRONT SPEAKER (+)
8	X56 18DB/RD	RIGHT FRONT SPEAKER (-)
9	X55 18BR/RD	LEFT FRONT SPEAKER (-)
10	X53 18DG	LEFT FRONT SPEAKER (+)
11	Z9 16BK	GROUND
12	M1 20PK	FUSED B(+)
13	X16 18LG (MIDLINE/ PREMIUM)	ANTENNA RELAY OUTPUT
14	D25 18YL/VT	PCI BUS
15	-	-
16	-	-
17	-	-
18	X51 18BR/YL	LEFT REAR SPEAKER (+)
19	X57 18BR/LB	LEFT REAR SPEAKER (-)
20	X58 18DB/OR	RIGHT REAR SPEAKER (-)
21	X52 18DB/WT	RIGHT REAR SPEAKER (+)
22	Z9 16BK	GROUND

RADIO C2

CAV	CIRCUIT	FUNCTION
1	X40 20WT/RD	AUDIO OUT RIGHT
2	Z30 20WT/BK	GROUND
3	Z9 20BK/DB	GROUND
4	D25 20YL/VT	PCI BUS
5	X112 20RD	IGNITION SWITCH OUTPUT
6	X41 20WT/DG	AUDIO OUT LEFT
7	Z17 20BK	GROUND
8	-	-
9	-	-
10	X160 20YL	B(+)

RADIO C3

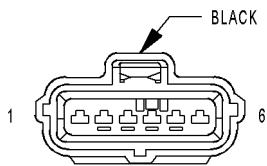
CAV	CIRCUIT	FUNCTION
1	X30 BK	RADIO ANTENNA CORE
2	X31 BK	RADIO ANTENNA SHIELD



RADIO CHOKE
(MIDLINE/PREMIUM)

RADIO CHOKE (MIDLINE/PREMIUM)

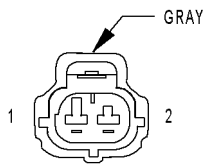
CAV	CIRCUIT	FUNCTION
1	F60 16DG/RD	FUSED B(+)
2	X13 16BK/RD	RADIO CHOKE OUTPUT
3	X16 18LG	ANTENNA RELAY OUTPUT
4	Z140 16BK/LG	GROUND



REAR
WIPER
MOTOR

REAR WIPER MOTOR

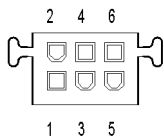
CAV	CIRCUIT	FUNCTION
1	Z235 18BK	GROUND
2	V21 20DB/RD	REAR WIPER ON DRIVER
3	G80 20YL/WT	FLIP-UP GLASS AJAR SWITCH SENSE
4	V22 20BR/YL	REAR WIPER INTERMITTENT DRIVER
5	F70 18PK/BK	FUSED B(+)
6	-	-



RED BRAKE
WARNING INDICATOR
SWITCH

RED BRAKE WARNING INDICATOR SWITCH

CAV	CIRCUIT	FUNCTION
1	G11 18WT/BK	RED BRAKE WARNING INDICATOR DRIVER
2	Z142 18BK/WT	GROUND

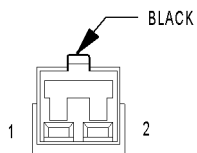


REMOTE KEYLESS
ENTRY MODULE
(EXCEPT BASE)

REMOTE KEYLESS ENTRY MODULE (EXCEPT BASE)

CAV	CIRCUIT	FUNCTION
1	Y60	RKE DATA
2	Y62	RKE SUPPLY
3	Y61	RKE PROGRAM
4	Y63	RKE GROUND
5	Y64	RKE ANTENNA (+)
6	Y65	RKE ANTENNA (-)

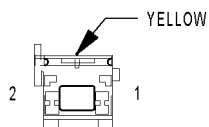
CONNECTOR PINOUTS



RIGHT
COURTESY
LAMP

RIGHT COURTESY LAMP

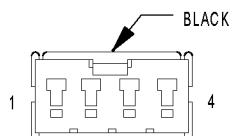
CAV	CIRCUIT	FUNCTION
1	M1 20PK	FUSED B(+)
2	M2 20YL	COURTESY LAMP DRIVER



RIGHT
CURTAIN
AIRBAG
SQUIB

RIGHT CURTAIN AIRBAG SQUIB

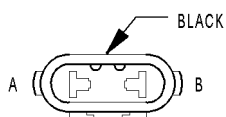
CAV	CIRCUIT	FUNCTION
1	R76 18YL/DB	RIGHT CURTAIN SQUIB 1 LINE 2
2	R74 18YL/BR	RIGHT CURTAIN SQUIB 1 LINE 1



RIGHT
DOOR LOCK
SWITCH
(EXCEPT BASE)

RIGHT DOOR LOCK SWITCH (EXCEPT BASE)

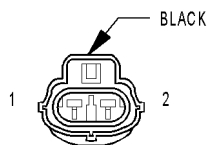
CAV	CIRCUIT	FUNCTION
1	P36 20PK/VT	DOOR LOCK SWITCH MUX
2	Z351 20BK/LG	GROUND
3	F89 20OR/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
4	P37 20LG	DOOR LOCK SWITCH GROUND



RIGHT
FOG LAMP

RIGHT FOG LAMP

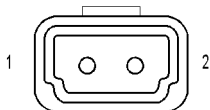
CAV	CIRCUIT	FUNCTION
A	Z142 18BK/WT	GROUND
B	L39 18LB	FRONT FOG LAMP RELAY OUTPUT



RIGHT FRONT
DOOR AJAR
SWITCH
(BASE)

RIGHT FRONT DOOR AJAR SWITCH (BASE)

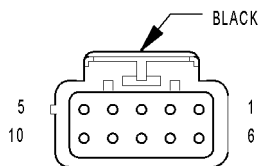
CAV	CIRCUIT	FUNCTION
1	G74 20TN/WT	RIGHT FRONT DOOR AJAR SWITCH SENSE
2	Z351 20BK/LG	GROUND



RIGHT FRONT
DOOR SPEAKER
(BASE)

RIGHT FRONT DOOR SPEAKER (BASE)

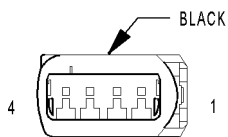
CAV	CIRCUIT	FUNCTION
1	X54 18VT	RIGHT FRONT SPEAKER (+)
2	X56 18DB/RD	RIGHT FRONT SPEAKER (-)



RIGHT FRONT
DOOR SPEAKER
(PREMIUM)

RIGHT FRONT DOOR SPEAKER (PREMIUM)

CAV	CIRCUIT	FUNCTION
1	X54 18VT	RIGHT FRONT SPEAKER (+)
2	X56 18DB/RD	RIGHT FRONT SPEAKER (-)
3	Z9 16BK	GROUND
4	X86 18OR/RD	AMPLIFIED HIGH RIGHT FRONT SPEAKER (-)
5	X92 18TN/BK	AMPLIFIED LOW RIGHT REAR SPEAKER (-)
6	X58 18DB/OR	RIGHT REAR DOOR SPEAKER (-)
7	X52 18DB/WT	RIGHT REAR DOOR SPEAKER (+)
8	X13 16BK/RD	RADIO CHOKE OUTPUT
9	X84 18TN/BK	AMPLIFIED HIGH RIGHT FRONT SPEAKER (+)
10	X94 18TN/VT	AMPLIFIED LOW RIGHT REAR SPEAKER (+)

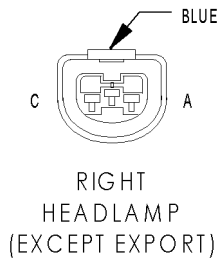


RIGHT FRONT
IMPACT
SENSOR

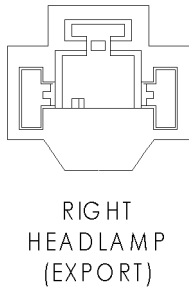
RIGHT FRONT IMPACT SENSOR

CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	R46 18BR/LB	RIGHT FRONT IMPACT SENSOR GROUND
4	R48 18TN	RIGHT FRONT IMPACT SENSOR SIGNAL

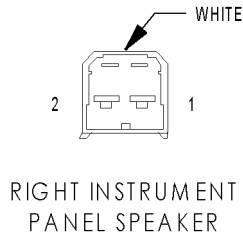
CONNECTOR PINOUTS



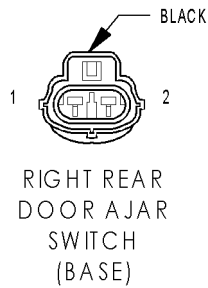
RIGHT HEADLAMP (EXCEPT EXPORT)		
CAV	CIRCUIT	FUNCTION
A	L44 18VT/RD	FUSED RIGHT LOW BEAM OUTPUT
B	Z142 18BK/WT	GROUND
C	L34 18RD/OR	FUSED RIGHT HIGH BEAM OUTPUT



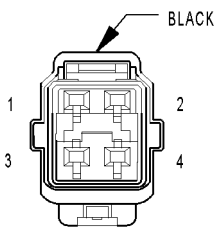
RIGHT HEADLAMP (EXPORT)		
CAV	CIRCUIT	FUNCTION
1	L34 18RD/OR	FUSED RIGHT HIGH BEAM OUTPUT
2	L44 18VT/RD	FUSED RIGHT LOW BEAM OUTPUT
3	Z142 18BK/WT	GROUND



RIGHT INSTRUMENT PANEL SPEAKER		
CAV	CIRCUIT	FUNCTION
1	X54 18VT (BASE/ LOWLINE)	RIGHT FRONT SPEAKER (+)
1	X84 18TN/BK (MIDLINE/ PREMIUM)	AMPLIFIED HIGH RIGHT FRONT SPEAKER (+)
2	X86 18OR/RD (MIDLINE/ PREMIUM)	AMPLIFIED HIGH RIGHT FRONT SPEAKER (-)
2	X56 18DB/RD (BASE/ LOWLINE)	RIGHT FRONT SPEAKER (-)

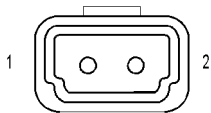


RIGHT REAR DOOR AJAR SWITCH (BASE)		
CAV	CIRCUIT	FUNCTION
1	G76 20TN/WT	RIGHT REAR DOOR AJAR SWITCH SENSE
2	Z351 20BK/LG	GROUND



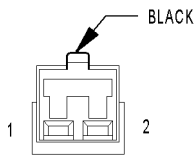
RIGHT REAR
DOOR LOCK MOTOR/
AJAR SWITCH
(EXCEPT BASE)

RIGHT REAR DOOR LOCK MOTOR/AJAR SWITCH (EXCEPT BASE)		
CAV	CIRCUIT	FUNCTION
1	G76 20TN/WT	RIGHT REAR DOOR AJAR SWITCH SENSE
2	Z351 20BK/LG	GROUND
3	P35 18OR/VT	UNLOCK RELAY OUTPUT
4	P33 18OR/BK	LOCK RELAY OUTPUT



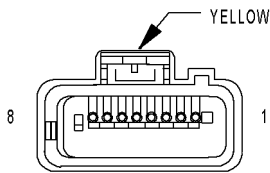
RIGHT REAR
DOOR SPEAKER

RIGHT REAR DOOR SPEAKER		
CAV	CIRCUIT	FUNCTION
1	X94 18TN/VT (PREMIUM)	AMPLIFIED LOW RIGHT REAR SPEAKER (+)
1	X52 18DB/WT (BASE)	RIGHT REAR DOOR SPEAKER (+)
2	X58 18DB/OR (BASE)	RIGHT REAR DOOR SPEAKER (-)
2	X92 18TN/BK (PREMIUM)	AMPLIFIED LOW RIGHT REAR SPEAKER (-)



RIGHT
REMOTE RADIO
SWITCH
(PREMIUM)

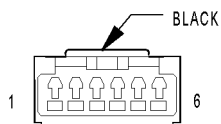
RIGHT REMOTE RADIO SWITCH (PREMIUM)		
CAV	CIRCUIT	FUNCTION
1	X10 20RD/DB	RADIO CONTROL MUX RETURN
2	X20 20RD/BK	RADIO CONTROL MUX



RIGHT SIDE IMPACT
AIRBAG CONTROL
MODULE (RSIACM)

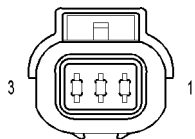
RIGHT SIDE IMPACT AIRBAG CONTROL MODULE (RSIACM)		
CAV	CIRCUIT	FUNCTION
1	F14 18LG/YL	FUSED IGNITION SWITCH OUTPUT (RUN-START)
2	-	-
3	R76 18YL/DB	RIGHT CURTAIN SQUIB 1 LINE 2
4	R74 18YL/BR	RIGHT CURTAIN SQUIB 1 LINE 1
5	Z100 18BK/YL	GROUND
6	-	-
7	-	-
8	D25 18YL/VT	PCI BUS

CONNECTOR PINOUTS



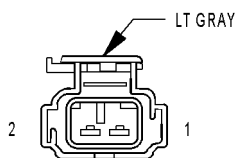
SENTRY KEY
IMMOBILIZER
MODULE
(EXCEPT BASE)

SENTRY KEY IMMOBILIZER MODULE (EXCEPT BASE)		
CAV	CIRCUIT	FUNCTION
1	F33 20PK/RD	FUSED B(+)
2	Z11 20BK/WT	GROUND
3	F1 20DB	FUSED IGNITION SWITCH OUTPUT (RUN-START)
4	Z110 20BK/TN	GROUND
5	D25 20YL/WT/BK	PCI BUS
6	-	-



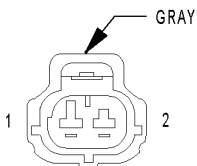
SIREN
(EXPORT)

SIREN (EXPORT)		
CAV	CIRCUIT	FUNCTION
1	Z142 18BK/WT	GROUND
2	X75 18DG	SIREN SIGNAL CONTROL
3	M1 18PK	FUSED B(+)



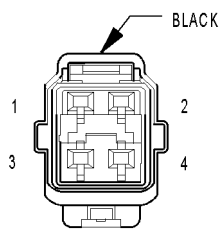
TAILGATE
CYLINDER LOCK
SWITCH

TAILGATE CYLINDER LOCK SWITCH		
CAV	CIRCUIT	FUNCTION
1	G910 20VT/BR	TAILGATE SWITCH GROUND
2	G71 18VT/YL	TAILGATE CYLINDER LOCK SWITCH MUX



TAILGATE
FLIP-UP AJAR
SWITCH

TAILGATE FLIP-UP AJAR SWITCH		
CAV	CIRCUIT	FUNCTION
1	G80 20YL/WT	FLIP-UP GLASS AJAR SWITCH SENSE
2	Z235 18BK	GROUND

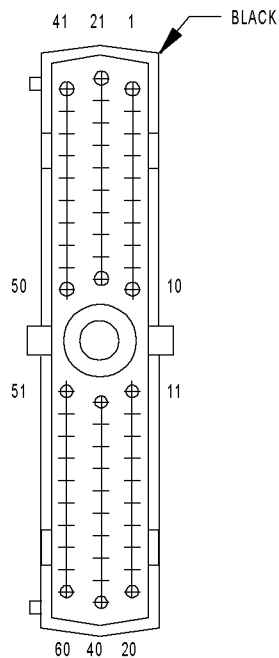


TAILGATE
LOCK MOTOR/
AJAR SWITCH

TAILGATE LOCK MOTOR/ AJAR SWITCH

CAV	CIRCUIT	FUNCTION
1	P31 16PK/WT	TAILGATE UNLOCK DRIVER
2	P30 16OR/WT	TAILGATE LOCK DRIVER
3	G78 20TN/BK	TAILGATE AJAR SWITCH SENSE
4	G910 20VT/BR	TAILGATE SWITCH GROUND

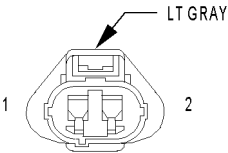
CONNECTOR PINOUTS



TRANSMISSION
CONTROL
MODULE

TRANSMISSION CONTROL MODULE

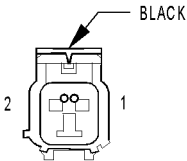
CAV	CIRCUIT	FUNCTION
1	T1 18LG/BK	TRS T1 SENSE
2	T4 18PK/OR (EXCEPT 4TRLE)	TRS T2 SENSE
3	T3 18VT	TRS T3 SENSE
4	-	-
5	-	-
6	K24 18GY/BK (3.4L)	CRANKSHAFT POSITION SENSOR SIGNAL
6	K244 20BR/WT (DIESEL)	ENGINE SPEED SIGNAL
7	D21 20PK (DIESEL)	SCI TRANSMIT
7	D21 18PK (3.4L)	SCI TRANSMIT
8	F45 18YL/BR (3.4L)	FUSED IGNITION SWITCH OUTPUT (START)
8	F45 18YL/RD (DIESEL)	FUSED IGNITION SWITCH OUTPUT (START)
9	T9 18OR/BK	OVERDRIVE PRESSURE SWITCH SENSE
10	T10 18YL/DG (3.4L)	TORQUE MANAGEMENT REQUEST SENSE
10	T10 20YL/DG (DIESEL)	TORQUE MANAGEMENT REQUEST SENSE
11	F1 18DB (3.4L)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
11	F1 20DB (DIESEL)	FUSED IGNITION SWITCH OUTPUT (RUN-START)
12	K22 18OR/DB (GAS)	THROTTLE POSITION SENSOR SIGNAL
12	K22 18OR/DB (DIESEL)	ACCELERATOR PEDAL POSITION SENSOR SIGNAL
13	T13 18DB/BK	SPEED SENSOR GROUND
14	T14 18LG/WT	OUTPUT SPEED SENSOR SIGNAL
15	K30 18PK	TRANSMISSION CONTROL RELAY CONTROL
16	T16 14RD	TRANSMISSION CONTROL RELAY OUTPUT
17	T16 14RD	TRANSMISSION CONTROL RELAY OUTPUT
18	T591 18YL/DB (EXCEPT 4TRLE)	PRESSURE CONTROL SOLENOID CONTROL
19	T119 18WT/DB	2C SOLENOID CONTROL
20	T20 18LB	LOW/REVERSE SOLENOID CONTROL
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	B22 20DG/YL (DIESEL)	VEHICLE SPEED OUTPUT
29	T29 18GY (EXCEPT 4TRLE)	UNDERDRIVE PRESSURE SWITCH SENSE
30	T38 18VT/TN (EXCEPT 4TRLE)	LINE PRESSURE SENSOR SIGNAL
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	T16 14RD (EXCEPT 4TRLE)	TRANSMISSION CONTROL RELAY OUTPUT
37	Z113 14BK/YL (EXCEPT 4TRLE)	GROUND
38	T39 18GY/LB (EXCEPT 4TRLE)	ACCELERATOR PEDAL POSITION SENSOR 5 VOLT SUPPLY
39	Z113 14BK/YL (EXCEPT 4TRLE)	GROUND
40	T140 18VT/LG (EXCEPT 4TRLE)	PRESSURE CONTROL SOLENOID CONTROL
41	T411 18WT/PK	TRS T41 SENSE (P/N)
42	T42 18VT/WT	TRS T42 SENSE
43	D25 18VT/YL	PCI BUS
43	D25 20VT/YL	PCI BUS
44	-	-
45	-	-
46	D20 18LG	SCI RECEIVE
47	T147 18LB (EXCEPT 4TRLE)	2C PRESSURE SWITCH SENSE
47	T47 18DB (4TRLE)	
48	T48 18DB	4C PRESSURE SWITCH SENSE
49	T6 18OR/WT	OVERDRIVE OFF SWITCH SENSE
50	T50 18DG	LOW/REVERSE PRESSURE SWITCH SENSE
51	K4 18BK/LB (3.4L)	SENSOR GROUND
52	T52 18RD/BK	INPUT SPEED SENSOR SIGNAL
53	Z112 14BK/LB (3.4L)	GROUND
53	Z112 14BK (DIESEL)	GROUND
54	T54 18VT	TRANSMISSION TEMPERATURE SENSOR SIGNAL
55	T59 18PK (EXCEPT 4TRLE)	UNDERDRIVE SOLENOID CONTROL
56	A30 14RD/WT	FUSED B(+)
57	Z113 14BK/YL	GROUND
58	-	-
59	T159 18DG/WT (EXCEPT 4TRLE)	4C SOLENOID CONTROL
59	T59 18PK (4TRLE)	
60	T60 18BR	OVERDRIVE SOLENOID CONTROL



WASHER FLUID
LEVEL
SWITCH

WASHER FLUID LEVEL SWITCH

CAV	CIRCUIT	FUNCTION
1	G29 18BK/TN	LOW WASHER FLUID SENSE
2	Z141 18BK	GROUND



WASHER
PUMP

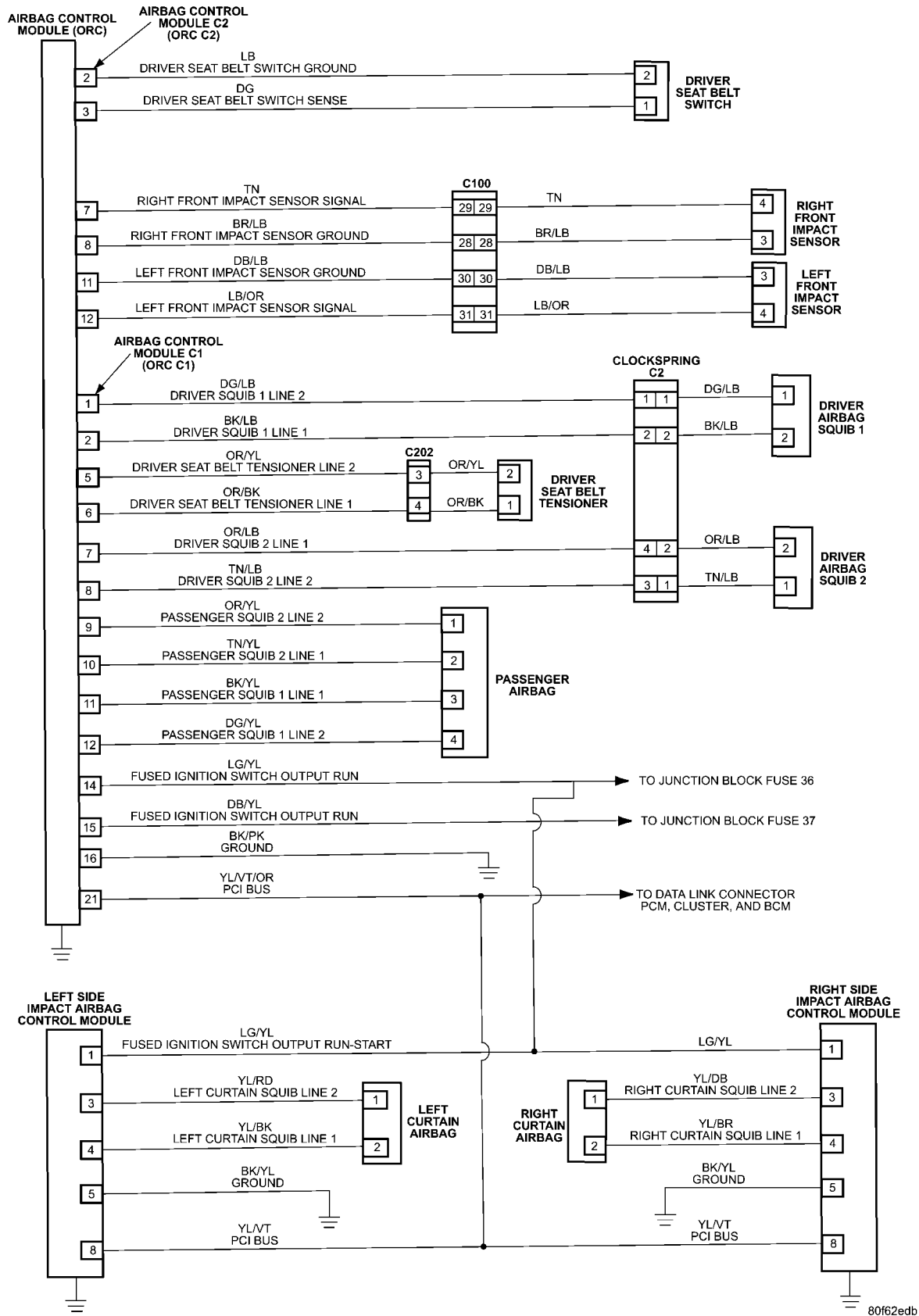
WASHER PUMP

CAV	CIRCUIT	FUNCTION
1	V20 18BK/WT	WASHER MOTOR SENSE
2	V10 18BR	WASHER PUMP DRIVER

NOTES

10.0 SCHEMATIC DIAGRAMS

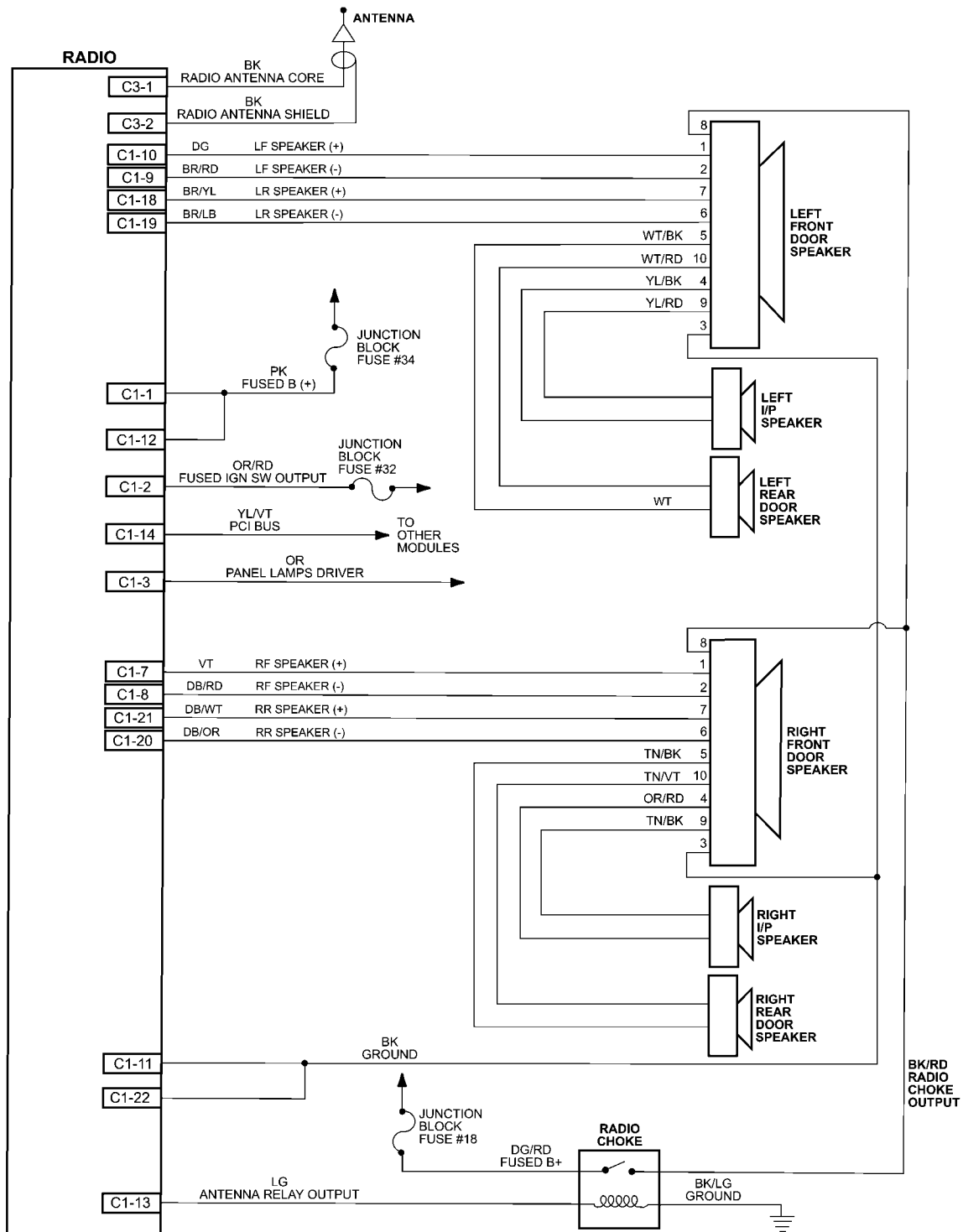
10.1 AIRBAG SYSTEM



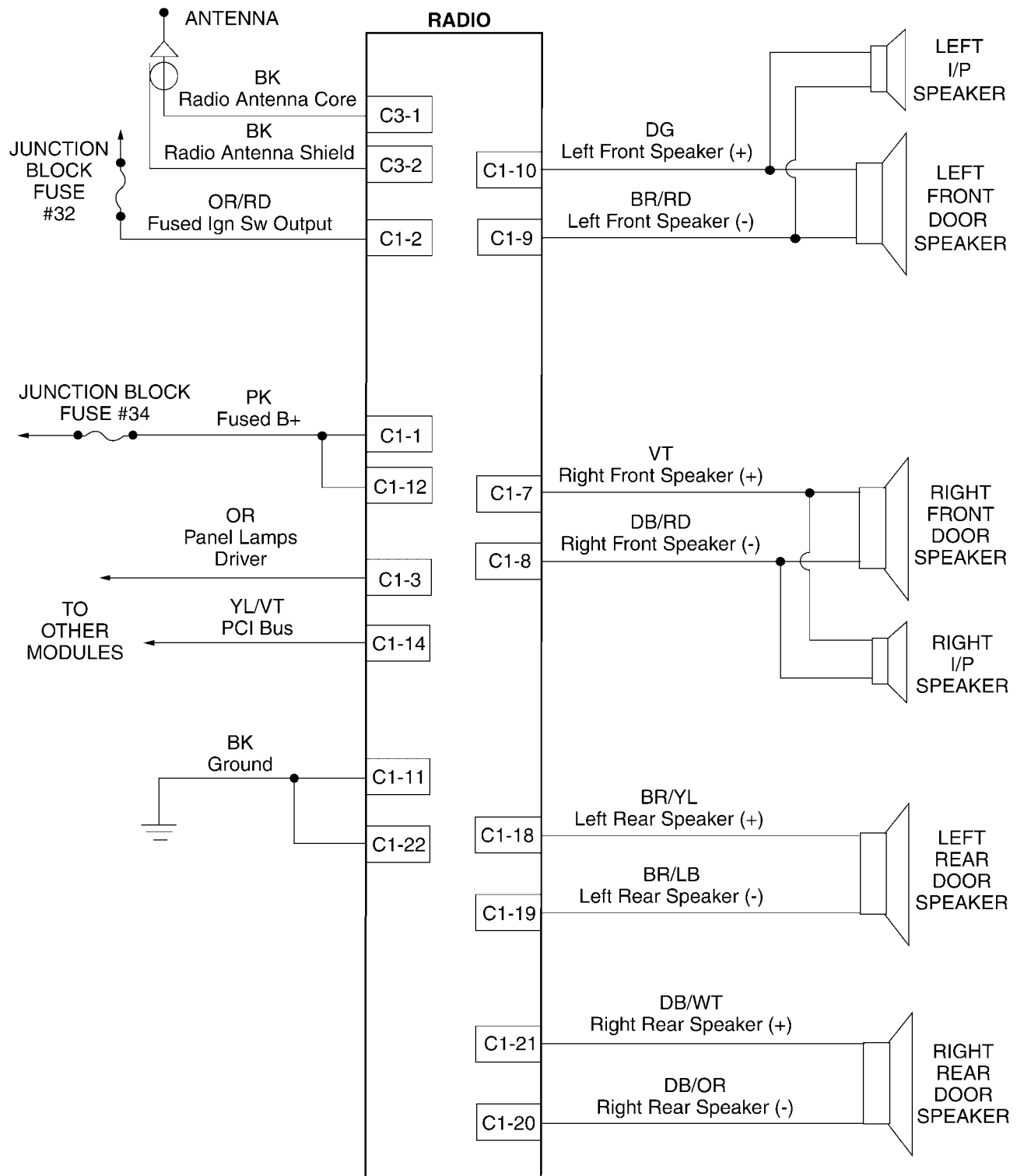
SCHEMATIC DIAGRAMS

10.2 AUDIO

10.2.1 PREMIUM AUDIO SYSTEM

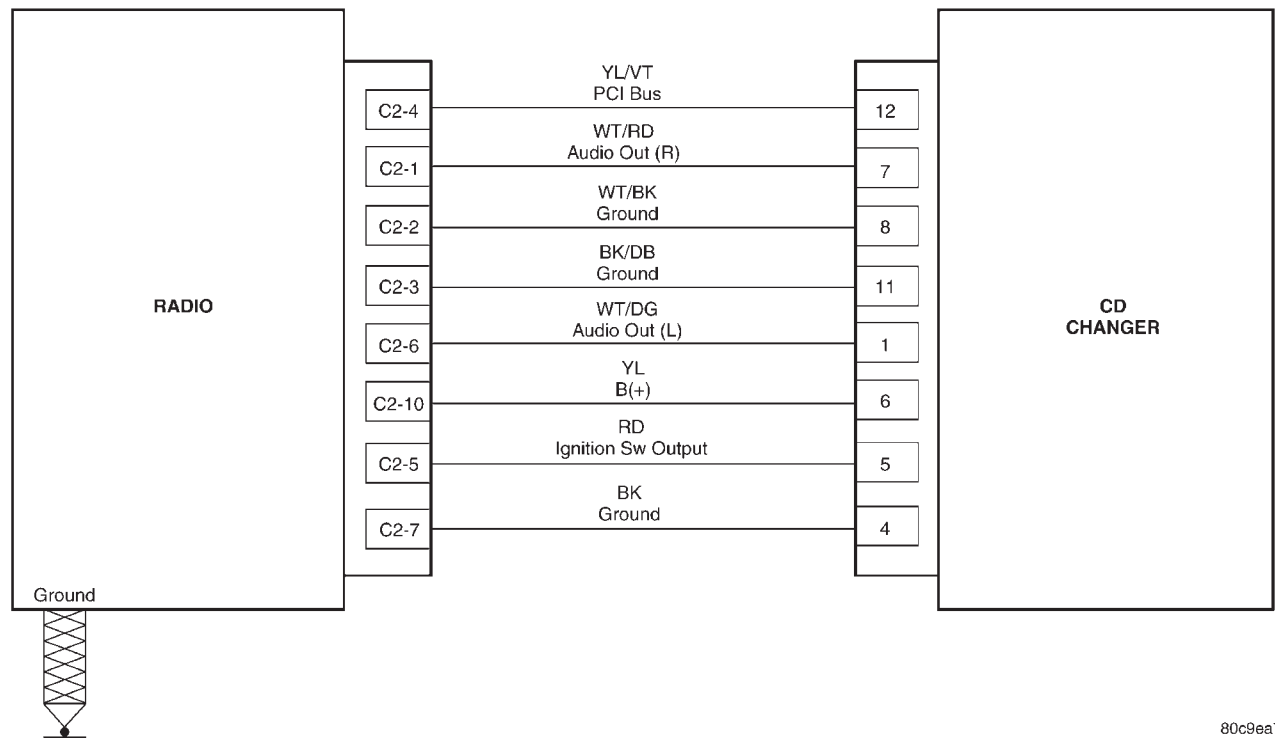


10.2.2 BASE AUDIO SYSTEM

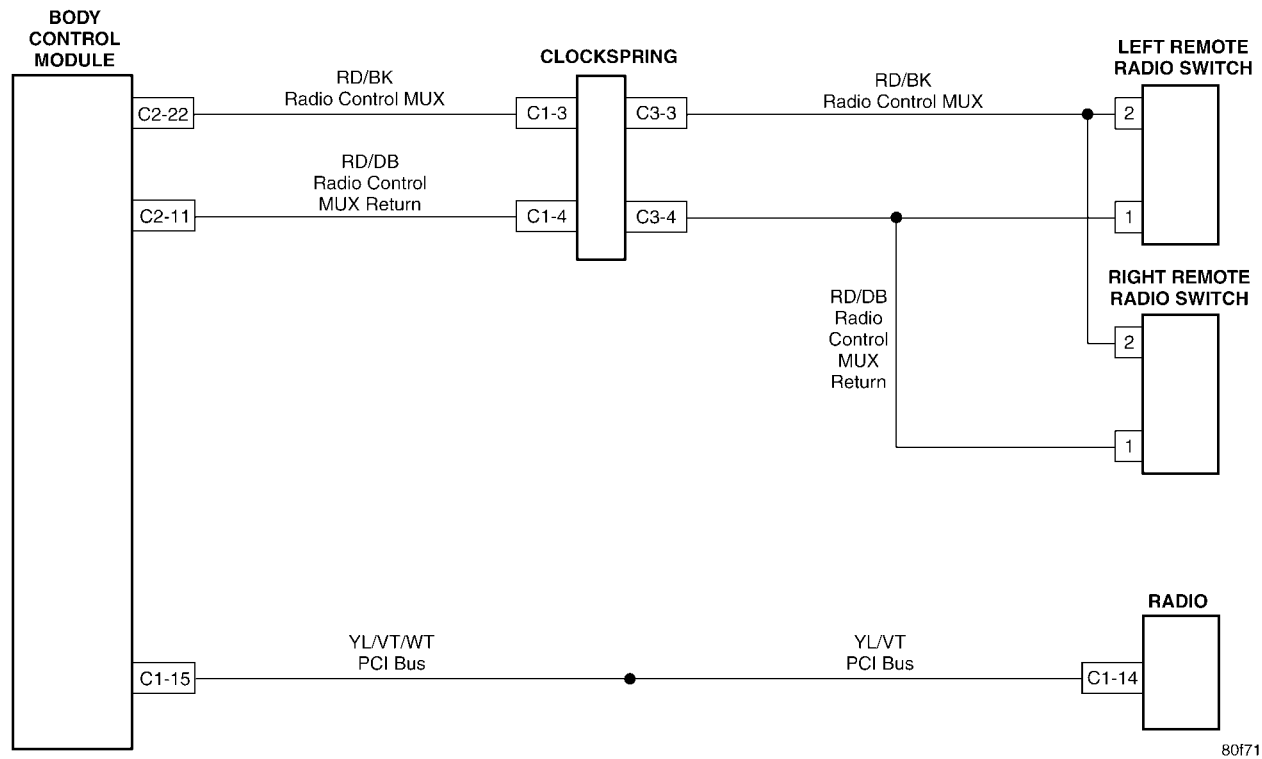


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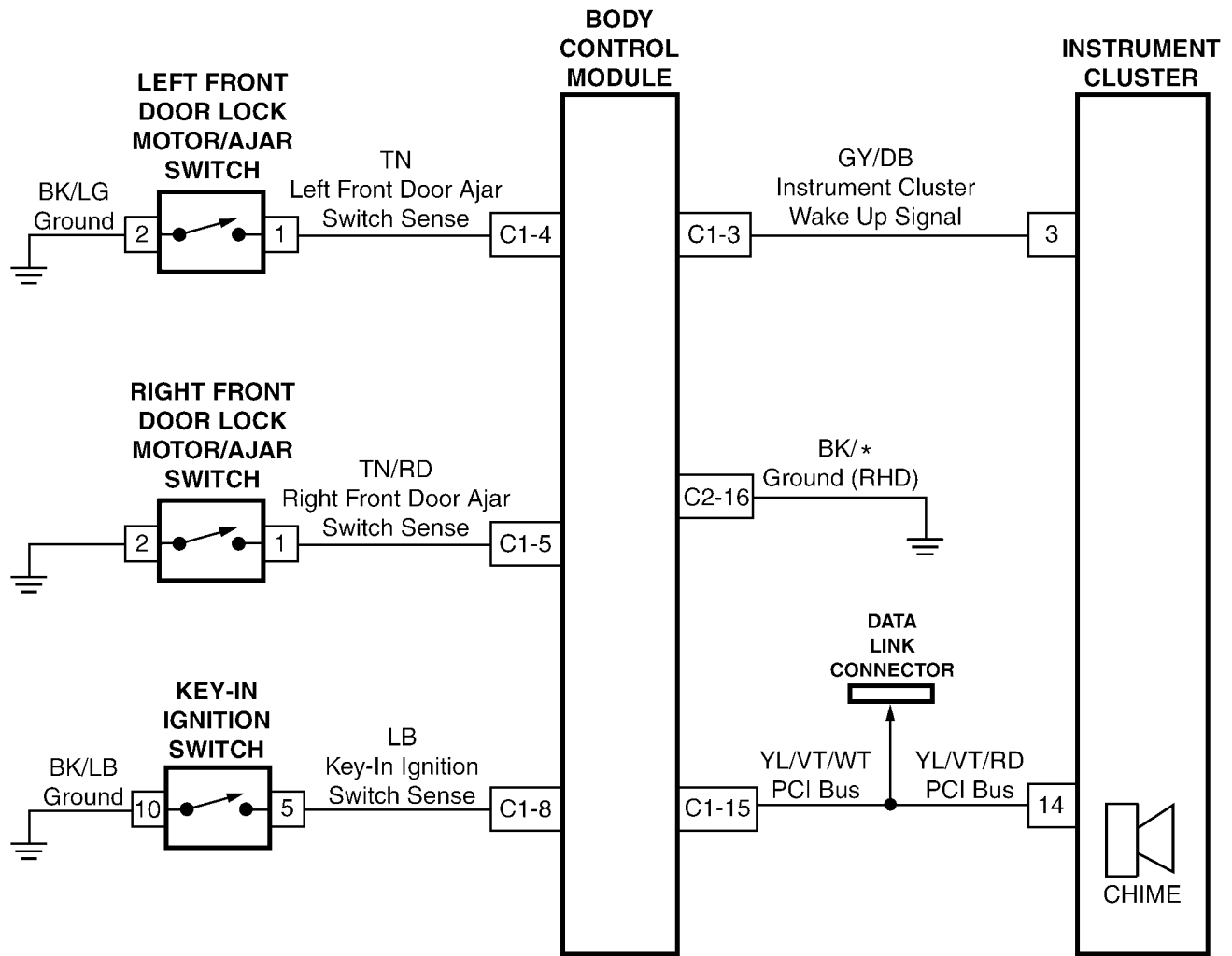
10.2.3 CD CHANGER



10.2.4 REMOTE RADIO CONTROLS



10.3 CHIME

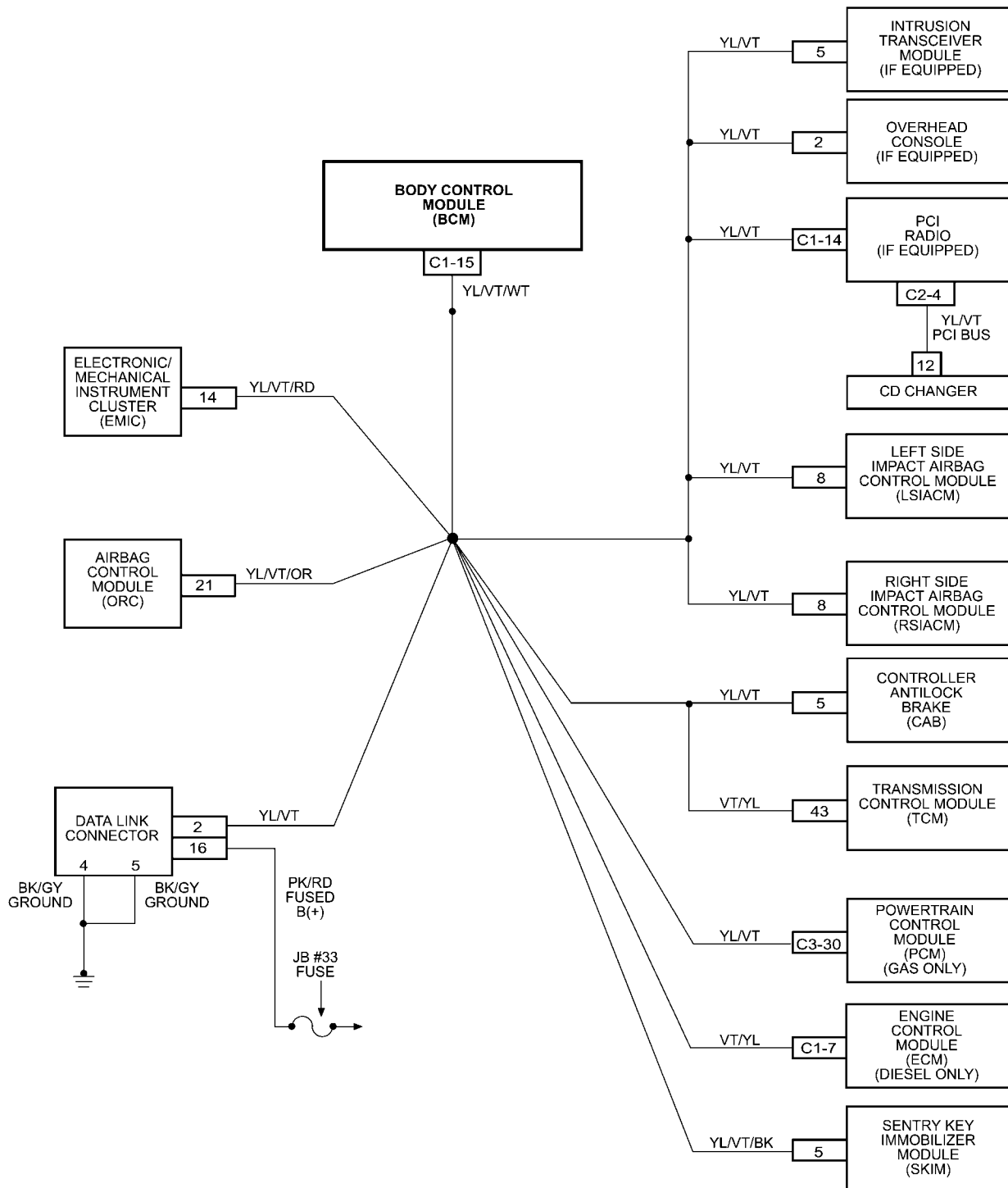


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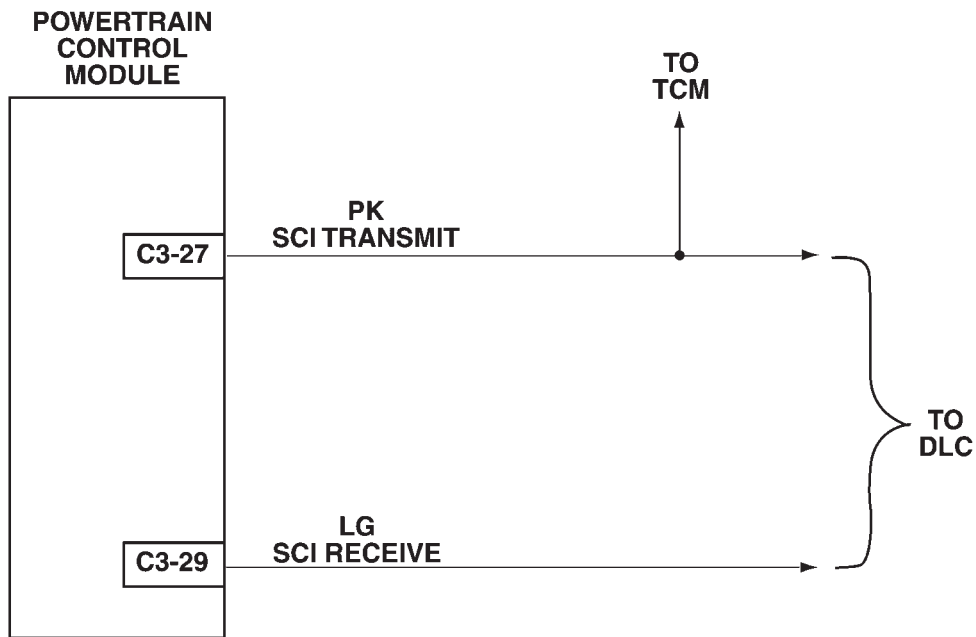
SCHEMATIC DIAGRAMS

10.4 COMMUNICATION

10.4.1 INTER-MODULE AND DRB COMMUNICATION

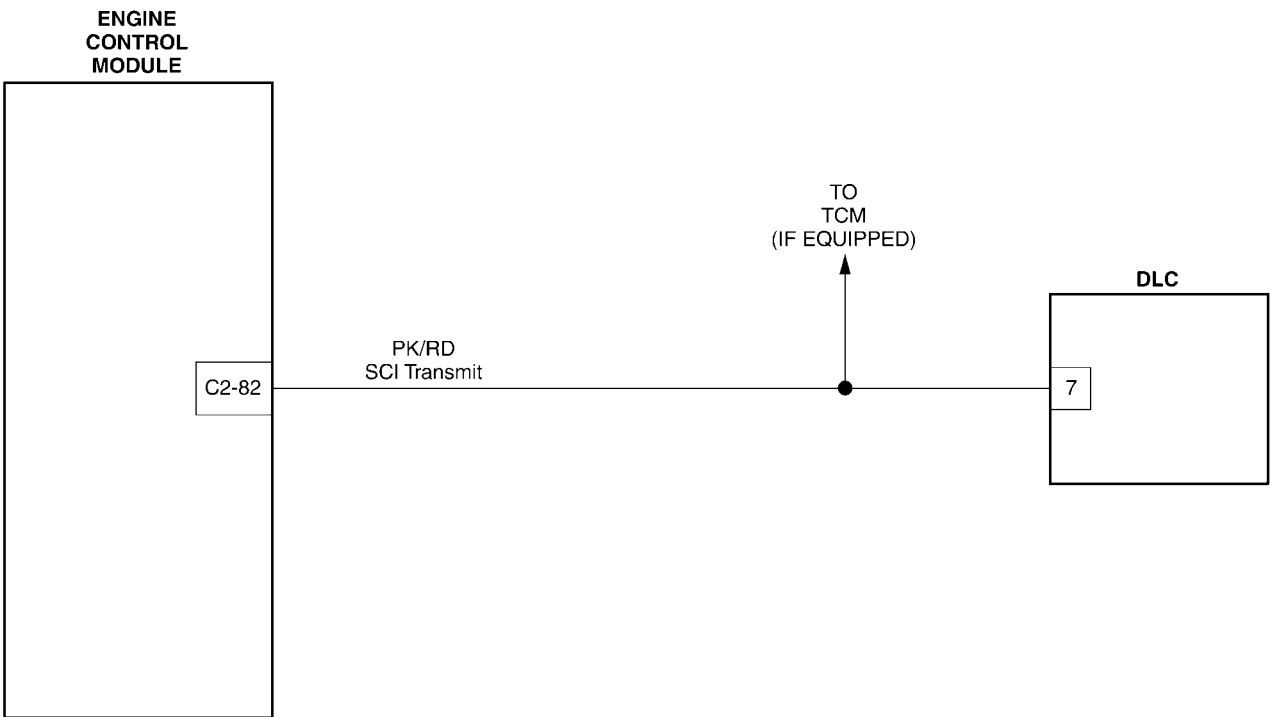


10.4.2 PCM COMMUNICATION — GAS ONLY



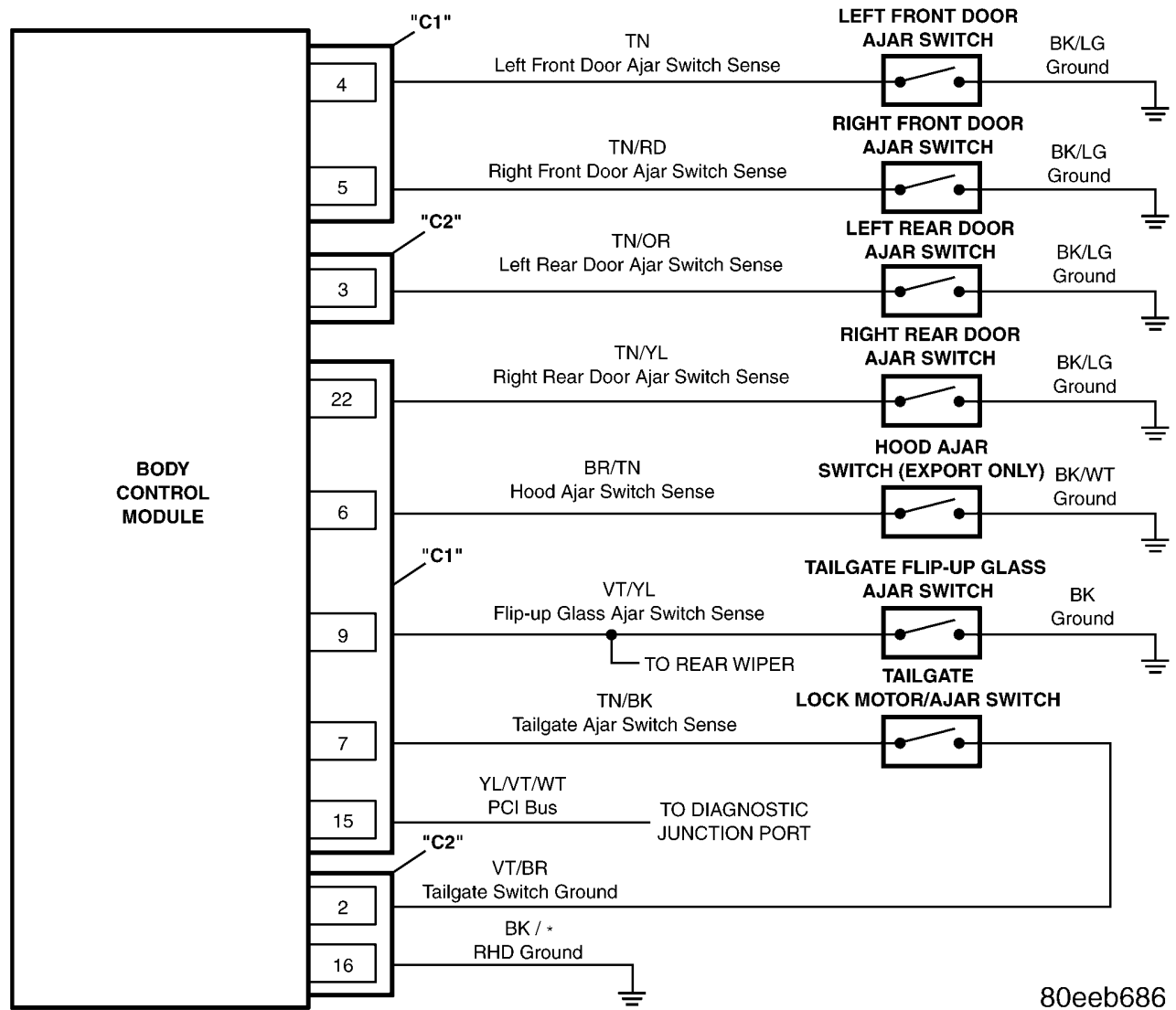
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10.4.3 ECM COMMUNICATION — DIESEL ONLY

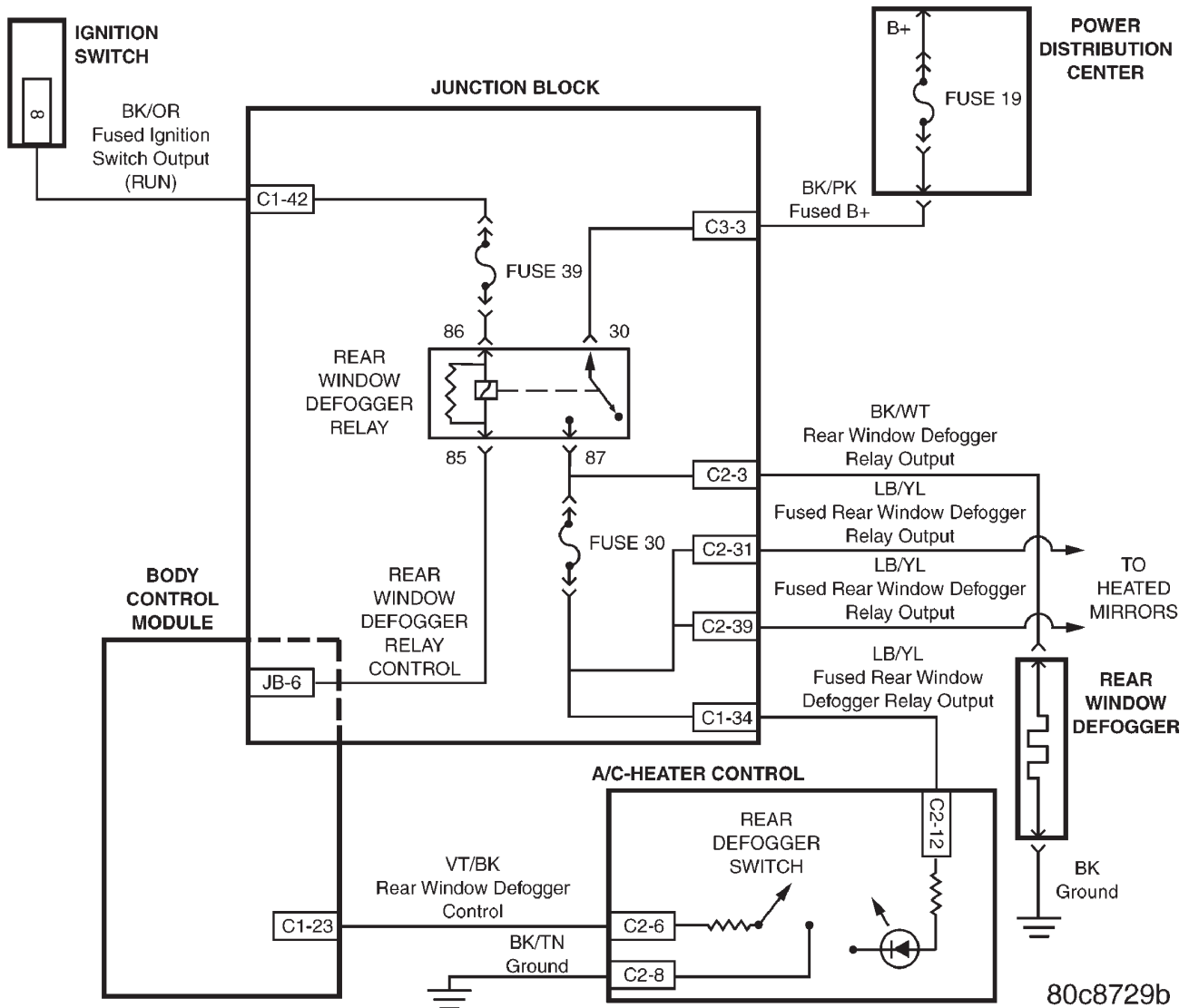


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10.5 DOOR AJAR SYSTEM

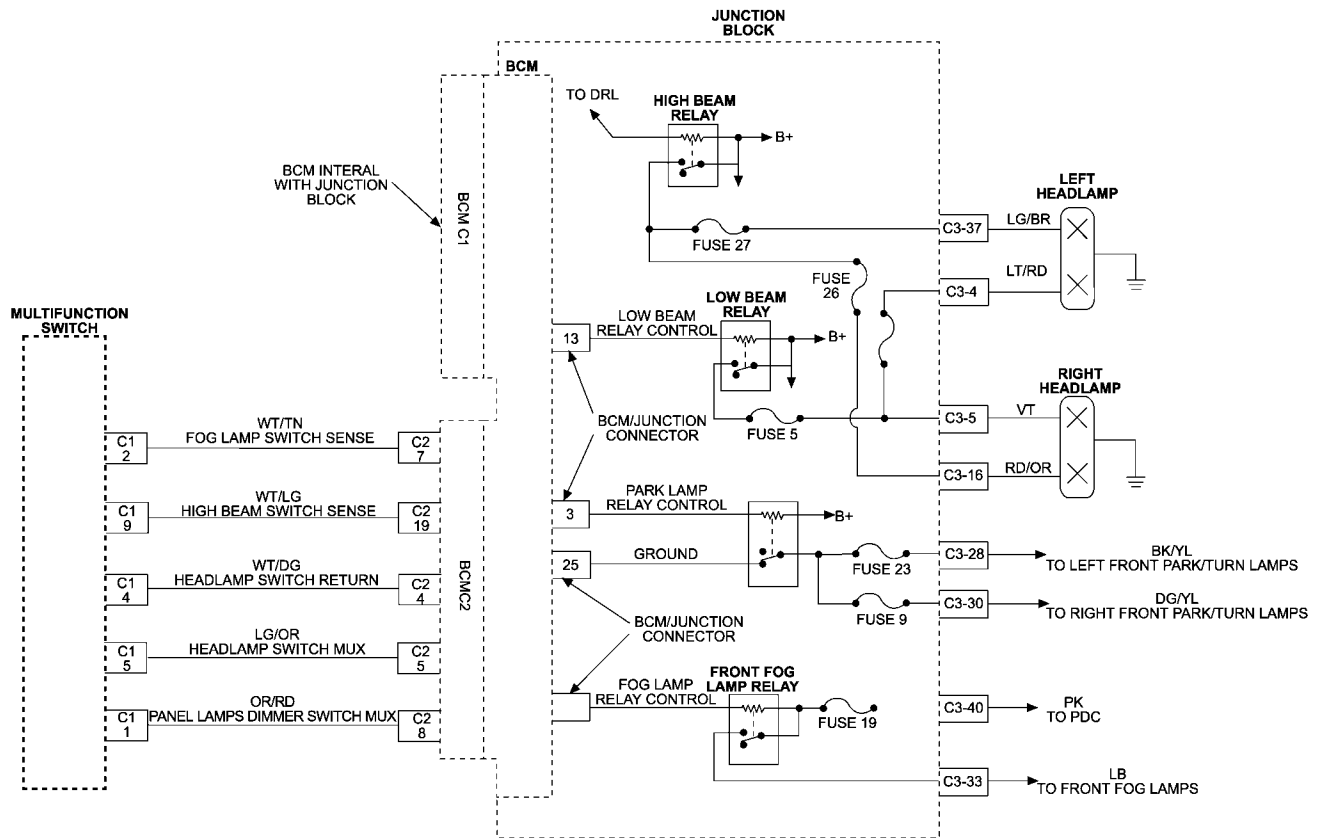


10.6 ELECTRICALLY HEATED SYSTEM



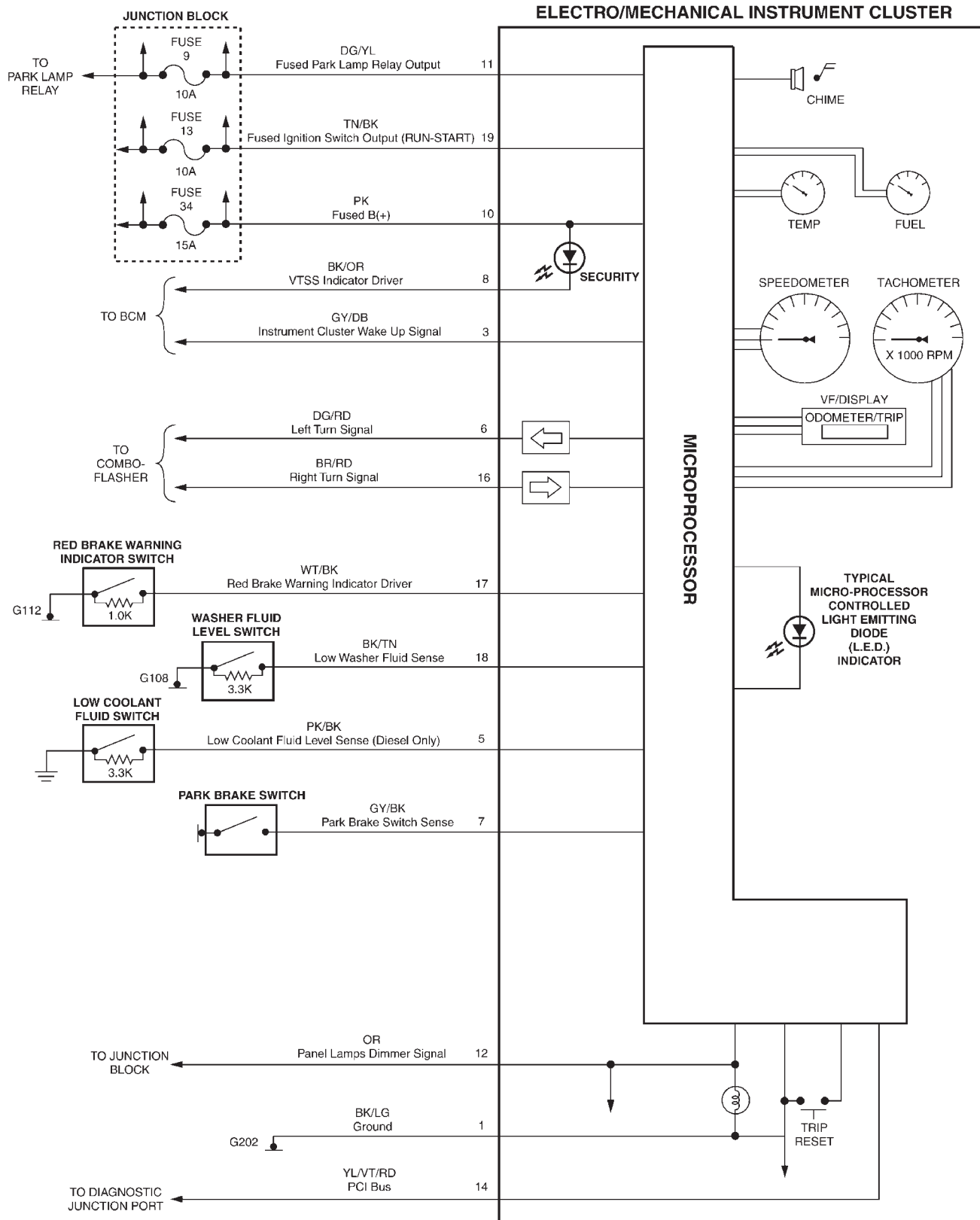
SCHEMATIC DIAGRAMS

10.7 EXTERIOR LIGHTING



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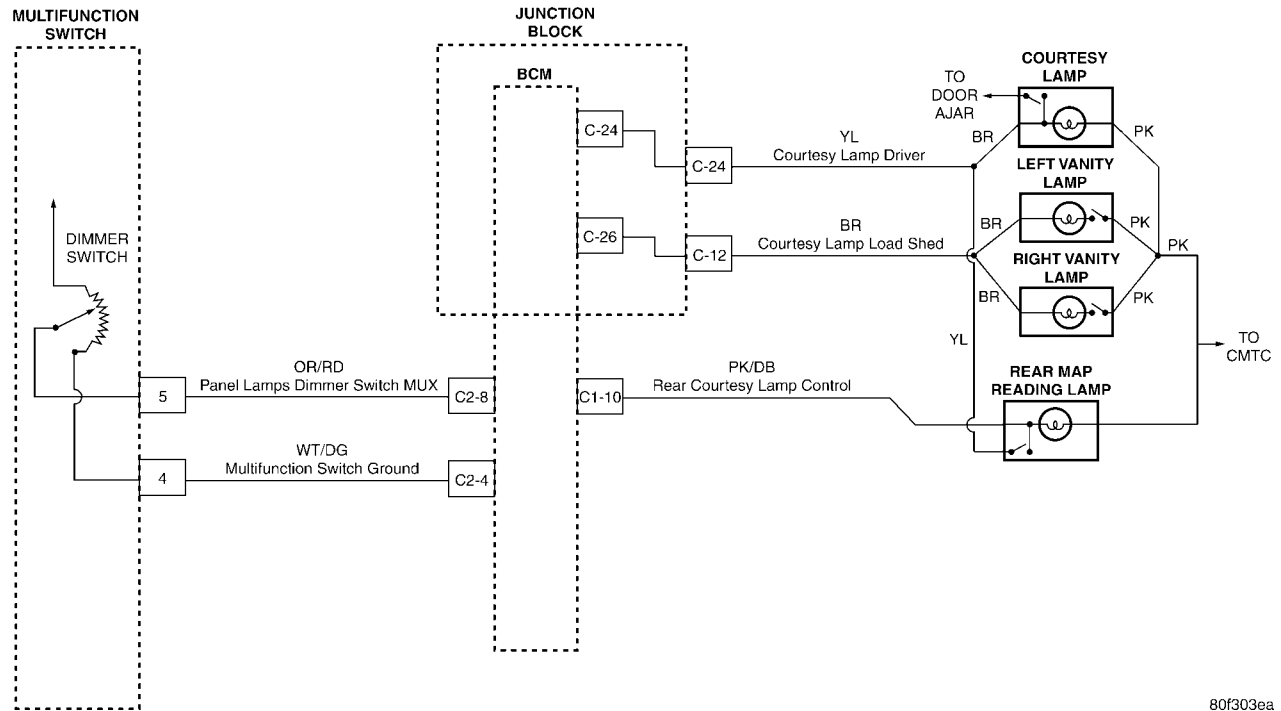
10.8 INSTRUMENT CLUSTER



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SCHEMATIC DIAGRAMS

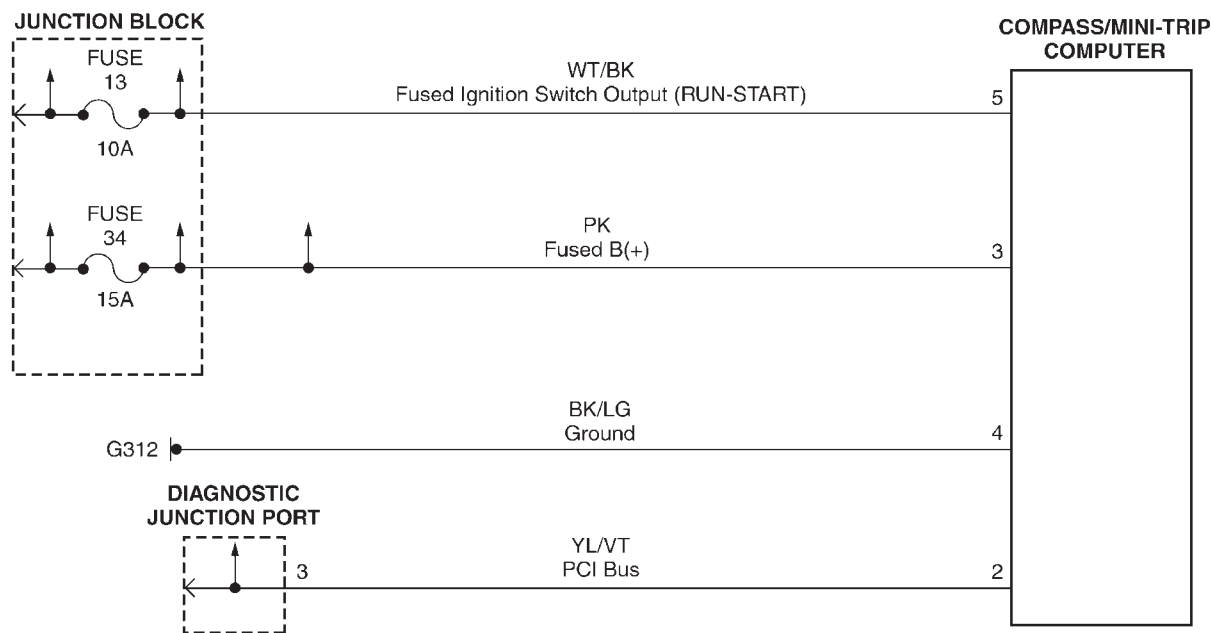
10.9 INTERIOR LIGHTING



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10.10 OVERHEAD CONSOLE

10.10.1 ELECTRONIC VEHICLE INFORMATION CENTER (EVIC)

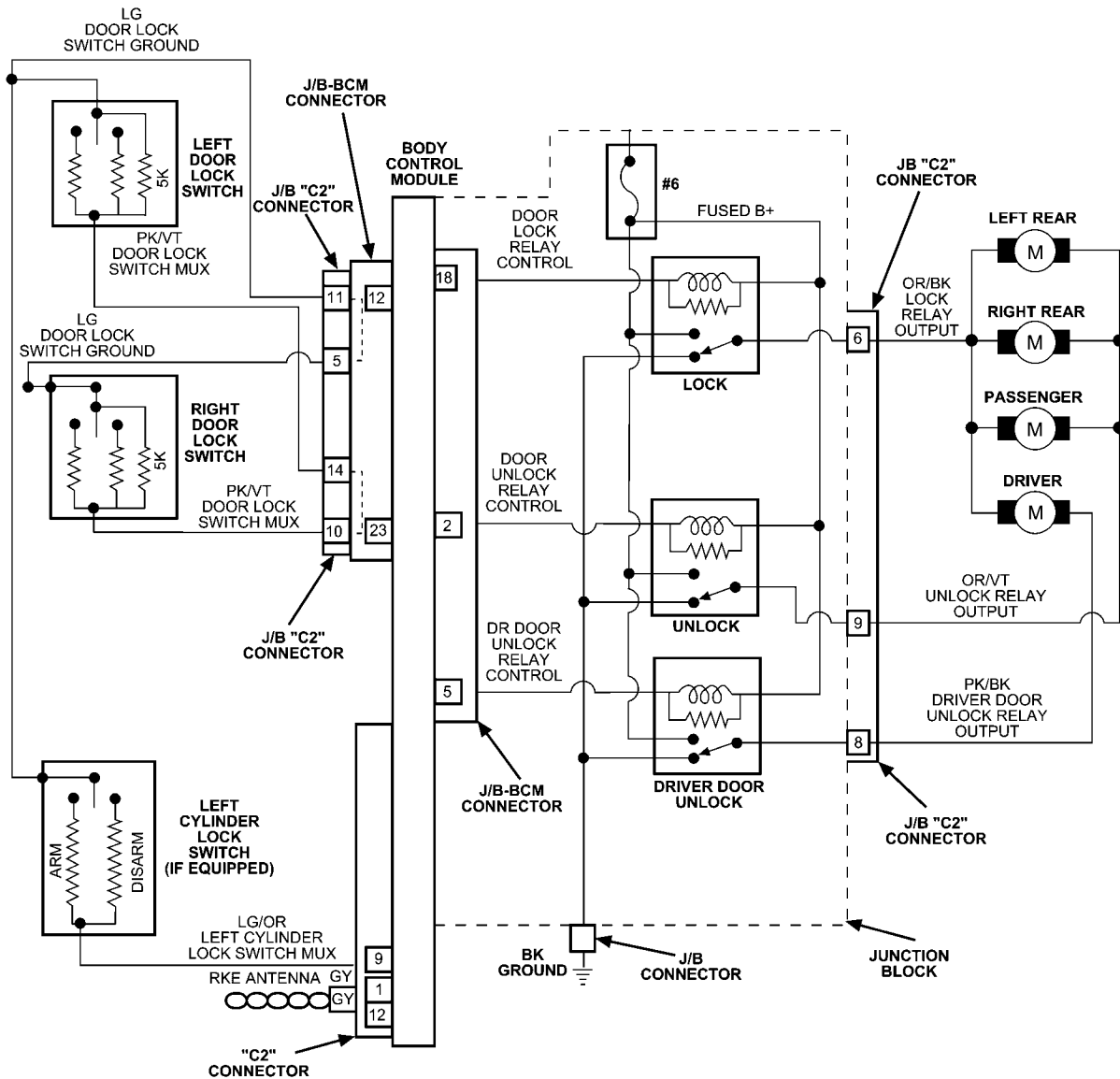


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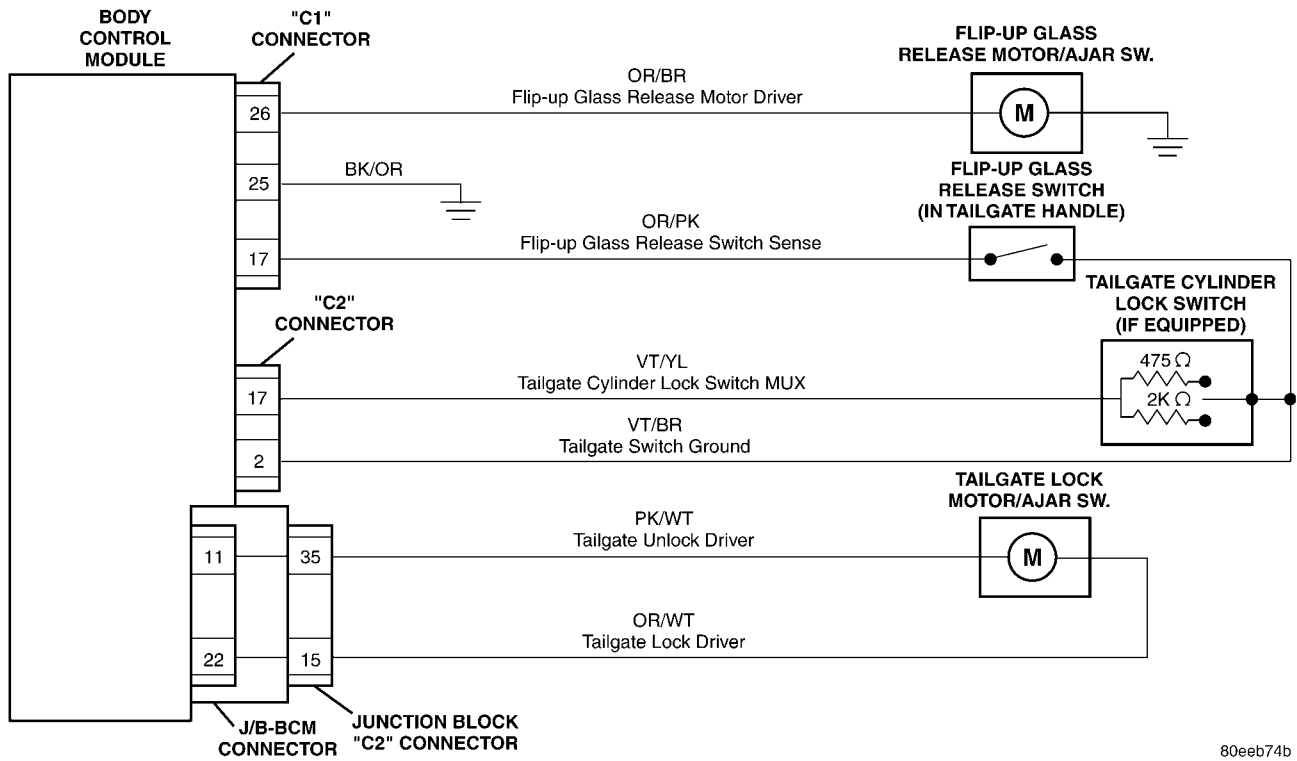
SCHEMATIC DIAGRAMS

10.11 POWER DOOR LOCKS

10.11.1 DOORS



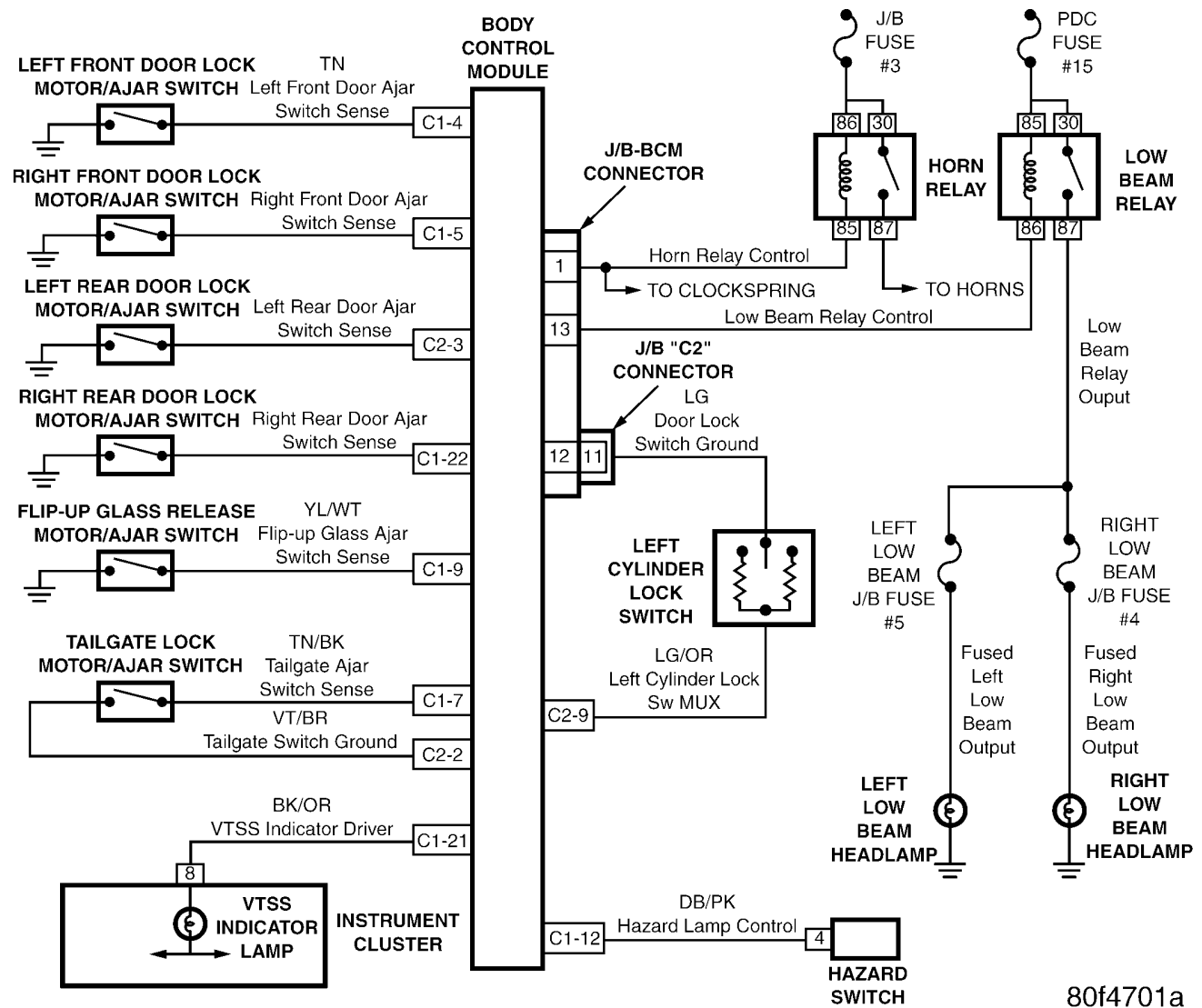
10.11.2 TAILGATE AND FLIP-UP GLASS



SCHEMATIC DIAGRAMS

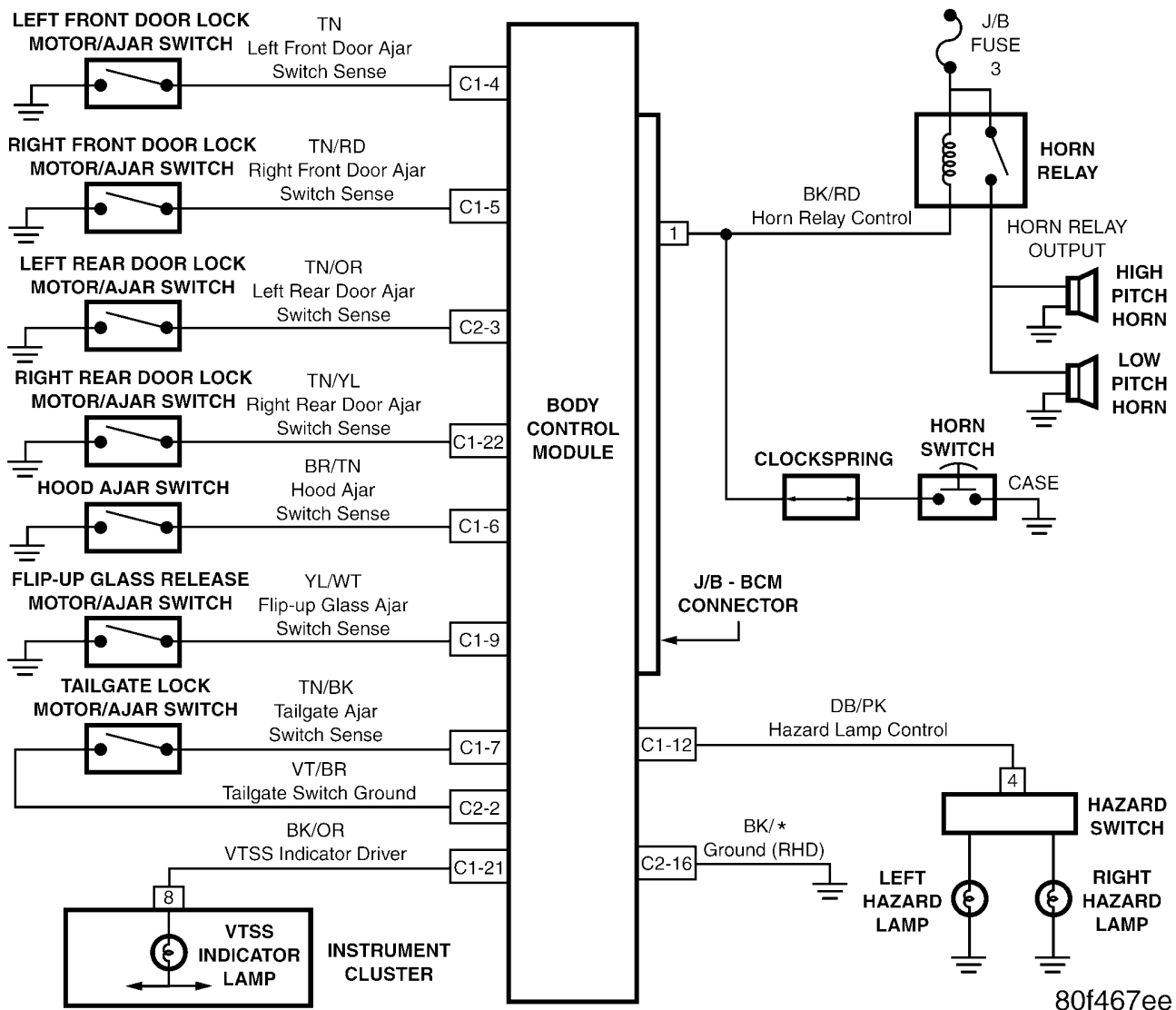
10.12 VEHICLE THEFT SECURITY SYSTEM (VTSS)

10.12.1 VTSS



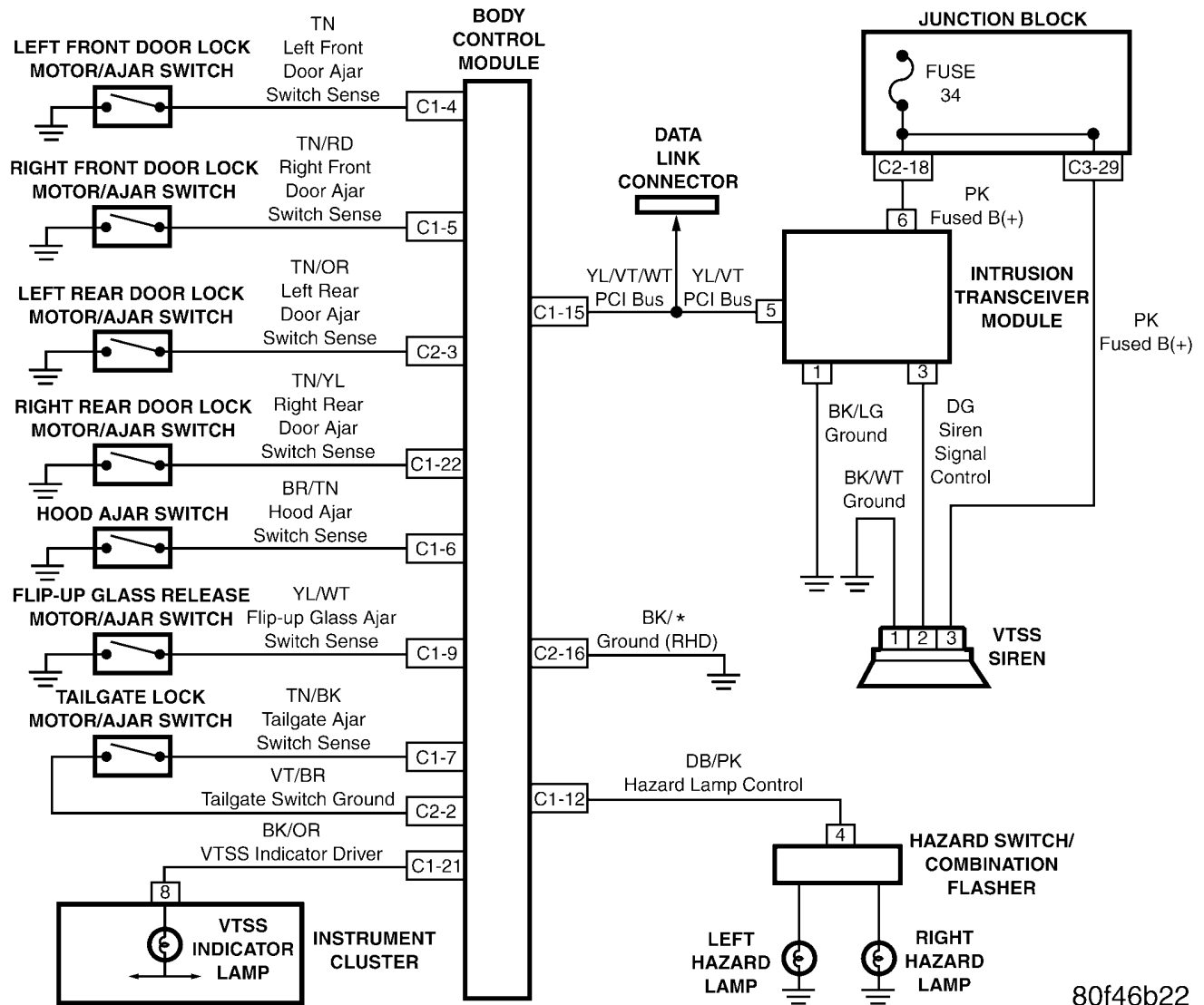
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10.12.2 BASE - VTSS (EXPORT ONLY)



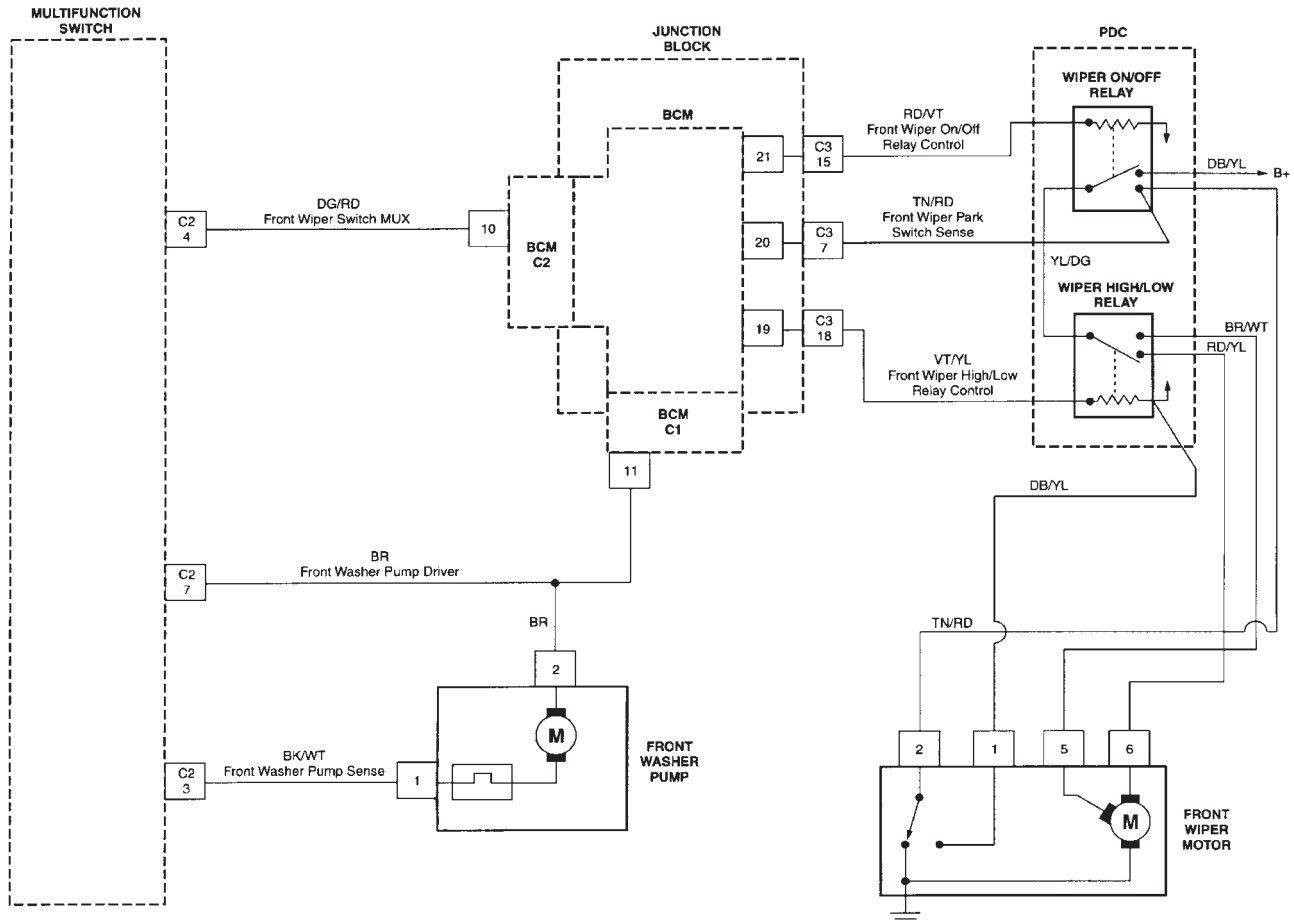
SCHEMATIC DIAGRAMS

10.12.3 PREMIUM - VTSS (EXPORT ONLY)



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10.13 WINDSHIELD WIPERS



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NOTES