TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 SYSTEM COVERAGE 1
1.2 SIX-STEP TROUBLESHOOTING PROCEDURE 1

2.0 IDENTIFICATION OF SYSTEM 1

3.0 SYSTEM DESCRIPTION AND FUNCTIONAL OPERATION 1

3.1 AIRBAG SYSTEM/OCCUPANT RESTRAINT CONTROLLER SYSTEM 2
3.1.1 DRIVER AIRBAG MODULE (DAB) 2
3.1.2 CLOCKSPRING 3
3.1.3 PASSENGER AIRBAG MODULE (PAB) 3
3.1.4 SIDE IMPACT AIRBAG CONTROL MODULES 3
3.1.5 SEAT AIRBAG MODULES 3
3.1.6 SEAT BELT TENSIONER 4
3.1.7 ORC/SIACM DIAGNOSTIC TROUBLE CODES 4
3.1.7.1 ACTIVE CODES 4
3.1.7.2 STORED CODES 4
3.1.7.3 OCCUPANT RESTRAINT SYSTEM TROUBLE CODES 5
3.2 AUDIO SYSTEM 5
3.3 INSTRUMENT CLUSTER 6
3.4 REMOTE KEYLESS ENTRY MODULE 6
3.4.1 VEHICLE THEFT SECURITY SYSTEM 6
3.4.1.1 PANIC MODE (IF EQUIPPED) 7
3.4.2 POWER DOOR LOCKS 7
3.4.2.1 CENTRAL LOCKING 7
3.4.2.2 ROLLING (AUTOMATIC) DOOR LOCKS 7
3.4.2.3 DOOR LOCK INHIBIT 7
3.5 SENTRY KEY IMMOBILIZER SYSTEM (SKIS) 7
3.6 COMMUNICATION 7
3.7 USING THE DRBIII® 9
3.7.1 DRBIII® ERROR MESSAGES AND BLANK SCREEN 9
3.7.2 DRBIII® DOES NOT POWER UP 9
3.7.3 DISPLAY IS NOT VISIBLE 9

4.0 DISCLAIMERS, SAFETY, WARNINGS 9

4.1 DISCLAIMERS 9
4.2 SAFETY 9
4.2.1 TECHNICIAN SAFETY INFORMATION 9
4.2.2 VEHICLE PREPARATION FOR TESTING 9
4.2.3 SERVICING SUB-ASSEMBLIES 10
4.2.4 DRBIII® SAFETY INFORMATION 10
4.3 WARNINGS 10
4.3.1 VEHICLE DAMAGE WARNINGS 10
4.3.2 ROAD TESTING A COMPLAINT VEHICLE 10

5.0 REQUIRED TOOLS AND EQUIPMENT 10

6.0 GLOSSARY OF ACRONYMS 11

7.0 DIAGNOSTIC INFORMATION AND PROCEDURES 13

TABLE OF CONTENTS - Continued

AIRBAG

LEFT SIACM ACCELEROMETER # 1 (ACTIVE) 14
LEFT SIACM ACCELEROMETER # 1 (STORED) 14
LEFT SIACM ACCELEROMETER # 2 (ACTIVE) 14
LEFT SIACM ACCELEROMETER # 2 (STORED) 14
LEFT SIACM INTERNAL #1 (ACTIVE) 14
LEFT SIACM INTERNAL #1 (STORED) 14
LEFT SIACM OUTPUT DRIVER #1 (ACTIVE) 14
LEFT SIACM OUTPUT DRIVER #1 (STORED) 14
LEFT SIACM, LOSS OF IGNITION RUN/START (ACTIVE) 14
LEFT SIACM, NO PCI TRANSMISSION (ACTIVE) 14
LEFT SIACM, NO PCI TRANSMISSION (STORED) 16
LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (STORED) 16
LEFT SIACM, SEAT SQUIB CIRCUIT SHORTED (STORED) 16
LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (STORED) 16
LEFT SIACM, SEAT SQUIB SHORTED TO GROUND (STORED) 16
ORC, INTERROGATE LEFT SIACM (STORED) 16
ORC, NO LEFT SIACM MESSAGE (STORED) 16
LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE) 18
LEFT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE) 21
LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE) 23
LEFT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE) 26
ORC ACCELEROMETER (ACTIVE) 28
ORC ACCELEROMETER (STORED) 28
ORC FIRING STORED ENERGY (ACTIVE) 28
ORC FIRING STORED ENERGY (STORED) 28
ORC INTERNAL #1 (ACTIVE) 28
ORC INTERNAL #1 (STORED) 28
ORC INTERNAL #2 (ACTIVE) 28
ORC INTERNAL #2 (STORED) 28
ORC, NO PCI TRANSMISSION (ACTIVE) 28
ORC, OUTPUT DRIVER #1 (ACTIVE) 28
ORC, OUTPUT DRIVER #1 (STORED) 28
ORC, OUTPUT DRIVER #2 (ACTIVE) 28
ORC, OUTPUT DRIVER #2 (STORED) 28
ORC, CALIBRATION MISMATCH (ACTIVE) 31
ORC, CALIBRATION MISMATCH (STORED) 33
ORC, CLUSTER MESSAGE MISMATCH (STORED) 33
ORC, DRIVER SQUIB #1 CIRCUIT OPEN (STORED) 33
ORC, DRIVER SQUIB #1 CIRCUIT SHORTED (STORED) 33
ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (STORED) 33
ORC, DRIVER SQUIB #1 SHORTED TO GROUND (STORED) 33
ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED STORED 33
ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN (STORED) 33
ORC, LEFT SEAT BELT TENSIONER SHORTED TO BATTERY STORED 33
ORC, LEFT SEAT BELT TENSIONER SHORTED TO GROUND STORED 33
ORC, LOSS OF IGNITION RUN ONLY (STORED) 33
ORC, LOSS OF IGNITION RUN/START (STORED) 33
ORC, NO CLUSTER MESSAGES (STORED) 33
ORC, NO ODOMETER MESSAGE (STORED) 33
ORC, NO PCI TRANSMISSION (STORED) 33
ORC, PASSENGER SQUIB #1 CIRCUIT OPEN (STORED) 33
ORC, PASSENGER SQUIB #1 CIRCUIT SHORTED (STORED) 33

TABLE OF CONTENTS - Continued

ORC, PASSENGER SQUIB #1 SHORTED TO BATTERY (STORED) 33
ORC, PASSENGER SQUIB #1 SHORTED TO GROUND (STORED) 33
ORC, RIGHT SEAT BELT TENSIONER CIRCUIT OPEN STORED. 33
ORC, RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED STORED 33
ORC, RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY STORED 33
ORC, RIGHT SEAT BELT TENSIONER SHORTED TO GROUND STORED 33
ORC, VEHICLE BODY STYLE UNKNOWN (STORED) 33
ORC, WARNING LAMP CIRCUIT OPEN (STORED) 33
ORC, WARNING LAMP CIRCUIT SHORTED (STORED) 33
ORC, CLUSTER MESSAGE MISMATCH (ACTIVE) 39
ORC, DRIVER SQUIB #1 CIRCUIT OPEN (ACTIVE). 41
ORC, DRIVER SQUIB #1 CIRCUIT SHORTED (ACTIVE) 44
ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (ACTIVE) 46
ORC, DRIVER SQUIB #1 SHORTED TO GROUND (ACTIVE) 49
ORC, INTERROGATE LEFT SIACM (ACTIVE) 52
ORC, INTERROGATE RIGHT SIACM (ACTIVE). 53
ORC, INTERROGATE RIGHT SIACM (STORED). 54
ORC, NO RIGHT SIACM MESSAGE (STORED) 54
RIGHT SIACM, NO PCI TRANSMISSION (STORED) 54
RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (STORED). 54
RIGHT SIACM, SEAT SQUIB CIRCUIT SHORTED (STORED) 54
RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (STORED) 54
RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (STORED) 54
ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE 56
ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN (ACTIVE) 58
ORC, LEFT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE 60
ORC, LEFT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE 62
ORC, LOSS OF IGNITION RUN ONLY (ACTIVE) 64
ORC, LOSS OF IGNITION RUN/START W/O SIACM(ACTIVE). 67
ORC, LOSS OF IGNITION RUN/START WITH SIACM (ACTIVE) 70
ORC, NO CLUSTER MESSAGES (ACTIVE) 73
ORC, NO LEFT SIACM MESSAGE (ACTIVE) 75
ORC, NO ODOMETER MESSAGE (ACTIVE). 76
ORC, NO RIGHT SIACM MESSAGE (ACTIVE) 78
ORC, NOT CONFIGURED FOR SAB (ACTIVE) 79
ORC, NOT CONFIGURED FOR SAB (STORED) 81
ORC, PASSENGER SQUIB #1 CIRCUIT OPEN (ACTIVE) 82
ORC, PASSENGER SQUIB #1 CIRCUIT SHORTED (ACTIVE). 84
ORC, PASSENGER SQUIB #1 SHORTED TO BATTERY (ACTIVE). 86
ORC, PASSENGER SQUIB #1 SHORTED TO GROUND (ACTIVE). 88
ORC, RIGHT SEAT BELT TENSIONER CIRCUIT OPEN ACTIVE. 90
ORC, RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE 92
ORC, RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE 94
ORC, RIGHT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE 96
ORC, VEHICLE BODY STYLE UNKNOWN (ACTIVE) 98
ORC, WARNING LAMP CIRCUIT OPEN (ACTIVE) 100
ORC, WARNING LAMP CIRCUIT SHORTED (ACTIVE) 102
RIGHT SIACM ACCELEROMETER #1 (ACTIVE) 104
RIGHT SIACM ACCELEROMETER #1 (STORED) 104
RIGHT SIACM ACCELEROMETER #2 (ACTIVE) 104
RIGHT SIACM ACCELEROMETER #2 (STORED) 104
RIGHT SIACM INTERNAL #1 (ACTIVE) 104
RIGHT SIACM INTERNAL #1 (STORED) 104

RIGHT SIACM OUTPUT DRIVER #1 (ACTIVE) 104
RIGHT SIACM OUTPUT DRIVER #1 (STORED) 104
RIGHT SIACM, LOSS OF IGNITION RUN/START (ACTIVE). 104
RIGHT SIACM, NO PCI TRANSMISSION (ACTIVE) 104
RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE). 106
RIGHT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE) 109
RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE) 111
RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE) 114

AUDIO
ALL OUTPUTS SHORT. 117
CASSETTE FAULTS 120
CASSETTE TAPE TENSION HIGH 120
CASSETTE TAPE TENSION LOW. 120
CD MECHANICAL FAILURE 120
*AM/FM SWITCH INOPERATIVE. 120
*ANY STATION PRESET SWITCH INOPERATIVE. 120
*BALANCE INOPERATIVE 120
*CD EJECT SWITCH INOPERATIVE. 120
*EQUALIZER INOPERATIVE 120
*FADER INOPERATIVE 120
*FF/RW SWITCH INOPERATIVE 120
*HOUR/MINUTE SWITCHES INOPERATIVE 120
*POWER SWITCH INOPERATIVE. 120
*SCAN SWITCH INOPERATIVE 120
*SEEK SWITCH INOPERATIVE. 120
*SET SWITCH INOPERATIVE 120
*TAPE EJECT SWITCH INOPERATIVE. 120
*TAPE/CD SWITCH INOPERATIVE 120
*TIME SWITCH INOPERATIVE 120
*TUNE SWITCH INOPERATIVE. 120
CD PLAY FAILURE 122
CD READ FAILURE 122
CD READ FAILURE/IMPROPER DISK 122
IMPROPER DISC 122
CD TEMPERATURE HIGH 124
CD TEMPERATURE LOW 124
FRONT OUTPUT SHORT. 125
LEFT OUTPUT SHORT 128
NO ANTENNA CONNECTION 131
POWER SUPPLY TOO HIGH. 132
REAR OUTPUT SHORT. 133
RIGHT OUTPUT SHORT 136
*NO SOUND FROM ALL SPEAKERS 139

COMMUNICATION
*BUS +/- SIGNALS OPEN FROM INSTRUMENT CLUSTER. 141
*BUS +/- SIGNALS OPEN FROM RKE 143
*BUS +/- SIGNALS OPEN FROM SKIM 146
*NO RESPONSE FROM CAB 148
*NO RESPONSE FROM LEFT SIACM 150
*NO RESPONSE FROM ORC 153
*NO RESPONSE FROM PCM (PCI BUS). 155

*NO RESPONSE FROM RADIO 157
*NO RESPONSE FROM RIGHT SIACM 160
*NO RESPONSE FROM TCM 163
*PCI BUS COMMUNICATION FAILURE 167

INSTRUMENT CLUSTER
ABS MESSAGES NOT RECEIVED BY MIC 169
ACM MESSAGES NOT RECEIVED BY MIC. 170
EEPROM CHECKSUM FAILURE. 171
FUEL LEVEL SENSOR OPEN 172
FUEL LEVEL SENSOR SHORT. 174
PANEL DIMMER OPEN 176
PANEL DIMMER SHORT 178
SBEC MESSAGES NOT RECEIVED BY MIC. 180
SKIM MESSAGE NOT RECEIVED BY MIC 181
*FOG LAMP INDICATOR INOPERATIVE 182
*GAUGE OR GAUGES NOT OPERATING PROPERLY-INT 183
*LED INDICATOR (EXC. FOG LAMP OR LIFTGATE) FAILS SELF TEST 186
*LIFTGATE INDICATOR INOPERATIVE 187
*LIFTGATE INDICATOR STAYS ON 188
*NO CLUSTER ILLUMINATION 189
*REAR FOG LAMP INDICATOR INOPERATIVE. 190
*RED BRAKE WARNING INDICATOR NOT OPERATING PROPERLY 191
*SEATBELT INDICATOR PROBLEM 195
*VF DISPLAY FAILS SELF TEST. 197

INTERIOR LIGHTING
*COURTESY LAMPS ON AT ALL TIMES 198
*COURTESY LAMPS TOTALLY INOPERATIVE 203
*ILLUMINATED ENTRY INOPERATIVE. 204

POWER DOOR LOCKS/RKE
BODY CODE MISMATCH. 205
NO AIRBAG MESSAGES RECEIVED 206
*ALL DOOR LOCKS INOPERATIVE 207
*ALL DOORS (EXC DRIVER) FAIL TO LOCK & UNLOCK. 211
*ALL DOORS (EXCEPT DRIVER) FAIL TO LOCK 213
*ALL DOORS (EXCEPT DRIVER) FAIL TO UNLOCK 214
*ALL LOCKS INOPERATIVE FROM DRIVER CYLINDER LOCK SWITCH. 215
*ALL LOCKS INOPERATIVE FROM DRIVER DOOR LOCK SWITCH 216
*ALL LOCKS INOPERATIVE FROM PASSENGER CYLINDER LOCK SWITCH 218
*ALL LOCKS INOPERATIVE FROM PASSENGER DOOR LOCK SWITCH 219
*AUTOMATIC DOOR LOCKS INOPERATIVE 221
*DOORS LOCKABLE WITH KEY IN IGN & DRIVER DOOR OPEN 222
*DRIVER DOOR FAILS TO LOCK 224
*DRIVER DOOR FAILS TO LOCK & UNLOCK 225
*DRIVER DOOR FAILS TO UNLOCK 227
*LEFT REAR DOOR FAILS TO LOCK & UNLOCK. 228
*LIFTGATE FAILS TO LOCK OR UNLOCK. 229
*PASSENGER DOOR FAILS TO LOCK & UNLOCK 230
*RIGHT REAR DOOR FAILS TO LOCK & UNLOCK 231
*RKE TRANSMITTER INOPERATIVE 232

VEHICLE THEFT/SECURITY
HOOD AJAR SWITCH MISSING 233
P/N MISMATCH. 235
VTSS PREVIOUSLY ENABLED 236
*HEADLAMPS FAIL TO FLASH DURING ALARM 237
*HORN FAILS TO SOUND DURING ALARM 238
*INTRUSION SENSOR CANNOT BE DISABLED. 239
*INTRUSION SENSOR FAILS TO TRIP VTSS 240
*INTRUSION SENSOR REPEATEDLY TRIGGERS VTSS 242
*OPEN DRIVER DOOR FAILS TO TRIP ALARM 243
*OPEN LIFTGATE FAILS TO TRIP ALARM. 244
*OPEN PASSENGER DOOR FAILS TO TRIP ALARM 245
*PARK LAMPS FAIL TO FLASH DURING ALARM 247
*VTSS FAILS TO ARM FROM DRIVER CYLINDER LOCK SWITCH 248
*VTSS FAILS TO ARM FROM LIFTGATE CYLINDER LOCK SWITCH. 249
*VTSS FAILS TO ARM FROM PASSENGER CYLINDER LOCK SWITCH 251
*VTSS INDICATOR FAILS TO FLASH. 252
*VTSS INDICATOR STAYS ON STEADY DURING ARMING. 253
*VTSS SIREN INOPERATIVE 254

VERIFICATION TESTS
VERIFICATION TESTS. 256

8.0 COMPONENT LOCATIONS 261

8.1 AIRBAG SYSTEM 261
8.1.1 FUSE BLOCK 261
8.1.2 DATA LINK CONNECTOR (DLC) 261
8.1.3 OCCUPANT RESTRAINT CONTROLLER (ORC) 261
8.1.4 DRIVER AND PASSENGER AIRBAG MODULES. 262
8.1.5 SEAT BELT PRETENSIONER 262
8.1.6 SIDE IMPACT AIRBAG CONTROL MODULES. 262

8.2 COMMUNICATION 263
8.2.1 POWER DISTRIBUTION CENTER (PDC). 263
8.2.2 CONTROLLER ANTILOCK BRAKE (CAB) 263
8.2.3 OCCUPANT RESTRAINT CONTROLLER (ORC) 263
8.2.4 POWERTRAIN CONTROL MODULE (PCM). 264
8.2.5 REMOTE KEYLESS ENTRY MODULE 264
8.2.6 SENTRY KEY IMMOBILIZER 264
8.2.7 TRANSMISSION CONTROL MODULE 265
8.3 INSTRUMENT CLUSTER 265
8.3.1 120 MPH U.S. 265
8.3.2 240 KM/H CANADA 266
8.3.3 140 MPH UNITED KINGDOM 266
8.3.4 240 KM/H BUX 267
8.3.5 240 KM/H AUS/JAPAN 267
8.3.6 SEATBELT SWITCH 268
8.3.7 FUEL LEVEL SENSOR. 268
8.4 POWER DOOR LOCKS/RKE 268
8.4.1 REMOTE KEYLESS ENTRY MODULE 268
8.4.2 DOOR LOCK MOTOR 269
8.4.3 LIFTGATE LOCK MOTOR 269

8.5 VEHICLE THEFT SECURITY SYSTEM. 269
8.5.1 REMOTE KEYLESS ENTRY MODULE 269
8.5.2 HOOD AJAR SWITCH 270
8.5.3 SIREN 270
8.5.4 INTRUSION SENSOR. 270

9.0 CONNECTOR PINOUTS 271

BRAKE WARNING INDICATOR SWITCH - BLACK 2 WAY 271
CLOCKSPRING - 7 WAY 271
CONTROLLER ANTI-LOCK BRAKE - 25 WAY 271
DATA LINK CONNECTOR - BLACK 16 WAY 272
DOME LAMP/INTRUSION SENSOR (BUILT-UP-EXPORT) - 4 WAY 272
DRIVER AIRBAG MODULE 272
DRIVER CYLINDER LOCK SWITCH - 2 WAY 272
DRIVER DOOR LOCK MOTOR - 4 WAY 273
DRIVER DOOR LOCK SWITCH - 3 WAY 273
DRIVER SEAT BELT SWITCH - BLACK 2 WAY 273
ENGINE COOLANT TEMPERATURE SENSOR - 2 WAY 273
ENGINE OIL PRESSURE SWITCH - LIGHT GREEN 2 WAY 274
FUEL PUMP MODULE - LT. GRAY 4 WAY 274
FUSES 276
CIRCUIT BREAKERS 276
HEADLAMP RELAY (LHD) 276
HEADLAMP RELAY (RHD). 278
HIGH NOTE HORN - BLACK 2 WAY. 278
HOOD AJAR SWITCH - 2 WAY 278
IGNITION SWITCH - 10 WAY 278
INSTRUMENT CLUSTER C1 - BLACK 26 WAY 279
INSTRUMENT CLUSTER C2 - 10 WAY 279
LEFT FRONT DOOR SPEAKER - BLACK 2 WAY 279
LEFT INSTRUMENT PANEL SPEAKER - BLACK 2 WAY 280
LEFT REAR DOOR LOCK MOTOR - BLACK 3 WAY. 280
LEFT REAR FOG LAMP (BUILT-UP-EXPORT) - GRAY 2 WAY. 280
LEFT REAR SPEAKER - BLACK 2 WAY 280
LEFT SEAT AIRBAG - 2 WAY 281
LEFT SEAT BELT TENSIONER - YELLOW 2 WAY 281
LEFT SIDE IMPACT AIRBAG CONTROL MODULE (FULL OPTIONS) - 6 WAY 281
LIFTGATE AJAR SWITCH - BLACK 2 WAY 281
LIFTGATE CYLINDER LOCK SWITCH - LT. GRAY 2 WAY 282
LIFTGATE LOCK MOTOR - BLACK 4 WAY 282
LOW NOTE HORN - BLACK 2 WAY 282
MULTI-FUNCTION SWITCH - GRAY 20 WAY. 283
OCCUPANT RESTRAINT CONTROLLER - YELLOW 23 WAY 283
PASSENGER AIRBAG - YELLOW 4 WAY. 284
PASSENGER CYLINDER LOCK SWITCH - 2 WAY 284
PASSENGER DOOR LOCK MOTOR - BLACK 4 WAY 284
PASSENGER DOOR LOCK SWITCH - BLACK 3 WAY 284
PASSENGER SEAT BELT SWITCH (BUILT-UP-EXPORT) - BLACK 2 WAY 285
FUSES 287
A/C COMPRESSOR CLUTCH RELAY. 287
AUTOMATIC SHUT DOWN RELAY 287
ENGINE STARTER MOTOR RELAY 287

FUEL PUMP RELAY 288
HIGH SPEED RADIATOR FAN RELAY 288
HORN RELAY 288
LOW SPEED RADIATOR FAN RELAY 288
TRANSMISSION CONTROL RELAY 288
POWERTRAIN CONTROL MODULE C1 - BLACK 40 WAY. 289
POWERTRAIN CONTROL MODULE C2 - GRAY 40 WAY. 290
RADIO C1 - GRAY 7 WAY 290
RADIO C2 - BLACK 7 WAY 291
RADIO C3 - 2 WAY. 291
REMOTE KEYLESS ENTRY MODULE - 26 WAY 291
RIGHT FRONT DOOR SPEAKER - BLACK 2 WAY 292
RIGHT INSTRUMENT PANEL SPEAKER - BLACK 2 WAY 292
RIGHT REAR DOOR LOCK MOTOR - BLACK 3 WAY 292
RIGHT REAR FOG LAMP (BUILT-UP-EXPORT) - GRAY 2 WAY 292
RIGHT REAR SPEAKER - BLACK 2 WAY 293
RIGHT SEAT AIRBAG (FULL OPTIONS) - 2 WAY 293
RIGHT SEAT BELT TENSIONER - YELLOW 2 WAY 293
RIGHT SIDE IMPACT AIRBAG CONTROL MODULE (FULL OPTIONS)
- BLACK 6 WAY. 293
SENTRY KEY IMMOBILIZER MODULE - BLACK 6 WAY 294
SIREN (BUILT-UP-EXPORT) - BLACK 4 WAY 294
THROTTLE POSITION SENSOR - 3 WAY 294
TRACTION CONTROL SWITCH - 4 WAY. 294
TRANSMISSION CONTROL MODULE - BLACK 60 WAY 295

10.0 SCHEMATIC DIAGRAMS. 297

10.1 AIRBAG SYSTEM 297
10.1.1 WITH SIACM 297
10.1.2 WITHOUT SIACM 298
10.2 AUDIO 299
10.3 COMMUNICATION 300
10.4 INSTRUMENT CLUSTER. 301
10.5 POWER DOOR LOCKS 302
10.6 SENTRY KEY IMMOBILIZER SYSTEM. 302
10.7 VEHICLE THEFT SECURITY SYSTEM. 303

1.0 INTRODUCTION

The procedures contained in this manual include all the specifications, instructions and graphics needed to diagnose 2001 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" or "Bus +/- signal open" condition, you must diagnose that first.
2. Read DTC's (diagnostic trouble codes) with the DRBIII®.
3. If no DTC's are present, identify the customer complaint.
4. Once the DTC or customer complaint is identified, locate the matching test in the Table of Contents and begin to diagnose the symptom.

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

An * placed before the symptom description 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 the 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 procedures manual covers all 2001 PT CRUISER VEHICLES.

This diagnostic procedure manual also covers both left hand drive (LHD) and right hand drive (RHD) vehicles. There may be some slight differences in the location views of components. If the location views shown are on a LHD vehicle, a RHD vehicle will be symmetrically opposite.

1.2 SIX-STEP TROUBLESHOOTING PROCEDURE

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

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

2.0 IDENTIFICATION OF SYSTEM

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

- Airbag
- Audio
- Communication
- DRB III® Problems
- Instrument Cluster
- Power Door Lock/RKE
- Vehicle theft security system (VTSS)

3.0 SYSTEM DESCRIPTION AND FUNCTIONAL OPERATION

The body system on the 2001 PT consists of a combination of modules that communicate over the PCI bus (Programmable Communication Interface multiplex system). Through the PCI bus, information about the operation of vehicle components and circuits is relayed quickly to the appropriate module(s). All modules receive all the information transmitted on the bus even though a module may not require all information to perform it's function. It will only respond to messages "addressed" to it through a binary coding process. This method of data transmission significantly reduces the complexity of the wiring in the vehicle and the size of wiring harnesses. All of the information about the functioning of all the systems is organized, controlled, and communicated by the PCI bus, which is described in The Vehicle Communication Section of this general information.

3.1 AIRBAG SYSTEM/OCCUPANT RESTRAINT CONTROLLER SYSTEM

The Airbag System is equipped with a new type of Airbag Control Module (ACM) called an Occupant Restraint Controller (ORC). The ORC is secured to a bracket on the floor panel transmission tunnel below the instrument panel inside the vehicle. The ORC mounting bracket also serves as the instrument panel center support. The ORC contains a microprocessor, the impact sensor, and energy storage capacitors. The microprocessor contains the airbag system logic. The airbag system logic includes On-Board Diagnostics OBD capability, and communicates with the instrument cluster circuitry on the Programmable Communication Interface (PCI) data bus to control the airbag indicator lamp. The microprocessor in the ORC monitors the impact sensor signal and the airbag system electrical circuits to determine the system readiness. If the ORC detects a monitored system fault, it sends messages to the Mechanical Instrument Cluster (MIC) over the PCI data bus to turn on the airbag warning lamp. A pre-programmed decision algorithm in the ORC microprocessor determines when the deceleration rate is severe enough to require airbag system protection. When the programmed conditions are met, the ORC sends an electrical signal to deploy the airbag system components. The impact sensor is an accelerometer that senses the rate of vehicle deceleration, which provides verification of the direction and severity of an impact. The impact sensor is calibrated for the specific vehicle, and is only serviced as a unit with the ORC. The ORC also contains an energy-storage capacitor. This capacitor stores enough electrical energy to deploy the airbags, for two minutes following a battery disconnect or failure during an impact. The purpose of the capacitor is to provide airbag system protection in severe secondary impact if the initial impact has damaged or disconnected the battery, but not severe enough to deploy the airbags. The ORC cannot be repaired or adjusted and, if damaged or faulty, it must be replaced.

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 OCCUPANT RESTRAINT CONTROLLER IS ACCIDENTALLY DROPPED DURING SERVICE, THE MODULE MUST BE SCRAPPED AND REPLACED WITH A NEW UNIT.

The airbag warning lamp 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 MIC performs a lamp check by turning the AIRBAG warning lamp on for 6-8 seconds. If the lamp remains off, it means that the ORC has checked the system and found it to be free of discernible malfunctions. If the lamp remains on, there could be an active fault in the ORC system or the MIC lamp circuit may be internally shorted to ground.

3.1.1 DRIVER AIRBAG MODULE (DAB)

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

THE AIRBAG MODULE INFLATOR ASSEMBLY CONTAINS SODIUM AZIDE AND POTASSIUM NITRATE. THESE MATERIALS ARE POISONOUS AND EXTREMELY FLAMMABLE. CONTACT WITH ACID, WATER, OR HEAVY METALS MAY PRODUCE HARMFUL AND IRRITATING GASES (SODIUM HYDROXIDE IS FORMED IN THE PRESENCE OF MOISTURE) OR COMBUSTIBLE COMPOUNDS. DO NOT PUNCTURE, INCINERATE, OR BRING INTO CONTACT WITH ELEC-

TRICITY. DO NOT STORE AT TEMPERATURE EXCEEDING 93°C (200°F).

3.1.2 CLOCKSPRING

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

3.1.3 PASSENGER AIRBAG MODULE (PAB)

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

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

3.1.4 SIDE IMPACT AIRBAG CONTROL MODULES

The SIACM perform self diagnostics and circuit tests to determine if the system is functioning properly. If the test find a problem the SIACM will set both active and stored diagnostic trouble codes. If a DTC is active the SIACM will request that the airbag warning lamp be turned on. The results of the system test are transmitted on the PCI Bus to the ORC once each second or on change in lamp state. If the warning lamp status message from the either SIACM contains a lamp on request the ORC will set an active DTC. At the same time as the DTC is set the ORC sends a PCI Bus message to the mechanical instrument cluster (MIC) requesting the airbag warning lamp be turned on. Observe all ORC warning and caution statements when servicing or handling the SIACM. SIACM are not repairable and must be replaced if they are dropped.

3.1.5 SEAT AIRBAG MODULES

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

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

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

3.1.6 SEAT BELT TENSIONER

Front seat belt systems incorporate Tensioner Modules. At the onset of an impact event each tensioner uses a pyrotechnic device, which is triggered simultaneously with the airbags, to rapidly retract the seat belts. With the slack removed, the occupant's forward motion in an impact will be reduced as will the likelihood of contacting interior components. After an impact that deploys the airbag, the seat belt tensioner assembly must be replaced.

The ORC module monitors the Seat Belt Tensioners circuit resistance and reports active and stored DTC's if any problem is found. Follow all of the safety procedures described.

3.1.7 ORC/SIACM DIAGNOSTIC TROUBLE CODES

Airbag diagnostic trouble codes consist of active and stored codes. If more than one code exists, diagnostic priority should be given to the active codes.

Each diagnostic trouble code is diagnosed by following a specific testing procedure. The diagnostic test procedures contain step-by-step instructions for determining the cause of the trouble codes. It is not necessary to perform all of the tests in this book to diagnose an individual code.

Active diagnostic trouble codes for the airbag system are not permanent and will change the moment the reason for the code is corrected. In certain test procedures within this manual, diagnostic trouble codes are used as a diagnostic tool.

3.1.7.1 ACTIVE CODES

The code becomes active as soon as the malfunction is detected or key-off, whichever occurs first. An active trouble code indicates an on-going malfunction. This means that the malfunction is currently there every time the control module checks that circuit/function. It is impossible to erase an active code; active codes automatically erase by themselves when the reason for the code has been corrected.

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.

An "Interrogate Right SIACM or Interrogate left SIACM" diagnostic trouble code indicates an active trouble code in the respective module.

3.1.7.2 STORED CODES

Airbag codes are automatically stored in the ORC's memory as soon as the malfunction is detected. A "stored" code indicates there was an active code present at some time. However, the code currently may not be present as an active code, although another active code could be.

When a trouble code occurs, the airbag warning lamp illuminates for 12 seconds minimum (even if the problem existed for less than 12 seconds). The code is stored, along with the time in minutes it was active, and the number of times the ignition has been cycled since the problem was last detected. The minimum time shown for any code will be one minute, even if the code was actually present for less than one minute. Thus, the time shown for a code that was present for two minutes 13 seconds, for example, would be three minutes.

If a malfunction is detected a diagnostic trouble code is stored and will remain stored as long as the malfunction exists. When and if the malfunction ceases to exist, an ignition cycle count will be initiated for that code. If the ignition cycle count reaches 100 without a reoccurrence of the same malfunction, the diagnostic trouble code is erased and that ignition cycle counter is reset to zero. If the malfunction reoccurs before the count reaches 100, then the ignition cycle counter will be reset and the diagnostic trouble code will continue to be a stored code.

If a malfunction is not active while performing a diagnostic test 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.

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.

3.1.7.3 OCCUPANT RESTRAINT SYSTEM TROUBLE CODES

The Occupant Restraint System contains three modules, ORC, Left SIACM and Right SIACM (If equipped with SIACM) that store active and stored DTC's. Some DTC's will require replacing the implicated module. Other DTC's will require some Diagnostic procedures to determine defective components.

For these codes, replace the implicated module.

OCCUPANT RESTRAINT CONTROLLER:
ORC Accelerometer
ORC Firing Stored Energy
ORC Internal #1
ORC Internal #2
ORC Output Driver #1
ORC Output Driver #2

LEFT SIDE IMPACT AIRBAG CONTROL MODULE:
Left SIACM Accelerometer #1
Left SIACM Accelerometer #2
Left SIACM Internal #1
Left SIACM Output Driver #1

RIGHT SIDE IMPACT AIRBAG CONTROL MODULE:
Right SIACM Acclerometer #1
Right SIACM Accelerometer #2
Right SIACM Internal #1
Right SIACM Output Driver #1

For these codes, refer to the table of contents procedure:

ORC, Calibration Mismatch
ORC, Cluster Message Mismatch
ORC, Driver Squib #1 Circuit Open
ORC, Driver Squib #1 Circuit Shorted
ORC, Driver Squib #1 Circuit Shorted To Battery
ORC, Driver Squib #1 Circuit Shorted To Ground
ORC, Loss of Ignition Run Only
ORC, Loss of Ignition Run/Start
ORC, Loss of Ignition Run/Start w/SIACM
ORC, No Cluster Messages
ORC, No Odometer Messages
ORC, No PCI Communication
ORC, Passenger Squib #1 Circuit Open
ORC, Passenger Squib #1 Circuit Shorted
ORC, Passenger Squib #1 Circuit Shorted To Battery
ORC, Passenger Squib #1 Circuit Shorted to Ground
ORC, Vehicle Body Style Unknown
ORC, Warning Lamp open
ORC, Warning Lamp shorted
ORC, Interrogate Left SIACM
ORC, Interrogate Right SIACM
ORC, No Left SIACM Message
ORC, No Right SIACM Message
ORC, Not Configured For SAB
ORC, Left Seat Belt Tensioner Circuit Open
ORC, Left Seat Belt Tensioner Circuit Shorted
ORC, Left Seat Belt Tensioner Shorted to Battery
ORC, Left Seat Belt Tensioner Shorted to Ground
ORC, Right Seat Belt Tensioner Circuit Open
ORC, Right Seat Belt Tensioner Circuit Shorted
ORC, Right Seat Belt Tensioner Shorted to Battery
ORC, Right Seat Belt Tensioner Shorted to Ground

LEFT SIDE IMPACT AIRBAG CONTROL MODULE:
Left SIACM, Loss of Ignition Run/Start
Left SIACM, No PCI Transmission
Left SIACM, Seat Squib Circuit Open
Left SIACM, Seat Squib Circuit Shorted
Left SIACM, Seat Squib Shorted to Battery
Left SIACM, Seat Squib Shorted to Ground

RIGHT SIDE IMPACT AIRBAG CONTROL MODULE:
Right SIACM, Loss of Ignition Run/Start
Right SIACM, No PCI Transmission
Right SIACM, Seat Squib Circuit Open
Right SIACM, Seat Squib Circuit Shorted
Right SIACM, Seat Squib Shorted to Battery
Right SIACM, Seat Squib Shorted to Ground

3.2 AUDIO SYSTEM

There are six radio systems available that will be on the PCI Bus. They are the RBB, RAZ, RBK (late introduction), RAD, RBY and RBT. The RBB, RAZ and RBK are for the US market and the RAD, RBY and RBT are for export or BUX. Each radio system comes equipped with a standard premium 6 speaker system. The speakers are located in the instrument panel, the front doors and the rear "D" pillars. The instrument panel speakers are a tweeter type speaker for high frequency. The front door speakers are a woofer/midrange type speaker. The rear "D" pillar speakers are a full range type speaker. Depending on the manufacture some systems will have a Front/Rear channel system and others will have a Left/Right channel system. If one of the speaker circuits experiences a short, the

other speakers on that channel will also shut down until the circuit is repaired. The radio will also set a trouble code, which the DRBIII® can display, indicating which channel is effected.

3.3 INSTRUMENT CLUSTER

The instrument cluster for the PT body is referred to as an "Electro-Mechanical Instrument Cluster" (EMIC). Some of the features are that it controls all the gauges, the courtesy lamps, it receives and sends messages to other modules via the PCI bus circuit, it controls all the instrument illumination and the chime is also an integral part of the cluster. The front turn signals are wired through the cluster and then go to the front lamps. The reason being that the DRL module is built into the cluster if the cluster is so equipped.

One button is used to switch the display from trip to total mileage. Holding the button when the display is in the trip mode will reset the trip mileage. This button is also used to put the cluster if self diagnostic mode. To put in self diagnostic mode, press the button down and turn the ignition to the run position. The gauges will increment to selected stops and all bus operated indicators will light. All indicators are LED's and are not replaceable, with the exception of the high beam indicator which is a bulb. The gauges are also not individually replaceable thereby requiring complete replacement of the cluster if one LED indicator or gauge is defective. The oil lamp will come on when the ignition is turned on and the engine is off, and most of the indicators will also come on briefly for a bulb check when the ignition is turned from off to run. All of the gauges (except Fuel Gauge) receive their information via the PCI bus from the powertrain control module.

The seat belt indicator will stay on continually unless the seat belt is buckled. The chime will sound for 6 seconds if the belt is unbuckled when the ignition is first turned on.

In the event that the instrument cluster loses communication with other modules on the PCI bus, the cluster will display "*no bus*" in the VF display. The VF display also displays "Door", "Cruise", "Trac" and odometer trip or total.

If the cluster does not detect voltage from the battery circuit, the message "FUSE" will alternate with the odometer/trip odometer after the ignition is turned on and will continue until the vehicle is first moved. The lack of voltage can be due to the M1 Fused B(+) (IOD) fuse being open or a circuit problem.

3.4 REMOTE KEYLESS ENTRY MODULE

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

The RKE module monitors the occupant restraint controller messages for the purpose of monitoring the deployment of the airbag. Upon receiving that message along with the verification that the ignition is on and the vehicle speed is zero, it will provide the "enhanced accident response feature". This feature will cause the module to unlock all doors and the instrument cluster to turn the courtesy lamps on.

The RKE module communicates with the Powertrain Control Module to receive vehicle speed information to activate the rolling door lock feature, receive the "okay to lock" message, to receive the vehicle information number and receive body style information. Two transmitters are supplied with the vehicle but a total of 4 can be programmed to the module. The horn chirp on vehicle lock command is customer programmable except when used in conjunction with the premium VTSS system. For this system horn chirp is not available.

To limit the amount of battery drain during storage, the module has 3 modes of operation: ship mode, dealer storage mode and customer usage mode. To change from ship mode to dealer storage mode, the DRBIII® may be used or the ignition switch cycled up to 30 times. To transfer from dealer storage to customer mode, install the IOD fuse and cycle the ignition switch. To transfer back to dealer storage mode, the DRBIII® must be used, the IOD fuse removed, and the ignition switch cycled. Sometimes the instrument cluster doesn't transmit a message upon change of the IOD fuse. By cycling the ignition, this causes the cluster to transmit the message, thereby ensuring the RKE module has received the most recent IOD status.

3.4.1 VEHICLE THEFT SECURITY SYSTEM

The VTSS monitors the vehicle doors, liftgate, hood and the interior of the vehicle (via the intrusion sensor) for unauthorized operation. The alarm activates by sounding the siren, flashing the headlamps, park lamps and the VTSS indicator in the instrument cluster. Locking the doors with the door lock switch (through following a normal exit sequence of opening the door, pressing the lock button, and closing the door), the door cylinder lock switches or the RKE transmitter arms the system. During the 16 second arming process the VTSS indicator will flash quickly and when the system is

armed will slow down. If the hood switch is grounded the LED will stay on steady during arming. Once the system is armed, the door cylinder unlock switches may not be used to disarm the alarm system. The only way to disarm the system is to use the RKE transmitter or turn the ignition on.

All of the sensors for the VTS system can be monitored using the DRBIII®. The DRBIII® is also useful to determine the cause of a customer complaint of the alarm going off with no apparent reason.

Note: Features of the VTSS will vary depending on the country code and whether the vehicle is equipped with a base or premium system.

3.4.1.1 PANIC MODE (IF EQUIPPED)

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

3.4.2 POWER DOOR LOCKS

3.4.2.1 CENTRAL LOCKING

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

3.4.2.2 ROLLING (AUTOMATIC) DOOR LOCKS

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

3.4.2.3 DOOR LOCK INHIBIT

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

3.5 SENTRY KEY IMMOBILIZER SYSTEM (SKIS)

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

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

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

3.6 COMMUNICATION

The Programmable Communication Interface or PCI Bus is a single wire multiplexed network capable to supporting binary encoded messages shared between multiple modules. The PCI bus circuit is identified as D25 and is violet with a yellow tracer. The modules are wired in parallel. Connections are made in the harness using splices. The following modules are used on 2001 PT:

- Occupant Restraint Controller
- Left SIACM
- Right SIACM
- Controller Antilock Brake
- Powertrain Control Module
- Remote Keyless Entry Module

- Sentry Key Immobilizer Module
- Radio
- Transmission Control Module
- Mechanical Instrument Cluster

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

The bus messages are transmitted at a rate averaging 10.4k 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 DRBIII® lab scope. The 12v square wave selection on the 20-volt scale provides a good view of the bus activity. Voltage on the bus should pulse between zero and about seven and a half volts. Refer to the figure for some typical displays.

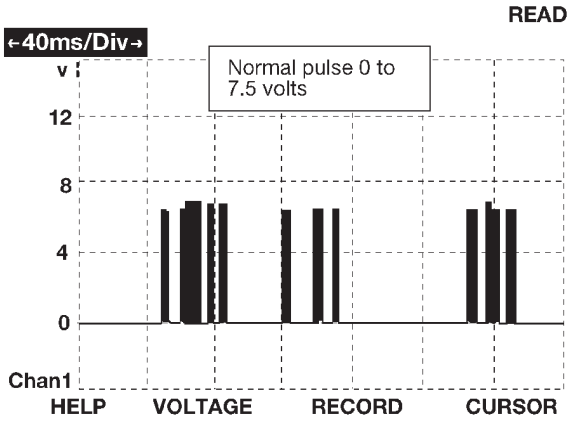
The PCI Bus failure modes are broken down into two categories. PCI Bus Communication Failure and individual module no response. Causes of PCI Bus Communication Failure include a short to ground or battery on the PCI circuit. Individual module no response can be caused by an open circuit at the module,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

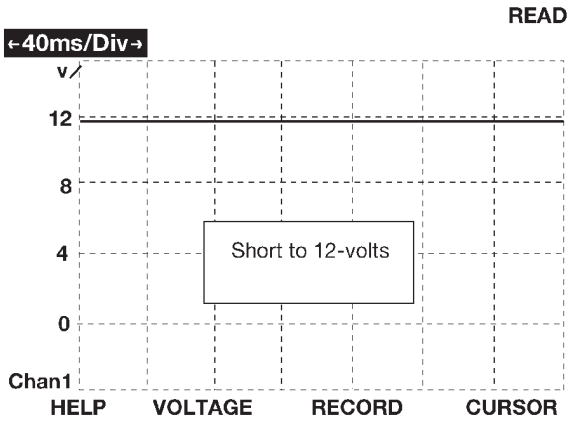
Symptoms of a PCI Bus Communication Failure would include but are not limited to:

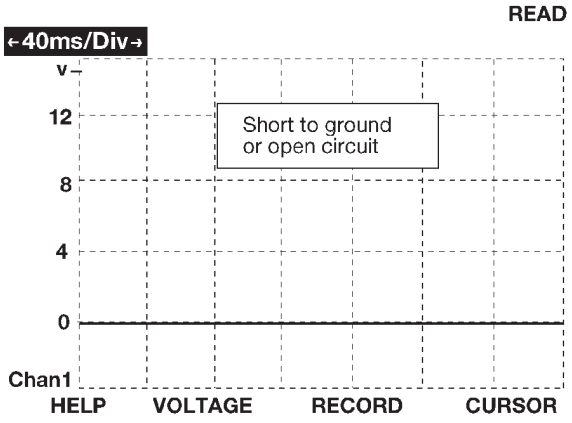
- All gauges on the MIC stay at zero
- All telltales on MIC illuminate
- MIC backlighting at full intensity
- No response received from any module on the PCI bus
- No start (if equipped with Sentry Key Immobilizer)

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

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







80bdbcf6

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

3.7 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.

3.7.1 DRBIII® ERROR MESSAGES AND BLANK SCREEN

Under normal operation, the DRBIII® will display one of only two error messages:

– User-Requested WARM Boot or User-Requested COLD Boot

This is a sample of such an error message display:

```
ver:2.14
date: 26 Jul93
file: key_itf.cc
date: Jul 26 1993
line: 548
err: Ox1
User-Requested COLD boot

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

3.7.2 DRBIII® DOES NOT POWER UP

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

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

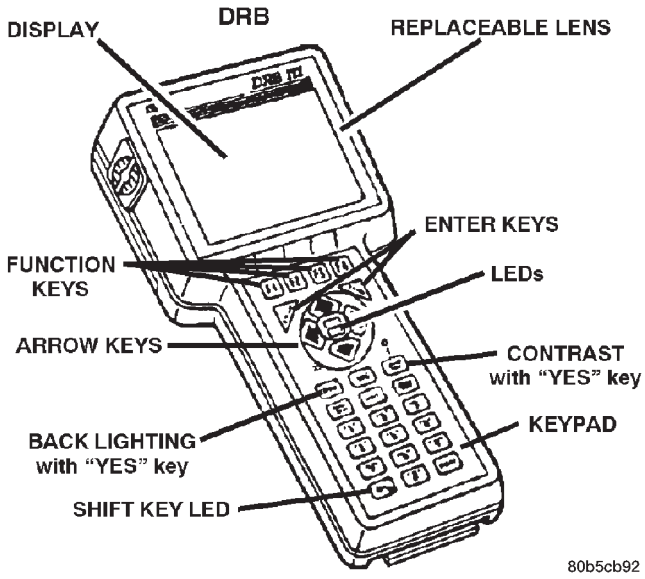
3.7.3 DISPLAY IS NOT VISIBLE

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

4.0 DISCLAIMERS, SAFETY, WARNINGS

4.1 DISCLAIMERS

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



4.2 SAFETY

4.2.1 TECHNICIAN SAFETY INFORMATION

DANGER!!! 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 the drive wheels.

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

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

4.2.2 VEHICLE PREPARATION FOR TESTING

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

4.2.3 SERVICING SUB-ASSEMBLIES

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

4.2.4 DRBIII® SAFETY INFORMATION

WARNING: EXCEEDING THE LIMITS OF THE DRBIII® MULTIMETER IS DANGEROUS. 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 function for the measurement. Do not try voltage or current measurements that may exceed the rated capacity.
- Do not exceed the limits shown in the table below:

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

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

- Voltage between any terminal and ground must not exceed 500v DC or 500v peak AC.
- Use caution when measuring voltage above 25v DC or 25v AC.
- Use the low current shunt to measure circuits up to 10A. Use the high current clamp to measure circuits exceeding 10A.
- When testing for the presence of voltage or current, make sure the meter is functioning correctly. Take a reading of a known voltage or current before accepting a zero reading.
- When measuring current, connect the meter in series with test lead.
- Disconnect the live test lead before disconnecting the common test lead.
- When using the meter function, keep the DRBIII® away from spark plug or coil wires to avoid measuring error from outside interference.

4.3 WARNINGS

4.3.1 VEHICLE DAMAGE WARNINGS

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

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

4.3.2 ROAD TESTING A COMPLAINT VEHICLE

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

CAUTION: 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 DRB FROM THE REAR VIEW MIRROR OR OPERATE IT YOURSELF. HAVE AN ASSISTANT AVAILABLE TO OPERATE THE DRBIII®.

5.0 REQUIRED TOOLS AND EQUIPMENT

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

6.0 GLOSSARY OF ACRONYMS

ABS	antilock brake system
BUX	built up export
CAB	controller antilock brake
DAB	driver airbag
DLC	data link connector
DTC	diagnostic trouble code
LHD	left hand drive
MIC	mechanical instrument cluster
ORC	occupant restraint controller
PAB	passenger airbag
ORS	occupant restraint system
PCI	Programmable Communication Interface (vehicle communication bus)
PCM	powertrain control module
PDC	power distribution center
PWM	pulse width modulated
RHD	right hand drive
RKE	remote keyless entry
SCI	serial communication interface
SIACM	side impact airbag control module
SKIM	sentry key immobilizer module
SKIS	sentry key immobilizer system
SQUIB	also called initiator (located in rear of airbag module)
TCM	transmission control module
VFD	vacuum fluorescent display
VTSS	vehicle theft security system

NOTES

7.0

DIAGNOSTIC INFORMATION AND PROCEDURES

Symptom List:

LEFT SIACM ACCELEROMETER # 1 (ACTIVE)
LEFT SIACM ACCELEROMETER # 1 (STORED)
LEFT SIACM ACCELEROMETER # 2 (ACTIVE)
LEFT SIACM ACCELEROMETER # 2 (STORED)
LEFT SIACM INTERNAL #1 (ACTIVE)
LEFT SIACM INTERNAL #1 (STORED)
LEFT SIACM OUTPUT DRIVER #1 (ACTIVE)
LEFT SIACM OUTPUT DRIVER #1 (STORED)
LEFT SIACM, LOSS OF IGNITION RUN/START (ACTIVE)
LEFT SIACM, NO PCI TRANSMISSION (ACTIVE)

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be LEFT SIACM ACCELEROMETER # 1 (ACTIVE).

When Monitored and Set Condition:

LEFT SIACM ACCELEROMETER # 1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM ACCELEROMETER # 1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM ACCELEROMETER # 2 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM ACCELEROMETER # 2 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM INTERNAL #1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM INTERNAL #1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM ACCELEROMETER # 1 (ACTIVE) — Continued

LEFT SIACM OUTPUT DRIVER #1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM OUTPUT DRIVER #1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

LEFT SIACM, LOSS OF IGNITION RUN/START (ACTIVE)

When Monitored: With the ignition in the run/start position the ORC monitors the Fused Ignition Switch Output Run/Start circuit for proper system voltage. This is an active trouble code only.

Set Condition: If the voltage on the Fused Ignition Switch Output Run/Start circuit is below 4.0 volts, the code will set.

LEFT SIACM, NO PCI TRANSMISSION (ACTIVE)

When Monitored: With the ignition in the On position and the ORC transmitting information on the PCI BUS.

Set Condition: The code will set if the ORC cannot detect the ORC transmitting information on the PCI BUS for 5 consecutive seconds. NOTE: Any PCI Bus Failure will cause this code to set.

POSSIBLE CAUSES
LSIACM, ACTIVE/STORED CODE

TEST	ACTION	APPLICABILITY
1	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE LEFT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Left Side Impact Airbag Control Module (LSIACM) in accordance with Service Instructions. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Errase DTC's in the ORC and Right SIACM. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom List:

LEFT SIACM, NO PCI TRANSMISSION (STORED)
LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (STORED)
LEFT SIACM, SEAT SQUIB CIRCUIT SHORTED (STORED)
LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (STORED)
LEFT SIACM, SEAT SQUIB SHORTED TO GROUND (STORED)
ORC, INTERROGATE LEFT SIACM (STORED)
ORC, NO LEFT SIACM MESSAGE (STORED)

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be LEFT SIACM, NO PCI TRANSMISSION (STORED).

When Monitored and Set Condition:

LEFT SIACM, NO PCI TRANSMISSION (STORED)

When Monitored: With the ignition in the On position and the ORC transmitting information on the PCI BUS.

Set Condition: The code will set if the ORC cannot detect the ORC transmitting information on the PCI BUS for 5 consecutive seconds. NOTE: Any PCI Bus Failure will cause this code to set.

LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (STORED)

When Monitored: When the ignition is On, the Left SIACM monitors the Left Seat Squib circuits for high resistance.

Set Condition: The Left SIACM has detected an open circuit or high resistance on the Left Seat Squib circuits.

LEFT SIACM, SEAT SQUIB CIRCUIT SHORTED (STORED)

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

Set Condition: The Left SIACM has detected low resistance in the Left Seat Squib circuits.

LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (STORED)

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

Set Condition: The Left SIACM has detected high voltage on the Left Seat Squib circuits.

LEFT SIACM, SEAT SQUIB SHORTED TO GROUND (STORED)

When Monitored: When the ignition is on, the Left SIACM monitors the resistance of the left Seat Squib circuits for low resistance.

Set Condition: The Left SIACM has detected a short to ground in the left Seat Squib circuits.

LEFT SIACM, NO PCI TRANSMISSION (STORED) — Continued

ORC, INTERROGATE LEFT SIACM (STORED)

When Monitored: With ignition on, the ORC 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 ORC once each second or opon any change in the active DTCs.

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

ORC, NO LEFT SIACM MESSAGE (STORED)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the Left SIACM status message. The Left SIACM transmits the status message to the ORC at 1 - second intervals.

Set Condition: If the ORC fails to see the Left SIACM status message on the PCI Bus for 5 seconds the code will set.

POSSIBLE CAUSES
STORED CODE HAS BECOME ACTIVE

Repair Instructions:

STORED CODE HAS BECOME ACTIVE

Select appropriate symptom from Symptom List and continue with diagnosis.

Symptom:
LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE)

When Monitored and Set Condition:

LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE)

When Monitored: When the ignition is On, the Left SIACM monitors the Left Seat Squib circuits for high resistance.

Set Condition: The Left SIACM has detected an open circuit or high resistance on the left Seat Squib circuits.

POSSIBLE CAUSES
LEFT SEAT AIRBAG MODULE CIRCUITS OPEN
LEFT SEAT SQUIB LINE 1 CIRCUIT OPEN
LEFT SEAT SQUIB LINE 2 CIRCUIT OPEN
LSIACM, LEFT SEAT SQUIB CIRCUITS OPEN

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTLY DEPLOYED** Remove the seat back cover and partially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag 2-way connector located inside the left seat back. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable, and appropriate jumper harness to the Left Seat Airbag connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRB show LEFT SEAT SQUIB CIRCUIT OPEN? Yes → Go To 2 No → Replace Left Seat Airbag Module squib circuits open. Perform AIRBAG VERIFICATION TEST VER 1. **Note:When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and partially remove the material to gain access to the left Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat back. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module Connector. **Note: Check connectors - Clean / repair as necessary.** Measure the resistance of the Left Seat Squib Line 1 circuit between the Left SIACM connector and the Left Seat Airbag connector. Is the resistance below 1.0 ohms ? Yes → Go To 3 No → Repair open or high resistance in the Left Seat Squib Line 1 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and partially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat back. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module connector. **Note: Check connectors - Clean / repair as necessary.** Measure the resistance of the Left Seat Squib Line 2 circuit between the Left SIACM connector and the Left Seat Airbag connector. Is the resistance below 1.0 ohms? Yes → Go To 4 No → Repair open or high resistance in the Left Seat Squib Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

LEFT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE LEFT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair 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. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:

LEFT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE)

When Monitored and Set Condition:

LEFT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE)

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

Set Condition: The Left SIACM has detected low resistance in the Left Seat Squib circuits.

POSSIBLE CAUSES
LEFT SEAT AIRBAG MODULE CIRCUITS SHORTED
LEFT SEAT SQUIB LINE 1 SHORTED TO LINE 2
LSIACM, LEFT SEAT SQUIB CIRCUITS SHORTED

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Left Seat Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show "LEFT SEAT SQUIB CIRCUIT SHORTED"? Yes → Go To 2 No → Replace Left Seat Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

LEFT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module connector **Note: Check connectors - Clean / repair as necessary.** Using an Ohmmeter measure between the Left Seat Squib Line 1 and line 2 at the Left Side Impact Airbag Control Module connector. Is the resistance below 5.0 Ohms? Yes → Repair Left Seat Squib Line 1 shorted to the Left Seat Squib Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE LEFT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Left Side Impact Airbg 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE)

When Monitored and Set Condition:

LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE)

When Monitored: When the ignition is on, the Left SIACM monitors the voltage of the left Seat Squib circuits.

Set Condition: The Left SIACM has detected high voltage on the Left Seat Squib circuits.

POSSIBLE CAUSES
LEFT SEAT AIRBAG MODULE CIRCUITS SHORTED TO BATTERY
LEFT SEAT SQUIB LINE 1 SHORTED TO BATTERY
LEFT SEAT SQUIB LINE 2 SHORTED TO BATTERY
LSIACM, LEFT SEAT SQUIB CIRCUITS SHORTED TO BATTERY

TEST	ACTION	APPLICABILITY
1	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Left Seat Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRBIII®, read DTC's. Does the DRBIII® display ″LEFT SEAT SQUIB SHORTED TO BATTERY)″? Yes → Go To 2 No → Replace Left Seat Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Measure the voltage of the Left Seat Squib Line 2 circuit in the Left Side Impact Control Module connector. Is the voltage above 0.5 volts? Yes → Repair Left Seat Squib Line 2 shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the left Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Measure the voltage of the Left Seat Squib Line 1 circuit in the Left Side Impact Airbag Control Module connector. Is the voltage above 0.5 volts? Yes → Repair Left Seat Squib Line 1 shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

LEFT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE LEFT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Left Side Impact 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
LEFT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE)

When Monitored and Set Condition:

LEFT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE)

When Monitored: When the ignition is on, the Left SIACM monitors the resistance of the left Seat Squib circuits for low resistance.

Set Condition: The Left SIACM has detected a short to ground in the left Seat Squib circuits.

POSSIBLE CAUSES
LEFT SEAT AIRBAG MODULE CIRCUIT SHORTED TO GROUND
LEFT SEAT SQUIB LINE 1 SHORTED TO GROUND
LEFT SEAT SQUIB LINE 2 SHORTED TO GROUND
LSIACM, LEFT SEAT SQUIB CIRCUITS SHORTED TO GROUND

TEST	ACTION	APPLICABILITY
1	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean/repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Left Seat Airbag connector. Turn ignition on, then reconnect the battery. With the DRBIII®, read DTC's. Does the DRBIII® display ″LEFT SEAT SQUIB SHORTED TO GROUND″? Yes → Go To 2 No → Replace the Left Seat Airbag. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

LEFT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module connector **Note: Check connectors - Clean / repair as necessary.** Measure the resistance of the Left Seat Squib Line 2 circuit between the Left Side Impact Airbag Control Module connector and ground. Is the resistance below 5.0 Ohms on the Left Seat Squib Line 2 circuit ? Yes → Repair Left Seat Squib Line 2 shoredt to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the left Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module connector. **Note:Check connectors - Clean/repair as necessary.** Using an ohmmeter, measure the resistance of the circuit between the Left SIACM connector and ground.Measure the resistance of the Left Seat Squib Line 1 circuit between the Left SIACM connector and ground. Is the resistance below 5.0 Ohms on the Left Seat Squib Line 1 circuit ? Yes → Repair Left Seat Squib Line 1 shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE LEFT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair 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. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom List:

ORC ACCELEROMETER (ACTIVE)
ORC ACCELEROMETER (STORED)
ORC FIRING STORED ENERGY (ACTIVE)
ORC FIRING STORED ENERGY (STORED)
ORC INTERNAL #1 (ACTIVE)
ORC INTERNAL #1 (STORED)
ORC INTERNAL #2 (ACTIVE)
ORC INTERNAL #2 (STORED)
ORC, NO PCI TRANSMISSION (ACTIVE)
ORC, OUTPUT DRIVER #1 (ACTIVE)
ORC, OUTPUT DRIVER #1 (STORED)
ORC, OUTPUT DRIVER #2 (ACTIVE)
ORC, OUTPUT DRIVER #2 (STORED)

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

When Monitored and Set Condition:

ORC ACCELEROMETER (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC ACCELEROMETER (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC FIRING STORED ENERGY (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC FIRING STORED ENERGY (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC INTERNAL #1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC ACCELEROMETER (ACTIVE) — Continued

ORC INTERNAL #1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC INTERNAL #2 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC INTERNAL #2 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC, NO PCI TRANSMISSION (ACTIVE)

When Monitored: With the ignition in the On position and the ORC transmitting information on the PCI BUS.

Set Condition: The code will set if the ORC cannot detect the ORC transmitting information on the PCI BUS for 5 consecutive seconds. NOTE: Any PCI Bus Failure will cause this code to set.

ORC, OUTPUT DRIVER #1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC, OUTPUT DRIVER #1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC, OUTPUT DRIVER #2 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

ORC, OUTPUT DRIVER #2 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

POSSIBLE CAUSES
ORC, ACTIVE/STORED CODE

ORC ACCELEROMETER (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
1	**Warning: Turn Ignition Off. Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE AIRBAG MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) in accordance with Service Instructions. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Errase DTC's in the Left and Right SIACM. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, CALIBRATION MISMATCH (ACTIVE)

When Monitored and Set Condition:

ORC, CALIBRATION MISMATCH (ACTIVE)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the VIN message containing the body style. The PCM transmits the 17-character VIN message every 13.76 seconds. Note: The VIN message should match the vehicle VIN plate.

Set Condition: If the Body style stored in ORC does not exectly match the vehicle body style indicated by the PCM, then the fault shall be set.

POSSIBLE CAUSES
PCM, PCI COMMUNICATION FAILURE
COMPARE VEHICLE IDENTIFICATION NUMBERS
ORC, ORC CALIBRATION MISMATCH

TEST	ACTION	APPLICABILITY
1	With the DRB select ″ENGINE″ MISCELLANEOUS″, SELECT MISC FUNCTION″, and then ″CHECK VIN″ to read the Vehicle Identification Number in the Powertrain Control Module. Compare the VIN displayed on the DRB screen and the Vehicle VIN plate. Does the VIN plate and the PCM VIN match? Yes → Go To 2 No → Replace the Powertrain Control Module and program with the correct vehicle identification number. Perform AIRBAG VERIFICATION TEST VER 1.	All
2	Turn the ignition on. Connect the DRB to the data link connector and select ″PASSIVE RESTRAINTS″, ″AIRBAG″, SYSTEM TEST″. With the DRBIII®, read the ″PCM Active on the Bus:″. Does the DRB show ″PCM Active on the Bus:YES″? Yes → Go To 3 No → Refer to category ″ COMMUNICATION″ and select the related symptom. Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, CALIBRATION MISMATCH (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE AIRBAG MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom List:

ORC, CALIBRATION MISMATCH (STORED)
ORC, CLUSTER MESSAGE MISMATCH (STORED)
ORC, DRIVER SQUIB #1 CIRCUIT OPEN (STORED)
ORC, DRIVER SQUIB #1 CIRCUIT SHORTED (STORED)
ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (STORED)
ORC, DRIVER SQUIB #1 SHORTED TO GROUND (STORED)
ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED STORED
ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN (STORED)
ORC, LEFT SEAT BELT TENSIONER SHORTED TO BATTERY STORED
ORC, LEFT SEAT BELT TENSIONER SHORTED TO GROUND STORED
ORC, LOSS OF IGNITION RUN ONLY (STORED)
ORC, LOSS OF IGNITION RUN/START (STORED)
ORC, NO CLUSTER MESSAGES (STORED)
ORC, NO ODOMETER MESSAGE (STORED)
ORC, NO PCI TRANSMISSION (STORED)
ORC, PASSENGER SQUIB #1 CIRCUIT OPEN (STORED)
ORC, PASSENGER SQUIB #1 CIRCUIT SHORTED (STORED)
ORC, PASSENGER SQUIB #1 SHORTED TO BATTERY (STORED)
ORC, PASSENGER SQUIB #1 SHORTED TO GROUND (STORED)
ORC, RIGHT SEAT BELT TENSIONER CIRCUIT OPEN STORED
ORC, RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED STORED
ORC, RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY STORED
ORC, RIGHT SEAT BELT TENSIONER SHORTED TO GROUND STORED
ORC, VEHICLE BODY STYLE UNKNOWN (STORED)
ORC, WARNING LAMP CIRCUIT OPEN (STORED)
ORC, WARNING LAMP CIRCUIT SHORTED (STORED)

Test Note: **All symptoms listed above are diagnosed using the same tests. The title for the tests will be ORC, CALIBRATION MISMATCH (STORED).**

When Monitored and Set Condition:

ORC, CALIBRATION MISMATCH (STORED) — Continued

ORC, CALIBRATION MISMATCH (STORED)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the VIN message containing the body style. The PCM transmits the 17-character VIN message every 13.76 seconds. Note: The VIN message should match the vehicle VIN plate.

Set Condition: If the Body style stored in ORC does not exectly match the vehicle body style indicated by the PCM, then the fault shall be set.

ORC, CLUSTER MESSAGE MISMATCH (STORED)

When Monitored: After the MIC bulb test is completed, the ORC compares the Lamp Request by ORC (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 ORC (On or Off) and the Lamp on by MIC (On or Off) messages do not match within 6 consecutive seconds, the code will set.

ORC, DRIVER SQUIB #1 CIRCUIT OPEN (STORED)

When Monitored: When the ignition is on, the ORC monitors the resistance of the Driver Squib # 1 circuits.

Set Condition: The ORC has detected an open circuit or high resistance in the Driver Squib # 1 circuits.

ORC, DRIVER SQUIB #1 CIRCUIT SHORTED (STORED)

When Monitored: When the ignition is on, the ORC monitors the resistance of the Driver Squib # 1 circuits.

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

ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (STORED)

When Monitored: When the ignition is on, the ORC monitors the voltage of the Driver Squib # 1 circuits.

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

ORC, DRIVER SQUIB #1 SHORTED TO GROUND (STORED)

When Monitored: When the ignition is on, the ORC monitors the resistance of the Driver Squib # 1 circuits.

Set Condition: The ORC has detected a short to ground in the Driver Squib # 1 circuits.

ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED STORED

When Monitored: When the ignition is on, the ORC monitors the resistance of the Left Seat Belt Pretensioner circuits.

Set Condition: The ORC has detected low resistance in the Left Seat Belt Pretensioner circuits.

ORC, CALIBRATION MISMATCH (STORED) — Continued

ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN (STORED)

When Monitored: With the ignition is On, the ORC monitors the resistance of the Left Seat belt Pretensioner circuits.

Set Condition: The ORC has detected an open circuit or high resistance on the Left Seat Belt Pretensioner circuits.

ORC, LEFT SEAT BELT TENSIONER SHORTED TO BATTERY STORED

When Monitored: When the ignition is on, the ORC monitors the voltage of the Left Seat Belt Pretensioner circuits.

Set Condition: When the ignition is on, the ORC monitors the voltage of the Left Seat Belt Pretensioner circuits.

ORC, LEFT SEAT BELT TENSIONER SHORTED TO GROUND STORED

When Monitored: When the ignition is on, the ORC monitors the resistance of the Left Seat Belt Pretensioner circuits for low resistance.

Set Condition: The ORC has detected a short to ground in the Left Seat Belt Pretensioner circuits.

ORC, LOSS OF IGNITION RUN ONLY (STORED)

When Monitored: With the ignition in the run/start position the ORC monitors the Fused Ignition Switch Output Run/Start circuit for proper system voltage.

Set Condition: If the voltage on the Fused Ignition Switch Output Run Only circuit drops below 4.5 volts, the code will set.

ORC, LOSS OF IGNITION RUN/START (STORED)

When Monitored: With the ignition in the run/start position the ORC monitors the Fused Ignition Switch Output Run/Start circuit for proper system voltage.

Set Condition: If the voltage on the Fused Ignition Switch Output Run/Start circuit drops below 4.5 volts, the code will set.

ORC, NO CLUSTER MESSAGES (STORED)

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

Set Condition: If the MIC message is not received for 5 consecutive seconds, the code will set.

ORC, NO ODOMETER MESSAGE (STORED)

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

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

ORC, CALIBRATION MISMATCH (STORED) — Continued

ORC, NO PCI TRANSMISSION (STORED)

When Monitored: With the ignition in the On position and the ORC transmitting information on the PCI BUS.

Set Condition: The code will set if the ORC cannot detect the ORC transmitting information on the PCI BUS for 5 consecutive seconds. NOTE: Any PCI Bus Failure will cause this code to set.

ORC, PASSENGER SQUIB #1 CIRCUIT OPEN (STORED)

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

Set Condition: The ORC has detected an open circuit or high resistance on the Driver Squib # 1 circuits.

ORC, PASSENGER SQUIB #1 CIRCUIT SHORTED (STORED)

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

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

ORC, PASSENGER SQUIB #1 SHORTED TO BATTERY (STORED)

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

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

ORC, PASSENGER SQUIB #1 SHORTED TO GROUND (STORED)

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

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

ORC, RIGHT SEAT BELT TENSIONER CIRCUIT OPEN STORED

When Monitored: When the ignition is on, the ORC monitors the resistance of the Right Seat Belt Pretensioner circuits.

Set Condition: The ORC has detected low resistance in the Right Seat Belt Pretensioner circuits.

ORC, RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED STORED

When Monitored: When the ignition is on, the ORC monitors the resistance of the Right Seat Belt Pretensioner circuits.

Set Condition: The ORC has detected low resistance in the Right Seat Belt Pretensioner circuits.

ORC, CALIBRATION MISMATCH (STORED) — Continued

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY STORED

When Monitored: When the ignition is on, the ORC monitors the voltage of the Right Seat Belt Pretensioner circuits.

Set Condition: The ORC has detected high voltage on the Right Seat Belt Pretensioner circuits.

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO GROUND STORED

When Monitored: When the ignition is on, the ORC monitors the resistance of the Right Seat Belt Pretensioner circuits for low resistance.

Set Condition: The ORC has detected a short to ground in the Right Seat Belt Pretensioner circuits.

ORC, VEHICLE BODY STYLE UNKNOWN (STORED)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the VIN message containing the vehicle body style from the Powertrain Control Module. The PCM transmits the VIN message every 2.75 seconds.

Set Condition: If the ORC does not receive two consective odometer messages on the bus, frist 10 seconds after ignition on, then ″VEHICLE BODY STYLE UNKNOWN″ code will set.

ORC, WARNING LAMP CIRCUIT OPEN (STORED)

When Monitored: When the ignition is On, the ORC monitors the PCI Bus for a message from the MIC containing the airbag warning lamp status Ok or Open. The MIC transmit the message one time at ignition on, opon lamp state change,or in response to the ORC lamp message.

Set Condition: The code is set if the lamp state is open for 2 consecutive messages or 2 seconds.

ORC, WARNING LAMP CIRCUIT SHORTED (STORED)

When Monitored: When the ignition is On, the ORC monitors the PCI Bus for a message from the MIC containing the airbag warning lamp status Ok or Shorted. The MIC transmit the message one time at ignition on, opon lamp state change,or in response to the ORC lamp message.

Set Condition: The code is set if the lamp state is Shorted for 2 consecutive messages or 2 seconds.

POSSIBLE CAUSES
STORED CODE PRESENT
STORED CODE HAS BECOME ACTIVE

ORC, CALIBRATION MISMATCH (STORED) — Continued

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the battery is fully charged.** Active codes must be resolved before diagnosing stored codes. Turn ignition on. With the DRBIII®, record and errase all DTCs from all modules. With the DRB III monitor active codes as you work through the system. Wiggle the wiring harness and connectors of the Airbag System and rotate the steering wheel from stop to stop. **Note: Check connectors - Clean / repair as necessary.** Did the DTC become active ? Yes → Select appropriate active symptom from Symptom List. No → No problem found at this time. Erase all codes before returning vehicle to customer.	All

Symptom:
ORC, CLUSTER MESSAGE MISMATCH (ACTIVE)

When Monitored and Set Condition:

ORC, CLUSTER MESSAGE MISMATCH (ACTIVE)

When Monitored: After the MIC bulb test is completed, the ORC compares the Lamp Request by ORC (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 ORC (On or Off) and the Lamp on by MIC (On or Off) messages do not match within 6 consecutive seconds, the code will set.

POSSIBLE CAUSES
MIC, COMMUNICATION FAILURE
MIC, CLUSTER MESSAGE MISMATCH
ORC, CLUSTER MESSAGE MISMATCH

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Read the odometer display. Does the MIC odometer display ″NO BUS″? Yes → Refer to category ″ COMMUNICATION″ and select the related symptom ″INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN ″. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 2	All
2	With the DRB 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 ORC″ monitors after the 6 to 8 second bulb check. Does the ″LAMP ON BY MIC″ and ″LAMP REQ BY ORC″ monitors match? YES Go To 3 NO Replace Mechanical Instrument Cluster (MIC). Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, CLUSTER MESSAGE MISMATCH (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off. Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, DRIVER SQUIB #1 CIRCUIT OPEN (ACTIVE)

When Monitored and Set Condition:

ORC, DRIVER SQUIB #1 CIRCUIT OPEN (ACTIVE)

When Monitored: When the ignition is on, the ORC monitors the resistance of the Driver Squib # 1 circuits.

Set Condition: The ORC has detected an open circuit or high resistance in the Driver Squib # 1 circuits.

POSSIBLE CAUSES
DRIVER AIRBAG MODULE CIRCUIT OPEN
CLOCKSPRING DRIVER SQUIB # 1 CIRCUIT OPEN
DRIVER SQUIB #1 LINE 1 CIRCUIT OPEN
DRIVER SQUIB #1 LINE 2 CIRCUIT OPEN
ORC, DRIVER SQUIB # 1 CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	**Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Disconnect the Driver Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Driver Airbag squib connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 CIRCUIT OPEN? Yes → Go To 2 No → Replace the Driver Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, DRIVER SQUIB #1 CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 black cable and jumper harness to the Clockspring 2-way connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 CIRCUIT OPEN? Yes → Go To 3 No → Replace the Clockspring. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
3	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Disconnect the ORC 23-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an Ohmmeter, measure the Driver Squib # 1 Line 1 circuit between the load tool 23-way connector and the Driver Squib # 1 Line 1 circuit at the Clockspring 2-way Connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open or high resistance in the Driver Squib # 1 Line 1 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, DRIVER SQUIB #1 CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller 23-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an Ohmmeter, measure the Driver Squib # 1 Line 2 circuit between the load tool 23-way adaptor and the Clockspring 2-Way Connector. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair open or high resistance in the Driver Squib # 1 Line 2 Circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
5	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, DRIVER SQUIB #1 CIRCUIT SHORTED (ACTIVE)

When Monitored and Set Condition:

ORC, DRIVER SQUIB #1 CIRCUIT SHORTED (ACTIVE)

When Monitored: When the ignition is on, the ORC monitors the resistance of the Driver Squib # 1 circuits.

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

POSSIBLE CAUSES
DRIVER AIRBAG MODULE CIRCUITS SHORTED
CLOCKSPRING, DRIVER SQUIB #1 CIRCUITS SHORTED
DRIVER SQUIB #1 LINE 1 SHORTED TO LINE 2
ORC, DRIVER SQUIB # 1 CIRCUITS SHORTED

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Driver Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Diver Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 CIRCUIT SHORTED? Yes → Go To 2 No → Replace Driver Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, DRIVER SQUIB #1 CIRCUIT SHORTED (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Driver Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 black cable and jumper harness to the Clockspring 2-way connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 SHORTED TO BATTERY? Yes → Go To 3 No → Replace Clockspring. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
3	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Disconnect the ORC 23-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an Ohmmeter measure between the Driver Squib # 1 Line 1 and Line 2 at the Clockspring Connector. Is the resistance below 5.0 ohms? Yes → Repair the Driver Squib # 1 Line 1 circuit shorted to Driver Squib # 1 Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (ACTIVE)

When Monitored and Set Condition:

ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (ACTIVE)

When Monitored: When the ignition is on, the ORC monitors the voltage of the Driver Squib # 1 circuits.

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

POSSIBLE CAUSES
DRIVER AIRBAG MODULE CIRCIUTS SHORTED TO BATTERY
CLOCKSPRING SQUIB #1 CIRCUITS SHORTED TO BATTERY
DRIVER SQUIB #1 LINE 1 SHORTED TO BATTERY
DRIVER SQUIB #1 LINE 2 SHORTED TO BATTERY
ORC, DRIVER SQUIB # 1 CIRCUITS SHORTED TO BATTERY

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Driver Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Driver Airbag squib connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 SHORTED TO BATTERY? Yes → Go To 2 No → Replace the Driver Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Driver Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Clockspring 2-Way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 black cable and jumper harness to the Clockspring 2-way connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 SHORTED TO BATTERY ? Yes → Go To 3 No → Replace the Clockspring. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
3	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Disconnect the ORC 23-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Turn Ignition On and then reconnect the Battery. Using a Voltmeter, measure the Driver Airbag Line 1 from the Clockspring connector to ground. Is the voltage above 0.5 volts on Driver Squib # 1 Line 1 circuit? Yes → Repair the Driver Squib # 1 Line 1 circuit shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, DRIVER SQUIB #1 SHORTED TO BATTERY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller 23-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Turn Ignition On and then reconnect the Battery. Using a Voltmeter, measure the Driver Squib # 1 Line 2 from the Clockspring connector to ground. Is the voltage above 0.5 volts Yes → Repair Driver Squib # 1 Line 2 Circuit shorted to battery voltage. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 5 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
5	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, DRIVER SQUIB #1 SHORTED TO GROUND (ACTIVE)

When Monitored and Set Condition:

ORC, DRIVER SQUIB #1 SHORTED TO GROUND (ACTIVE)

When Monitored: When the ignition is on, the ORC monitors the resistance of the Driver Squib # 1 circuits.

Set Condition: The ORC has detected a short to ground in the Driver Squib # 1 circuits.

POSSIBLE CAUSES
DRIVER AIRBAG MODULE, CIRCUITS SHORTED TO GROUND
CLOCKSPRING SQUIB #1 CIRCUITS SHORTED TO GROUND
DRIVER SQUIB #1 LINE 1 SHORTED TO GROUND
DRIVER SQUIB #1 LINE 2 SHORTED TO GROUND
ORC, DRIVER SQUIB # 1 CIRCUITS SHORTED TO GROUND

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Driver Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Driver Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 SHORTED TO GROUND? Yes → Go To 2 No → Replace the Driver Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, DRIVER SQUIB #1 SHORTED TO GROUND (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Driver Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Clockspring 2-Way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 black cable and jumper harness to the Clockspring 2-way connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show DRIVER SQUIB # 1 SHORTED TO GROUND? Yes → Go To 3 No → Replace the Clockspring. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
3	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Disconnect the ORC 23-way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an Ohmmeter, measure the Driver Squib # 1 Line 1 circuit between Clockspring 2-way Connector and ground. Is the resistance below 5.0 ohms? Yes → Repair Driver Squib # 1 Line 1 circuit shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, DRIVER SQUIB #1 SHORTED TO GROUND (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** Disconnect the Clockspring 2-way Connector. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an Ohmmeter, measure the Driver Squib # 1 Line 2 Circuit between the Clockspring 2-Way Connector and ground. Is the resistance below 5.0 ohms? Yes → Repair Driver Squib # 1 Line 2 Circuit shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 5 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected..**	All
5	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, INTERROGATE LEFT SIACM (ACTIVE)

When Monitored and Set Condition:

ORC, INTERROGATE LEFT SIACM (ACTIVE)

When Monitored: With ignition on, the ORC 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 ORC once each second or opon any change in the active DTCs.

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

POSSIBLE CAUSES
INTERROGATE LEFT SIACM
ORC, INTERROGATE LEFT SIACM

Repair Instructions:

INTERROGATE LEFT SIACM

Refer to symptom list for problems related to Left Side Impact Airbag Control Module.

Perform AIRBAG VERIFICATION TEST VER 1.

ORC, INTERROGATE LEFT SIACM

Replace the Occupant Restraint Controller (ORC) 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.

Symptom:
ORC, INTERROGATE RIGHT SIACM (ACTIVE)

When Monitored and Set Condition:

ORC, INTERROGATE RIGHT SIACM (ACTIVE)

When Monitored: With ignition on, the ORC monitors the PCI Bus for a Right SIACM status message containing the airbag warning lamp ″Lamp On/ OFF″ request. The status message is sent to the ORC once each second or opon any change in the active DTCs.

Set Condition: The Code will set, if the ORC 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
ORC, INTERROGATE RIGHT SIACM

Repair Instructions:

INTERROGATE RIGHT SIACM

Refer to PASSIVE RESTRAINTS category and select the symptom from the RIGHT SIACM list.

Perform AIRBAG VERIFICATION TEST VER 1.

ORC, INTERROGATE RIGHT SIACM

Replace the Occupant Restraint Controller (ORC) 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.

Symptom List:

ORC, INTERROGATE RIGHT SIACM (STORED)
ORC, NO RIGHT SIACM MESSAGE (STORED)
RIGHT SIACM, NO PCI TRANSMISSION (STORED)
RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (STORED)
RIGHT SIACM, SEAT SQUIB CIRCUIT SHORTED (STORED)
RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (STORED)
RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (STORED)

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be ORC, INTERROGATE RIGHT SIACM (STORED).

When Monitored and Set Condition:

ORC, INTERROGATE RIGHT SIACM (STORED)

When Monitored: With ignition on, the ORC monitors the PCI Bus for a Right SIACM status message containing the airbag warning lamp ″Lamp On/ OFF″ request. The status message is sent to the ORC once each second or opon any change in the active DTCs.

Set Condition: The Code will set, if the ORC 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.

ORC, NO RIGHT SIACM MESSAGE (STORED)

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

Set Condition: If the ORC fails to see the Right SIACM status message on the PCI Bus for 5 seconds the code will set.

RIGHT SIACM, NO PCI TRANSMISSION (STORED)

When Monitored: With the ignition in the On position and the ORC transmitting information on the PCI BUS.

Set Condition: The code will set if the ORC cannot detect the ORC transmitting information on the PCI BUS for 5 consecutive seconds. NOTE: Any PCI Bus Failure will cause this code to set.

RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (STORED)

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

Set Condition: The Right SIACM has detected an open circuit or high resistance on the Right Seat Squib circuits.

ORC, INTERROGATE RIGHT SIACM (STORED) — Continued

RIGHT SIACM, SEAT SQUIB CIRCUIT SHORTED (STORED)

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

Set Condition: The Right SIACM has detected that the Right Seat Squib circuits are shorted together.

RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (STORED)

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

Set Condition: The Right SIACM has detected high voltage on the Right Seat Squib circuits.

RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (STORED)

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

Set Condition: The Right SIACM has detected a short to ground in the Right Seat Squib circuits.

POSSIBLE CAUSES
STORED CODE HAS BECOME ACTIVE

Repair Instructions:

STORED CODE HAS BECOME ACTIVE

Select appropriate symptom from Symptom List and continue with diagnosis.

Symptom:
ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE

When Monitored and Set Condition:

ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE

When Monitored: When the ignition is on, the ORC monitors the resistance of the Left Seat Belt Pretensioner circuits

Set Condition: The ORC has detected low resistance in the Left Seat Belt Pretensioner circuits.

POSSIBLE CAUSES
LEFT SEAT BELT TENSIONER CIRCUITS SHORTED
LEFT SEAT BELT TENSIONER LINE 1 SHORTED TO LINE 2
ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the battery is fully charged.** **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner connector. **Note: Check connectors - Clean/repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Left Seat Belt Tensioner connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRBIII® display LEFT SEAT BELT TENSIONER CIRCUIT SHORTED? Yes → Go To 2 No → Replace Left Seat Belt Tensioner. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, LEFT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner. Disconnect the Occupant Restraint Controller connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Left Seat Belt Tensioner Line 1 and line 2 circuit at the Left Seat Belt Tensioner connector. Is the resistance below 5.0 Ohms? Yes → Repair Left Seat Belt Tensioner Line 1 circuit shorted to Left Seat Belt Tensioner Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note:When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN (ACTIVE)

When Monitored and Set Condition:

ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN (ACTIVE)

When Monitored: With the ignition is On, the ORC monitors the resistance of the Left Seat belt Pretensioner circuits.

Set Condition: The ORC has detected an open circuit or high resistance on the Left Seat Belt Pretensioner circuits.

POSSIBLE CAUSES
LEFT SEAT BELT TENSIONER CIRCUITS OPEN
LEFT SEAT BELT TENSIONER LINE 1 CIRCUIT OPEN
LEFT SEAT BELT TENSIONER LINE 2 CIRCUIT OPEN
ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the battery is fully charged.** **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner. **Note: Check connectors - Clean/repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Left Seat Belt Tensioner connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRBIII® display LEFT SEAT BELT TENSIONER CIRCUIT OPEN? Yes → Go To 2 No → Replace Left Seat Belt Tensioner. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, LEFT SEAT BELT TENSIONER CIRCUITS OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner. Disconnect the Occupant Restraint Controller Connector. **Note: Check connectors - Clean/repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Left Seat Belt Tensioner Line 1 circuit between the Airbag System Load Tool Adaptor and the Left Seat Belt Tensioner connector. Is the resistance below 1.0 ohms ? Yes → Go To 3 No → Repair open or high resistance in Left Seat Belt Tensioner Line 1 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner. Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Left Seat Belt Tensioner Line 2 circuit between the Airbag System Load Tool 23-way Adaptor connector and Left Seat Belt Tensioner connector Is the resistance below 1.0 ohms? Yes → Go To 4 No → Repair the open or high resistance in Left Seat Belt Tensioner Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

Symptom:

ORC, LEFT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE

When Monitored and Set Condition:

ORC, LEFT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE

When Monitored: When the ignition is on, the ORC monitors the voltage of the Left Seat Belt Pretensioner circuits.

Set Condition: The ORC has detected high voltage on the Left Seat Belt Pretensioner circuits.

POSSIBLE CAUSES
LEFT SEAT BELT TENSIONER CIRCUITS SHORTED TO BATTERY
LEFT SEAT BELT TENSIONER LINE 1 SHORTED TO BATTERY
LEFT SEAT BELT TENSIONER LINE 2 SHORTED TO BATTERY
ORC, LEFT SEAT BELT TENSIONER CIRCUITS SHORTED TO BATTERY

TEST	ACTION	APPLICABILITY
1	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt tensioner. **Note: Check connectors - Clean/repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Left Seat Belt tensioner. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRBIII® display LEFT SEAT BELT TENSIONER SHORTED TO BATTERY? Yes → Go To 2 No → Replace Left Seat Belt Tensioner. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, LEFT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner. Disconnect the Occupant Restraint Controller Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Turn Ignition On and then reconnect the Battery. Measure the voltage of the Left Seat Belt Tensioner Line 1 at the Left Seat Belt Tensioner connector. Is the voltage above 0.5 volts? Yes → Repair Left Seat Belt Tensioner Line 1 circuit shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner connector. Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** connector to ground.Measure the resistance of the Left Seat Belt Tensioner Line 2 circuit between the Left Seat Belt Tensioner connector and ground. Is the voltage above 0.5 volts? Yes → Repair Left Seat Belt Tensioner Line 2 circuit shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:

ORC, LEFT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE

When Monitored and Set Condition:

ORC, LEFT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE

When Monitored: When the ignition is on, the ORC monitors the voltage of the Left Seat Belt Pretensioner circuits.

Set Condition:

POSSIBLE CAUSES
LEFT SEAT BELT TENSIONER CIRCUITS SHORTED TO GROUND
LEFT SEAT BELT TENSIONER LINE 1 SHORTED TO GROUND
LEFT SEAT BELT TENSIONER LINE 2 SHORTED TO GROUND
ORC, LEFT SEAT BELT TENSIONER CIRCUITS SHORTED TO GROUND

TEST	ACTION	APPLICABILITY
1	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt tensioner connector. **Note: Check connectors - Clean/repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Left Seat Belt Tensioner connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRBIII® display LEFT SEAT BELT TENSIONER SHORTED TO GROUND? Yes → Go To 2 No → Replace the Left Seat Belt Tensioner. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, LEFT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner. Disconnect the Occupant Restraint Controller Connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Left Seat Belt Tensioner Line 1 circuit between the Left Seat Belt Tensioner connector and ground. Is the resistance below 5.0 Ohms? Yes → Repair Left Seat Belt Tensioner Line 1 circuit shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Seat Belt Tensioner connector. Disconnect the Occupant Restraint Controller connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Left Seat Belt Tensioner Line 2 circuit between the Left Seat Belt Tensioner connector and ground. Is the resistance below 5.0 Ohms? Yes → Repair Left Seat Belt Tensioner Line 2 circuit for a short to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

Symptom:
ORC, LOSS OF IGNITION RUN ONLY (ACTIVE)

When Monitored and Set Condition:

ORC, LOSS OF IGNITION RUN ONLY (ACTIVE)

When Monitored: With the ignition in the run only position the ORC monitors the Fused Ignition Switch Output Run circuit for proper system voltage.

Set Condition: If the voltage on the Fused Ignition Switch Output Run Only circuit drops below 4.5 volts, the code will set.

POSSIBLE CAUSES
OPEN FUSE BLOCK FUSE # 5
IGNITION SWITCH OUTPUT RUN CIRCUIT
FUSED IGNITION SWITCH OUTPUT RUN CIRCUIT SHORT TO GROUND
FUSED IGNITION SWITCH OUTPUT RUN ONLY CIRCUIT OPEN
ORC, FUSED IGNITION SWITCH OUTPUT RUN CIRCUIT SHORTED TO GROUND
ORC, FUSED IGNITION SWITCH OUTPUT RUN ONLY CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Remove Fuse Block Fuse # 5. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On (Engine Off). Using a Voltmeter measure the Ignition Switch Output Circuit between the use Fuse Block Fuse # 5 and ground. Is the voltage above 4.0 volts? Yes → Go To 2 No → Repair the open or low voltage condition on the Ignition Switch Output Run circuit. Perform AIRBAG VERIFICATION TEST VER 1.	All
2	Turn Ignition off. Remove and inspect Fuse # 5. Is the Fuse open? Yes → Go To 3 No → Go To 5 **Note: Reinstall the fuse if it is not open.**	All

ORC, LOSS OF IGNITION RUN ONLY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	Remove Fuse Bolck Fuse # 5. **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Occupant Restraint Controller. **Note: Check connectors - Clean / repair as necessary.** Measure the resistance of the Fused Ignition Switch Output Run (Only) circuit between the Occupant Restraint Controller connector and ground. Is the resistance below 5.0 ohms ? Yes → Repair the Fused Ignition Switch Output Run Circuit for a short to ground and replace Junction Block Fuse # 5. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	Reconnect all previouslly disconnected connectors and components. Turn ignition off. Install a new Fused Ignition Switch Output Run circuit fuse # 5 and turn the ignition on. Did the Fused Ignition Switch Output Run circuit fuse blow? Yes → Replace the Occupant Restraint Controller (ORC) in accordance with Service lnstructions. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Replace fuse # 5. Perform AIRBAG VERIFICATION TEST VER 1. No → Fuse Block fuse # 5 was defective and has been replaced as part of the previous test. Perform AIRBAG VERIFICATION TEST VER 1.	All
5	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Using a Voltmeter measure the Fused Ignition Switch Output Run Only circuit from the Occupant Restraint Controller connector to ground. Is the voltage above 4.0 volts? Yes → Go To 6 No → Repair Fused Ignition Switch Output Run Only Circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, LOSS OF IGNITION RUN ONLY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
6	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, LOSS OF IGNITION RUN/START W/O SIACM(ACTIVE)

When Monitored and Set Condition:

ORC, LOSS OF IGNITION RUN/START W/O SIACM(ACTIVE)

When Monitored: With the ignition in the run/start position the ORC monitors the Fused Ignition Switch Output Run/Start circuit for proper system voltage.

Set Condition: If the voltage on the Fused Ignition Switch Output Run/Start circuit drops below 4.5 volts, the code will set.

POSSIBLE CAUSES
SUSPECT MODULE SHORT TO GROUND
IGNITION SWITCH RUN/START CIRCUIT
FUSED IGNITION SWITCH OUTPUT RUN/START CIRCUIT OPEN
RUN/START CIRCUIT SHORTED TO GROUND
ORC, FUSED IGNITION SWITCH OUTPUT RUN/START OPEN

TEST	ACTION	APPLICABILITY
1	Remove use Fuse Block Fuse # 9. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On (Engine Off). Measure the Ignition Switch Output Circuit between the Fuse Block Fuse # 9 and ground. Is the voltage above 4.0 volts? Yes → Go To 2 No → Repair the open or low voltage condition on the Ignition Switch Output Run/Start circuit. Perform AIRBAG VERIFICATION TEST VER 1.	without AIR BAGS - SIDE IMPACT
2	Turn Ignition off. Remove and inspect Fuse # 9. Is the Fuse open? Yes → Go To 3 No → Go To 5 **Note: Reinstall the fuse if it is not open.**	without AIR BAGS - SIDE IMPACT

ORC, LOSS OF IGNITION RUN/START W/O SIACM(ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** Measure the resistance of the Fused Igniion Switch Output Run/Start circuit between the Fuse Block Fuse # 9 and ground. While monitoring the Ohmmeter, disconnect the following control modules one at a time. Occupant Restraint Controller (ORC) **Note: If,after disconnecting a module, the ohmmeter changes to above 5.0 ohms, the module just disconnected is pulling the Fused Run/Start circuit low.** **Note: Check connectors - Clean / repair as necessary.** With all modules disconnected, does the ohmmeter display below 5.0 ohms? Yes → If AIR BAGS - SIDE IMPACT, Go To 4 Else, Test Complete. No → Replace the suspected Module in accordance with Service lnstructions. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Replace the Fuse Block Fuse # 9. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	without AIR BAGS - SIDE IMPACT
4	If there are no possible causes remaining, view repair. Repair Repair Fused Ignition Switch Output Run/Start Circuit shorted to ground and replace Fuse Block Fuse # 9. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT
5	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the resistance Fused Ignition Switch Output Run/Start circuit from the Occupant Restraint Controller connector to ground. Is the voltage above 4.0 volts? Yes → Go To 6 No → Repair the Fused Ignition Switch Output Run/Start Circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1.	without AIR BAGS - SIDE IMPACT

ORC, LOSS OF IGNITION RUN/START W/O SIACM(ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
6	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE AIRBAG MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	without AIR BAGS - SIDE IMPACT

Symptom:
ORC, LOSS OF IGNITION RUN/START WITH SIACM (ACTIVE)

When Monitored and Set Condition:

ORC, LOSS OF IGNITION RUN/START WITH SIACM (ACTIVE)

When Monitored: With the ignition in the run/start position the ORC monitors the Fused Ignition Switch Output Run/Start circuit for proper system voltage.

Set Condition: If the voltage on the Fused Ignition Switch Output Run/Start circuit drops below 4.5 volts, the code will set.

POSSIBLE CAUSES
SUSPECT MODULE SHORT TO GROUND
IGNITION SWITCH RUN/START CIRCUIT
FUSED IGNITION SWITCH OUTPUT RUN/START CIRCUIT OPEN
RUN/START CIRCUIT SHORTED TO GROUND
ORC, FUSED IGNITION SWITCH OUTPUT RUN/START OPEN

TEST	ACTION	APPLICABILITY
1	Remove use Fuse Block Fuse # 9. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On (Engine Off). Measure the Ignition Switch Output Circuit between the Fuse Block Fuse # 9 and ground. Is the voltage above 4.0 volts? Yes → Go To 2 No → Repair the open or low voltage condition on the Ignition Switch Output Run/Start circuit. Perform AIRBAG VERIFICATION TEST VER 1.	AIR BAGS - SIDE IMPACT
2	Turn Ignition off. Remove and inspect Fuse # 9. Is the Fuse open? Yes → Go To 3 No → Go To 5 **Note: Reinstall the fuse if it is not open.**	AIR BAGS - SIDE IMPACT

ORC, LOSS OF IGNITION RUN/START WITH SIACM (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** Measure the resistance of the Fused Igniion Switch Output Run/Start circuit between the Fuse Block Fuse # 9 and ground. While monitoring the Ohmmeter, disconnect the following control modules one at a time. Occupant Restraint Controller (ORC) Left Side Impact Airbag Control Module (LSIACM) Right Side Impact Airbag Control Module (ORC) **Note: If,after disconnecting a module, the ohmmeter changes to above 5.0 ohms, the module just disconnected is pulling the Fused Run/Start circuit low.** **Note: Check connectors - Clean / repair as necessary.** With all modules disconnected, does the ohmmeter display below 5.0 ohms? Yes → Go To 4 No → Replace the suspected Module in accordance with Service lnstructions. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Replace the Fuse Block Fuse # 9. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT
4	If there are no possible causes remaining, view repair. Repair Repair Fused Ignition Switch Output Run/Start Circuit shorted to ground and replace Fuse Block Fuse # 9. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT
5	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Measure the resistance Fused Ignition Switch Output Run/Start circuit from the Occupant Restraint Controller connector to ground. Is the voltage above 4.0 volts? Yes → Go To 6 No → Repair open Fused Ignition Switch Output Run/Start Circuit. Perform AIRBAG VERIFICATION TEST VER 1.	AIR BAGS - SIDE IMPACT

ORC, LOSS OF IGNITION RUN/START WITH SIACM (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
6	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: If the Occupant Restraint Controller is dropped at any time, it must be replaced.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
ORC, NO CLUSTER MESSAGES (ACTIVE)

When Monitored and Set Condition:

ORC, NO CLUSTER MESSAGES (ACTIVE)

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

Set Condition: If the MIC message is not received for 5 consecutive seconds, the code will set.

POSSIBLE CAUSES
MIC, COMMUNICATION FAILURE
NO CLUSTER MESSAGES
ORC, NO CLUSTER MESSAGES

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Read the odometer display. Does the MIC odometer display ″NO BUS″? Yes → Refer to category ″ COMMUNICATION″ and select the related symptom ″INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN ″. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 2	All
2	With the DRB select ″PASSIVE RESTRAINTS″, ″AIRBAG″, ″MONITOR DISPLAY″ and ″WARNING LAMP STATUS″. Cycle the ignition key and observe the ″LAMP ON BY MIC″ monitor after the 6 to 8 seconds bulb check. Does the DRB show ″LAMP ON BY MIC: ON or OFF″? YES Go To 3 NO Replace Instrument Cluster circuit board. Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, NO CLUSTER MESSAGES (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off. Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED..** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, NO LEFT SIACM MESSAGE (ACTIVE)

When Monitored and Set Condition:

ORC, NO LEFT SIACM MESSAGE (ACTIVE)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the Left SIACM status message. The Left SIACM transmits the status message to the ORC at 1 - second intervals.

Set Condition: If the ORC fails to see the Left SIACM status message on the PCI Bus for 5 seconds the code will set.

POSSIBLE CAUSES
NO LEFT SIACM MESSAGE
ORC, NO LEFT SIACM MESSAGE

Repair Instructions:

NO LEFT SIACM MESSAGE

Refer to the Communication category for the related symptom(s).

Perform AIRBAG VERIFICATION TEST VER 1.

ORC, NO LEFT SIACM MESSAGE

Replace the Occupant Restraint Controller (ORC) 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.

Symptom:
ORC, NO ODOMETER MESSAGE (ACTIVE)

When Monitored and Set Condition:

ORC, NO ODOMETER MESSAGE (ACTIVE)

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

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

POSSIBLE CAUSES
PCM, PCI COMMUNICATION FAILURE
NO ODOMETER MESSAGE
ORC, NO ODOMETER MESSAGE

TEST	ACTION	APPLICABILITY
1	With the DRB select ″ENGINE″ MISCELLANEOUS″, SELECT MISC FUNCTION″, and then ″CHECK VIN″ to read the Vehicle Identification Number in the Powertrain Control Module. Compare the VIN displayed on the DRB screen and the Vehicle VIN plate. Does the VIN plate and the PCM VIN match? Yes → Go To 2 No → Replace the Powertrain Control Module and program with the correct vehicle identification number. Perform AIRBAG VERIFICATION TEST VER 1.	All
2	Turn the ignition on. Connect the DRBIII® to the data link connector and select ″PASSIVE RESTRAINTS″, ″AIRBAG″, ″SYSTEM TEST″. With the DRBIII®, read the ″PCM Active on the Bus:″. Does the DRB show ″PCM ACTIVE ON THE BUS:YES″? Yes → Go To 3 No → Refer to category ″ COMMUNICATION″ and select the related symptom. Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, NO ODOMETER MESSAGE (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE AIRBAG MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, NO RIGHT SIACM MESSAGE (ACTIVE)

When Monitored and Set Condition:

ORC, NO RIGHT SIACM MESSAGE (ACTIVE)

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

Set Condition: If the ORC fails to see the Right SIACM status message on the PCI Bus for 5 seconds the code will set.

POSSIBLE CAUSES
NO RIGHT SIACM MESSAGE
ORC, NO RIGHT SIACM MESSAGE

Repair Instructions:

NO RIGHT SIACM MESSAGE

Refer to the Communication category for the related symptom(s).

Perform AIRBAG VERIFICATION TEST VER 1.

ORC, NO RIGHT SIACM MESSAGE

Replace the Occupant Restraint Controller (ORC) 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.

Symptom:
ORC, NOT CONFIGURED FOR SAB (ACTIVE)

When Monitored and Set Condition:

ORC, NOT CONFIGURED FOR SAB (ACTIVE)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the VIN message containing ″A″, or ″4″ in the 3 th position of the VIN. This character identifies the type of safety equipment and should match the VIN. The PCM transmits the VIN every 13.76 seconds

Set Condition: The code will set, if the ORC detects a Side Impact Airbag Module on the PCI Bus and a VIN message containing an ″4″ as the 3 th character.

POSSIBLE CAUSES
PCM, PCI COMMUNICATION FAILURE
ORC NOT CONFIGURED FOR SIDE AIRBAGS
ORC, ORC NOT CONFIGURED FOR SIDE AIRBAGS

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Connect the DRB to the data link connector and select ″PASSIVE RESTRAINTS″, ″AIRBAG″, SYSTEM TEST″. With the DRBIII®, read the ″PCM Active on the Bus:″. Does the DRB show ″PCM Active on the Bus:YES″? Yes → Go To 2 No → Refer to category ″ COMMUNICATION″ and select the related symptom. Perform AIRBAG VERIFICATION TEST VER 1.	All
2	With the DRB read the Vehicle Identification Number in the Powertrain Control Module. Compare the VIN displayed on the DRB screen and the Vehicle VIN plate. Does the VIN plate and the PCM VIN match? Yes → Go To 3 No → Replace the Powertrain Control Module and program with the correct vehicle identification number. Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, NOT CONFIGURED FOR SAB (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE AIRBAG MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, NOT CONFIGURED FOR SAB (STORED)

When Monitored and Set Condition:

ORC, NOT CONFIGURED FOR SAB (STORED)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the VIN message containing ″A″, or ″4″ in the 3 th position of the VIN. This character identifies the type of safety equipment and should match the VIN. The PCM transmits the VIN every 13.76 seconds

Set Condition: The code will set, if the ORC detects a Side Impact Airbag Module on the PCI Bus and a VIN message containing an ″4″ as the 3 th character.

POSSIBLE CAUSES
INTERMITTENT PCI BUS TEST

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the battery is fully charged.** Active codes must be resolved before diagnosing stored codes. Turn ignition on. Read both active and stored codes, and record them. With the DRB III monitor stored codes as you work through the system. **Note: Check for partially seated connectors and spread terminals - Clean / repair as necessary.** Wiggle the wiring harness of each module on the PCI Bus. While monitoring the DRB road test the vehicle. Is there a wiring, connector problem, loss of communication or ″NO PCI TRANSMISSION″ DTC returns? Yes → Repair the PCI Bus wiring, connectors or terminals as necessary. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
ORC, PASSENGER SQUIB #1 CIRCUIT OPEN (ACTIVE)

When Monitored and Set Condition:

ORC, PASSENGER SQUIB #1 CIRCUIT OPEN (ACTIVE)

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

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

POSSIBLE CAUSES
PASSENGER AIRBAG MODULE CIRCUITS OPEN
PASSENGER SQUIB #1 LINE 1 CIRCUIT OPEN
PASSENGER SQUIB #1 LINE 2 CIRCUIT OPEN
ORC, PASSENGER SQUIB # 1 CIRCUITS OPEN

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Passenger Airbag Module connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show PASSENGER SQUIB # 1 CIRCUIT OPEN? Yes → Go To 2 No → Replace Passenger Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, PASSENGER SQUIB #1 CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller 23-way Connector. **Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. With the DRB in Ohmmeter Mode measure the resistance of the Passenger Squib # 1 Line 1 Circuit between the Airbag System Load Tool Adaptor and the Passenger Airbag Module Connector. Is the resistance below 1.0 ohms ? Yes → Go To 3 No → Repair open or high resistance in Passenger Squib # 1 Line 1 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an ohmmeter, measure the resistance of the Passenger Squib # 1 Line 2 circuit between the Airbag System Load Tool 23-way Adaptor and the Passenger Airbag Module connector. Is the resistance below 1.0 ohms? Yes → Go To 4 No → Repair open or high resistance in Passenger Squib # 1 Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, PASSENGER SQUIB #1 CIRCUIT SHORTED (ACTIVE)

When Monitored and Set Condition:

ORC, PASSENGER SQUIB #1 CIRCUIT SHORTED (ACTIVE)

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

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

POSSIBLE CAUSES
PASSENGER AIRBAG MODULE CIRCUITS SHORTED
PASSENGER SQUIB #1 LINE 1 SHORTED TO LINE 2
ORC, PASSENGER SQUIB # 1 CIRCUITS SHORTED

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Passenger Airbag Module connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show PASSENGER SQUIB CIRCUIT SHORTED? Yes → Go To 2 No → Replace Passenger Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, PASSENGER SQUIB #1 CIRCUIT SHORTED (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an Ohmmeter measure between the Passenger Squib # 1 Line 1 and line 2 at the Passenger Airbag Module connector. Is the resistance below 5.0 Ohms? Yes → Repair Passenger Squib # 1 Line 1 circuit shorted to Passenger Squib # 1 Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note:When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, PASSENGER SQUIB #1 SHORTED TO BATTERY (ACTIVE)

When Monitored and Set Condition:

ORC, PASSENGER SQUIB #1 SHORTED TO BATTERY (ACTIVE)

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

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

POSSIBLE CAUSES
PASSENGER AIRBAG MODULE CIRCUITS SHORTED TO BATTERY
PASSENGER SQUIB #1 LINE 1 SHORTED TO BATTERY
PASSENGER SQUIB #1 LINE 2 SHORTED TO BATTERY
ORC, PASSENGER SQUIB # 1 CIRCUITS SHORTED TO BATTERY

TEST	ACTION	APPLICABILITY
1	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Passenger Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show PASSENGER SQUIB CIRCUIT SHORTED TO BATTERY? Yes → Go To 2 No → Replace Passenger Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note:When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, PASSENGER SQUIB #1 SHORTED TO BATTERY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the ORC 23-Way Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Turn Ignition On and then reconnect the Battery. Using a Voltmeter, measure the Passenger Squib # 1 Line 1 from the Passenger Airbag Module connector to ground. Is the voltage above 0.5 volts on Passenger Squib # 1 Line 1 circuit? Yes → Repair Passenger Squib # 1 Line 1 circuit shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Using a Voltmeter, measure the Passenger Squib # 1 Line 2 from the Passenger Airbag module connector to ground. Is the voltage above 0.5 volts on Passenger Squib # 1 Line 2 circuit ? Yes → Repair Passenger Squib # 1 Line 2 circuit shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, PASSENGER SQUIB #1 SHORTED TO GROUND (ACTIVE)

When Monitored and Set Condition:

ORC, PASSENGER SQUIB #1 SHORTED TO GROUND (ACTIVE)

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

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

POSSIBLE CAUSES
PASSENGER AIRBAG MODULE CIRCUITS SHORTED TO GROUND
PASSENGER SQUIB #1 LINE 1 SHORTED TO GROUND
PASSENGER SQUIB #1 LINE 2 SHORTED TO GROUND
ORC, PASSENGER SQUIB # 1 CIRCUITS SHORTED TO GROUND

TEST	ACTION	APPLICABILITY
1	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module Connector. **Note: Check connectors - Clean / repair as necessary. .** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Passenger Airbag Module connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show PASSENGER SQUIB CIRCUIT SHORTED TO GROUND? Yes → Go To 2 No → Replace the Passenger Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, PASSENGER SQUIB #1 SHORTED TO GROUND (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller 23-Way Connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restriant Controller connector. Using an ohmmeter, measure the resistance of the Passenger Squib # 1 Line 1 circuit between the Passenger Airbag Module Connector and ground. Is the resistance below 5.0 Ohms on Passenger Squib # 1 Line 1 circuit ? Yes → Repair Passenger Squib # 1 Line 1 circuit for a shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: Do not place an intact undeployed Airbag face down on a hard surface, the Airbag will propel into the air if accidently deployed.** Disconnect the Passenger Airbag Module. **Note: Check connectors - Clean / repair as necessary.** Disconnect the Occupant Restraint Controller connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Using an Ohmmeter, measure the Passenger Squib # 1 Line 2 from the Passenger Airbag Module connector to ground. Is the resistance below 5.0 Ohms on Passenger Squib # 1 Line 2 circuit ? Yes → Repair Passenger Squib # 1 Line 2 circuit for a short to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:

ORC, RIGHT SEAT BELT TENSIONER CIRCUIT OPEN ACTIVE

When Monitored and Set Condition:

ORC, RIGHT SEAT BELT TENSIONER CIRCUIT OPEN ACTIVE

When Monitored: With the ignition is On, the ORC monitors the resistance of the Right Seat belt Pretensioner circuits.

Set Condition: The ORC has detected an open circuit or high resistance on the Right Seat Belt Pretensioner circuits.

POSSIBLE CAUSES
RIGHT SEAT BELT TENSIONER CIRCUITS OPEN
RIGHT SEAT BELT TENSIONER LINE 1 CIRCUIT OPEN
RIGHT SEAT BELT TENSIONER LINE 2 CIRCUIT OPEN
ORC, RIGHT SEAT BELT TENSIONER CIRCUITS OPEN

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the battery is fully charged.** **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System Load Tool # 8310 brown cable and jumper harness to the Right Seat Belt Tensioner connector. Turn Ignition On and then reconnect the Battery. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRBIII® display RIGHT SEAT BELT TENSIONER CIRCUIT OPEN? Yes → Go To 2 No → Replace the Right Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

ORC, RIGHT SEAT BELT TENSIONER CIRCUIT OPEN ACTIVE — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. Disconnect the Occupant Restraint Controller Connector. **Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Right Seat Belt Tensioner Line 1 circuit between the Airbag System Load Tool Adaptor connector and the Right Seat Belt Tensioner connector. Is the resistance below 1.0 ohms ? Yes → Go To 3 No → Repair open or high resistance in Right Seat Belt Tensioner Line 1 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System Load Tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Right Seat Belt Tensioner Line 2 circuit between the Airbag System Load Tool 23-way Adaptor connector Right Seat Belt Tensioner connector. Is the resistance below 1.0 ohms? Yes → Go To 4 No → Repair open or high resistance in Right Seat Belt Tensioner Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE

When Monitored and Set Condition:

ORC, RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE

When Monitored: When the ignition is on, the ORC monitors the resistance of the Right Seat Belt Pretensioner circuits.

Set Condition: The ORC has detected low resistance in the Right Seat Belt Pretensioner circuits.

POSSIBLE CAUSES
RIGHT SEAT BELT TENSIONER CIRCUITS SHORTED
RIGHT SEAT BELT TENSIONER LINE 1 SHORTED TO LINE 2
ORC, RIGHT SEAT BELT TENSIONER CIRCUITS SHORTED

TEST	ACTION	APPLICABILITY
1	**Note:Ensure the battery is fully charged.** **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System Load Tool # 8310 brown cable and jumper harness to the Passenger Seat Belt Tensioner connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRB show RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED? Yes → Go To 2 No → Replace the Right Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, RIGHT SEAT BELT TENSIONER CIRCUIT SHORTED ACTIVE — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. Disconnect the Occupant Restraint Controller connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System Load Tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance between the Right Seat Belt Tensioner Line 1 and line 2 circuit at the Right Seat belt Tensioner connector. Is the resistance below 5.0 Ohms? Yes → Repair the Right Seat Belt Tensioner Line 1 circuit for a short to the Right Seat Belt Tensioner Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note:When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE

When Monitored and Set Condition:

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE

When Monitored: When the ignition is on, the ORC monitors the voltage of the Right Seat Belt Pretensioner circuits.

Set Condition: The ORC has detected high voltage on the Right Seat Belt Pretensioner circuits.

POSSIBLE CAUSES
RIGHT SEAT BELT TENSIONER CIRCUITS SHORTED TO BATTERY
RIGHT SEAT BELT TENSIONER LINE 1 SHORTED TO BATTERY
RIGHT SEAT BELT TENSIONER LINE 2 SHORTED TO BATTERY
ORC, RIGHT SEAT BELT TENSIONER CIRCUITS SHORTED TO BATTERY

TEST	ACTION	APPLICABILITY
1	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System Load Tool # 8310 brown cable and jumper harness to the Right Seat Belt Tensioner connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRBIII® display RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY? Yes → Go To 2 No → Replace the Right Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST VER 1. **Note:When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO BATTERY ACTIVE — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. Disconnect the Occupaint Restraint Controller Connector. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage of the Right Seat Belt Tensioner Line 1 circuit in the Right Seat Belt Tensioner connector. Is the voltage above 0.5 volts? Yes → Repair Right Seat Belt Tensioner Line 1 Shorted To Battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. Disconnect the Occupant Restraint Controller connector. **Note: Check connectors - Clean / repair as necessary.** **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** Measure the voltage between Right Seat Belt Tensioner Line 2 circuit in the Right Seat Belt Tensioner connector. Is the voltage above 0.5 volts? Yes → Repair the Right Seat Belt Tensioner Line 2 circuit for a short to voltage. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE

When Monitored and Set Condition:

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE

When Monitored: When the ignition is on, the ORC monitors the resistance of the Right Seat Belt Pretensioner circuits for low resistance.

Set Condition: The ORC has detected a short to ground in the Right Seat Belt Pretensioner circuits.

POSSIBLE CAUSES
RIGHT SEAT BELT TENSIONER CIRCUITS SHORTED TO GROUND
RIGHT SEAT BELT TENSIONER LINE 1 SHORTED TO GROUND
RIGHT SEAT BELT TENSIONER LINE 2 SHORTED TO GROUND
ORC, RIGHT SEAT BELT TENSIONER CIRCUITS SHORTED TO GROUND

TEST	ACTION	APPLICABILITY
1	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner connector. **Note: Check connectors - Clean / repair as necessary. .** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Right Seat Belt Tensioner connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRBIII®, read the active DTC's. Does the DRBIII® display RIGHT SEAT BELT TENSIONER SHORTED TO GROUND? Yes → Go To 2 No → Replace the Right Seat Belt Tensioner in accordance with the Service Information. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

ORC, RIGHT SEAT BELT TENSIONER SHORTED TO GROUND ACTIVE — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. Disconnect the Occupant Restraint Controller Connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Right Seat Belt Tensioner Line 1 circuit between the Right Seat Belt Tensioner connector and ground. Is the resistance below 5.0 Ohms? Yes → repair Right Seat Belt Tensioner Line 1 shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Seat Belt Tensioner. Disconnect the Occupant Restraint Controller connector **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System Load Tool # 8310 23-way adaptor to the Occupant Restraint Controller connector. Measure the resistance of the Right Seat Belt Tensioner Line 2 circuit between the Right Seat Belt Tensioner connector and ground. Is the resistance below 5.0 Ohms? Yes → Repair the Right Seat Belt Tensioner Line 2 circuit for a short to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

Symptom:
ORC, VEHICLE BODY STYLE UNKNOWN (ACTIVE)

When Monitored and Set Condition:

ORC, VEHICLE BODY STYLE UNKNOWN (ACTIVE)

When Monitored: With ignition on, the ORC monitors the PCI Bus for the VIN message containing the vehicle body style from the Powertrain Control Module. The PCM transmits the VIN message every 2.75 seconds.

Set Condition: If the ORC does not receive two consective odometer messages on the bus, frist 10 seconds after ignition on, then ″VEHICLE BODY STYLE UNKNOWN″ code will set.

POSSIBLE CAUSES
PCM, PCI COMMUNICATION FAILURE
VEHICLE BODY STYLE UNKNOWN
ORC, VEHICLE BODY STYLE UNKNOWN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Connect the DRBIII® to the data link connector and select ″PASSIVE RESTRAINTS″, ″AIRBAG″, ″SYSTEM TEST″. With the DRBIII®, read the ″PCM Active on the Bus:″. Does the DRB show ″PCM ACTIVE ON THE BUS:YES″? Yes → Go To 2 No → Refer to category ″COMMUNICATION″ and select the related symptom. Perform AIRBAG VERIFICATION TEST VER 1.	All
2	With the DRB read the Vehicle Identification Number in the Powertrain Control Module. Compare the VIN displayed on the DRB screen and the Vehicle VIN plate. Does the VIN plate and the PCM VIN match? Yes → Go To 3 No → Replace the Powertrain Control Module and program with the correct vehicle identification number. Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, VEHICLE BODY STYLE UNKNOWN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE AIRBAG MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, WARNING LAMP CIRCUIT OPEN (ACTIVE)

When Monitored and Set Condition:

ORC, WARNING LAMP CIRCUIT OPEN (ACTIVE)

When Monitored: When the ignition is On, the ORC monitors the PCI Bus for a message from the MIC containing the airbag warning lamp status Ok or Open. The MIC transmit the message one time at ignition on, opon lamp state change,or in response to the ORC lamp message.

Set Condition: The code is set if the lamp state is open for 2 consecutive messages or 2 seconds.

POSSIBLE CAUSES
MIC, COMMUNICATION FAILURE
WARNING LAMP OPEN
ORC, WARNING LAMP CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Read the odometer display. Does the MIC odometer display ″NO BUS″? Yes → Refer to category ″COMMUNICATION″ and select the related symptom ″INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN″. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 2	All
2	With the DRB select PASSIVE RESTRAINTS, AIRBAG and MONITOR DISPLAY. Using the DRB, read the ″WARNING LAMP MONITOR″ screen. Select the ″LAMP STATUS″ displayed on the DRB monitors screen. 1. ″LAMP STATUS: OK″ Go To 3 2. ″LAMP STATUS: OPEN″ Replace instrument cluster circuit board. Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, WARNING LAMP CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom:
ORC, WARNING LAMP CIRCUIT SHORTED (ACTIVE)

When Monitored and Set Condition:

ORC, WARNING LAMP CIRCUIT SHORTED (ACTIVE)

When Monitored: When the ignition is On, the ORC monitors the PCI Bus for a message from the MIC containing the airbag warning lamp status Ok or Shorted. The MIC transmit the message one time at ignition on, opon lamp state change,or in response to the ORC lamp message.

Set Condition: The code is set if the lamp state is Shorted for 2 consecutive messages or 2 seconds.

POSSIBLE CAUSES
MIC, COMMUNICATION FAILURE
WARNING LAMP SHORTED
ORC, WARNING LAMP CIRCUIT SHORTED

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Read the odometer display. Does the MIC odometer display ″NO BUS″? Yes → Refer to category ″COMMUNICATION″ and select the related symptom ″INSTRUMENT CLUSTER BUS +/- SIGNAL OPEN″. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 2	All
2	With the DRB select PASSIVE RESTRAINTS, AIRBAG and MONITOR DISPLAY. Using the DRB, read the ″WARNING LAMP MONITOR″ screen. Select the ″LAMP STATUS″ displayed on the DRB monitors screen. 1. ″LAMP STATUS: OK″ Go To 3 2. ″LAMP STATUS: SHORTED″ Replace instrument cluster circuit board. Perform AIRBAG VERIFICATION TEST VER 1.	All

ORC, WARNING LAMP CIRCUIT SHORTED (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Warning: IF THE OCCUPANT RESTRAINT CONTROLLER IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Symptom List:

RIGHT SIACM ACCELEROMETER #1 (ACTIVE)
RIGHT SIACM ACCELEROMETER #1 (STORED)
RIGHT SIACM ACCELEROMETER #2 (ACTIVE)
RIGHT SIACM ACCELEROMETER #2 (STORED)
RIGHT SIACM INTERNAL #1 (ACTIVE)
RIGHT SIACM INTERNAL #1 (STORED)
RIGHT SIACM OUTPUT DRIVER #1 (ACTIVE)
RIGHT SIACM OUTPUT DRIVER #1 (STORED)
RIGHT SIACM, LOSS OF IGNITION RUN/START (ACTIVE)
RIGHT SIACM, NO PCI TRANSMISSION (ACTIVE)

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be RIGHT SIACM ACCELEROMETER #1 (ACTIVE).

When Monitored and Set Condition:

RIGHT SIACM ACCELEROMETER #1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM ACCELEROMETER #1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM ACCELEROMETER #2 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM ACCELEROMETER #2 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM INTERNAL #1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM INTERNAL #1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM ACCELEROMETER #1 (ACTIVE) — Continued

RIGHT SIACM OUTPUT DRIVER #1 (ACTIVE)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM OUTPUT DRIVER #1 (STORED)

When Monitored: Continuously with ignition on.

Set Condition: The ORC has detected a diagnostic condition, replace the module.

RIGHT SIACM, LOSS OF IGNITION RUN/START (ACTIVE)

When Monitored: With the ignition in the run/start position the ORC monitors the Fused Ignition Switch Output Run/Start circuit for proper system voltage.This is an active trouble code only.

Set Condition: If the voltage on the Fused Ignition Switch Output Run/Start circuit is below 4.0 volts, the code will set.

RIGHT SIACM, NO PCI TRANSMISSION (ACTIVE)

When Monitored: With the ignition in the On position and the ORC transmitting information on the PCI BUS.

Set Condition: The code will set if the ORC cannot detect the ORC transmitting information on the PCI BUS for 5 consecutive seconds. NOTE: Any PCI Bus Failure will cause this code to set.

POSSIBLE CAUSES
RSIACM, ACTIVE/STORED CODE

TEST	ACTION	APPLICABILITY
1	**TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE RIGHT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair Replace the Right Side Impact Airbag Control Module (RSIACM) in accordance with Service information. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Errase DTC's in the ORC and Left SIACM. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE)

When Monitored and Set Condition:

RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE)

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

Set Condition: he Right SIACM has detected an open circuit or high resistance on the Right Seat Squib circuits.

POSSIBLE CAUSES
RIGHT SEAT AIRBAG MODULE CIRCUITS OPEN
RIGHT SEAT SQUIB LINE 1 CIRCUIT OPEN
RIGHT SEAT SQUIB LINE 2 CIRCUIT OPEN
RISACM, RIGHT SEAT SQUIB CIRCUITS OPEN

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and partially remove the material to gain access to the Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable, and appropriate jumper harness to the Right Seat Airbag harness connector. **Warning: TURN IGNITION ON, THEN RECONNECT THE BATTERY.** With the DRB, read the active codes.With the DRBIII®, read the active DTC's. Does the DRBIII® display RIGHT SEAT SQUIB CIRCUIT OPEN? Yes → Go To 2 No → Replace Right Seat Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Right Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Right Side Impact Airbag Control Module Connector. **Note: Check connectors - Clean / repair as necessary.** Measure the resistance of the Right Seat Squib Line 1 circuit between the Right SIACM connector and the Right Seat Airbag connector. Is the resistance below 1.0 ohms ? Yes → Go To 3 No → Repair open or high resistance in the Right Seat Squib Line 1 circuit. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Right Seat Airbag Module Squib connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Right Side Impact Airbag Control Module Connector. **Note: Check connectors - Clean / repair as necessary.** Measure the resistance of the Right Seat Squib Line 2 circuit between the Right SIACM connector and the Right Seat Squib connector. Is the resistance below 1.0 ohms? Yes → Repair open or high resistance in Right Seat Squib Line 2 circuit. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

RIGHT SIACM, SEAT SQUIB CIRCUIT OPEN (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE RIGHT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair 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. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
RIGHT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE)

When Monitored and Set Condition:

RIGHT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE)

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

Set Condition: The Right SIACM has detected that the Right Seat Squib circuits are shorted together.

POSSIBLE CAUSES
RIGHT SEAT AIRBAG MODULE CIRCUITS SHORTED
RIGHT SEAT SQUIB LINE 1 SHORTED TO LINE 2
RSIACM, RIGHT SEAT SQUIB CIRCUITS SHORTED

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UN DEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and partially remove the material to gain access to the Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Right Seat Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show "RIGHT SEAT SQUIB CIRCUIT SHORTED'? Yes → Go To 2 No → Replace Right Seat Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

RIGHT SIACM, SEAT SQUIB CIRCUIT SHORTED (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: MAKE SURE THE BATTERY IS DISCONNECTED, THEN WAIT TWO MINUTES BEFORE PROCEEDING.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Left Seat Airbag connector located inside the left seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Left Side Impact Airbag Control Module connector **Note: Check connectors - Clean / repair as necessary.** Measure the resistance of the Left Seat Squib Line 1and line 2 circuit in the Left Side Impact Airbag Control Module connector. Is the resistance below 5.0 Ohms? Yes → Repair Right Seat Squib # 1 Line 1 shorted to Right Seat Squib # 1 Line 2. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE RIGHT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair 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. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE)

When Monitored and Set Condition:

RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE)

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

Set Condition: The Right SIACM has detected high voltage on the Right Seat Squib Line circuits.

POSSIBLE CAUSES
RIGHT SEAT AIRBAG MODULE CIRCUITS SHORTED TO BATTERY
RIGHT SEAT SQUIB LINE 1 SHORTED TO BATTERY
RIGHT SEAT SQUIB LINE 2 SHORTED TO BATTERY
RSIACM, RIGHT SEAT SQUIB CIRCUITS SHORTED TO BATTERY

TEST	ACTION	APPLICABILITY
1	**Warning: Turn Ignition Off, disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the Right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean / repair as necessary.** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Right Seat Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show ″RIGHT SEAT SQUIB SHORTED TO BATTERY? Yes → Go To 2 No → Replace Right Seat Airbag Module. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Right Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Right Side Impact Airbag Control Module connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Using a Voltmeter, measure the Right Seat Squib Line 1 from the Right Side Impact Airbag Control Module connector to ground. Is the voltage above 0.5 volts on Right Seat Squib Line 1 circuit? Yes → Repair Right Seat Squib Line 1 shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect theRight Seat Airbag connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Right Side Impact Airbag Control Module connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Using a Voltmeter, measure the Right Seat Squib Line 2 from the Right Side Impact Control Module connector to ground. Is the voltage above 0.5 volts on Right Seat Squib Line 2 circuit ? Yes → Repair Right Seat Squib Line 2 shorted to battery. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

RIGHT SIACM, SEAT SQUIB SHORTED TO BATTERY (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE RIGHT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair 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. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:

RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE)

When Monitored and Set Condition:

RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE)

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

Set Condition: The Right SIACM has detected a short to ground in the Right Seat Squib circuits.

POSSIBLE CAUSES
RIGHT SEAT AIRBAG MODULE CIRCUITS SHORTED TO GROUND
RIGHT SEAT SQUIB LINE 1 SHORTED TO GROUND
RIGHT SEAT SQUIB LINE 2 SHORTED TO GROUND
RSIACM, RIGHT SEAT SQUIB CIRCUITS SHORTED TO GROUND

TEST	ACTION	APPLICABILITY
1	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution:DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. **Note: Check connectors - Clean / repair as necessary. .** Connect the Airbag System load tool # 8310 brown cable and jumper harness to the Right Seat Airbag connector. Turn Ignition On and then reconnect the Battery. With the DRB, read the active codes. Does the DRB show ″RIGHT SEAT SQUIB SHORTED TO GROUND″? Yes → Go To 2 No → Replace the Right Seat Airbag. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
2	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Right Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Right Side Impact Airbag Control Module connector. **Note: Check connectors - Clean / repair as necessary.** Using an ohmmeter, measure the resistance of the Right Seat Squib Line 1 circuit between the Right SIACM connector and ground. Is the resistance below 5.0 Ohms on the Right Seat Squib Line 1 circuit ? Yes → Repair Right Seat Squib Line 1 for a shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 3 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT
3	**Warning: Turn Ignition OFF. Disconnect the Battery and wait 2 minutes before proceeding.** **Caution: DO NOT PLACE AN INTACT UNDEPLOYED AIRBAG FACE DOWN ON A HARD SURFACE, THE AIRBAG WILL PROPEL INTO THE AIR IF ACCIDENTALLY DEPLOYED.** Remove the seat back cover and parcially remove the material to gain access to the Seat Airbag connector. Disconnect the Right Seat Airbag connector located inside the right seat. Do not disconnect the 4-way airbag connectors at the base of the seat. Disconnect the Right Side Impact Airbag Control Module connector **Note: Check connectors - Clean / repair as necessary.** Using an Ohmmeter, measure the Right Seat Squib Line 2 from the Right Side Impact Airbag Control Module connector to ground. Is the resistance below 5.0 Ohms on Right Seat Squib Line 2 circuit ? Yes → Repair Left Seat Squib Line 2 shorted to ground. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 4 **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

RIGHT SIACM, SEAT SQUIB SHORTED TO GROUND (ACTIVE) — Continued

TEST	ACTION	APPLICABILITY
4	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **Warning: IF THE RIGHT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no potential causes remaining, replace the Right Side Impact Airbag Control Module. If there are no possible causes remaining, view repair. Repair 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. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
ALL OUTPUTS SHORT

When Monitored and Set Condition:

ALL OUTPUTS SHORT

When Monitored: With the ignition on and the radio on.

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

POSSIBLE CAUSES
DETERMINE FAULT
LEFT I/P SPEAKER SHORTED
LEFT FRONT DOOR SPEAKER SHORTED
LEFT REAR SPEAKER SHORTED
RIGHT I/P SPEAKER SHORTED
RIGHT FRONT DOOR SPEAKER SHORTED
RIGHT REAR SPEAKER SHORTED
SPEAKER (+) CIRCUIT SHORTED TO GROUND
SPEAKER (-) CIRCUIT SHORTED TO GROUND
SPEAKER (+) CIRCUIT SHORTED TO SPEAKER (-) CIRCUIT
RADIO INTERNAL SHORT

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. Is the ALL OUTPUTS SHORT code set? Yes → Go To 2 No → Refer to the wiring diagrams located in the service information to help isolate a possible short. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Left Instrument Panel Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the ALL OUTPUTS SHORT code set? Yes → Go To 3 No → Replace the Left Instrument Panel Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

ALL OUTPUTS SHORT — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the ALL OUTPUTS SHORT code set? Yes → Go To 4 No → Replace the Left Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Left Rear Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the ALL OUTPUTS SHORT code set? Yes → Go To 5 No → Replace the Left Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Right Instrument Panel Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the ALL OUTPUTS SHORT code set? Yes → Go To 6 No → Replace the Right Instrument Panel Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the ALL OUTPUTS SHORT code set? Yes → Go To 7 No → Replace the Right Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
7	Turn the ignition off. Disconnect the Right Rear Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the ALL OUTPUTS SHORT code set? Yes → Go To 8 No → Replace the Right Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

ALL OUTPUTS SHORT — Continued

TEST	ACTION	APPLICABILITY
8	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left Instrument Panel Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right Instrument Panel Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between ground and each speaker (+) circuit. Is the resistance below 5.0 ohms for any of the measurements? Yes → Repair the speaker (+) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All
9	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left Instrument Panel Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right Instrument Panel Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between ground and each speaker (-) circuit. Is the resistance below 5.0 ohms for any of the measurements? Yes → Repair the speaker (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left Instrument Panel Speaker harness connector. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right Instrument Panel Speaker harness connector. Disconnect the Left Rear Speaker harness connector. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between each speaker (+) circuit and each speaker (-) circuit. Is the resistance below 5.0 ohms for any of the measurements? Yes → Repair the speaker (+) circuit for a short to the speaker (-) circuit. 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 List:

CASSETTE FAULTS
CASSETTE TAPE TENSION HIGH
CASSETTE TAPE TENSION LOW
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**
***POWER SWITCH INOPERATIVE**
***SCAN SWITCH INOPERATIVE**
***SEEK SWITCH INOPERATIVE**
***SET SWITCH INOPERATIVE**
***TAPE EJECT SWITCH INOPERATIVE**
***TAPE/CD 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 FAULTS.

When Monitored and Set Condition:

CASSETTE FAULTS

When Monitored: Monitored any time the PCI radio has power.

Set Condition: The PCI radio has experienced an internal radio failure.

CASSETTE TAPE TENSION HIGH

When Monitored: Monitored any time the PCI radio has power.

Set Condition: The PCI radio has experienced an internal radio failure.

CASSETTE TAPE TENSION LOW

When Monitored: Monitored any time the PCI radio has power.

Set Condition: The PCI radio has experienced an internal radio failure.

CD MECHANICAL FAILURE

When Monitored: With ignnition on and the CD player turned on.

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

CASSETTE FAULTS — Continued

POSSIBLE CAUSES
INTERNAL FAILURE

TEST	ACTION	APPLICABILITY
1	This is an internal radio failure. If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom List:

CD PLAY FAILURE
CD READ FAILURE
CD READ FAILURE/IMPROPER DISK
IMPROPER DISC

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

When Monitored and Set Condition:

CD PLAY FAILURE

When Monitored: Continuously with the ignition on.

Set Condition: If the CD is scratched, dirty, so that the head cannot play the disk the code will set.

CD READ FAILURE

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

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

CD READ FAILURE/IMPROPER DISK

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

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

IMPROPER DISC

When Monitored: With ignition on and CD Player is turned on.

Set Condition: If an improper CD that is not formated for music is installed, the code will set.

POSSIBLE CAUSES
CD PLAY OR READ/IMPROPER DISK FAILURE

CD PLAY FAILURE — Continued

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 DRB display CD PLAY FAILURE, CD READ FAILURE, IMPROPER DISK or CD READ FAILURE/IMPROPER DISK? Yes → Replace the Radio CD player. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom List:

CD TEMPERATURE HIGH
CD TEMPERATURE LOW

Test Note: All symptoms listed above are diagnosed using the same tests. The title for the tests will be CD TEMPERATURE HIGH.

When Monitored and Set Condition:

CD TEMPERATURE HIGH

When Monitored: Continuously with the ignition on.

Set Condition: If the temperature inside the Radio CD player is above +65° C (+145° F) the code will set.

CD TEMPERATURE LOW

When Monitored: Continuously with the ignition on.

Set Condition: If the temperature inside the Radio CD player is below -23° C (-10° F) the code will set.

POSSIBLE CAUSES
LOW OR HIGH TEMPERATURE FAILURE

TEST	ACTION	APPLICABILITY
1	Start the engine and allow the engine to reach normal operating temperature. If the vehicle has been in the hot sunlight or extreme cold move the vehicle indoors and open the doors to allow the inside temperature to stabilize. The CD will operate between -23° C and 65° C (-10° F and +145° F). With the DRBIII®, read DTC's. Does the DRBIII® display CD TEMPERATURE LOW or CD TEMPERATURE HIGH? Yes → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
FRONT OUTPUT SHORT

When Monitored and Set Condition:

FRONT OUTPUT SHORT

When Monitored: With the ignition on and the radio on.

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

POSSIBLE CAUSES
DETERMINE FAULT
LEFT I/P SPEAKER SHORTED
LEFT FRONT DOOR SPEAKER SHORTED
RIGHT I/P SPEAKER SHORTED
RIGHT FRONT DOOR SPEAKER SHORTED
RIGHT FRONT DOOR SPEAKER CIRCUITS SHORTED TO GROUND
RIGHT FRONT DOOR SPEAKER CIRCUITS SHORTED TOGETHER
LEFT FRONT DOOR SPEAKER CIRCUITS SHORTED TO GROUND
LEFT FRONT DOOR SPEAKER CIRCUITS SHORTED TOGETHER
RADIO INTERNAL SHORT

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. Is the FRONT OUTPUT SHORT code set? Yes → Go To 2 No → Refer to the wiring diagrams located in the service information to help isolate a possible short. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Left Instrument Panel Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the FRONT OUTPUT SHORT code set? Yes → Go To 3 No → Replace the Left Instrument Panel Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

FRONT OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the FRONT OUTPUT SHORT code set? Yes → Go To 4 No → Replace the Left Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Right Instrument Panel Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the FRONT OUTPUT SHORT code set? Yes → Go To 5 No → Replace the Right Instrument Panel Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the FRONT OUTPUT SHORT code set? Yes → Go To 6 No → Replace the Right Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between ground and each right front speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Right Front Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between the Right Front Speaker (+) circuit and the Right Front Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Right Front Speaker (+) circuit for a short to the Right Front Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All

FRONT OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
8	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between ground and each left front speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Left Front Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All
9	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between the Left Front Speaker (+) circuit and the Left Front Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Left Front Speaker (+) circuit for a short to the Left Front Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
LEFT OUTPUT SHORT

When Monitored and Set Condition:

LEFT OUTPUT SHORT

When Monitored: With the ignition on and the radio on.

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

POSSIBLE CAUSES
DETERMINE FAULT
LEFT I/P SPEAKER SHORTED
LEFT FRONT DOOR SPEAKER SHORTED
LEFT REAR SPEAKER SHORTED
LEFT FRONT DOOR SPEAKER CIRCUITS SHORTED TO GROUND
LEFT FRONT DOOR SPEAKER CIRCUITS SHORTED TOGETHER
LEFT REAR SPEAKER CIRCUITS SHORTED TO GROUND
LEFT REAR SPEAKER CIRCUITS SHORTED TOGETHER
RADIO INTERNAL SHORT

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. Is the LEFT OUTPUT SHORT code set? Yes → Go To 2 No → Refer to the wiring diagrams located in the service information to help isolate a possible short. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Left Instrument Panel Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the LEFT OUTPUT SHORT code set? Yes → Go To 3 No → Replace the Left Instrument Panel Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

LEFT OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the LEFT OUTPUT SHORT code set? Yes → Go To 4 No → Replace the Left Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Left Rear Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the LEFT OUTPUT SHORT code set? Yes → Go To 5 No → Replace the Left Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between ground and each left front speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Left Front Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect the Left Front Door Speaker harness connector. Disconnect the Left Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between the Left Front Speaker (+) circuit and the Left Front Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Left Front Speaker (+) circuit for a short to the Left Front Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Disconnect the Left Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between ground and each left rear speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Left Rear Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All

LEFT OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
8	Turn the ignition off. Disconnect the Left Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between the Left Rear Speaker (+) circuit and the Left Rear Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Left Rear Speaker (+) circuit for a short to the Left Rear Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All
9	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
NO ANTENNA CONNECTION

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 and wait approximately 1 minute 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 SUPPLY TOO HIGH

When Monitored and Set Condition:

POWER SUPPLY TOO HIGH

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

Set Condition: The code will set if the radio detects ignition voltage over 16.0 volts for 5 seconds.

POSSIBLE CAUSES
POWER SUPPLY OF RADIO
POWER SUPPLY TOO HIGH

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Disconnect the radio C1 harness connector. Start the engine. Measure the voltage of the Fused B(+) circuit in the radio C1 harness connector. Is the voltage above 16.0 volts? Yes → Refer to Charging System to repair high ignition voltage. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
REAR OUTPUT SHORT

When Monitored and Set Condition:

REAR OUTPUT SHORT

When Monitored: With the ignition on and the radio on.

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

POSSIBLE CAUSES
DETERMINE FAULT
LEFT REAR SPEAKER SHORTED
RIGHT REAR SPEAKER SHORTED
RIGHT REAR SPEAKER CIRCUITS SHORTED TO GROUND
RIGHT REAR SPEAKER CIRCUITS SHORTED TOGETHER
LEFT REAR SPEAKER CIRCUITS SHORTED TO GROUND
LEFT REAR SPEAKER CIRCUITS SHORTED TOGETHER
RADIO INTERNAL SHORT

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. Is the REAR OUTPUT SHORT code set? Yes → Go To 2 No → Refer to the wiring diagrams located in the service information to help isolate a possible short. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Left Rear Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the REAR OUTPUT SHORT code set? Yes → Go To 3 No → Replace the Left Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

REAR OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Right Rear Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the REAR OUTPUT SHORT code set? Yes → Go To 4 No → Replace the Right Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between ground and each right rear speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Right Rear Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between the Right Rear Speaker (+) circuit and the Right Rear Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Right Rear Speaker (+) circuit for a short to the Right Rear Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect the Left Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between ground and each left rear speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Left Rear Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Disconnect the Left Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between the Left Rear Speaker (+) circuit and the Left Rear Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Left Rear Speaker (+) circuit for a short to the Left Rear Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All

REAR OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
8	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
RIGHT OUTPUT SHORT

When Monitored and Set Condition:

RIGHT OUTPUT SHORT

When Monitored: With the ignition on and the radio on.

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

POSSIBLE CAUSES
DETERMINE FAULT
RIGHT I/P SPEAKER SHORTED
RIGHT FRONT DOOR SPEAKER SHORTED
RIGHT REAR SPEAKER SHORTED
RIGHT FRONT DOOR SPEAKER CIRCUITS SHORTED TO GROUND
RIGHT FRONT DOOR SPEAKER CIRCUITS SHORTED TOGETHER
RIGHT REAR SPEAKER CIRCUITS SHORTED TO GROUND
RIGHT REAR SPEAKER CIRCUITS SHORTED TOGETHER
RADIO INTERNAL SHORT

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. Is the RIGHT OUTPUT SHORT code set? Yes → Go To 2 No → Refer to the wiring diagrams located in the service information to help isolate a possible short. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Right Instrument Panel Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the RIGHT OUTPUT SHORT code set? Yes → Go To 3 No → Replace the Right Instrument Panel Speaker. Perform BODY VERIFICATION TEST - VER 1.	All

RIGHT OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the RIGHT OUTPUT SHORT code set? Yes → Go To 4 No → Replace the Right Front Door Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Disconnect the Right Rear Speaker harness connector. Turn the ignition on. With the DRBIII®, erase the audio DTC's and wait 10 seconds before proceeding. With the DRBIII®, read the audio DTC's. Is the RIGHT OUTPUT SHORT code set? Yes → Go To 5 No → Replace the Right Rear Speaker. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between ground and each right front speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Right Front Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn the ignition off. Disconnect the Right Front Door Speaker harness connector. Disconnect the Right Instrument Panel Speaker harness connector. Disconnect the Radio C1 and C2 harness connectors. Measure the resistance between the Right Front Speaker (+) circuit and the Right Front Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Right Front Speaker (+) circuit for a short to the Right Front Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between ground and each right rear speaker circuit. Is the resistance below 5.0 ohms for either measurement? Yes → Repair the Right Rear Speaker (+) or (-) circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All

RIGHT OUTPUT SHORT — Continued

TEST	ACTION	APPLICABILITY
8	Turn the ignition off. Disconnect the Right Rear Speaker harness connector. Disconnect the Radio C2 harness connector. Measure the resistance between the Right Rear Speaker (+) circuit and the Right Rear Speaker (-) circuit. Is the resistance below 5.0 ohms? Yes → Repair the Right Rear Speaker (+) circuit for a short to the Right Rear Speaker (-) circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All
9	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*NO SOUND FROM ALL SPEAKERS

POSSIBLE CAUSES
RADIO SHORTED TO GROUND
REPLACE FUSE #13
FUSED IGNITION SWITCH OUTPUT CIRCUIT SHORTED TO GROUND
OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT
OPEN FUSED B+ CIRCUIT
RADIO GROUND CIRCUIT OPEN
INTERNAL FAILURE

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Remove and inspect Fuse #13 in the Fuse Block. Is the fuse open? Yes → Go To 2 No → Go To 4	All
2	Turn the ignition off. Replace Fuse #13 in the Fuse Block. Turn the ignition on. Remove and inspect fuse #13 in the Fuse Block. Is the fuse open? Yes → Go To 3 No → Check the Fused Ignition Switch Output circuit for an intermittent short to ground, refer to the wiring diagrams in the service information. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Radio C1 harness connector. Remove Fuse #13 from the Fuse Block. Measure the resistance between ground and the Fused Ignition Switch Output circuit. Is the resistance below 5.0 ohms? Yes → Repair the Fused Ignition Switch Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

*NO SOUND FROM ALL SPEAKERS — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. **Note: Ensure Fuse #13 is installed in the Fuse Block.** Disconnect the Radio C1 harness connector. Turn the ignition on. Measure the voltage of the Fused Ignition Switch Output circuit. Is the voltage above 10.0 volts? Yes → Go To 5 No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Disconnect the Radio C1 harness connector. Measure the voltage of the Fused B+ circuit. Is the voltage above 10.0 volts? Yes → Go To 6 No → Repair the Fused B+ circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Radio Ground connector. Measure the resistance between ground and the Radio Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 7 No → Repair the Radio Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
7	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***BUS +/- SIGNALS OPEN FROM INSTRUMENT CLUSTER**

POSSIBLE CAUSES
CLUSTER FUSE (#10) OPEN
IOD FUSE OPEN
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
FUSED B(+) CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
INSTRUMENT CLUSTER - PCI BUS OPEN

TEST	ACTION	APPLICABILITY
1	Test the Cluster Fuse (#10) in the Fuse Block. Is the fuse open? Yes → Refer to the wiring diagrams located in the service information to help isolate a possible short to ground condition. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	**Note: If this fuse is open the word "No Fuse" will flash in the VF display of the cluster (unless the "Cluster" fuse is open also).** Test the IOD Fuse in the PDC. Is the fuse open? Yes → Refer to the wiring diagrams located in the service information to help isolate a possible short to ground condition. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Turn all lights off. Disconnect the Instrument Cluster C1 harness connector. Measure the resistance between both Ground circuits (cavities 1 & 2) to chassis ground . Is the resistance below 5.0 ohms on both ground circuits? Yes → Go To 4 No → Repair the open ground circuit(s). Perform BODY VERIFICATION TEST - VER 1.	All

*BUS +/- SIGNALS OPEN FROM INSTRUMENT CLUSTER — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Ensure the cluster fuse is installed. Turn the ignition on. Measure the voltage of the Fused Ignition Switch Output circuit. Is the voltage above 10.0 volts? Yes → Go To 5 No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
5	**Note: If this circuit is open the word ″nofuse″ will flash in the VF display of the cluster.** Turn the ignition off. Disconnect the Instrument Cluster C1 harness connector. Ensure the IOD fuse is installed. Measure the voltage of the Fused B+ circuit. Is the voltage above 10.0 volts? Yes → Go To 6 No → Repair the Fused B(+) circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	**NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** 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. Select DRB 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 Instrument Cluster C1 harness connector. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Instrument Cluster C1 harness connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 7 Steady 0 volts Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
7	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***BUS +/- SIGNALS OPEN FROM RKE**

POSSIBLE CAUSES
RKE MODULE - FUSED B(+) SHORT TO GROUND
FUSED B(+) CIRCUIT SHORT TO GROUND
FUSED B(+) WIRE SHORT TO GROUND
FUSE #10 OPEN
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
FUSED B(+) CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
RKE MODULE - PCI BUS OPEN

TEST	ACTION	APPLICABILITY
1	Remove and inspect the RKE Fuse (#1) in the Fuse Block. Is the fuse open? Yes → Go To 2 No → Go To 4	All
2	Turn the ignition off. Remove the RKE fuse (#1) in the Fuse Block. Measure the resistance between ground and the Fused B(+) circuit in the fuse output terminal Is the resistance below 10.0 ohms? Yes → Go To 3 No → Refer to the wiring diagrams located in the service information to help isolate a possible intermittent short, replace the fuse. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Remove the RKE fuse (#1) in the Fuse Block. Disconnect the RKE Module harness connector. Measure the resistance between ground and the Fused B(+) circuit (cavity 9) in the RKE connector. Is the resistance below 10.0 ohms? Yes → Repair the Fused B(+) wire for a short to ground and replace blown fuse. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module (Fused B(+) Output shorted). Perform BODY VERIFICATION TEST - VER 1.	All

*BUS +/- SIGNALS OPEN FROM RKE — Continued

TEST	ACTION	APPLICABILITY
4	Remove and inspect the Cluster fuse (#10) in the Fuse Block. Is the fuse open? Yes → Refer to the wiring diagrams located in the service information to help isolate a possible short to ground condition. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the RKE Module harness connector. Turn all lights off. Measure the resistance between ground and the ground circuit (cavity 12). Is the resistance below 5.0 ohms? Yes → Go To 6 No → Repair the ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the RKE Module harness connector. Ensure fuse #10 is installed. Turn the ignition on. Measure the voltage of the Fused Ignition Switch Output circuit. Is the voltage above 10.0 volts? Yes → Go To 7 No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
7	Turn the ignition off. Disconnect the RKE Module harness connector. Ensure fuse #1 is installed. Measure the voltage of the Fused B(+) circuit (cavity 9). Is the voltage above 10.0 volts? Yes → Go To 8 No → Repair the Fused B(+) circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*BUS +/- SIGNALS OPEN FROM RKE — Continued

TEST	ACTION	APPLICABILITY
8	**NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** 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. Select DRB 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 RKE Module harness connector. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the RKE Module connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 9 Steady 0 volts Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
9	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***BUS +/- SIGNALS OPEN FROM SKIM**

POSSIBLE CAUSES
SKIM RESPONSE FAILURE
DRB DOES NOT COMMUNICATE WITH SKIM
SKIM FUSED B(+) OPEN
SKIM FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
SKIM GROUND CIRCUIT OPEN
PCI BUS OPEN CIRCUIT TO SKIM

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. Using the DRB, attempt to communicate with the SKIM. Did you communicate with the SKIM? No → Go To 2 Yes → Refer to the wiring diagrams located in the service information to help isolate a possible intermittent open or short. Perform SKIS VERIFICATION.	All
2	Turn the ignition off. Disconnect the SKIM harness connector. Measure the voltage of the Fused B+ circuit. Is the voltage above 10.0 volts? Yes → Go To 3 No → Repair the Fused B+ circuit for an open. Perform SKIS VERIFICATION.	All
3	Turn the ignition off. Disconnect the SKIM harness connector. Turn the ignition on. Measure the voltage of the Fused Ignition Switch Output circuit. Is the voltage above 10.0 volts? 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. Measure the resistance between ground and the ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair the ground circuit for an open. Perform SKIS VERIFICATION.	All

*BUS +/- SIGNALS OPEN FROM SKIM — Continued

TEST	ACTION	APPLICABILITY
5	Turn the ignition off. Disconnect the SKIM harness connector. Connect the DRB III to the Data Link 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 III. Attach the red and black leads and the cable to probe adapter to the scope input cable. Select DRB 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. Connect the Black lead to the SKIM ground. Connect the Red lead to the SKIM PCI Bus circuit. Turn the ignition on. Observe the voltage display on the DRB III Lab Scope. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Replace the Sentry Key Immobilizer Module. Perform SKIS VERIFICATION. Steady 0.0 volt Repair the PCI Bus circuit for an open. Perform SKIS VERIFICATION.	All

Symptom:
*NO RESPONSE FROM CAB

POSSIBLE CAUSES
NO RESPONSE FROM CAB
CHECK FUSE #11
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
CAB - NO RESPONSE

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **As soon as one or more module communicates with the DRBIII®, answer the question.** With the DRBIII®, select PASSIVE RESTRAINTS, then select AIRBAG. With the DRBIII®, select MECHANICAL INSTRUMENT CLUSTER. Were you able to establish communication with any of the modules? Yes → Go To 2 No → Refer to symptom PCI BUS COMMUNICATION FAILURE in the COMMUNICATION category. Perform ABS VERIFICATION TEST.	All
2	Turn the ignition off. Remove and inspect fuse #11 from the Fuse Block. Is the Fuse blown? Yes → Refer to the wiring diagrams located in the service information to help isolate a possible short to ground condition. Perform ABS VERIFICATION TEST. No → Go To 3	All
3	Turn the ignition off. Disconnect the CAB harness connector. **Note: Check connector - Clean/repair as necessary.** Measure the resistance between ground and both of the ground circuits. Is the resistance below 1.0 ohm for both measurements? Yes → Go To 4 No → Repair the Ground circuit(s) for an open. Perform ABS VERIFICATION TEST.	All

*NO RESPONSE FROM CAB — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Ensure Fuse #11 is installed. Disconnect the CAB harness connector. **Note: Check connector - Clean/repair as necessary.** Turn the ignition on. Measure the voltage of the Fused Ignition Switch Output circuit. Is the voltage above 10.0 volts? Yes → Go To 5 No → Repair the Fused Ignition Switch Output circuit for an open. Perform ABS VERIFICATION TEST.	All
5	**NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** 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. Select DRB 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 CAB harness connector. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the CAB harness connector. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 6 Steady 0 volts Repair the PCI Bus circuit for an open. Perform ABS VERIFICATION TEST.	All
6	If there are no potential causes remaining, view repair. Repair Replace the CAB. Perform ABS VERIFICATION TEST.	All

Symptom:
*NO RESPONSE FROM LEFT SIACM

POSSIBLE CAUSES
INTERROGATE ORC
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT RUN/START CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
LSIACM, NO RESPONSE FROM LEFT SIACM

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the battery is fully charged.** 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? Yes → Refer to the symptom list and perform the Loss Of Ignition Run/Start symptom. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 2	AIR BAGS - SIDE IMPACT
2	**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. **Note: Check connectors - Clean/repair as necessary.** Measure the resistance between ground and the Ground circuit in the Left Side Impact Airbag Control Module connector. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the ground circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

*NO RESPONSE FROM LEFT SIACM — Continued

TEST	ACTION	APPLICABILITY
3	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Side Impact Airbag Control Module harness connector. **Note: Check connectors - Clean / repair as necessary.** Turn Ignition On and then reconnect the Battery. Measure the voltage of the Fused Ignition Switch Output Run/Start circuit in the Left Side Impact Airbag Control Module connector. Is the voltage above 6.0 volts? Yes → Go To 4 No → Repair the Fused Ignition Switch Output Run/Start circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.** **Note: After testing and repairs are complete, check other modules for any DTC's that may have been set while performing this procedure.**	AIR BAGS - SIDE IMPACT
4	**NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** **WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Left Side Impact Airbag Control Module harness 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. Select DRB 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. 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. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 5 Steady 0 volts Repair the PCI Bus circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1.	AIR BAGS - SIDE IMPACT

*NO RESPONSE FROM LEFT SIACM — Continued

TEST	ACTION	APPLICABILITY
5	**Warning: Turn Ignition Off, Disconnect the Battery and wait 2 minutes before proceeding.** **WARNING: IF THE LEFT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair 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. **Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:
*NO RESPONSE FROM ORC

POSSIBLE CAUSES
CHECKING FOR VOLTAGE AT ORC
ORC GROUND CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
ORC, NO RESPONSE FROM ORC

TEST	ACTION	APPLICABILITY
1	Ensure that the battery is fully charged. **WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Occupant Restraint Controller harness connector. **Note: Check connectors - Clean / repair as necessary.** Turn the ignition on and then reconnect the Battery. Measure the voltage of the Fused Ignition Switch Output Run Circuit and the Fused Ignition Switch Output Run/Start Circuit at the Occupant Restraint Controller connector. NOTE: One open circuit will not cause a NO RESPONSE condition. Is the voltage above 10.0 volts on both circuits? Yes → Go To 2 No → Repair the Fused Ignition Switch Output Run and Fused Ignition Switch Output Run/Start circuits for an open. Replace the fuse(s) if necessary. Perform AIRBAG VERIFICATION TEST VER 1. **NOTE: When reconnecting airbag system components, the ignition must be turned off and the battery must be disconnected.**	All
2	**Ensure that the battery is fully charged.** **WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Occupant Restraint Controller harness connector. **Check connectors - Clean/repair as necessary.** Measure the resistance between ground and the ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the Ground circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1. **When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	All

*NO RESPONSE FROM ORC — Continued

TEST	ACTION	APPLICABILITY
3	**Note: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** **WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Occupant Restraint Controller harness 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. Select DRB 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. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus circuit in the Occupant Restraint Controller connector. Observe the voltage display on the DRB Lab Scope. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 4 Steady 0 volts Repair the PCI Bus circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Occupant Restraint Controller (ORC) in accordance with the Service lnformation. WARNING: Make sure the battery is disconnected and wait 2 minutes before proceeding. Perform AIRBAG VERIFICATION TEST VER 1.	All

Symptom:
*NO RESPONSE FROM PCM (PCI BUS)

POSSIBLE CAUSES
FUSED B(+) CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT CIRCUIT OPEN
PCM GROUND CIRCUIT(S) OPEN
PCM PCI NO RESPONSE
PCM INTERNAL PCI BUS OPEN
PCM PCI BUS CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Turn Ignition On. **Note: As soon as one or more module communicates with the DRBIII, answer the question.** With the DRBIII, Select THEFT ALARM, then select SKIM. With the DRBIII, Select THEFT ALARM, Then select VTSS. With the DRBIII, Select ANTI-LOCK BRAKES. With the DRBIII, Select BODY, Then Select ELECTRO-MECHANICAL CLUSTER (MIC). With the DRBIII, Select PASSIVE RESTRAINTS, Then select AIRBAG. Were you able to establish communication with any of the modules? Yes → Go To 2 No → Refer to the communication category and perform the PCI Bus Communication Failure symptom. Perform POWERTRAIN VERIFICATION TEST VER - 1.	All
2	Turn the ignition off. Disconnect the Powertrain Control Module harness connector. Use a 12 volt test light in the following step. With a 12 V test light connected to ground, probe the Fused B+ circuit in the PCM harness connector. Is the test light illuminated and bright? No → Repair the Fused B+ circuit for an open Perform POWERTRAIN VERIFICATION TEST VER - 1. Yes → Go To 3	All
3	Turn the ignition off. Disconnect the Powertrain Control Module harness connector(s). Use a 12 volt test light in the following step. Connect 12V test light to B(+). Probe the Ground Circuits, one at a time, in the PCM Connector. Does the test light illuminate at each Ground circuit? Yes → Go To 4 No → Repair the ground circuit(s) for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1.	All

*NO RESPONSE FROM PCM (PCI BUS) — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Powertrain Control Module harness connector. Turn the ignition on. Use a 12 volt test light in the following step. With the 12V test light connected to ground, probe the Fused Ignition Switch Output circuit in the PCM Connector. Is the test light illuminated and bright? Yes → Go To 5 No → Repair the Fused Ignition Switch Output circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1.	All
5	With the DRB read PCM Diagnostic Trouble Codes. This is to ensure power and grounds to the PCM are operational. **Note: If the DRB will not read PCM DTC's, follow the ″NO RESPONSE TO PCM (SCI only) symptom path, if vehicle will start. For NO START Conditions follow symptom ″NO RESPONSE″ in Starting category .** Turn the ignition off. Disconnect the Powertrain Control Module harness connectors. Connect the DRBIII to the Data Link 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. Select DRB 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. Connect the Black lead to the PCM ground. Connect the Red lead to the PCM PCI Bus circuit. Turn the ignition on. Observe the voltage display on the DRB Lab Scope. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 6 Steady 0 volts Repair the PCI Bus circuit for an open. Perform POWERTRAIN VERIFICATION TEST VER - 1.	All
6	The Powertrain Control Module has an internal open PCI Bus and must be replaced. If there are no possible causes remaining, view repair. Repair Replace the Powertrain Control Module. Perform POWERTRAIN VERIFICATION TEST VER - 1.	All

Symptom:
*NO RESPONSE FROM RADIO

POSSIBLE CAUSES
RADIO SHORTED TO GROUND
NO RESPONSE FROM RADIO
OPEN FUSED IGNITION SWITCH OUTPUT CIRCUIT
REPLACE FUSE #13
OPEN FUSED B+ CIRCUIT
FUSED IGNITION SWITCH OUTPUT CIRCUIT SHORTED TO GROUND
RADIO GROUND CIRCUIT OPEN
OPEN PCI BUS CIRCUIT
RADIO

TEST	ACTION	APPLICABILITY
1	Turn the ignition on. **Note: As soon as one or more modules communicate with the DRBIII®, answer the question.** With the DRBIII®, attempt to communicate with the Occupant Restraint Controller (ORC). With the DRBIII®, attempt to communicate with the Mechanical Instrument Cluster (MIC). Was the DRBIII® able to I/D or establish communications with either of the modules? Yes → Go To 2 No → Refer to the Communications category and perform the symptom PCI Bus Communication Failure. Perform BODY VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Remove and inspect Fuse #13 in the Fuse Block. Is the fuse open? Yes → Go To 3 No → Go To 5	All
3	Turn the ignition off. Replace Fuse #13 in the Fuse Block. Turn the ignition on. Remove and inspect fuse #13 in the Fuse Block. Is the fuse open? Yes → Go To 4 No → Check the Fused Ignition Switch Output circuit for an intermittent short to ground, refer to the wiring diagrams in the service information. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM RADIO — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Disconnect the Radio C1 harness connector. Remove Fuse #13 from the Fuse Block. Measure the resistance between ground and the Fused Ignition Switch Output circuit. Is the resistance below 5.0 ohms? Yes → Repair the Fused Ignition Switch Output circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. **Note: Ensure Fuse #13 is installed in the Fuse Block.** Disconnect the Radio C1 harness connector. Turn the ignition on. Measure the voltage of the Fused Ignition Switch Output circuit. Is the voltage above 10.0 volts? Yes → Go To 6 No → Repair the Fused Ignition Switch Output circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Radio C1 harness connector. Measure the voltage of the Fused B+ circuit. Is the voltage above 10.0 volts? Yes → Go To 7 No → Repair the Fused B+ circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
7	Turn the ignition off. Disconnect the Radio Ground connector. Measure the resistance between ground and the Radio Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 8 No → Repair the Radio Ground circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM RADIO — Continued

TEST	ACTION	APPLICABILITY
8	**Note: Ensure there is PCI Bus communication with other modules on the vehicle before proceeding. If not, refer to the symptom list from the menu and repair as necessary.** Disconnect the Radio ″C3″ 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 DRBIII®. Attach the red and black leads and the cable to probe adapter to the scope input cable. Select DRB 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. Connect the Black lead to the chassis ground. Connect the Red lead to the PCI Bus ckt in the Radio connector. Turn the ignition on. Observe the voltage display on the DRBIII® Lab Scope. Does the voltage pulse from 0 to approximately 7.5 volts? Yes → Go To 9 No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
9	If there are no possible causes remaining, view repair. Repair Replace the Radio. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*NO RESPONSE FROM RIGHT SIACM

POSSIBLE CAUSES
INTERROGATE ORC
GROUND CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT RUN/START CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
RSIACM, NO RESPONSE FROM RIGHT SIACM

TEST	ACTION	APPLICABILITY
1	**Note: Ensure that the battery is fully charged.** 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? Yes → Refer to symptom list and perform the Loss Of Ignition Run/Start symptom. Perform AIRBAG VERIFICATION TEST VER 1. No → Go To 2	AIR BAGS - SIDE IMPACT
2	**Note: Ensure that the battery is fully charged.** **WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Side Impact Airbag Control Module harness connector. **Note: Check connectors - Clean/repair as necessary.** Measure the resistance of the Ground circuit in the Right Side Impact Airbag Control Module connector. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the ground circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

*NO RESPONSE FROM RIGHT SIACM — Continued

TEST	ACTION	APPLICABILITY
3	**WARNING: TURN THE IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Disconnect the Right Side Impact Airbag Control Module harness connector. **Note: Check connectors - Clean / repair as necessary.** **Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** Measure the voltage of the Fused Ignition Switch Output Run/Start circuit in the Right Side Impact Airbag Control Module connector. Is the voltage above 6.0 volts? Yes → Go To 4 No → Repair the Fused Ignition Switch Output Run/Start circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1. **Note: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.** **NOTE: After testing and repairs are complete, check other modules for any DTC's that may have been set while performing this procedure.**	AIR BAGS - SIDE IMPACT
4	**NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** **WARNING: TURN THE 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. 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. Select DRB 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. 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. Observe the voltage display on the DRB Lab Scope. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 5 Steady 0 volts Repair the PCI Bus circuit for an open. Perform AIRBAG VERIFICATION TEST VER 1.	AIR BAGS - SIDE IMPACT

*NO RESPONSE FROM RIGHT SIACM — Continued

TEST	ACTION	APPLICABILITY
5	**Warning: TURN IGNITION OFF, DISCONNECT THE BATTERY AND WAIT TWO MINUTES BEFORE PROCEEDING.** **WARNING: IF THE RIGHT SIDE IMPACT AIRBAG CONTROL MODULE IS DROPPED AT ANY TIME, IT MUST BE REPLACED.** If there are no possible causes remaining, view repair. Repair 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. Perform AIRBAG VERIFICATION TEST VER 1. **NOTE: When reconnecting airbag system components, the ignition must be turned off and the battery must be disconnected.**	AIR BAGS - SIDE IMPACT

Symptom:

***NO RESPONSE FROM TCM**

POSSIBLE CAUSES
ATTEMPT TO COMMUNICATE WITH THE PCM
FUSED B(+) CIRCUIT TO TCM OPEN
FUSED IGNITION SWITCH OUTPUT (RUN/ST) CIRCUIT OPEN
FUSED IGNITION SWITCH OUTPUT (START) CIRCUIT OPEN
GROUND CIRCUIT OPEN
PCI BUS CIRCUIT OPEN
OTHER BUS PROBLEMS PRESENT
SCI TRANSMIT CIRCUIT OPEN
TCM (PCI BUS CIRCUIT)

TEST	ACTION	APPLICABILITY
1	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 2 No → Refer to symptom No Response From PCM (SCI Only) in the Communication category. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1.	All
2	With the DRBIII®, attempt to read Transmission DTC's. Does the DRBIII® show ″NO RESPONSE to TCM″? Yes → Go To 3 No → Test Complete.	All
3	With the DRBIII®, check all of the other modules on the vehicle for evidence of a vehicle bus problem. Bus related DTC's in other modules point to an overall vehicle bus problem. Other symptoms such as a customer complaint of intermittent operation of bus controlled features also indicate a bus problem. Does the PRNDL display indicate ″No Bus″ or is there any evidence of an overall vehicle bus problem? Yes → Diagnose and repair other bus problems as necessary. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1. No → Go To 4	All

*NO RESPONSE FROM TCM — Continued

TEST	ACTION	APPLICABILITY
4	Turn ignition off to the lock position. Disconnect the TCM harness connector. **Note: Check connectors - Clean/repair as necessary.** Connect the ground clip of a test light to a known good ground. Connect the other end to the Fused B(+) circuit in the TCM connector. **Note: The light must illuminate brightly, if it does not light, or lights dimly, the circuit must be repaired. If there is any doubt, compare the brightness when testing the circuit, to the brightness when connected directly to the battery.** Does the test light illuminate brightly? Yes → Go To 5 No → Repair Fused B(+) Circuit wiring and / or connectors. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1.	All
5	Turn ignition off to the lock position. Disconnect the TCM harness connector. **Note: Check connectors - Clean/repair as necessary.** Ignition on, engine not running. Connect the ground clip of a test light to a known good ground. Probe the Fused Ignition Switch Output circuit in the TCM connector with the test light. **Note: The light must illuminate brightly, if it does not light, or lights dimly, the circuit must be repaired. If there is any doubt, compare the brightness when testing the circuit, to the brightness when connected directly to the battery.** Does the test light illuminate brightly? Yes → Go To 6 No → Repair cause of not lit or dim test light in Fused Ignition Switch Output (Run/St) circuit. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1.	All
6	Turn ignition off to the lock position. Disconnect the TCM harness connector. Remove the starter relay from the PDC. Connect the ground clip of a test light to a known good ground. Probe the Fused Ignition Switch Output(Start) circuit in the TCM connector with the test light. Turn the ignition switch to the start position. **Note: The light must illuminate brightly, if it does not light, or lights dimly, the circuit must be repaired. If there is any doubt, compare the brightness when testing the circuit, to the brightness when connected directly to the battery.** Does the test light illuminate brightly? Yes → Go To 7 No → Repair cause of unlit or dim test light in Fused Ignition Switch Output (Start) circuit. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1. **Note: Reinstall the Starter Relay.**	All

*NO RESPONSE FROM TCM — Continued

TEST	ACTION	APPLICABILITY
7	Turn ignition off to the lock position. Disconnect the TCM harness connector. **Note: Check connectors - Clean/repair as necessary.** Connect the ground clip of a test light to a known good 12 volt source on the vehicle such as the positive battery post. Probe all ground circuit(s) in the TCM connector with the test light. **Note: The light must illuminate brightly, if it does not light, or lights dimly, the circuit must be repaired. If there is any doubt, compare the brightness when testing the circuit, to the brightness when connected directly to the battery.** Does the light illuminate brightly at all ground circuits? Yes → Go To 8 No → Repair the Ground circuit(s) as necessary. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1.	All
8	**NOTE: Ensure there is PCI bus communication with other modules. If not, refer to the PCI Bus Communication Failure symptom and repair as necessary.** Turn ignition off to the lock position. 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. Select DRB Standalone. Select lab scope. Select Live. Select 12 volt square wave. Select F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Connect the Black lead to 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. What is the voltage display on the scope? Pulse from 0 to approximately 7.5 volts Go To 9 Steady 0 volts Repair the PCI Bus circuit for an open. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1.	All
9	Turn the ignition off. Disconnect the Transmission Control Module harness connector. Disconnect the DRB from the Data Link Connector. Measure the resistance of the SCI Transmit circuit between the TCM connector and the Data Link Connector. Is the resistance below 5.0 ohms? Yes → Go To 10 No → Repair the SCI Transmit circuit for an open. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1.	All

*NO RESPONSE FROM TCM — Continued

TEST	ACTION	APPLICABILITY
10	If there are no possible causes remaining, view repair. Repair Replace the Transmission Control Module. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1.	All

Symptom:
*PCI BUS COMMUNICATION FAILURE

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

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

*PCI BUS COMMUNICATION FAILURE — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Disconnect the PCM C2 harness connector. Disconnect the DRB from the Data Link Connector (DLC). Disconnect the negative battery cable. Measure the resistance of the PCI Bus circuit between the Data Link Connector (DLC) and the PCM C2 connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the PCI Bus circuit for an open. Perform BODY VERIFICATION TEST - VER 1.	All
4	**Note: Reconnect the PCM C2 harness connector and the negative battery cable.** Turn the ignition on. Measure the voltage of the PCI Bus circuit at the Data Link Connector (DLC). Is the voltage above 1.5 volts? Yes → Go To 5 No → Go To 6	All
5	Turn the ignition off. Using a voltmeter, connect one end to the PCI Bus circuit at the DLC, and the other end to ground. **Note: When performing the next step turn the ignition off (wait one minute) before disconnecting any module. When the module is disconnected turn the ignition on to check for a short to voltage.** Turn the ignition on. While monitoring the voltmeter, disconnect each module the vehicle is equipped with one at a time. Is the voltage steadily above 1.5 volts with all the modules disconnected? Yes → Repair the PCI Bus circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Replace the module that when disconnected the short to voltage was eliminated. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the negative battery cable. Using a ohmmeter, connect one end to the PCI Bus circuit at the DLC, and the other end to ground. While monitoring the ohmmeter, disconnect each module the vehicle is equipped with one at a time. Is the resistance below 1000.0 ohms with all the modules disconnected? Yes → Repair the PCI Bus circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Replace the module that when disconnected the short to ground was eliminated. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

ABS MESSAGES NOT RECEIVED BY MIC

When Monitored and Set Condition:

ABS MESSAGES NOT RECEIVED BY MIC

When Monitored: Monitored during ignition on.

Set Condition: No ABS messages received for 10 seconds.

POSSIBLE CAUSES
ABS MESSAGES NOT RECEIVED BY MIC

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Cycle the ignition off then on. Wait 30 seconds then with the DRBIII®, read DTC's. Does the DRBIII® display: ABS MESSAGE NOT RECEIVED BY MIC? Yes → Test Complete. No → Refer to symptom NO RESPONSE FROM CAB in the COMMUNICATION category. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
ACM MESSAGES NOT RECEIVED BY MIC

When Monitored and Set Condition:

ACM MESSAGES NOT RECEIVED BY MIC

When Monitored: Monitored during ignition on.

Set Condition: No ACM messages received for 5 seconds.

POSSIBLE CAUSES
ACM MESSAGES NOT RECEIVED BY MIC

TEST	ACTION	APPLICABILITY
1	Turn ignition on. With the DRBIII®, erase DTC's. Cycle the ignition off then on. Wait 30 seconds then with the DRBIII®, read DTC's. Does the DRBIII® display: ACM MESSAGES NOT RECEIVED BY MIC? Yes → Refer to symptom NO RESPONSE FROM ORC in the COMMUNICATION category. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

EEPROM CHECKSUM FAILURE

POSSIBLE CAUSES
INSTRUMENT CLUSTER - EEPROM CHECKSUM ERROR

TEST	ACTION	APPLICABILITY
1	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

FUEL LEVEL SENSOR OPEN

When Monitored and Set Condition:

FUEL LEVEL SENSOR OPEN

When Monitored: With Ignition on. (Customer Complaint: fuel gauge displays empty)

Set Condition: The Instrument Cluster monitors the fuel level sensor signal circuit for a resistance value between approximately 25 ohms to 1100 ohms. If the Cluster senses a resistance greater than 1100 ohms, this code will set.

POSSIBLE CAUSES
FUEL LEVEL SENSOR CIRCUIT OPEN
SENSOR GROUND CKT OPEN
FUEL LEVEL SENSOR SIGNAL CIRCUIT SHORT TO VOLTAGE
FUEL LEVEL SENSOR OPEN
FUEL LEVEL SENSOR SIGNAL CIRCUIT OPEN
INSTRUMENT CLUSTER - OPEN FUEL LEVEL

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Turn the ignition on. With the DRBIII®, read DTC's. Does the DRBIII® display ″Fuel Level Sensor Open″? No → Test complete. DTC is intermittent. Road test the vehicle and recheck for DTC's. If the code returns, rerun this test. Perform BODY VERIFICATION TEST - VER 1. Yes → Go To 2	All
2	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Measure the resistance of both ground circuis in the fuel pump module harness connector. Is the resistance below 5.0 ohms in both ground circuits? Yes → Go To 3 No → Repair the open Ground circuit. Perform BODY VERIFICATION TEST - VER 1.	All

FUEL LEVEL SENSOR OPEN — Continued

TEST	ACTION	APPLICABILITY
3	Turn the ignition off. Remove the Instrument Cluster. Turn the ignition on. Measure the voltage between the Fuel Level Sensor Signal circuit in the Instrument Cluster C2 connector and ground. Is there any voltage present? Yes → Repair the Fuel Level Sensor Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Measure the resistance of the Fuel Level Sensor between the Sensor Signal (DB) and the Sensor Ground (BK/LG) circuits (sensor side connector). Is the resistance above 1060 ohms? Yes → Replace the Fuel Level Sensor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	Turn the ignition off. Disconnect the Instrument Cluster harness connector. Connect a jumper wire between the Fuel Level Sensor Signal circuit and ground. Disconnect the Fuel Pump Module harness connector. Measure the resistance of the Fuel Level Sensor Signal circuit in the Fuel Pump Module harness connector to ground. Is the resistance below 5.0 ohms? Yes → Go To 6 No → Repair the open Fuel Level Sensor Signal circuit. Perform BODY VERIFICATION TEST - VER 1.	All
6	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
FUEL LEVEL SENSOR SHORT

When Monitored and Set Condition:

FUEL LEVEL SENSOR SHORT

When Monitored: When the ignition is on. (Customer Complaint: fuel gauge displays empty).

Set Condition: The Instrument Cluster monitors the fuel level sensor signal circuit for a resistance value between approximately 25 ohms to 1100 ohms. If the Cluster senses a resistance less than 25 ohms, this code will set.

POSSIBLE CAUSES
FUEL LEVEL SENSOR CIRCUIT SHORTED TEST
FUEL LEVEL SENSOR SHORTED
FUEL LEVEL SENSOR SIGNAL WIRE SHORT TO GROUND
INSTRUMENT CLUSTER - SHORTED FUEL LEVEL

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Turn the ignition on. With the DRBIII®, read DTC's. Does the DRBIII® display "Fuel Level Sensor Short"? No → Test complete. DTC is intermittent. Road test the vehicle and recheck for DTC's. If the code returns, rerun this test. Perform BODY VERIFICATION TEST - VER 1. Yes → Go To 2	All
2	Turn the ignition off. Disconnect the Fuel Pump Module harness connector. Measure the resistance of the Fuel Level Sensor between the Sensor Signal (DB) and the Sensor Ground (BK/LG) circuits (sensor side connector). Is the resistance below 60.0 ohms? Yes → Replace the Fuel Level Sensor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the Instrument Cluster connector. Disconnect the Fuel Pump Module harness connector. Measure the resistance of the Fuel Level Sensor Signal circuit in the Instrument Cluster connector to ground. Is the resistance below 10000 (10 K) ohms? NOTE: it should be infinite. Yes → Repair the Fuel Level Sensor Signal wire for a short to ground Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

FUEL LEVEL SENSOR SHORT — Continued

TEST	ACTION	APPLICABILITY
4	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
PANEL DIMMER OPEN

When Monitored and Set Condition:

PANEL DIMMER OPEN

When Monitored: When the ignition is on.

Set Condition: The Instrument Cluster monitors the panel lamps dimmer signal circuit for a resistance value between 150 ohms and approximately 8800 ohms. When the cluster senses a value greater than 30000 (30K) ohms for more than 5 seconds, this code will set.

POSSIBLE CAUSES
PANEL DIMMER OPEN CODE CHECK
PANEL LAMPS DIMMER SIGNAL CIRCUIT SHORT TO VOLTAGE
PANEL LAMPS DIMMER SIGNAL WIRE OPEN
PANEL DIMMER SWITCH OPEN
INSTRUMENT CLUSTER DEFECTIVE - PANEL LAMPS DIMMER OPEN

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Turn the park lamps on. Wait 10 seconds. Rotate the Panel Lamps Dimmer Switch to both extreme positions. With the DRBIII®, read DTC's. Did the ″Panel Dimmer Open″ code return? Yes → Go To 2 No → Test complete. No problem found at this time. Check for intermittent wiring shorted to ground. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Instrument Cluster. Measure the voltage between the Panel Lamps Dimmer Signal circuit in the Instrument Cluster C2 connector and ground. Is there any voltage present? Yes → Repair the Panel Lamps Dimmer Signal circuit for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3 **Note: Reconnect the Multi-Function Switch connector before proceeding.**	All

PANEL DIMMER OPEN — Continued

TEST	ACTION	APPLICABILITY
3	Disconnect the Instrument Cluster. Disconnect the Multi-Function switch connector. Measure the resistance of the Panel Lamps Dimmer Signal circuit between the instrument cluster connector and the multi-function switch connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Panel Lamps Dimmer Signal wire. Perform BODY VERIFICATION TEST - VER 1. **Note: Reconnect the Multi-Function Switch connector before proceeding.**	All
4	Disconnect the Instrument Cluster connector. Ensure the Multi- Function Switch is connected before proceeding. Measure the resistance of the Panel Lamps Dimmer Signal circuit in the instrument cluster connector to ground. Move the Instrument Panel Dimmer Switch from one extreme to the other and observe the ohmmeter. Did the resistance increment in stepa from approximately 150.0 to approximately 8800.0 (8.8 K) ohms? Yes → Go To 5 No → Replace the Multi-Function Switch. Perform BODY VERIFICATION TEST - VER 1.	All
5	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster (not responding to panel lamps dimmer signal). Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
PANEL DIMMER SHORT

When Monitored and Set Condition:

PANEL DIMMER SHORT

When Monitored: When the ignition is on.

Set Condition: The Instrument Cluster monitors the panel lamps dimmer signal circuit for a resistance value between 150.0 and 8800 (8.8K) ohms. When the cluster senses a resistance below 20.0 ohms for over 5 seconds, this code will set.

POSSIBLE CAUSES
PANEL DIMMER SHORT CODE CHECK
INSTRUMENT CLUSTER - PANEL LAMPS SIGNAL SHORTED
PANEL LAMPS DIMMER SIGNAL WIRE SHORT TO GROUND
PANEL LAMPS DIMMER SWITCH SHORT TO GROUND.

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Turn the park lamps on. Wait 10 seconds. Rotate the Panel Lamps Dimmer Switch to both extreme positions. With the DRBIII®, read DTC's. Did the ″Panel Dimmer Short″ code return? Yes → Go To 2 No → Test complete. No problem found at this time. Check for intermittent wiring shorted to ground. Perform BODY VERIFICATION TEST - VER 1.	All
2	Remove the Instrument Cluster. Measure the resistance between ground and the Panel Lamps Dimmer Signal circuit in the ″C2″ connector. Turn the Panel Lamps Dimmer Switch (on left stalk switch) from one stop to the other stop while observing the ohmmeter. Did the resistance ever go below 25.0 ohms? Yes → Go To 3 No → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

PANEL DIMMER SHORT — Continued

TEST	ACTION	APPLICABILITY
3	Disconnect the Instrument Cluster. Disconnect the Multi-Function switch connector. Measure the resistance of the Panel Lamps Dimmer Signal circuit in the instrument cluster connector to ground. Is the resistance below 100.0 ohms? Yes → Repair the Panel Lamps Dimmer Signal wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	If there are no possible causes remaining, view repair. Repair Replace the Multi-Function Switch. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

SBEC MESSAGES NOT RECEIVED BY MIC

When Monitored and Set Condition:

SBEC MESSAGES NOT RECEIVED BY MIC

When Monitored: Monitored during ignition on.

Set Condition: No SBEC messages received for 20 seconds.

POSSIBLE CAUSES
SBEC MESSAGES NOT RECEIVED BY MIC

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Cycle the ignition off then on. Wait 30 seconds then with the DRBIII®, read DTC's. Does the DRBIII® display:SBEC MESSAGES NOT RECVEIVED BY MIC? Yes → Refer to symptom PCM PCI BUS OPEN in the COMMUNICATION category. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
SKIM MESSAGE NOT RECEIVED BY MIC

When Monitored and Set Condition:

SKIM MESSAGE NOT RECEIVED BY MIC

When Monitored: Monitored during ignition on.

Set Condition: No SKIM messages received for 6 seconds.

POSSIBLE CAUSES
SKIM MESSAGES NOT RECEIVED BY MIC

TEST	ACTION	APPLICABILITY
1	With the DRBIII®, erase DTC's. Cycle the ignition off then on. Wait 30 seconds then with the DRBIII®, read DTC's. Does the DRBIII® display:SKIM MESSAGES NOT RECEIVED BY MIC? Yes → Refer to symptom BUS +/- SIGNALS OPEN FROM SKIM in the COMMUNICATION category. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:

***FOG LAMP INDICATOR INOPERATIVE**

POSSIBLE CAUSES
FOG LAMP SWITCH OUTPUT CIRCUIT OPEN
INSTRUMENT CLUSTER DEFECTIVE - FOG LAMP INDICATOR OPEN

TEST	ACTION	APPLICABILITY
1	Ensure the Fog Lamps are operational before proceeeding. If not, select ″Service Information″ from the menu and repair as necessary. Disconnect the Instrument Cluster connector. Turn the Fog Lamps on. Measure the voltage between Fog Lamp Switch Output circuit and ground. Is the voltage greater than 10.0 volts? Yes → Go To 2 No → Repair the open Fog Lamp Switch Output circuit. Perform BODY VERIFICATION TEST - VER 1.	All
2	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***GAUGE OR GAUGES NOT OPERATING PROPERLY-INT**

POSSIBLE CAUSES
CLUSTER DEFECTIVE
DEFECTIVE INSTRUMENT CLUSTER
FUEL GAUGE
SPEEDOMETER INOPERATIVE
TACHOMETER INOPERATIVE
TEMP GAUGE INOPERATIVE
FUEL LEVEL SENSOR SIGNAL WIRE SHORT TO GROUND
FUEL SENSOR INACCURATE
ENGINE DTCS
CLUSTER DTCS

TEST	ACTION	APPLICABILITY
1	**Note: Using the DRBIII, ensure there is communication with the Instrument Cluster and the Powertrain Control Module before proceeding. If not, refer to the symptom list for problems related to COMMUNICATION..** Select from the list below the gauge(s) that are malfunctioning. All gauges inoperative Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. Fuel Gauge Inoperative Go To 2 Speedometer Inoperative Go To 4 Tachometer Inoperative Go To 5 Temperture Gauge Inoperative Go To 6 Fuel Gauge is Inaccurate Go To 8	All
2	Turn the ignition off. Press and hold the Trip Reset Button on the Instrument Cluster. Turn the ignition on, release the button and observe the fuel gauge. Calibration Points: Approximately: Empty stop, ″E″, ″1/8″, ″1/2″, ″F″, Full stop Did the Fuel Gauge move to the calibrated stops? Yes → Go To 3 No → Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All

*GAUGE OR GAUGES NOT OPERATING PROPERLY-INT — Continued

TEST	ACTION	APPLICABILITY
3	Using the DRB check for Instrument Cluster DTCs. Are there any Instrument Cluster DTCs? Yes → Repair Instrument Cluster Diagnostic Trouble Codes as needed. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
4	Turn the ignition off. Press and hold the Trip Reset Button on the Instrument Cluster. Turn the ignition on, release the button and observe the Speedometer. Calibration Points: 140 MPH Speedometer: Approximately 0, 2, 20, 55, 75, 140 MPH 240 Km/H Speedometer: Approximately 0, 2, 40, 80, 120, 240 Km/H Did the Speedometer move to the calibrated stops? Yes → Go To 7 No → Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All
5	Turn the ignition off. Press and hold the Trip Reset Button on the Instrument Cluster. Turn the ignition on, release the button and observe the Tachometer. Calibration Points: Approximately: 0, 800, 2000, 6000 RPM Did the Tachometer move to the calibrated stops? Yes → Go To 7 No → Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Press and hold the Trip Reset Button on the Instrument Cluster. Turn the ignition on, release the button and observe the temp gauge. Observe the 5 Calibration Points Did the Temperature Gauge move to the calibrated stops? Yes → Go To 7 No → Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All
7	Turn ignition on. With the DRBIII®, read Engine DTC's. Are there any engine DTC's present? Yes → Refer to symptom list for problems related to DRIVEABILITY. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All
8	Turn the ignition off. Press and hold the Trip Reset Button on the Instrument Cluster. Turn the ignition on, release the button and observe the fuel gauge. Calibration Points: Approximately: Empty stop, ″E″, ″1/8″, ″1/2″, ″F″, Full stop Did the Fuel Gauge move to the calibrated stops? Yes → Go To 9 No → Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All

*GAUGE OR GAUGES NOT OPERATING PROPERLY-INT — Continued

TEST	ACTION	APPLICABILITY
9	Turn the ignition off. Disconnect the Instrument Cluster connector. Disconnect the Fuel Pump Module harness connector. Measure the resistance of the Fuel Level Sensor Signal circuit in the Instrument Cluster connector to ground. Is the resistance below 10000 (10 K) ohms? NOTE: it should be infinite. Yes → Repair the Fuel Level Sensor Signal wire for a short to ground Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	Turn the ignition off. Remove the Fuel Pump Module from the fuel tank. Measure the resistance of the fuel level sensor from full to empty. Did the resistance measure in steps from 60 to 1060 (+/- 20) ohms? Yes → Test Complete. No → Replace the Fuel Level Sensor. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***LED INDICATOR (EXC. FOG LAMP OR LIFTGATE) FAILS SELF TEST**

POSSIBLE CAUSES
LED FAILS SELF TEST

TEST	ACTION	APPLICABILITY
1	Turn the ignition off. Press and hold the Trip Reset Button on the Instrument Cluster. Turn the ignition on and observe the LED in question.. Did the LED fail to illuminate during the self test? Yes → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. No → Test Complete.	All

Symptom:
*LIFTGATE INDICATOR INOPERATIVE

POSSIBLE CAUSES
LIFTGATE AJAR SWITCH OPEN
GROUND OPEN
LIFTGATE AJAR SWITCH SENSE WIRE OPEN
INSTRUMENT CLUSTER - LIFTGATE AJAR OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Liftgate Ajar Switch connector. Connect a jumper wire between Liftgate Ajar Switch Sense circuit and ground. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Liftgate Ajar Sw″ state. Does the DRBIII show: ″Closed″? Yes → Replace the Liftgater Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn ignition off. Disconnect the Liftgate Ajar Switch connector. Turn all lights off. Measure the resistance between ground and the Ground circuit.. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the open Ground wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn ignition off. Disconnect the Liftgate Ajar Switch connector. Remove the Instrument Cluster. Measure the resistance of the Liftgate Ajar Switch Sense circuit from the Liftgate Ajar Switch connector to the Instrument Cluster ″C1″ connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Liftgate Ajar Switch Sense wire. Perform BODY VERIFICATION TEST - VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*LIFTGATE INDICATOR STAYS ON

POSSIBLE CAUSES
LIFTGATE AJAR SWITCH SHORTED
RKE MODULE - LIFTGATE AJAR SHORT TO GROUND
LIFTGATE AJAR SWITCH SENSE WIRE SHORTED
INSTRUMENT CLUSTER DEFECTIVE - LIFTGATE AJAR SHORT

TEST	ACTION	APPLICABILITY
1	Open the Liftgate. Disconnect the Liftgate Ajar Switch connector. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Liftgate Ajar Sw″ state. Does the DRBIII show: ″Open″? Yes → Replace the defective Liftgate Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Liftgate Ajar Switch. Disconnect the RKE Module connector. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Liftgate Ajar Sw″ state. Does the DRBIII show ″Liftgate Ajar Sw: Open″? Yes → Replace the Remote Keyless Entry Module (liftgate ajar shorted). Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn ignition off. Disconnect the Liftgate Ajar Switch connector. Disconnect the Instrument Cluster connector. Disconnect the RKE Module connector. Measure the resistance of the Liftgate Ajar Switch Sense circuit from the ajar switch connector to ground. Is the resistance below 100.0 ohms? Yes → Repair the Liftgate Ajar Switch Sense wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***NO CLUSTER ILLUMINATION**

POSSIBLE CAUSES
BULBS OPEN
HEADLAMP SWITCH OUTPUT CIRCUIT OPEN
INSTRUMENT CLUSTER DEFECTIVE - PANEL LAMPS OPEN

TEST	ACTION	APPLICABILITY
1	Remove the Instrument Cluster. Remove and test some of the Cluster Illumination Bulbs. Are the bulbs Okay? Yes → Go To 2 No → Replace the necessary bulbs Perform BODY VERIFICATION TEST - VER 1.	All
2	Remove the Instrument Cluster to gain access to the connector. Turn the park lamps on. NOTE: If park lamps are inoperative, check fuse #15 and the park lamp circuits and repair as necessary before proceeding. Measure the voltage between Headlamp Switch Output circuit and ground. Is the voltage above 10.0 volts? Yes → Go To 3 No → Repair the open headlamp switch output circuit from the headlamp switch to the cluster connector.. Perform BODY VERIFICATION TEST - VER 1.	All
3	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*REAR FOG LAMP INDICATOR INOPERATIVE

POSSIBLE CAUSES
REAR FOG LAMP SWITCH OUTPUT CIRCUIT OPEN TO CLUSTER
INSTRUMENT CLUSTER - REAR FOG LAMP INDICATOR OPEN

TEST	ACTION	APPLICABILITY
1	Remove the Instrument Cluster. Turn the rear fog lamps on. Measure the voltage between the Rear Fog Lamp Switch Output circuit and ground. Is the voltage above 10.0 volts? Yes → Go To 2 No → Repair the open Rear Fog Lamp Switch Output circuit to the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
2	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***RED BRAKE WARNING INDICATOR NOT OPERATING PROPERLY**

POSSIBLE CAUSES
INSTRUMENT CLUSTER - RED BRAKE WARNING LED OPEN
POWERTRAIN CONTROL MODULE - BRAKE WARNING OPEN
BRAKE FLUID LEVEL SWITCH SHORTED
PARK BRAKE RED BRAKE WARNING INDICATOR DRIVER CIRCUIT OPEN
PARK BRAKE SWITCH SHORTED TO GROUND
GROUND WIRE OPEN
PARK BRAKE RED BRAKE WARNING INDICATOR DRIVER CIRCUIT SHORTED TO GROUND
RED BRAKE WARNING INDICATOR PROBLEM
PARK BRAKE SWITCH OPEN
LO FLUID RED BRAKE WARNING INDICATOR DRIVER CIRCUIT SHORTED
LOW FLUID - RED BRAKE WARNING INDICATOR DRIVER CIRCUIT OPEN
BRAKE FLUID LEVEL SWITCH OPEN
INSTRUMENT CLUSTER - PARK BRAKE WARNING INDICATOR OPEN
INSTRUMENT CLUSTER - RED BRAKE WARNING INDICATOR SHORTED
POWERTRAIN CONTROL MODULE - BRAKE WARNING SHORTED

TEST	ACTION	APPLICABILITY
1	Choose the option below that best describes your problem. Red Brake Warning Indicator has the following problem. Does not illuminate with low brake fluid Go To 2 Does not illuminate with park brake on Go To 5 On all the time Go To 8 Does not illuminate during ″key on″ Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. None of the above Test Complete - no problem found. Perform BODY VERIFICATION TEST - VER 1.	All

*RED BRAKE WARNING INDICATOR NOT OPERATING PROPERLY — Continued

TEST	ACTION	APPLICABILITY
2	Disconnect the Brake Warning Indicator Switch connector. Turn the ignition off. Measure the resistance of the Ground circuit to body ground.. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the open ground wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Brake Warning Indicator Switch from the brake fluid reservoir. Disconnect the Powertrain Control Module ″C2″ connector. Measure the resistance of the Red Brake Warning Indicator Driver circuit between the PCM ″C2″ connector and the Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Red Brake Warning Indicator Driver circuit. Perform BODY VERIFICATION TEST - VER 1.	All
4	Disconnect the Brake Fluid Level Switch connector. Connect a jumper wire between Red Brake Warning Indicator Driver and Ground circuits in the Brake Fluid Level Switch connector. Turn the ignition on. Did the Red Brake Warning Indicator come on? Yes → Replace the Brake Fluid Level Switch. Perform BODY VERIFICATION TEST - VER 1. No → Replace the Powertrain Control Module. Perform POWERTRAIN VERIFICATION TEST VER - 2.	All
5	Turn ignition off. Gain access to and disconnect the Park Brake Switch connector. Remove the Instrument Cluster. Measure the resistance of the Red Brake Warning Indicator Driver circuit between the Instrument Cluster connector and the Park Brake Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 6 No → Repair the open Red Brake Warning Indicator Driver circuit. Perform BODY VERIFICATION TEST - VER 1.	All
6	Gain access to and disconnect the Park Brake Switch connector. Connect a jumper wire between the Red Brake Warning Indicator Driver circuit and ground. Turn the ignition on. Did the Red Brake Warning Indicator come on and stay on? Yes → Replace the open Park Brake Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

*RED BRAKE WARNING INDICATOR NOT OPERATING PROPERLY — Continued

TEST	ACTION	APPLICABILITY
8	Ensure the Park Brake is not engaged. With the DRBIII®, read the PARK BRAKE SW status. Does the DRBIII® display CLOSED? Yes → Go To 9 No → Go To 12	All
9	Turn ignition off. Gain access to and disconnect the Park Brake Switch connector. Turn the ignition on. With the DRBIII®, read the PARK BRAKE SW status. Does the DRBIII® display OPEN? Yes → Replace the Park Brake Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	Turn ignition off. Gain access to and disconnect the Park Brake Switch connector. Remove the Instrument Cluster. Measure the resistance of the Red Brake Warning Indicator Driver circuit from the Park Brake Switch connector to a know good ground. Is the resistance below 1000.0 ohms? Yes → Repair the Red Brake Warning Indicator Driver circuit for an short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 11	All
11	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
12	Disconnect the Brake Brake Fluid Level Switch connector. Turn the ignition on. Did the Red Brake Warning Indicator go out? Yes → Replace the Brake Fluid Level Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 13	All
13	Turn the ignition off. Disconnect the Brake Warning Indicator Switch from the brake fluid reservoir. Disconnect the Powertrain Control Module ″C2″ connector. Measure the resistance of the Red Brake Warning Indicator Driver circuit to ground. Is the resistance below 1000.0 (1K) ohms? Yes → Repair the Red Brake Warning Indicator Driver circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 14	All

*RED BRAKE WARNING INDICATOR NOT OPERATING PROPERLY — Continued

TEST	ACTION	APPLICABILITY
14	If there are no possible causes remaining, view repair. Repair Replace the Powertrain Control Module. Perform POWERTRAIN VERIFICATION TEST VER - 2.	All

Symptom:

*SEATBELT INDICATOR PROBLEM

POSSIBLE CAUSES
INSTRUMENT CLUSTER - SEATBELT INDICATOR SHORTED
INSTRUMENT CLUSTER SEATBELT INDICATOR OPEN
INSTRUMENT CLUSTER SEATBELT INDICATOR PROBLEM
SEATBELT SWITCH SENSE CIRCUIT OPEN
SEATBELT SWITCH SENSE CIRCUIT SHORT TO GROUND
SEATBELT SWITCH OPEN
SEATBELT SWITCH SHORTED
INSTRUMENT CLUSTER - SEATBELT SWITCH OPEN
INSTRUMENT CLUSTER - SEATBELT SWITCH SHORTED

TEST	ACTION	APPLICABILITY
1	Cycle the ignition switch off then on and observe the Seatbelt Indicator. With the ignition on, fasten the Driver Seatbelt. Unfasten the Driver Seatbelt. Select the problem with the seatbelt indicator you observed. Indicator never came on Replace the Instrument Cluster - Seatbelt LED open. Perform BODY VERIFICATION TEST - VER 1. Indicator stays on w/belt buckled Go To 2 Indicator inoperative w/belt unbuckled Go To 6	All
2	Fasten the Driver Seatbelt With the DRBIII®, read the DRV SEAT BELT SW: status. Does the DRBIII® display OPEN? Yes → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Remove the Instrument Cluster. Disconnect the Seatbelt Switch connector. Measure the resistance of the Seatbnelt Switch Sense circuit to ground in the Instrument Cluster ″C1″ connector. Is the resistance below 1000.0 ohms? Yes → Repair the Seatbelt Switch Sense circuit for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All

*SEATBELT INDICATOR PROBLEM — Continued

TEST	ACTION	APPLICABILITY
4	Turn the ignition off. Remove the Instrument Cluster. Ensure the Seatbelt Switch is connected before proceeding. Fasten the Driver Seatbelt Measure the resistance of the Seatbelt Switch Sense circuit in the Instrument Cluster ″C1″ connector to ground. Is the resistance below 100.0 ohms? Yes → Replace the Seatbelt Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
6	Ensure the Seatbelt is UNFASTENED. With the DRBIII®, read the DRV SEAT BELT SW: status. Does the DRBIII® display CLOSED? Yes → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn the ignition off. Remove the Instrument Cluster. Disconnect the Seatbelt Switch connector. Measure the resistance of the Seatbnelt Switch Sense circuit between the Instrument Cluster ″C1″ connector and the Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 8 No → Repair the open Seatbelt Switch Sense circuit. Perform BODY VERIFICATION TEST - VER 1.	All
8	Turn the ignition off. Remove the Instrument Cluster. Ensure the Seatbelt is UNFASTENED. Ensure the Seatbelt Switch is connected before proceeding. Measure the resistance of the Seatbelt Switch Sense circuit in the Instrument Cluster ″C1″ connector. Is the resistance below 10.0 ohms? Yes → Go To 9 No → Replace the Seatbelt Switch. Perform BODY VERIFICATION TEST - VER 1.	All
9	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***VF DISPLAY FAILS SELF TEST**

POSSIBLE CAUSES
DEFECTIVE INSTRUMENT CLUSTER

TEST	ACTION	APPLICABILITY
1	The VF Display is not a repairable or replaceable item. If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***COURTESY LAMPS ON AT ALL TIMES**

POSSIBLE CAUSES
LEFT REAR DOOR AJAR SWITCH SHORTED
PASSENGER DOOR AJAR SWITCH SHORTED
RIGHT REAR DOOR AJAR SWITCH SHORTED
DRB SWITCH STATES
INSTRUMENT CLUSTER - PANEL LAMPS SIGNAL SHORTED
LIFTGATE AJAR SWITCH SHORTED
DRIVER DOOR AJAR SWITCH - SHORTED
RKE MODULE - LIFTGATE AJAR SHORT TO GROUND
DRIVER DOOR AJAR SWITCH SENSE WIRE SHORTED
RKE MODULE - PASSENGER DOOR AJAR SHORT
LIFTGATE AJAR SWITCH SENSE WIRE SHORTED
PANEL LAMPS DIMMER SIGNAL WIRE SHORT TO GROUND
RKE MODULE - DRIVER DOOR AJAR SHORT TO GROUND
PANEL LAMPS DIMMER SWITCH SHORT TO GROUND.
PASSENGER DOOR AJAR/RKE SENSE WIRE SHORT TO GROUND.
INSTRUMENT CLUSTER - DRIVER DOOR AJAR SHORT
INSTRUMENT CLUSTER - PASSENGER DOOR AJAR
INSTRUMENT CLUSTER DEFECTIVE - LIFTGATE AJAR SHORT

TEST	ACTION	APPLICABILITY
1	Close all doors and liftgate. Turn the Panel Lamps Dimmer Switch (on left stalk switch) to mid position. With the DRBIII®, read the ″Electro/Mech Cluster″, ″I/O's″. Observe the :″Drv Door Ajar Sw″, Passdoor Ajar Sw″, ″Liftgate Ajar Sw″, and ″Dome Lamp Output″. Select reading as follows: Drv Door Ajar: ″CLOSED″ Go To 2 Pass Door Ajar Sw: ″CLOSED″ Go To 6 Liftgate Ajar SW: ″CLOSED″ Go To 10 Dome Lamp Output: ″ON″ Go To 14 None of the above. Replace the Instrument Cluster - Courtesy Lamp driver shorted. Perform BODY VERIFICATION TEST - VER 1.	All

*COURTESY LAMPS ON AT ALL TIMES — Continued

TEST	ACTION	APPLICABILITY
2	Open the Drivers door. Disconnect the Driver Door Ajar Switch connector. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Dvr Door Ajar Sw″ state. Does the DRBIII show: ″Open″? Yes → Replace the defective Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn ignition off. Disconnect the driver door ajar switch connector. Disconnect the Instrument Cluster connector. Disconnect the RKE Module connector. Measure the resistance of the Driver Door Ajar Switch Sense circuit from the door ajar switch connector to ground. Is the resistance below 100.0 ohms? Yes → Repair the Driver Door Ajar Switch Sense wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	Ensure the Instrument Cluster is connected at this time. Disconnect the RKE Module connector. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Dvr Door Ajar Sw″ state. Does the DRBIII show ″Drv Door Ajar Sw: Open″? Yes → Replace the Remote Keyless Entry Module (driver door ajar shorted). Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All

*COURTESY LAMPS ON AT ALL TIMES — Continued

TEST	ACTION	APPLICABILITY
6	Close all passenger doors. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Pas Door Ajar Sw″ state. Remove each passenger door ajar switch and observe the DRBIII. When removing which switch did the DRB change states to read ″Pas Door Ajar Sw: Open″? Passenger Door Replace the defective Passenger Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. Left Rear Door Replace the defective Left Rear Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. Right Rear Door Replace the Right Rear Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. DRB Did Not Change Go To 7	All
7	Remove all 3 passenger door ajar switches. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Pas Door Ajar Sw″ state. Disconnect the RKE Module connector while observing the DRB.. When the RKE module was disconnected, did the DRB show ″Pas Door Ajar Sw: Open″? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All
8	Turn ignition off. Disconnect all 3 passenger door ajar switches. Disconnect the RKE Module connector. Disconnect the Instrument Cluster connector. Measure the resistance of the Passenger Door Ajar circuit in the Passenger Door Ajar Switch connector. Is the resistance below 100.0 ohms? Yes → Repair the Passenger Door Ajar/RKE Sense wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All
9	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster (passenger door ajar malfunction). Perform BODY VERIFICATION TEST - VER 1.	All

*COURTESY LAMPS ON AT ALL TIMES — Continued

TEST	ACTION	APPLICABILITY
10	Open the Liftgate. Disconnect the Liftgate Ajar Switch connector. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Liftgate Ajar Sw″ state. Does the DRBIII show: ″Open″? Yes → Replace the defective Liftgate Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 11	All
11	Disconnect the Liftgate Ajar Switch. Disconnect the RKE Module connector. With the DRB III select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Liftgate Ajar Sw″ state. Does the DRBIII show ″Liftgate Ajar Sw: Open″? Yes → Replace the Remote Keyless Entry Module (liftgate ajar shorted). Perform BODY VERIFICATION TEST - VER 1. No → Go To 12	All
12	Turn ignition off. Disconnect the Liftgate Ajar Switch connector. Disconnect the Instrument Cluster connector. Disconnect the RKE Module connector. Measure the resistance of the Liftgate Ajar Switch Sense circuit from the ajar switch connector to ground. Is the resistance below 100.0 ohms? Yes → Repair the Liftgate Ajar Switch Sense wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 13	All
13	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
14	Turn the Panel Lamps Dimmer Switch (on left stalk switch) to the mid position. Remove the Instrument Cluster. Measure the resistance between ground and the Panel Lamps Dimmer Signal circuit in the ″C2″ connector. Is the resistance below 100.0 ohms? Yes → Go To 15 No → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1.	All
15	Disconnect the Instrument Cluster. Disconnect the Multi-Function switch connector. Measure the resistance of the Panel Lamps Dimmer Signal circuit in the instrument cluster connector to ground. Is the resistance below 200.0 ohms? Yes → Repair the Panel Lamps Dimmer Signal wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 16	All

*COURTESY LAMPS ON AT ALL TIMES — Continued

TEST	ACTION	APPLICABILITY
16	If there are no possible causes remaining, view repair. Repair Replace the Multi-Function Switch. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*COURTESY LAMPS TOTALLY INOPERATIVE

POSSIBLE CAUSES
FUSED B(+) CIRCUIT OPEN
INSTRUMENT CLUSTER DEFECTIVE - COURTESY LAMP OPEN
COURTESY LAMP DRIVER CIRCUIT OPEN

TEST	ACTION	APPLICABILITY
1	Remove the dome lamp lens. Remove and ensure the bulb is good. Measure the voltage of the Fused B(+) circuit in the bulb socket. Is the voltage above 10.0 volts? Yes → Go To 2 No → Repair the open Fused B(+) circuit. Perform BODY VERIFICATION TEST - VER 1. **Note: Reinstall the dome lamp bulb.**	All
2	Disconnect the Instrument Cluster. Connect a jumper wire between Courtesy lamp Driver circuit and ground and observe the dome lamp. Did the dome lamp illuminate? Yes → Replace the Instrument Cluster. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Remove the dome lamp lens. Remove the dome lamp bulb. Disconnect the Instrument Cluster. Connect a jumper wire between Courtesy lamp Driver circuit in the Instrument Cluster connector and ground. Measure the resistance of the Courtesy Lamp Driver circuit in the Dome Lamp Socket. Is the resistance below 5.0 ohms? Yes → Test Complete. No → Repair the open Courtesy Lamp Driver Circuit. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*ILLUMINATED ENTRY INOPERATIVE

POSSIBLE CAUSES
COURTESY LAMPS OPERATIONAL
ILLUMINATED ENTRY NOT ENABLED

TEST	ACTION	APPLICABILITY
1	Check the courtesy lamp for proper operation. Does the courtesy lamp operate properly from the door ajar switches and the dome light switch? Yes → Go To 2 No → Refer to symptom list for problems related to COURTESY LAMPS TOTALLY INOPERATIVE.	All
2	With the DRBIII select: THEFT ALARM - VTSS - MISCELLANEOUS - ENABLE ILLUMINATED ENTRY. With the DRBIII®, read the ILLUMINATED ENTRY status. Does the DRBIII® display ENABLED? Yes → Test Complete. No → With the DRBIII®,enable ILLUMINATED ENTRY. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

BODY CODE MISMATCH

POSSIBLE CAUSES
RKE MODULE - BODY CODE MISMATCH

Repair Instructions:

RKE MODULE - BODY CODE MISMATCH

With the DRBIII select: ″Theft Alarm″, ″Miscellaneous″, ″Configure Module″ and follow instructions on the screen.

Perform BODY VERIFICATION TEST - VER 1.

Symptom:
NO AIRBAG MESSAGES RECEIVED

POSSIBLE CAUSES
NO AIRBAG MESSAGES RECEIVED

TEST	ACTION	APPLICABILITY
1	With the DRBIII select: ″Passive Restraints″, ″Airbag″. Does the DRBIII display show: NO RESPONSE? Yes → Test Complete. No → Refer to symptom NO RESPONSE FROM ORC in the COMMUNICATION category. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL DOOR LOCKS INOPERATIVE**

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

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the vehicle is not in ship mode before proceeding.** Test fuse #3 in the fuse block. Is the fuse open? Yes → Go To 2 No → Go To 13	All
2	Turn ignition off. Remove Fuse #3 in the Fuse Block. Measure the resistance of the fused B(+) circuit from the fuse output cavity to ground. Is the resistance below 100.0 ohms? Yes → Go To 3 No → Go To 5	All

*ALL DOOR LOCKS INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
3	Turn ignition off. Remove Fuse #3 in the Fuse Block. Disconnect the RKE Module connector. Measure the resistance of the fused B(+) circuit (cavity #3) in the RKE connector to ground. Is the resistance below 100.0 ohms? Yes → Repair fused B(+) wire for a short to ground and replace blown fuse. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
5	Replace fuse #3 Lock and Unlock the door locks several times. Did the system operate properly without blowing the fuse? Yes → Test complete. If Fuse #3 blows again, check with the customer as to when it blew and rerun this test. Perform BODY VERIFICATION TEST - VER 1. No → Go To 6	All
6	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Unlock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Unlock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Unlock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 8	All
8	Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Lock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Lock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 9	All

*ALL DOOR LOCKS INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
9	Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Lock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Lock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 10	All
10	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Door Lock Driver circuit and the Door Unlock Driver circuit in the RKE module connector. Is the resistance below 1.0 ohms? Yes → To isolate defective motor, disconnect each motor while testing resistance between Door Lock Driver and Door Ulnlock Driver circuits until resistance is greater than 1.0 ohm.. Replace motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 11	All
11	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Driver Door Lock Driver circuit and the Driver Door Unlock Driver circuit in the RKE module connector. Is the resistance below 4.5 ohms? Yes → Replace the Driver Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 12	All
12	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
13	Turn ignition off. Disconnect the RKE Module connector. Turn all lights off. Measure the resistance of the ground circuit (cavity #8) in the RKE Module connector. Is the resistance below 5.0 ohms? Yes → Go To 14 No → Repair the open ground circuit. Perform BODY VERIFICATION TEST - VER 1.	All
14	Disconnect the RKE Module connector. Using a test light, test both sides of Fuse #3 to ensure the fuse is Okay and that the 12.0 volt supply is not open. Measure the Voltage of the Fused B(+) circuit (cavity #3) in the RKE Module connector. Is the voltage above 10.0 volts? Yes → Go To 15 No → Repair the open Fused B(+) wire from the RKE Module connector to the fuse. Perform BODY VERIFICATION TEST - VER 1.	All

*ALL DOOR LOCKS INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
15	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Driver Door Unlock Driver circuit and the Door Lock Driver circuit in the RKE module connector.. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Unlock Driver circuit for a short to the Door Lock Driver circuit. Perform BODY VERIFICATION TEST - VER 1. No → Go To 16	All
16	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Driver Door Lock Driver terminal and the Door Unlock Driver terminal in the RKE Module connector. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Lock Driver wire for a short to the Door Unlock Driver wire. Perform BODY VERIFICATION TEST - VER 1. No → Go To 17	All
17	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Driver Door Lock Driver terminal and the Driver Door Unlock Driver terminal in the RKE Module connector. Is the resistance below 4.0 ohms? Yes → Repair the Driver Door Lock Driver wire for a short to the Driver Door Unlock Driver wire. Perform BODY VERIFICATION TEST - VER 1. No → Go To 18	All
18	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module (relays open). Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*ALL DOORS (EXC DRIVER) FAIL TO LOCK & UNLOCK

POSSIBLE CAUSES
OPEN PASSENGER LOCK MOTOR CIRCUIT - RKE MODULE
DOOR UNLOCK DRIVER SHORT TO DOOR LOCK DRIVER
DOOR UNLOCK DRIVER WIRE OPEN
DOOR LOCK DRIVER WIRE OPEN
OPEN MOTORS

TEST	ACTION	APPLICABILITY
1	Disconnect the Remote Keyless Entry module connector. Lower the passenger door window. Connect a jumper wire between the Door Lock Driver ckt and the Ground ckt in the RKE module connector. Connect a jumper wire to the Door Unlock Driver ckt and momentarily touch it to the Fused B(+) ckt and observe the passenger door locks. Reverse the jumper wires to drive the motors in the opposite direction. Did the passenger doors Lock and Unlock? Yes → Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Remote Keyless Entry module connector. Measure the resistance between the Door Unlock Driver circuit and the Door Lock Driver circuit in the RKE module connector.. Is the resistance below 1.0 ohms? Yes → Repair the Door Unlock Driver circuit for a short to the Door Lock Driver circuit (possibly a motor). Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn ignition off. Remove the passenger inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Passenger Door Lock Motor connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Unlock Driver wire between the RKE module connector and the door lock motor connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Door Unlock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All

*ALL DOORS (EXC DRIVER) FAIL TO LOCK & UNLOCK — Continued

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

Symptom:

*ALL DOORS (EXCEPT DRIVER) FAIL TO LOCK

POSSIBLE CAUSES
PASSENGER DOOR LOCK DRIVER WIRE SHORT TO GROUND
RKE MODULE DEF- PASSENGER UNLOCK DRIVER GROUND OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Lock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Lock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*ALL DOORS (EXCEPT DRIVER) FAIL TO UNLOCK

POSSIBLE CAUSES
PASSENGER DOOR UNLOCK DRIVER WIRE SHORT TO GND
RKE MODULE DEFECTIVE - PASSENGER UNLOCK DRIVER OPEN

TEST	ACTION	APPLICABILITY
1	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Door Unlock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Door Unlock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL LOCKS INOPERATIVE FROM DRIVER CYLINDER LOCK SWITCH**

POSSIBLE CAUSES
DRIVER CYLINDER LOCK SWITCH INOPERATIVE

TEST	ACTION	APPLICABILITY
1	The test for this symptom is in another catagory. Refer to symptom VTSS FAILS TO ARM/DISARM FROM DRIVER CYLINDER LOCK SWITCH in the VEHICLE THEFT SECURITY SYSTEM category.	All

Symptom:

***ALL LOCKS INOPERATIVE FROM DRIVER DOOR LOCK SWITCH**

POSSIBLE CAUSES
DOOR LOCK SWITCH OPEN
LOCK SWITCH GROUND OPEN
DOOR SWITCH MUX WIRE OPEN
DOOR SWITCH MUX CIRCUIT SHORT TO GROUND
DOOR SWITCH MUX WIRE SHORT TO VOLTAGE
REMOTE KEYLESS ENTRY MODULE - DOOR SWITCH MUX HIGH
RKE MODULE DEFECTIVE - DOOR SWITCH MUX OPEN

TEST	ACTION	APPLICABILITY
1	Turn all lights off. Turn the ignition off. Disconnect the Door Lock Switch connector. Measure the resistance of the Ground circuit in the lock switch connector. Is the resistance below 5.0 ohms? Yes → Go To 2 No → Repair the open ground wire. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Driver Door Lock Switch connector. Measure the voltage of the Driver Door Switch Mux circuit in the lock switch connector. What is the voltage of the Door Switch Mux circuit? Below 4.4 volts Go To 3 4.5 to 5.5 volts Replace the Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1. Above 5.6 volts Go To 6	All
3	Turn ignition off. Disconnect the Door Lock Switch connector. Disconnect the RKE module connector. Measure the resistance of the Driver Door Switch Mux circuit between the RKE connector and the lock switch connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Door Switch Mux wire. Perform BODY VERIFICATION TEST - VER 1.	All

*ALL LOCKS INOPERATIVE FROM DRIVER DOOR LOCK SWITCH — Continued

TEST	ACTION	APPLICABILITY
4	Turn ignition off. Disconnect the RKE module connector. Measure the resistance of the Driver Door Switch Mux circuit from the module connector to ground. Is the resistance below 1200.0 ohms (should be infinite)? Yes → Repair the Door Switch Mux circuit (wire or cylinder lock switch) for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
6	Turn ignition off. Disconnect the Door Lock Switch connector. Disconnect the RKE module connector. Measure the voltage of the Driver Door Switch Mux circuit to ground. Is there any voltage present? Yes → Repair the Door Switch Mux wire for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***ALL LOCKS INOPERATIVE FROM PASSENGER CYLINDER LOCK SWITCH**

POSSIBLE CAUSES
PASSENGER CYLINDER LOCK SWITCH INOPERATIVE

TEST	ACTION	APPLICABILITY
1	Test for this symptom is in another catagory. Refer to symptom VTSS FAILS TO ARM/DISARM FROM PASSENGER CYLINDER LOCK SWITCH in the VEHICLE THEFT SECURITY SYSTEM category.	All

Symptom:

***ALL LOCKS INOPERATIVE FROM PASSENGER DOOR LOCK SWITCH**

POSSIBLE CAUSES
DOOR LOCK SWITCH OPEN
LOCK SWITCH GROUND OPEN
DOOR SWITCH MUX WIRE OPEN
DOOR SWITCH MUX CIRCUIT SHORT TO GROUND
DOOR SWITCH MUX WIRE SHORT TO VOLTAGE
REMOTE KEYLESS ENTRY MODULE - DOOR SWITCH MUX HIGH
RKE MODULE DEFECTIVE - DOOR SWITCH MUX OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Door Lock Switch connector. Turn ignition off. Turn all lights off. Measure the resistance of the Ground circuit in the lock switch connector. Is the resistance below 5.0 ohms? Yes → Go To 2 No → Repair the open ground wire. Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Door Lock Switch connector. Measure the voltage of the Passenger Door Switch Mux circuit in the lock switch connector. What is the voltage of the Door Switch Mux circuit? Below 4.4 volts Go To 3 4.5 to 5.5 volts Replace the Door Lock Switch. Perform BODY VERIFICATION TEST - VER 1. Above 5.6 volts Go To 6	All
3	Turn ignition off. Turn all lights off. Disconnect the Door Lock Switch connector. Disconnect the RKE module connector. Measure the resistance of the Passenger Door Switch Mux circuit between the RKE connector and the lock switch connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Door Switch Mux wire. Perform BODY VERIFICATION TEST - VER 1.	All

*ALL LOCKS INOPERATIVE FROM PASSENGER DOOR LOCK SWITCH — Continued

TEST	ACTION	APPLICABILITY
4	Turn ignition off. Disconnect the RKE module connector. Measure the resistance of the Passenger Door Switch Mux circuit from the module connector to ground. Is the resistance below 1200.0 ohms (should be infinite) Yes → Repair the Door Switch Mux circuit (wire or cylinder lock switch) for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
6	Disconnect the Door Lock Switch connector. Disconnect the RKE module connector. Measure the voltage of the Passenger Door Switch Mux circuit to ground. Is there any voltage present? Yes → Repair the Door Switch Mux wire for a short to voltage. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*AUTOMATIC DOOR LOCKS INOPERATIVE

POSSIBLE CAUSES
AUTO DOOR LOCKS NOT ENABLED
DOOR AJAR SWITCH CLOSED
PCM DTC'S PRESENT
RKE MODULE DEFECTIVE - AUTO LOCKS INOPERABLE

TEST	ACTION	APPLICABILITY
1	With the DRBIII select: ″Theft Alarm″ ″VTSS″ ″Miscellaneous″ ″Auto Door Locks″ Does the DRB show ″Auto Door Locks: ENABLED″? Yes → Go To 2 No → With the DRBIII, enable the Auto Door Locks and retest the System. Perform BODY VERIFICATION TEST - VER 1.	All
2	Close all doors and liftgate. With the DRBIII®, read the ″Electro/Mech Cluster″, ″I/O's″. Observe the :″Drv Door Ajar Sw″, Passdoor Ajar Sw″ and ″Liftgate Ajar Sw″ states. Do any of the door or liftgate ajar states show: CLOSED? Yes → Refer to symptom COURTESY LAMPS ON AT ALL TIMES in the INTERIOR LIGHTING category. No → Go To 3	All
3	With the DRBIII read ″Engine″ DTC's. Are any ″Engine DTC's″ present? Yes → Refer to the appropriate ″Powertrain″ information. Perform BODY VERIFICATION TEST - VER 1. No → Go To 4	All
4	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*DOORS LOCKABLE WITH KEY IN IGN & DRIVER DOOR OPEN

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

TEST	ACTION	APPLICABILITY
1	Open the Drivers door. With the DRB III select: Body - Vehicle Theft - Input/Output Read the Drv Door Ajar Sw state. Does the DRBIII Show: CLOSED? No → Go To 2 Yes → Go To 5	All
2	Disconnect the Door Ajar Switch connector. Connect a jumper wire between Driver Door Ajar Switch Sense circuit and ground. With the DRB III select: Body - Vehicle Theft - Input/Output Read the Drv Door Ajar Sw state. Does the DRBIII show: Closed? Yes → Replace the Driver Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn ignition off. Disconnect the driver door ajar switch connector. Disconnect the RKE Module connector. Measure the resistance of the Driver Door Ajar Switch Sense circuit between the door ajar switch connector and the RKE Module connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Driver Door Ajar Switch Sense wire. Perform BODY VERIFICATION TEST - VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

*DOORS LOCKABLE WITH KEY IN IGN & DRIVER DOOR OPEN — Continued

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

Symptom:

***DRIVER DOOR FAILS TO LOCK**

POSSIBLE CAUSES
DRIVER DOOR LOCK DRIVER WIRE SHORT TO GROUND
REMOTE KEYLESS ENTRY MODYLE - DRIVER DOOR LOCK INOP

TEST	ACTION	APPLICABILITY
1	Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Lock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Lock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*DRIVER DOOR FAILS TO LOCK & UNLOCK

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

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

*DRIVER DOOR FAILS TO LOCK & UNLOCK — Continued

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

Symptom:

*DRIVER DOOR FAILS TO UNLOCK

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

TEST	ACTION	APPLICABILITY
1	Turn ignition off. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Driver Door Unlock Driver circuit in the RKE module connector to body ground. Is the resistance below 1000.0 ohms? Yes → Repair the Driver Door Unlock Driver wire for a short to ground. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***LEFT REAR DOOR FAILS TO LOCK & UNLOCK**

POSSIBLE CAUSES
OPEN LEFT REAR DOOR LOCK MOTOR
DOOR UNLOCK DRIVER WIRE OPEN
OPEN DOOR LOCK DRIVER WIRE

TEST	ACTION	APPLICABILITY
1	Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Connect a test light between the Door Lock Driver and the Door Unlock Driver terminals in the door lock motor connector. Press the door lock switch to the Lock and Unlock positions. Did the test light illuminate when the lock switch was pressed in both directions? Yes → Replace the Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Remove the left rear door inner trim panel to gain access to the Door Lock Motor connector. Disconnect the Left Rear Door Lock Motor connector. Using a 12-volt Test Light connected to ground, check the Door Unlock Driver circuit in the Door Lock connector.. With the DRBIII®, actuate the Door Unlock Relay and observe the test light. Does the test light flash during actuation? Yes → Go To 3 No → Repair the open Door Unlock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Remove the left rear door inner 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 Driver circuit in the Door Lock connector.. With the DRBIII®, actuate the Door Lock Relay and observe the test light. Does the test light flash during actuation? Yes → Test Complete. No → Repair the open Door Lock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*LIFTGATE FAILS TO LOCK OR UNLOCK

POSSIBLE CAUSES
OPEN LIFTGATE LOCK MOTOR
OPEN LIFTGATE DOOR LOCK DRIVER WIRE
LIFTGATE DOOR UNLOCK DRIVER WIRE OPEN

TEST	ACTION	APPLICABILITY
1	Remove the liftgate trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Connect a test light between the Door Lock Driver and the Door Unlock Driver terminals in the door lock motor connector. Press the door lock switch to the Lock and Unlock positions. Did the test light illuminate when the lock switch was pressed in both directions? Yes → Replace the Liftgate Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Remove the liftgate trim panel to gain access to the Door Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Using a 12-volt Test Light connected to ground, check the Door Lock Driver circuit in the Liftgate Lock Motor connector.. With the DRBIII®, actuate the Door Lock Relay and observe the test light. Does the test light flash during actuation? Yes → Go To 3 No → Repair the open Door Lock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Remove the liftgate trim panel to gain access to the Liftgater Lock Motor connector. Disconnect the Liftgate Lock Motor connector. Using a 12-volt Test Light connected to ground, check the Door Unlock Driver circuit in the Liftgate Lock Motor connector.. With the DRBIII®, actuate the Door Unlock Relay and observe the test light. Does the test light flash during actuation? Yes → Test Complete. No → Repair the open Door Unlock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*PASSENGER DOOR FAILS TO LOCK & UNLOCK

POSSIBLE CAUSES
OPEN PASSENGER DOOR LOCK MOTOR
DOOR UNLOCK DRIVER WIRE OPEN
DOOR LOCK DRIVER WIRE OPEN

TEST	ACTION	APPLICABILITY
1	Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Connect a test light between the Door Lock Driver and the Door Unlock Driver circuits in the door lock motor connector. Press the door lock switch to the Lock and Unlock positions. Did the test light illuminate when the lock switch was pressed in both directions? Yes → Replace the Passenger Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Remove the passenger inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Passenger Door Lock Motor connector. Using a 12-volt Test Light connected to ground, check the Door Unlock Driver circuit in the Passenger Door Lock Motor connector.. With the DRBIII®, actuate the Door Unlock Relay and observe the test light. Does the test light flash during actuation? Yes → Go To 3 No → Repair the open Door Unlock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Remove the inner door trim panel to gain access to the Passenger Door Lock Motor connector. Disconnect the Passenger Door Lock Motor connector. Using a 12-volt Test Light connected to ground, check the Door Lock Driver circuit in the Passenger Door Lock connector.. With the DRBIII®, actuate the Door Lock Relay and observe the test light. Does the test light flash during actuation? Yes → Test Complete. No → Repair the open Door Lock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*RIGHT REAR DOOR FAILS TO LOCK & UNLOCK

POSSIBLE CAUSES
OPEN RIGHT REAR DOOR LOCK MOTOR
DOOR UNLOCK DRIVER WIRE OPEN
OPEN DOOR LOCK DRIVER WIRE

TEST	ACTION	APPLICABILITY
1	Remove the inner door trim panel to gain access to the Door Lock Motor connector. Disconnect the Door Lock Motor connector. Connect a test light between the Door Lock Driver and the Door Unlock Driver circuits in the door lock motor connector. Press the door lock switch to the Lock and Unlock positions. Did the test light illuminate when the lock switch was pressed in both directions? Yes → Replace the Door Lock Motor. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Remove the right rear door inner trim panel to gain access to the Door Lock Motor connector. Disconnect the Right Rear Door Lock Motor connector. Using a 12-volt Test Light connected to ground, check the Door Unlock Driver circuit in the Door Lock connector.. With the DRBIII®, actuate the Door Unlock Relay and observe the test light. Does the test light flash during actuation? Yes → Go To 3 No → Repair the open Door Unlock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Remove the right rear door inner 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 Driver circuit in the Door Lock connector.. With the DRBIII®, actuate the Door Lock Relay and observe the test light. Does the test light flash during actuation. Yes → Test Complete. No → Repair the open Door Lock Driver wire. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*RKE TRANSMITTER INOPERATIVE

POSSIBLE CAUSES
TEST RKE TRANSMITTER
RKE TRANSMITTER DEFECTIVE
RKE MODULE DEFECTIVE - RECEIVER INOPERABLE

TEST	ACTION	APPLICABILITY
1	**Note: Ensure the RKE module is configured for RKE and is in CUSTOMER mode.** **Note: Ensure the voltage of each battery is greater than 3.0 volts before proceeding.** Using the DRB select BODY, Theft Alarm, VTSS, MISCELLANOUS then RKE FOB & Module Test. Follow the instructions on the DRB screen. Try the Door Locks using the Transmitter. Did the Door Locks respond properly to the Transmitter commands ? Yes → Using the DRB, program the transmitter and recheck the system. If okay, program all Transmitters that will be used with this vehicle. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Secure a known good Transmitter from another PL or PT vehicle. Using the DRB select BODY, Theft Alarm, VTSS, MISCELLANOUS then RKE FOB & Module Test. Follow the instructions on the DRB screen. Try the Door Locks using the Transmitter. Did the Door Locks respond properly to the Transmitter commands ? Yes → Replace the original Transmitter. Program all Transmitters that will be used with this Vehicle. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

HOOD AJAR SWITCH MISSING

When Monitored and Set Condition:

HOOD AJAR SWITCH MISSING

When Monitored: During configuration of the Remote Keyless Entry Module (with ignition on).

Set Condition: If the Hood Ajar Switch RKE Module input is NOT grounded while the module is being configured for VTSS, this code will set and the module will not completely configure..

POSSIBLE CAUSES
HOOD NOT OPEN
DRB HOOD AJAR SWITCH CHECK OK-OPEN
GROUND CIRCUIT OPEN
HOOD AJAR SWITCH SENSE CIRCUIT OPEN
HOOD AJAR SWITCH DEFECTIVE - OPEN
RKE MODULE - HOOD AJAR OPEN

TEST	ACTION	APPLICABILITY
1	Was the hood open during module configuration? Yes → Go To 2 No → Open the hood and retry module configuration. Perform VTSS VERIFICATION TEST - VER 1.	All
2	Open the hood. With the DRBIII select: ″Vehicle Theft″ ″VTSS″ ″Input/Output″ Read the ″Hood Ajar Sw″ state. Does the DRBIII show ″Closed″? Yes → Replace the Remote Keyless Entry Module (not reacting to Hood Ajar Input correctly). Perform VTSS VERIFICATION TEST - VER 1. No → Go To 3	All
3	Disconnect the Hood Ajar Switch connector. Measure the resistance of the Ground circuit in the Hood Ajar Switch connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open ground circuit. Perform VTSS VERIFICATION TEST - VER 1.	All

HOOD AJAR SWITCH MISSING — Continued

TEST	ACTION	APPLICABILITY
4	Disconnect the Hood Ajar Switch connector. Disconnect the RKE Module connector. Measure the resistance of the Hood Ajar Switch Sense circuit between the Switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair the open Hood Ajar Switch Sense Wire. Perform VTSS VERIFICATION TEST - VER 1.	All
5	Disconnect the Hood Ajar Switch connector. Connect a jumper wire between the Hood Ajar Switch Sense circuit and ground. Does the DRBIII show ″Hood Ajar SW: Closed″? Yes → Replace the Hood Ajar Switch Perform VTSS VERIFICATION TEST - VER 1. NO Go To 6	All
6	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform VTSS VERIFICATION TEST - VER 1.	All

Symptom:
P/N MISMATCH

When Monitored and Set Condition:

P/N MISMATCH

When Monitored: During configuration of the RKE module (with ignition on).

Set Condition: If the configuration of the module type does not correspond to the module part number, the configuration will fail and this code will set. Example: Trying to write ″BUX w/RKE″ configuration to a domestic part number will cause this code to set.

POSSIBLE CAUSES
RKE MODULE DEFECTIVE - P/N MISMATCH

TEST	ACTION	APPLICABILITY
1	Ensure the module type corresponds with the correct module part number. If the module type corresponds with the module part number it is assumed that the RKE module is defective. If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
VTSS PREVIOUSLY ENABLED

When Monitored and Set Condition:

VTSS PREVIOUSLY ENABLED

When Monitored: During configuration of the RKE module (with ignition on).

Set Condition: If the configuration of the module type has been previously set for VTSS, an attempt to set the module for non-VTSS will cause the new configuration to fail. This code should only appear if attempting to re-configure a used RKE module.

POSSIBLE CAUSES
RKE MOD DEFECT-VTSS PREVIOUSY ENABLED

TEST	ACTION	APPLICABILITY
1	The RKE module attempting to be configured to non-VTSS has originally been configured to be used on a VTSS equipped vehicle. If the vehicle is NOT VTSS equipped (does not have door cylinder lock switches or decklid knockout switch) the module attempting to be configured is assumed to be defective. If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***HEADLAMPS FAIL TO FLASH DURING ALARM**

POSSIBLE CAUSES
DIMMER SWITCH LOW BEAM OUTPUT CIRCUIT OPEN
RKE MODULE DEFECTIVE-LOW BEAM RELAY OPEN

TEST	ACTION	APPLICABILITY
1	Ensure the Low Beam Heqdlamps are operational before proceeding. If they are not, select ″Service Information″ from the menu and repair as necessary. Disconnect the Remote Keyless Entry module connector. Connect a test light to the Dimmer Switch Low Beam Output circuit to ground. Turn the Low Beam Headlamps on. Does the test light illuminate when the low beam headlamps are on? Yes → Go To 2 No → Repair the open Dimmer Switch Low Beam Output circuit. Perform BODY VERIFICATION TEST - VER 1.	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry module (low beam relay open) Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***HORN FAILS TO SOUND DURING ALARM**

POSSIBLE CAUSES
HORN RELAY CONTROL CIRCUIT OPEN
RKE MODULE - OPEN HORN CIRCUIT

TEST	ACTION	APPLICABILITY
1	Ensure the horn is operational from the horn switch. If not, select ″Service Information″ from the menu and repair the horn circuit as necessary. Disconnect the RKE module connector. Connect one end of a jumper wire to the Horn Relay Control circuit in the RKE connector. Momentarily touch the other end of the jumper wire to ground. Did the horn blow when the jumper was attached? Yes → Go To 2 No → Repair the open horn relay control circuit. Perform BODY VERIFICATION TEST - VER 1.	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***INTRUSION SENSOR CANNOT BE DISABLED**

POSSIBLE CAUSES
RKE MODULE - INTRUSION SENSOR DISABLING OPEN
INTRUSION SENSOR CANNOT BE DISABLED

TEST	ACTION	APPLICABILITY
1	Disconnect the Intrusion Sensor connector. Measure the voltage between Intrusion Sensor Signal circuit and ground. Is the voltage above 10.0 volts? Yes → Replace the Intrusion Sensor. Perform VTSS VERIFICATION TEST - VER 1. No → Replace the Remote Keyless Entry Module (intrusion sensor disabling circuit open). Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*INTRUSION SENSOR FAILS TO TRIP VTSS

POSSIBLE CAUSES
FUSED B(+) OPEN
INTRUSION SENSOR CHECK
GROUND CIRCUIT OPEN
INTRUSION SENSOR OPEN
INTRUSION SENSOR SIGNAL CIRCUIT OPEN
INTRUSION SENSOR SIGNAL CIRCUIT SHORT TO GROUND
RKE MODULE - INTRUSION SENSE OPEN

TEST	ACTION	APPLICABILITY
1	Ensure the IOD fuse is installed and the vehicle is in Customer Usage Mode. Using the DRBIII, read the module configuration and ensure it is configured for PREMIUM VTA. With the DRBIII select: THEFT ALARM, VTSS, SYSTEM TEST and INTRUSION SENSOR TEST. While waving your hand around the Intrusion Sensor, read the DRBIII. Does the DRBIII® display INTRUSION DETECTED? Yes → Verify system has not been armed with intrusion sensors disabled (via 3 lock requests with RKE or cylinder lock switches). Replace sensor if problem remains intermittent. Perform VTSS VERIFICATION TEST - VER 1. No → Go To 2	All
2	If the dome lamp works properly it is not necessary to complete this test as the same Fused B(+) circuit feeds the lamp. Press the CANCEL and then the OK buttons.. Disconnect the Intrusion Sensor connector. Measure the voltage between the Fused B(+) circuit and ground. Is the voltage above 10.0 volts? Yes → Go To 3 No → Repair the open Fused B(+) circuit from the IOD fuse. Perform VTSS VERIFICATION TEST - VER 1.	All
3	Disconnect the Intrusion Sensor connector. Turn the ignition and all lights off. Measure the resistance between ground and the Ground circuit. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open ground circuit. Perform VTSS VERIFICATION TEST - VER 1.	All

*INTRUSION SENSOR FAILS TO TRIP VTSS — Continued

TEST	ACTION	APPLICABILITY
4	Disconnect the Intrusion Sensor connector. Disconnect the Remote Keyless Entry Module. Measure the resistance of the Intrusion Sensor Signal circuit between the Sensor connector and the RKE Module connector. Is the resistance below 5.0 ohms? Yes → Go To 5 No → Repair the open Intrusion Sensor Signal circuit. Perform VTSS VERIFICATION TEST - VER 1.	All
5	Turn the ignition and all lights off. Disconnect the Intrusion Sensor connector. Disconnect the Remote Keyless Entry Module. Measure the resistance of the Intrusion Sensor Signal circuit to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Intrusion Sensor Signal circuit for a short to ground. Perform VTSS VERIFICATION TEST - VER 1. No → Go To 6	All
6	Disconnect the Intrusion Sensor connector. Backprobe a voltmeter lead to the Intrusion Sensor Signal circuit in the Sensor connector and the other lead to ground. Reconnect the Intrusion Sensor Signal connector. Wave your hand around the Intrusion Sensor and observe the voltmeter. Is the voltage betweeen 3.0 and 6.0 volts? Yes → Go To 7 No → Replace the Intrusion Sensor. Perform VTSS VERIFICATION TEST - VER 1.	All
7	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*INTRUSION SENSOR REPEATEDLY TRIGGERS VTSS

POSSIBLE CAUSES
RKE MODULE - INTRUSION SENSE INPUT ACTIVE
INTRUSION SENSOR REPEATEDLY TRIGGERS VTSS

TEST	ACTION	APPLICABILITY
1	**Note: Ensure there are no hanging objects or loose seat belts causing the false triggering.** **Note: Ensure there is no dust or debris around the intrusion sensor causing the false triggering.** Disconnect the Intrusion Sensor connector. Close all doors and arm the VTSS. Does the alarm inadvertently trigger due to intrusion sense even though the sensor is disconnected? Yes → Replace the Remote Keyless Entry Module (intrusion sense input active). Perform BODY VERIFICATION TEST - VER 1. No → Replace the Intrusion Sensor and retest system. Perform VTSS VERIFICATION TEST - VER 1.	All

Symptom:

*OPEN DRIVER DOOR FAILS TO TRIP ALARM

POSSIBLE CAUSES
DRIVER DOOR AJAR SWITCH STATUS INCORRECT
DRIVER DOOR AJAR SWITCH - OPEN
OPEN DRIVER DOOR AJAR SWITCH SENSE TO RKE MODULE
RKE MODULE - DRIVER DOOR AJAR OPEN

TEST	ACTION	APPLICABILITY
1	Open the Drivers door. With the DRBIII select: THEFT ALARM - VTSS - INPUT/OUTPUT. Read the DRV DOOR AJAR SW state. Does the DRBIII Show: CLOSED? No → Go To 2 Yes → Replace the RKE module (not responding to Driver Door Ajar). Perform BODY VERIFICATION TEST - VER 1.	All
2	Disconnect the Door Ajar Switch connector. Connect a jumper wire between Driver Door Ajar Switch Sense circuit and ground. With the DRBIII select: THEFT ALARM - VTSS - INPUT/OUTPUT. Read the DRV DOOR AJAR SW state. Does the DRBIII show: CLOSED? Yes → Replace the Driver Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All
3	Turn the ignition off. Disconnect the driver door ajar switch connector. Disconnect the RKE Module connector. Measure the resistance of the Driver Door Ajar Switch Sense circuit between the door ajar switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Driver Door Ajar Switch Sense wire. Perform BODY VERIFICATION TEST - VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:
*OPEN LIFTGATE FAILS TO TRIP ALARM

POSSIBLE CAUSES
LIFTGATE AJAR SWITCH OPEN
GROUND OPEN
LTGATE AJAR SWITCH SENSE WIRE OPEN
RKE MODULE - OPEN LIFTGATE AJAR

TEST	ACTION	APPLICABILITY
1	Open the Liftgate. Disconnect the Liftgate Ajar Switch connector. Connect a jumper wire between the Liftgatel Ajar Switch Sense circuit and ground. With the DRBIII select: ″Body″ ″Electro/Mech Cluster″ ″Input/Output″ Read the ″Liftgate Ajar Sw″ state. Does the DRBIII show: ″Closed″? Yes → Replace the Liftgate Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 2	All
2	Turn ignition off. Disconnect the Liftgate Ajar Switch connector. Turn all lights off. Measure the resistance between ground and the Ground circuit.. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the open Ground wire. Perform BODY VERIFICATION TEST - VER 1.	All
3	Turn ignition off. Disconnect the Liftgate Ajar Switch connector. Disconnect the RKE Module connector. Measure the resistance of the Liftgate Ajar Switch Sense circuit from the Liftgate Ajar Switch connector to the RKE connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Liftgate Ajar Switch Sense wire. Perform BODY VERIFICATION TEST - VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***OPEN PASSENGER DOOR FAILS TO TRIP ALARM**

POSSIBLE CAUSES
RKE MODULE - PASSENGER DOOR AJAR OPEN
LEFT REAR DOOR AJAR SWITCH - OPEN
PASSENGER DOOR AJAR SWITCH OPEN
RIGHT REAR DOOR AJAR SWITCH - OPEN
OPEN LEFT REAR DOOR AJAR SWITCH SENSE TO SPLICE
OPEN PASSENGER DOOR AJAR SWITCH SENSE TO SPLICE
OPEN RIGHT REAR DOOR AJAR SWITCH SENSE TO SPLICE
OPEN PASSENGER DOOR AJAR/RKE SENSE TO RKE MODULE
RKE MODULE - PASSENGER DOOR AJAR OPEN

TEST	ACTION	APPLICABILITY
1	Close all passenger doors. With the DRB III select: THEFT ALARM - VTSS - INPUT/OUTPUT. Read the PASS DOOR AJAR SW state and open and close each passenger door. Select the door(s) that did not show ″CLOSED″ when that door was opened. Passenger Go To 2 Left Rear Go To 4 Right Rear Go To 6 All Passenger Doors Go To 8 All door states read correctly Retest the VTSS system. If the passenger doors will still not trip the alarm, replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All
2	Open the Passenger Door. Disconnect the door ajar switch connector. Close all the other passenger doors. Connect a jumper wire from the Passenger Door Ajar Switch Sense circuit to ground. With the DRB III select: THEFT ALA RM - VTSS - INPUT/OUTPUT. Read the PASS DOOR AJAR SW state. Does the DRB show: ″Closed″? Yes → Replace the Passenger Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 3	All

*OPEN PASSENGER DOOR FAILS TO TRIP ALARM — Continued

TEST	ACTION	APPLICABILITY
3	If there are no possible causes remaining, view repair. Repair Repair the open Passenger Door Ajar Switch Sense wire to splice. Perform BODY VERIFICATION TEST - VER 1.	All
4	Open the Left Rear Door. Disconnect the door ajar switch connector. Close all the other passenger doors. Connect a jumper wire from the Passenger Door Ajar Switch Sense circuit to ground. With the DRB III select: VEHICLE THEFT - VTSS - INPUT/OUTPUT. Read the PASS DOOR AJAR SW state. Does the DRB show: CLOSED? Yes → Replace the Left Rear Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 5	All
5	If there are no possible causes remaining, view repair. Repair Repair the open Left Rear Door Ajar Switch Sense wire to splice. Perform BODY VERIFICATION TEST - VER 1.	All
6	Open the Right Rear Door. Disconnect the door ajar switch connector. Close all the other passenger doors. Connect a jumper wire from the Passenger Door Ajar Switch Sense circuit to ground. With the DRB III select: VEHICLE THEFT - VTSS - INPUT/OUTPUT. Read the PASS DOOR AJAR SW state. Does the DRB show: CLOSED? Yes → Replace the Right Rear Door Ajar Switch. Perform BODY VERIFICATION TEST - VER 1. No → Go To 7	All
7	If there are no possible causes remaining, view repair. Repair Repair the open Right Rear Door Ajar Switch Sense wire to splice. Perform BODY VERIFICATION TEST - VER 1.	All
8	Turn ignition off. Disconnect the passenger door ajar switch connector. Disconnect the RKE Module connector. Measure the resistance of the Passenger Door Ajar/RKE Sense circuit between the door ajar switch connector and the RKE module connector. Is the resistance below 5.0 ohms? Yes → Go To 9 No → Repair the open Passenger Door Ajar/RKE Sense wire. Perform BODY VERIFICATION TEST - VER 1.	All
9	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

*PARK LAMPS FAIL TO FLASH DURING ALARM

POSSIBLE CAUSES
HEAD (PARK) LAMP SWITCH OUTPUT CIRCUIT OPEN
RKE MODULE DEFECTIVE-PARK LAMP RELAY OPEN

TEST	ACTION	APPLICABILITY
1	Ensure the park lamps are operational from the multi-function switch. If not, select ″Service Information″ from the menu and repair the park lamp circuit. Disconnect the Remote Keyless Entry module connector. Connect a test light to the Head (park) Lamp Switch Output circuit (cav 2) to ground. Turn the Park Lamps on. Does the test light illuminate when the park lamps are on? Yes → Go To 2 No → Repair the open Head (park) Lamp Switch Output circuit. Perform BODY VERIFICATION TEST - VER 1.	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry module (park lamp relay open). Perform BODY VERIFICATION TEST - VER 1.	All

Symptom:

***VTSS FAILS TO ARM FROM DRIVER CYLINDER LOCK SWITCH**

POSSIBLE CAUSES
DOOR LOCKS INOPERABLE FROM DRIVER DOOR LOCK SWITCH
GROUND CIRCUIT OPEN
OPEN DRIVER SWITCH MUX CIRCUIT
OPEN DRIVER CYLINDER LOCK SWITCH

TEST	ACTION	APPLICABILITY
1	Open the driver door and operate the door locks from the Driver Door Lock Switch. Did the door locks operate properly? Yes → Go To 2 No → Refer to symptom ALL LOCKS INOPERATIVE FROM DRIVER DOOR LOCK SWITCH in the POWER DOOR LOCKS/RKE category. Perform VTSS VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Cylinder Lock Switch connector. Measure the resistance of the ground circuit to body ground. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the open ground circuit. Perform VTSS VERIFICATION TEST - VER 1.	All
3	Disconnect the Cylinder Lock Switch connector. Measure the voltage between Driver Door Switch Mux circuit and ground. Is the voltage above 4.5 volts? Yes → Go To 4 No → Repair the open Driver Switch Mux circuit. Perform VTSS VERIFICATION TEST - VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Driver Cylinder Lock Switch. Perform VTSS VERIFICATION TEST - VER 1.	All

Symptom:
*VTSS FAILS TO ARM FROM LIFTGATE CYLINDER LOCK SWITCH

POSSIBLE CAUSES
DOOR LOCKS INOPERABLE FROM DRIVER DOOR LOCK SWITCH
DOOR LOCKS INOPERABLE FROM PASSENGER DOOR LOCK SWITCH
GROUND CIRCUIT OPEN
OPEN LIFTGATE SWITCH MUX CIRCUIT
OPEN LIFTGATE CYLINDER LOCK SWITCH

TEST	ACTION	APPLICABILITY
1	**Note: For Right Hand Drive Vehicles the Driver Door Mux circuit must be operational for the result of this test to be valid.** Open the driver door and operate the door locks from the Driver Door Lock Switch. Did the door locks operate properly? Yes → Go To 2 No → Refer to symptom ALL LOCKS INOPERATIVE FROM DRIVER DOOR LOCK SWITCH in the POWER DOOR LOCKS/RKE category. Perform VTSS VERIFICATION TEST - VER 1.	All
2	**Note: For Left Hand Drive Vehicles the Passenger Door Mux circuit must be operational for the result of this test to be valid.** Open the passenger door and operate the door locks from the Passenger Door Lock Switch. Did the door locks operate properly? Yes → Go To 3 No → Refer to symptom *ALL LOCK INOPERATIVE FROM PASSENGER DOOR LOCK SWITCH in the POWER DOOR LOCKS/RKE category. Perform VTSS VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Liftgate Cylinder Lock Switch connector. Measure the resistance of the ground circuit to body ground. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open ground circuit. Perform VTSS VERIFICATION TEST - VER 1.	All
4	Disconnect the Liftgate Cylinder Lock Switch connector. Measure the voltage between Liftgate Switch Mux circuit and ground. Is the voltage above 4.5 volts? Yes → Go To 5 No → Repair the open Liftgate Switch Mux circuit. Perform VTSS VERIFICATION TEST - VER 1.	All

*VTSS FAILS TO ARM FROM LIFTGATE CYLINDER LOCK SWITCH — Continued

TEST	ACTION	APPLICABILITY
5	If there are no possible causes remaining, view repair. Repair Replace the Liftgate Cylinder Lock Switch. Perform VTSS VERIFICATION TEST - VER 1.	All

Symptom:

***VTSS FAILS TO ARM FROM PASSENGER CYLINDER LOCK SWITCH**

POSSIBLE CAUSES
DOOR LOCKS INOPERABLE FROM PASSENGER DOOR LOCK SWITCH
GROUND CIRCUIT OPEN
OPEN PASSENGER SWITCH MUX CIRCUIT
OPEN PASSENGER CYLINDER LOCK SWITCH

TEST	ACTION	APPLICABILITY
1	Open the passenger door and operate the door locks from the door lock switch. Did the door locks operate properly? Yes → Go To 2 No → Refer to symptom *ALL LOCKS INOPERATIVE FROM PASSENGER DOOR LOCK SWITCH in the POWER DOOR LOCKS/RKE category. Perform VTSS VERIFICATION TEST - VER 1.	All
2	Turn the ignition off. Disconnect the Cylinder Lock Switch connector. Measure the resistance of the ground circuit to body ground. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the open ground circuit. Perform VTSS VERIFICATION TEST - VER 1.	All
3	Disconnect the Cylinder Lock Switch connector. Measure the voltage between Passenger Door Switch Mux circuit and ground. Is the voltage above 4.5 volts? Yes → Go To 4 No → Repair the open Passenger Door Switch Mux circuit. Perform VTSS VERIFICATION TEST - VER 1.	All
4	If there are no possible causes remaining, view repair. Repair Replace the Passenger Cylinder Lock Switch. Perform VTSS VERIFICATION TEST - VER 1.	All

Symptom:
*VTSS INDICATOR FAILS TO FLASH

POSSIBLE CAUSES
VTSS INDICATOR CIRCUIT OK CHECK
VTSS INDICATOR DRIVER WIRE OPEN
INSTRUMENT CLUSTER - VTSS LED OPEN

TEST	ACTION	APPLICABILITY
1	Disconnect the Remote Keyless Entry module connector. **Note: Ensure the vehicle is in Customer Usage Mode before proceeding. If it is Dealer Lot Mode, the VTSS will operate but the indicator will not flash.** Connect a jumper wire between the VTSS Indicator Driver circuit and ground. Does the VTSS Indicator illuminate? Yes → Replace the Remote Keyless Entry Module. Perform VTSS VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Remote Keyless Entry module connector. Disconnect the Instrument Cluster connectror. Measure the resistance of the VTSS Indicator circuit between the RKE module connector and the Instrument Cluster connector. Is the resistance below 5.0 ohms? Yes → Go To 3 No → Repair the open VTSS Iindicator Driver circuit. Perform VTSS VERIFICATION TEST - VER 1.	All
3	If there are no possible causes remaining, view repair. Repair Replace the Instrument Cluster. Perform VTSS VERIFICATION TEST - VER 1.	All

Symptom:

***VTSS INDICATOR STAYS ON STEADY DURING ARMING**

POSSIBLE CAUSES
HOOR AJAR SWITCH SENSE WIRE SHORT TO GROUND
HOOD AJAR SWITCH SHORTED
RKE MODULE - HOOD AJAR SHORTED
RKE MODULE - VTSS LED SHORTED

TEST	ACTION	APPLICABILITY
1	Ensure the hood is closed and aligned properly. With the DRB read the Hood Ajar status.. Does the DRB show ″Closed″? No → Go To 2 Yes → Go To 3	All
2	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform VTSS VERIFICATION TEST - VER 1.	All
3	Ensure the hood is closed and aligned properly. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Hood Ajar Switch Sense circuit to ground. Is the resistance below 1000.0 (1k) ohms? No → Go To 4 Yes → Go To 5	All
4	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform VTSS VERIFICATION TEST - VER 1.	All
5	Disconnect the Hood Ajar Switch connector. Disconnect the Remote Keyless Entry module connector. Measure the resistance of the Hood Ajar Switch Sense circuit to ground. Is the resistance below 1000.0 (1k) ohms? Yes → Repair the Hood Ajar Switch Sense wire for a short to ground. Perform VTSS VERIFICATION TEST - VER 1. No → Go To 6	All
6	If there are no possible causes remaining, view repair. Repair Replace the Hood Ajar Switch. Perform VTSS VERIFICATION TEST - VER 1.	All

Symptom:

***VTSS SIREN INOPERATIVE**

POSSIBLE CAUSES
SIREN TEST
FUSED B(+) OPEN
GROUND CIRCUIT OPEN
SIREN CONTROL WIRE OPEN
SIREN CONTROL WIRE SHORT TO GROUND
SIREN OPEN
RKE MODULE - OPEN CONTROL CIRCUIT

TEST	ACTION	APPLICABILITY
1	Ensure the IOD fuse is installed and the vehicle is in Customer Usage Mode. Using the DRBIII, read the module configuration and ensure it is configured for PREMIUM VTA. With the DRBIII®, actuate the SIREN. Does the Siren actuate and sound proper? Yes → Check for intermittent wiring problem and retest system. If siren sounds when actuated, the RKE module is probably all right. Perform VTSS VERIFICATION TEST - VER 1. No → Go To 2	All
2	Disconnect the Siren connector. Measure the voltage of the Fused B(+) circuit in the Siren connector. Is the voltage above 10.0 volts? Yes → Go To 3 No → Repair the open Fused B(+) ckt from the fuse. Perform VTSS VERIFICATION TEST - VER 1.	All
3	Turn the ignition off. Disconnect the Siren connector. Measure the resistance between ground and the Ground circuit in the Siren connector. Is the resistance below 5.0 ohms? Yes → Go To 4 No → Repair the open Ground circuit. Perform VTSS VERIFICATION TEST - VER 1.	All

*VTSS SIREN INOPERATIVE — Continued

TEST	ACTION	APPLICABILITY
4	Use the DRBIII and set up as follows: 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. Select DRB Standalone. Select lab scope. Select Live. Select 12 volt square wave. Press F2 for Scope. Press F2 and use the down arrow to set voltage range to 20 volts. Press F2 again when complete. Disconnect the Siren connector. Connect the Black lead to the chassis ground. Connect the Red lead to the Siren Control circuits (Cavities 1 & 2) in the Siren connector. Observe the the voltage displayed on the DRB Lab Scope.. Is there a voltage square wave present in each cavity every 1 or 2 seconds? Yes → Go To 5 No → Go To 6	All
5	If there are no possible causes remaining, view repair. Repair Replace the Siren. Perform VTSS VERIFICATION TEST - VER 1.	All
6	Turn the ignition off. Disconnect the Siren connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Siren Control circuit between the Siren connector (cavities 1 & 2) and the RKE Module connector (cavity 15). Is the resistance below 5.0 ohms between all cavities? Yes → Go To 7 No → Repair the open Siren Control wire between the Siren and the RKE Module connectors. Perform VTSS VERIFICATION TEST - VER 1.	All
7	Turn the ignition off. Disconnect the Siren connector. Disconnect the Remote Keyless Entry Module connector. Measure the resistance of the Siren Control circuit to ground. Is the resistance below 1000.0 ohms? Yes → Repair the Siren Control wire for a short to ground. Perform VTSS VERIFICATION TEST - VER 1. No → Go To 8	All
8	If there are no possible causes remaining, view repair. Repair Replace the Remote Keyless Entry Module. Perform VTSS VERIFICATION TEST - VER 1.	All

Verification Tests

41TE TRANSMISSION VERIFICATION TEST - VER 1	APPLICABILITY
1. Connect the DRBIII® to the Data Link Connector (DLC). 2. Reconnect any disconnected components. 3. With the DRBII®, erase all Transmission DTC's, also erase the PCM DTC P-0700 which turns on the MIL indicator. 4. With the DRBIII®, display transmission temperature. Start and run the engine until the transmission temperature is HOT (above 110 deg. F). 5. Check the transmission fluid and adjust if necessary. Add oil slowly (1 pint at a time) to avoid overfilling, especially when cold. Once oil is visible on the dipstick, do not add oil until transmission oil temp is 180 degrees. **6. Note: If the transmission control module or torque converter has been replaced or if the transmission has been repaired or replaced it is necessary to perform the DRBIII® quick learn procedure.** 7. Road test the vehicle. With the DRBIII®, monitor the engine RPM. Make 15 to 20 1-2, 2-3, 3-4 upshifts. Perform these shifts from a standing start to 45 MPH with a constant throttle opening of 20 to 25 degrees. 8. Below 25 MPH, make 5 to 8 wide open throttle kickdowns to 1st gear. Allow at least 5 seconds each in 2nd and 3rd gear between each kickdown. 9. For a specific DTC, drive the vehicle to the Symptom's When Monitored/When Set conditions to verify the DTC repair. 10. Check for Diagnostic Trouble Codes (DTC's) during the road test. If a DTC sets during the road test , return to the Symptom list and follow the path. Were any Trouble Codes set during the road test? Yes → Refer to the Symptom List for appropriate diagnostic tests. Perform 41TE TRANSMISSION VERIFICATION TEST - VER 1. No → Repair is complete.	All

ABS VERIFICATION TEST	APPLICABILITY
1. Turn ignition off. 2. Connect all previously disconnected components and connectors. 3. Turn the ignition on. 4. With the DRBIII®, erase DTC's. 5. With the DRBIII®, read DTC's. 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 complaint can no longer be duplicated, the repair is complete.	All

Verification Tests — Continued

AIRBAG VERIFICATION TEST VER 1	APPLICABILITY
1. Remove any special tools or jumper wires and reconnect all previously disconnected components (except the Battery). 2. Turn the Ignition key On and reconnect the Battery. 3. Connect the DRB to the Data Link Connector (use the most current software available). 4. With the DRBIII®, record and errase all DTCs from all modules. 5. Turn the Ignition Off,and wait 15 seconds before turning the Ignition On. 6. Wait one minute, and read active codes in all related modules and if there are none present read the stored codes in all related modules. 7. If the DRB 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 codes present? YES Select the appropriate symptom from the Symptom List and continue diagnostics. NO Repair is complete. **8. Note: When reconnecting airbag system components the Ignition must be turned off and the Battery must be disconnected.**	All

Verification Tests — Continued

BODY VERIFICATION TEST - VER 1	APPLICABILITY
1. Disconnect all jumper wires and reconnect all previously disconnected components and connectors. 2. If the Sentry Key Immobilizer Module (SKIM) or the Powertrain Control Module (PCM) were replaced, proceed to number 5. If the SKIM or PCM were not replaced, continue to the next number. 3. If the Remote Keyless Entry module was replaced, using the DRBIII® select ″Theft Alarm″ ″VTSS″ ″Miscellaneous″ and ″Configure Module″. If the vehicle is equipped with VTSS, use the DRB and enable VTSS. Program other options as necessary. 4. Using the DRBIII® program all RKE transmitters used with this vehicle. Proceed to number 12. 5. Obtain the Vehicle's unique PIN number assigned to it's original SKIM module from either the vehicle's invoice or from Chrysler's Customer Center (1-800-992-1997). 6. With the DRBIII, select THEFT ALARM, SKIM, MISCELLANEOUS and select ″Skim Module Replaced″ function. Enter the 4 digit PIN number to put SKIM in ″Access Mode″. 7. The DRBIII will prompt you through the following steps. (1) Program the country code into the SKIM's memory. (2) Program the vehicle's VIN number into the SKIM's memory. (3) Transfer the vehicle's Secret Key data from the PCM. 8. Once secured access mode is active, the SKIM will remain in that mode for 60 seconds. 9. Using the DRBIII, program all customer keys into the SKIM's memory. This requires that the SKIM be in secured access mode, using the 4 digit code. 10. Note: If the PCM is replaced, the unique Secret Key data must be transfered from the SKIM to the PCM. This procedure requires the SKIM to be placed in secured access mode using the 4-digit code. 11. Note: If 3 attempts are made to enter secured access mode using an incorrect PIN, secured access mode will be locked out for 1 hour which causes the DRBIII to display ″Bus +\- Signals Open″. To exit this mode, turn ignition to the ″Run″ pos. for 1 hour. 12. Ensure all accessories are turned off and the battery is fully charged. 13. 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. 14. Turn the ignition off and wait 5 seconds. Turn the ignition on and using the DRBIII®, read DTC's from ALL modules. 15. If ANY codes are present, select the appropriate symptom from the Symptom List and continue diagnostics. If NO codes are present and the customers complaint cannot be duplicated, the repair is complete.	All

Verification Tests — Continued

POWERTRAIN VERIFICATION TEST VER - 1	APPLICABILITY
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 it is contaminated, change the oil and filter. 3. Perform the steps 4 through 6 if the PCM has been replaced. Then proceed with the verification. If the PCM has not been replaced skip those steps and continue verification. 4. If PCM has been changed and correct VIN and mileage have not been programmed a DTC will be set in ABS and Air Bag modules. In addition, if vehicle is equipped with a 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 DRB 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 engine is unable to start, look for any Technical Service Bulletins that may relate to this condition. Return to Symptom List if necessary. 9. If the engine starts and stays running, the repair is now complete.	All

POWERTRAIN VERIFICATION TEST VER - 2	APPLICABILITY
1. Inspect the vehicle to ensure that all engine components are properly installed and connected. Reassemble and reconnect components as necessary. 2. If this verification procedure is being performed after a 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 TROUBLE CODE repair, perform steps 6 through 11. 6. Connect the DRB to the data link connector. Using the DRB erase any diagnostic trouble codes and reset all values. 7. If the PCM has been replaced, perform steps 8 through 10, then proceed with the verification. If the PCM has not been replaced, skip those steps and continue verification. 8. If PCM has been replaced and correct VIN and mileage have not been programmed, a DTC will be set in ABS and Air bag modules. In addition, if vehicle is equipped with a 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 SKIS theft alarm: Connect DRB to data link conn. Go to Theft Alarm, SKIM, and Misc. 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. Drive the vehicle for at least 5 minutes. 12. Drive the vehicle at least 64 kmh (40 mph). Ensure the trans shifts through all gears. At some point stop the vehicle, turn off the engine for at least 10 seconds. When finished read DTCs with the DRB. If a DTC has set, return to Symptoms and follow path. 13. If the original DTC did not return and there are no new DTCs, the repair was successful and testing is complete.	All

Verification Tests — Continued

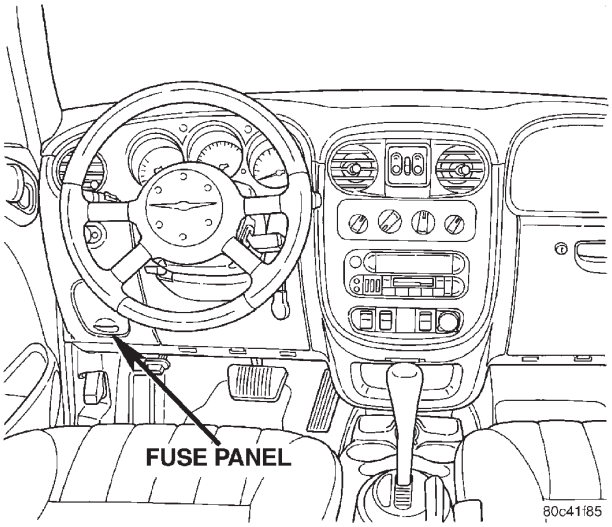
SKIS VERIFICATION	APPLICABILITY
1. Reconnect all previously disconnected components and connectors. 2. Obtain the vehicle's unique Personal Identification Number (PIN) assigned to it's original SKIM. This number can be obtained from the vehicle's invoice or Chrysler's Customer Center (1-800-992-1997). 3. NOTE: When entering PIN, care should be taken because 3 attempts will only be allowed. The SKIM module will then ″lock out″ the DRB III for 1 hour, which will cause the DRB III to display ″Bus +\- Signals Open' to SKIM. 4. To exit ″lock out″ mode, the ignition key needs to remain in the ″On″ position continually for one hour. Turn off all accessories and connect a battery charger, if necessary. 5. With the DRB III, select ″Theft Alarm,″ ″Skim,″ ″Miscellaneous,″ then select desired procedure and follow the steps displayed. 6. If the SKIM was replaced, ensure all of the vehicles keys are programmed into the new SKIM. **7. Note: Prior to returning vehicle to the customer, perform a module scan to be sure all DTC's are erased. Erase ANY DTC's that are found.**	All

VTSS VERIFICATION TEST - VER 1	APPLICABILITY
1. Ensure all doors, hood and liftgate are closed. 2. Open the driver's door. 3. Remove the ignition key (but keep in hand). 4. Lock the doors with RKE transmitter. 5. Close the driver's door. 6. - If the VTSS indicator lamp flashes, the system is operational. 7. - If the indicator fails to flash, there is a problem with the system. Refer to symptom list for problems related to VEHICLE THEFT SECURITY SYSTEM.	All

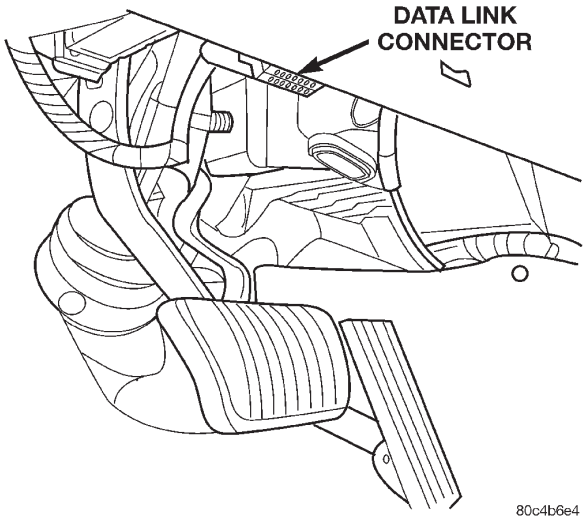
8.0 COMPONENT LOCATIONS

8.1 AIRBAG SYSTEM

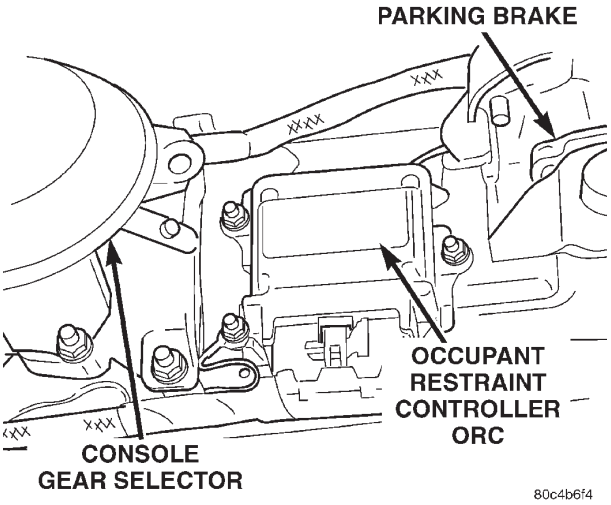
8.1.1 FUSE BLOCK



8.1.2 DATA LINK CONNECTOR (DLC)

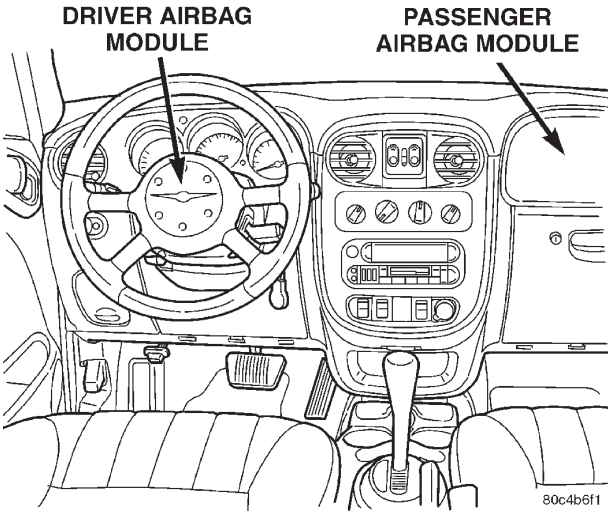


8.1.3 OCCUPANT RESTRAINT CONTROLLER (ORC)

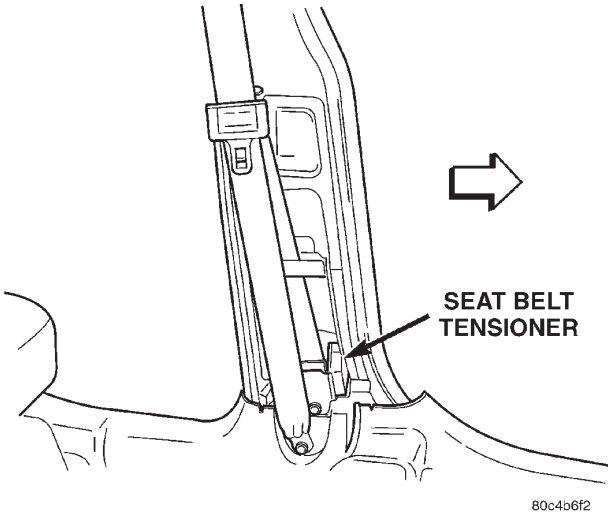


8.1 AIRBAG SYSTEM (Continued)

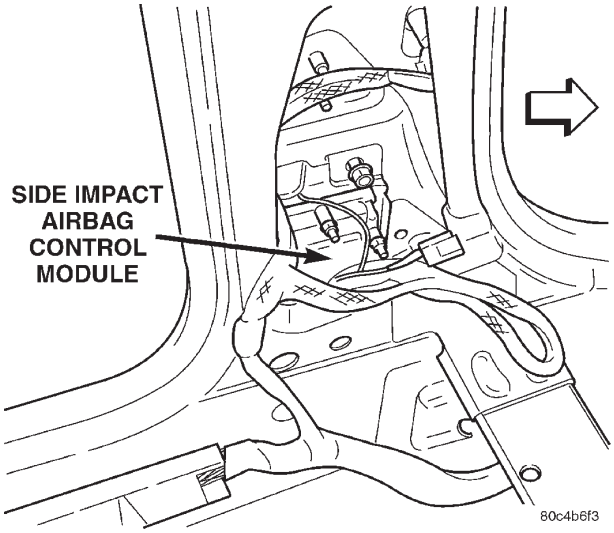
8.1.4 DRIVER AND PASSENGER AIRBAG MODULES



8.1.5 SEAT BELT PRETENSIONER

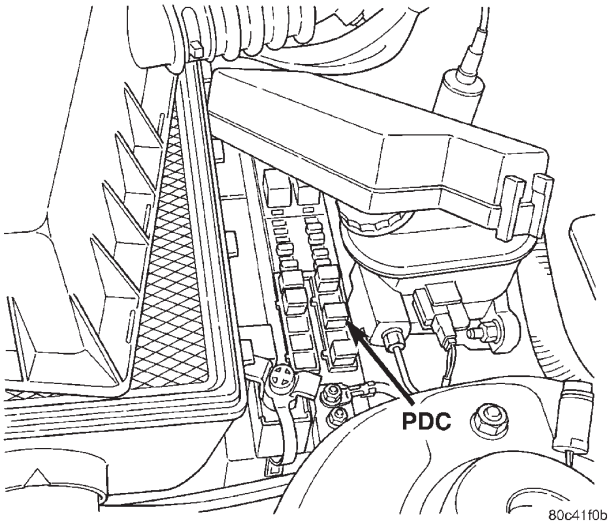


8.1.6 SIDE IMPACT AIRBAG CONTROL MODULES

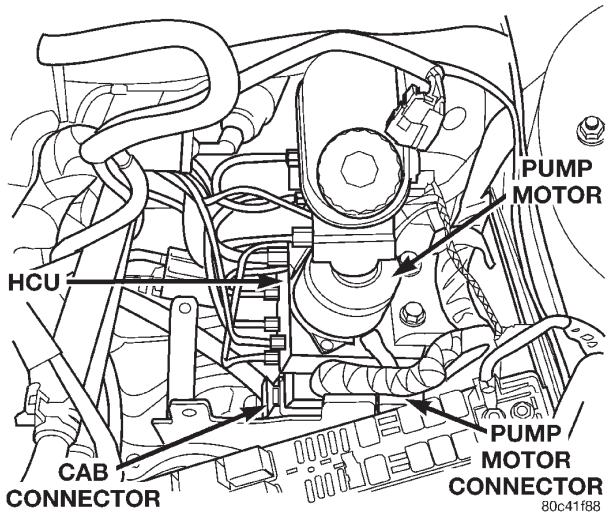


8.2 COMMUNICATION

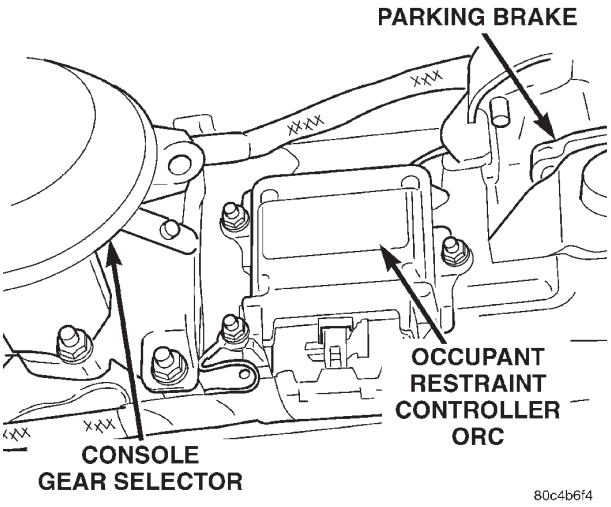
8.2.1 POWER DISTRIBUTION CENTER (PDC)



8.2.2 CONTROLLER ANTILOCK BRAKE (CAB)

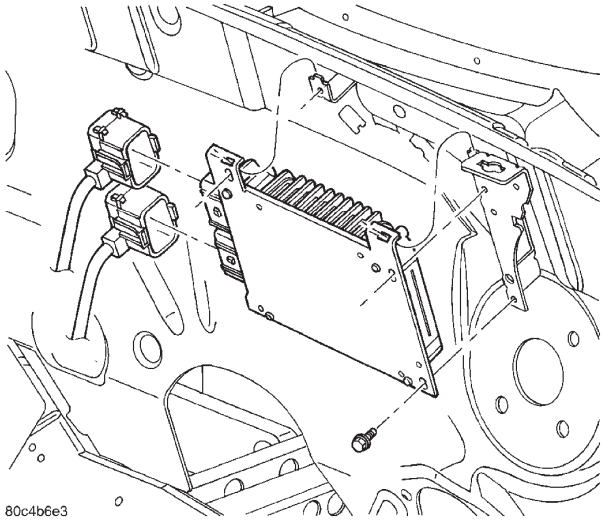


8.2.3 OCCUPANT RESTRAINT CONTROLLER (ORC)

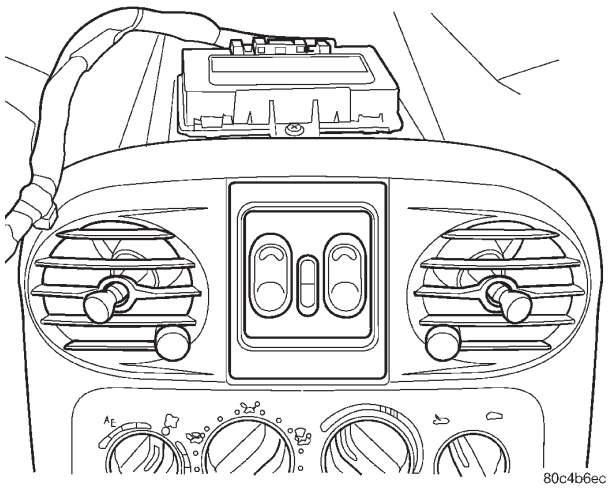


8.2 COMMUNICATION (Continued)

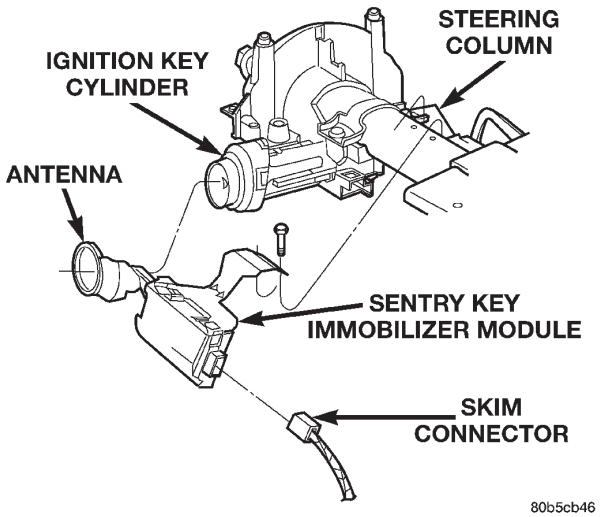
8.2.4 POWERTRAIN CONTROL MODULE (PCM)



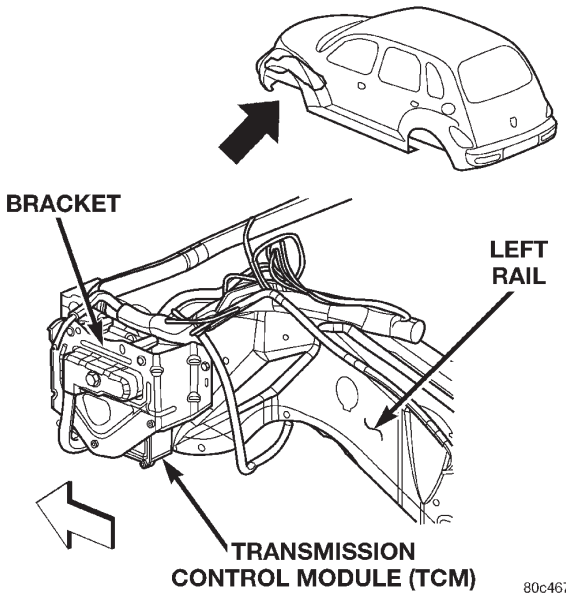
8.2.5 REMOTE KEYLESS ENTRY MODULE



8.2.6 SENTRY KEY IMMOBILIZER

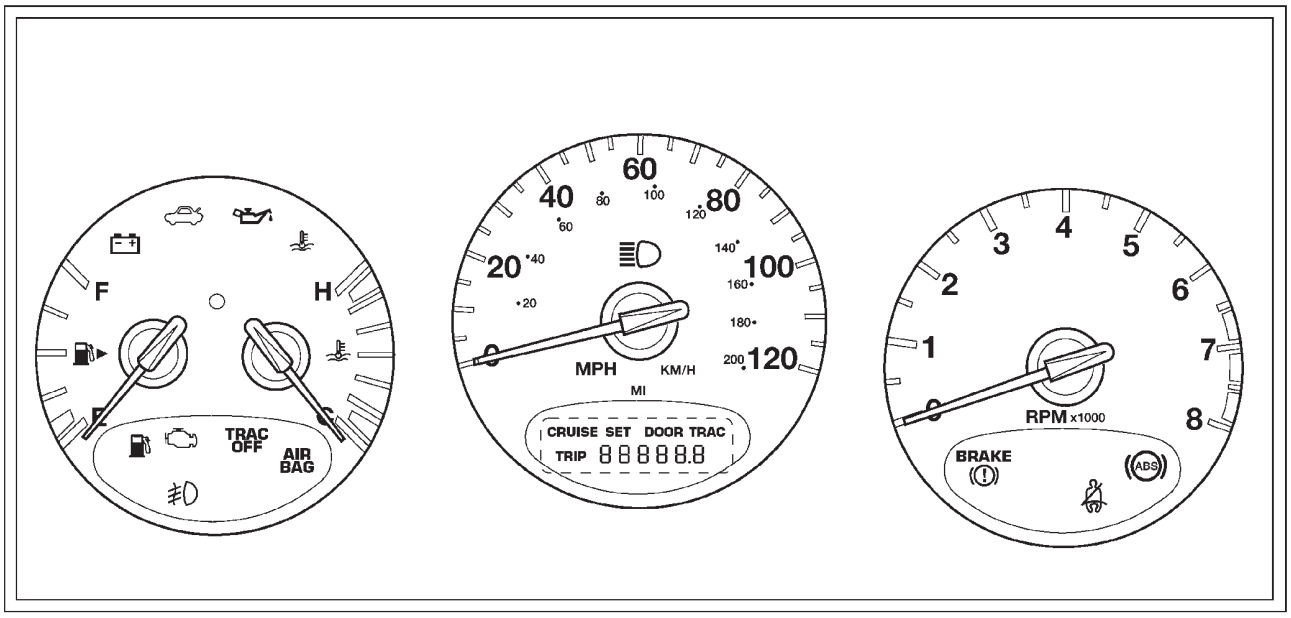


8.2.7 TRANSMISSION CONTROL MODULE



8.3 INSTRUMENT CLUSTER

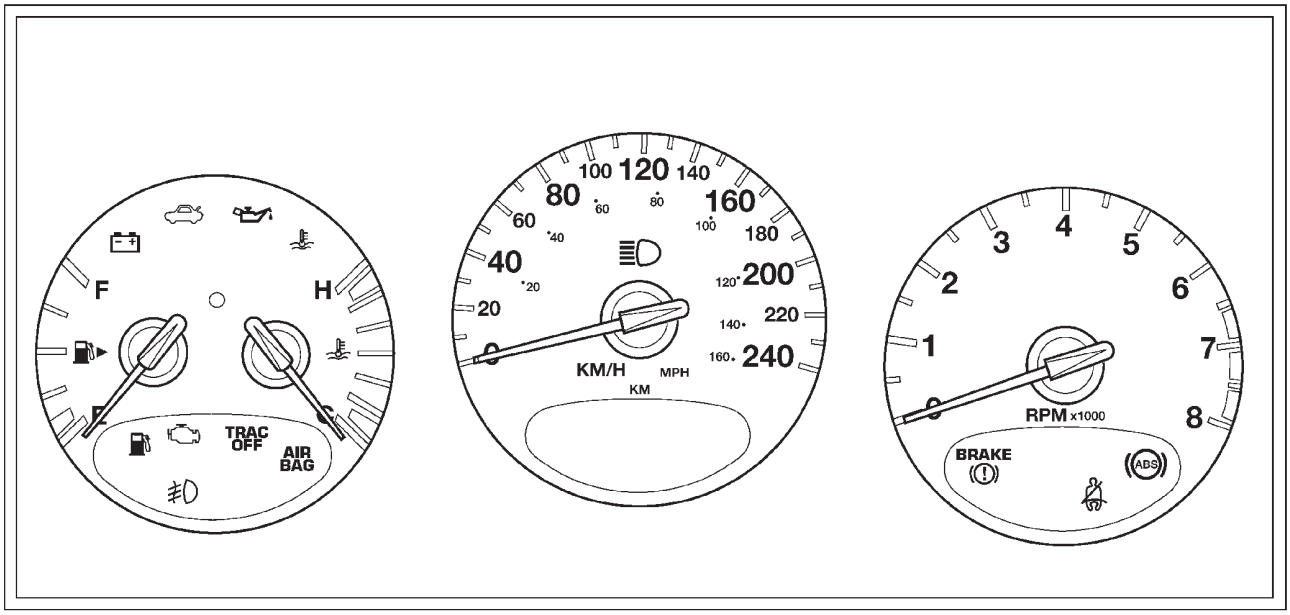
8.3.1 120 MPH U.S.



80c4b6e6

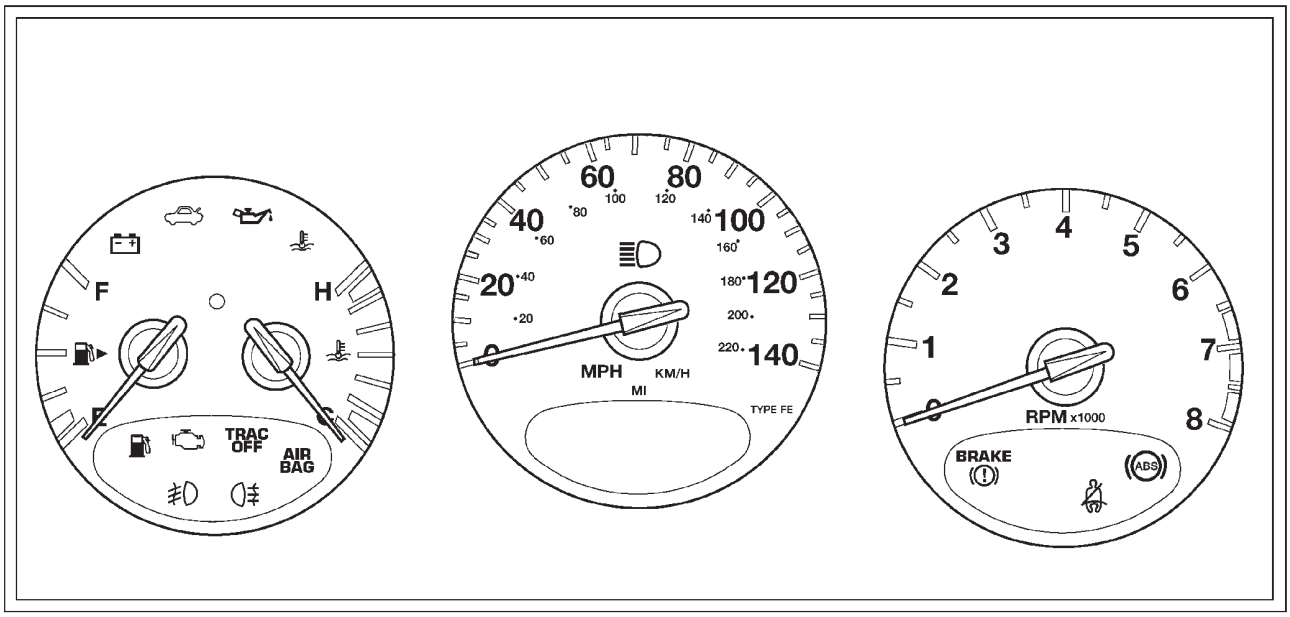
8.3 INSTRUMENT CLUSTER (Continued)

8.3.2 240 KM/H CANADA



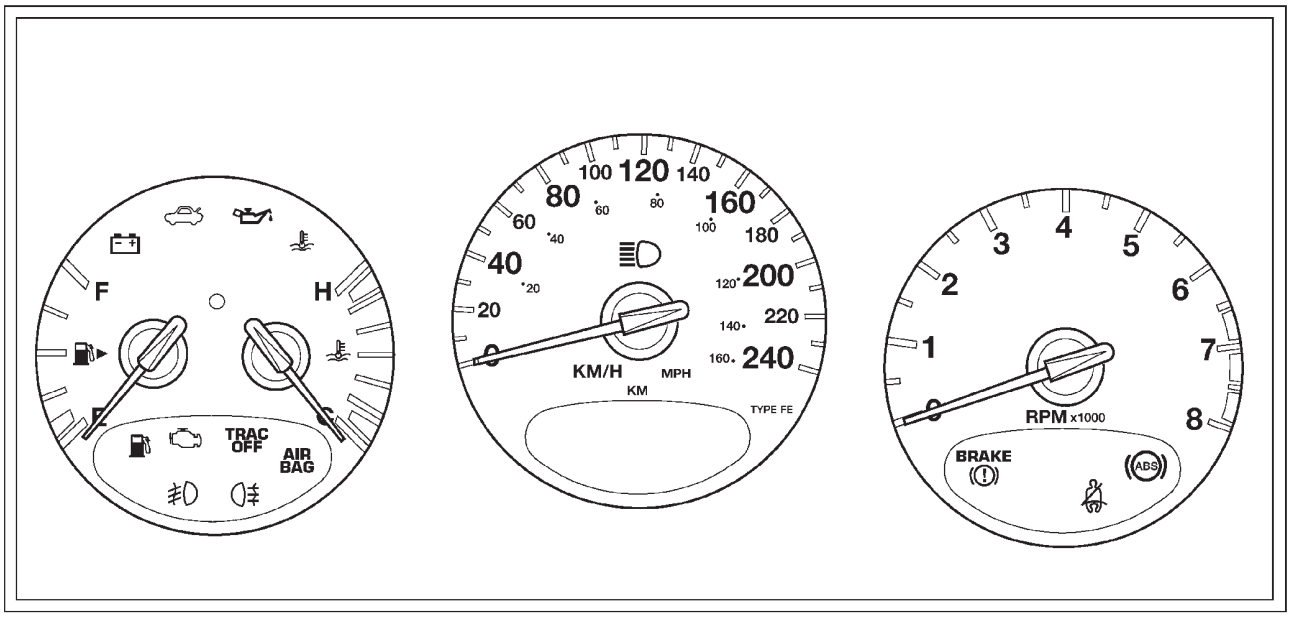
80c4b6e8

8.3.3 140 MPH UNITED KINGDOM



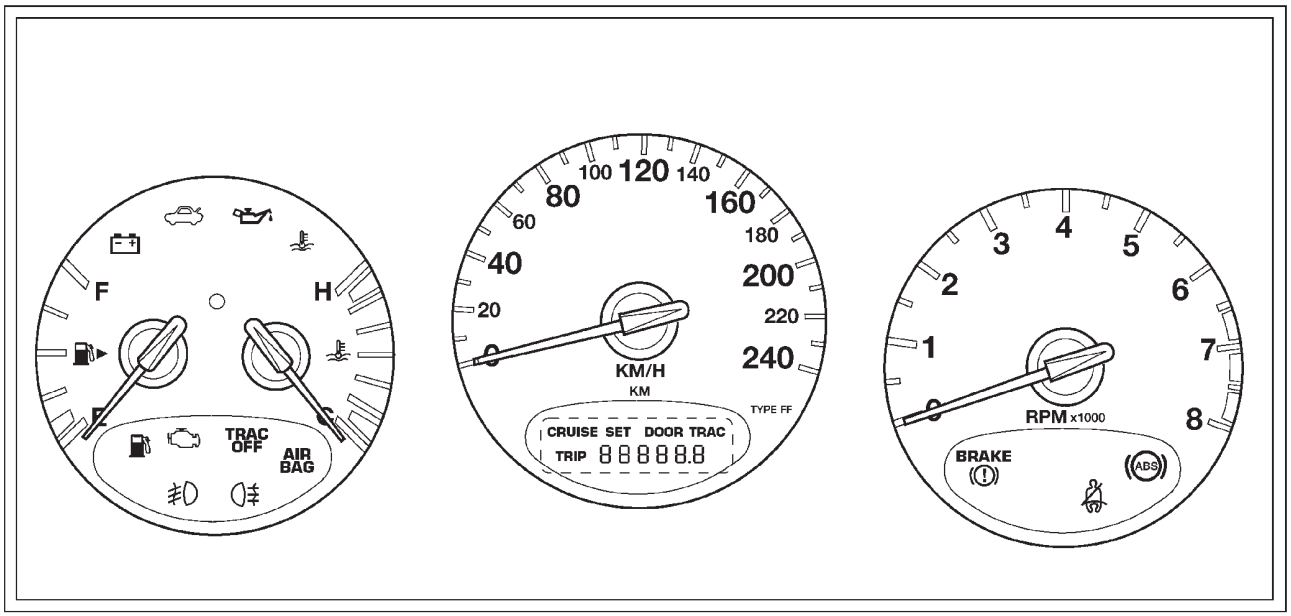
80c4b6e9

8.3.4 240 KM/H BUX



80c4b6e7

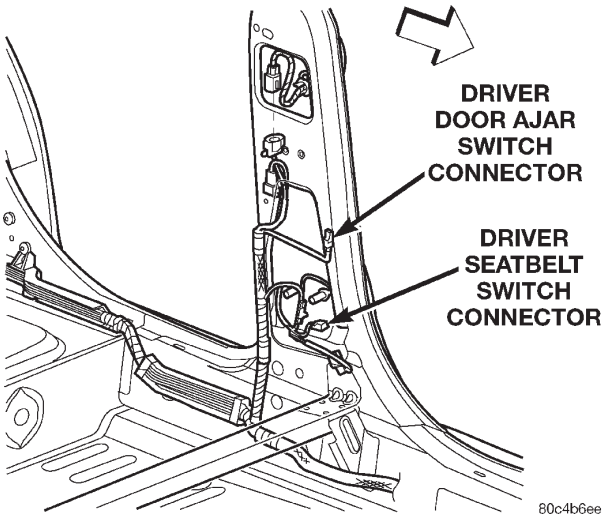
8.3.5 240 KM/H AUS/JAPAN



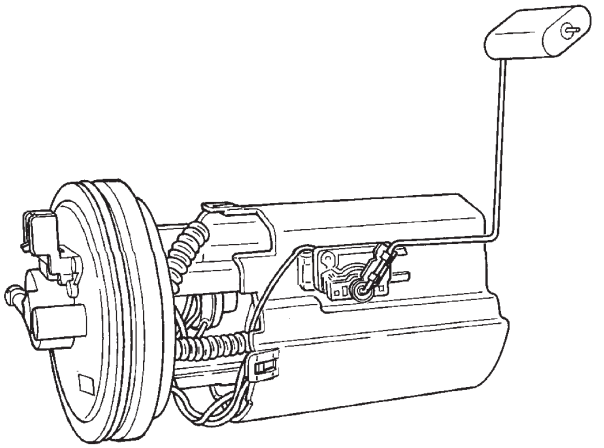
80c4b6ea

8.3 INSTRUMENT CLUSTER (Continued)

8.3.6 SEATBELT SWITCH

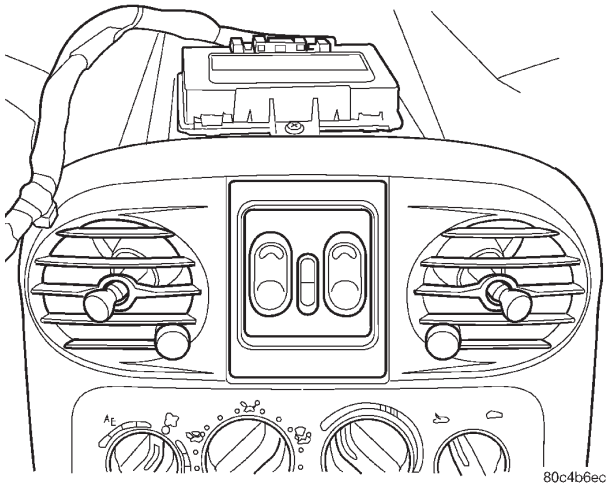


8.3.7 FUEL LEVEL SENSOR

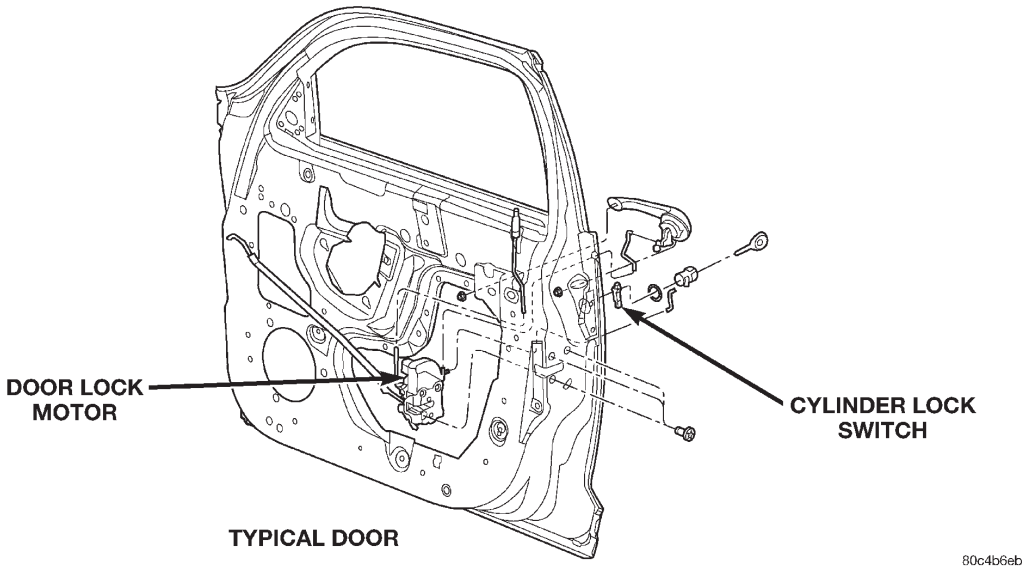


8.4 POWER DOOR LOCKS/RKE

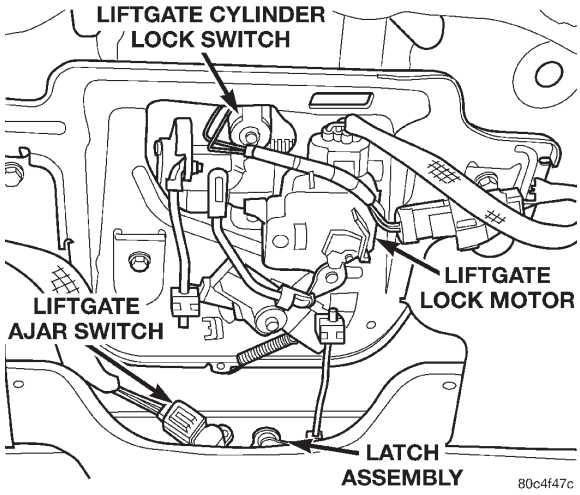
8.4.1 REMOTE KEYLESS ENTRY MODULE



8.4.2 DOOR LOCK MOTOR

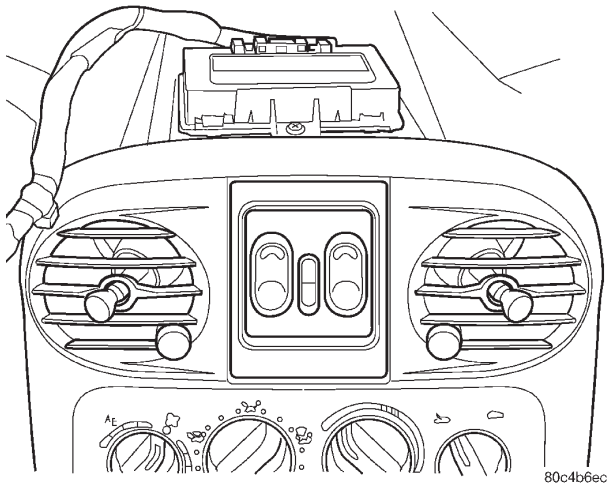


8.4.3 LIFTGATE LOCK MOTOR



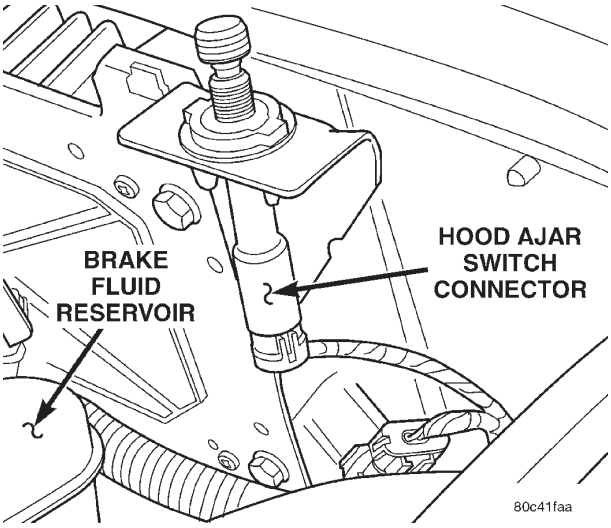
8.5 VEHICLE THEFT SECURITY SYSTEM

8.5.1 REMOTE KEYLESS ENTRY MODULE

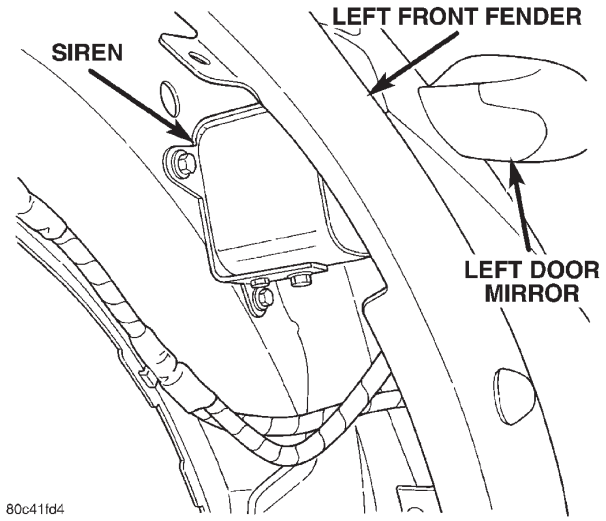


8.5 VEHICLE THEFT SECURITY SYSTEM (Continued)

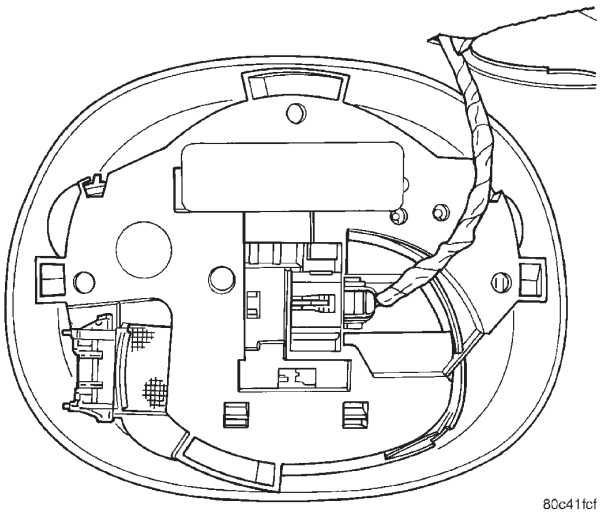
8.5.2 HOOD AJAR SWITCH



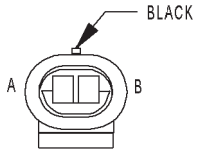
8.5.3 SIREN



8.5.4 INTRUSION SENSOR



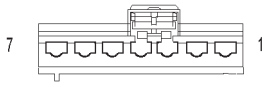
9.0 CONNECTOR PINOUTS



BRAKE WARNING INDICATOR SWITCH

BRAKE WARNING INDICATOR SWITCH - BLACK 2 WAY

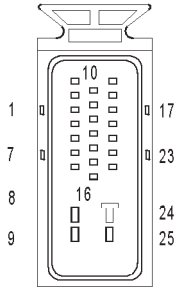
CAV	CIRCUIT	FUNCTION
A	G9 20GY/BK	RED BRAKE WARNING INDICATOR SWITCH SENSE
B	Z1 20BK	GROUND



CLOCKSPRING

CLOCKSPRING - 7 WAY

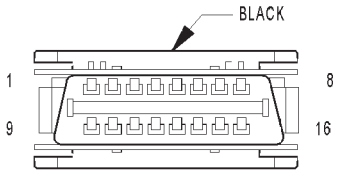
CAV	CIRCUIT	FUNCTION
1	R43 18BK/LB	DRIVER SQUIB NO. 1 LINE 1
2	R45 18DG/LB	DRIVER SQUIB NO. 1 LINE 2
3	-	-
4	-	-
5	X3 20BK/RD	HORN RELAY CONTROL
6	V37 20RD/LG	SPEED CONTROL SWITCH SIGNAL
7	Z2 20BK/LG	GROUND



CONTROLLER ANTI-LOCK BRAKE

CONTROLLER ANTI-LOCK BRAKE - 25 WAY

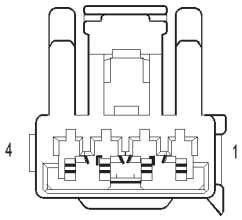
CAV	CIRCUIT	FUNCTION
1	B8 18RD/DB	LEFT FRONT WHEEL SPEED SENSOR SIGNAL
2	B9 18RD	LEFT FRONT WHEEL SPEED SENSOR 12 VOLT SUPPLY
3	-	-
4	F12 18DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
5	B3 18LG/DB	LEFT REAR WHEEL SPEED SENSOR SIGNAL
6	B4 18LG	LEFT REAR WHEEL SPEED SENSOR 12 VOLT SUPPLY
7	-	-
8	Z1 12BK	GROUND
9	A20 12RD/DB	FUSED B(+)
10	D25 18VT/YL	PCI BUS
11	-	-
12	-	-
13	-	-
14	-	-
15	B27 18RD/YL	TRACTION CONTROL SWITCH SENSE
16	-	-
17	-	-
18	L50 18WT/TN	BRAKE LAMP SWITCH OUTPUT
19	B6 18WT/DB	RIGHT FRONT WHEEL SPEED SENSOR SIGNAL
20	B7 18WT	RIGHT FRONT WHEEL SPEED SENSOR 12 VOLT SUPPLY
21	-	-
22	B2 18YL	RIGHT REAR WHEEL SPEED SENSOR 12 VOLT SUPPLY
23	B1 18YL/DB	RIGHT REAR WHEEL SPEED SENSOR SIGNAL
24	Z1 12BK	GROUND
25	A10 12RD/DG	FUSED B(+)



DATA LINK CONNECTOR

DATA LINK CONNECTOR - BLACK 16 WAY

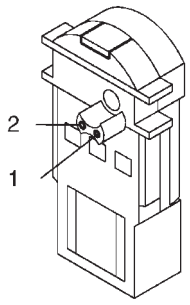
CAV	CIRCUIT	FUNCTION
1	-	-
2	D25 20VT/YL	PCI BUS
3	-	-
4	Z12 20BK/TN	GROUND
5	Z11 20BK/WT	GROUND
6	D20 20LG	SCI RECEIVE
7	D21 20PK	SCI TRANSMIT
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	D6 20PK/LB	SCI RECEIVE (EATX)
15	-	-
16	A14 18RD/WT	FUSED B(+)



DOME LAMP/ INTRUSION SENSOR (BUILT-UP-EXPORT)

DOME LAMP/INTRUSION SENSOR (BUILT-UP-EXPORT) - 4 WAY

CAV	CIRCUIT	FUNCTION
1	M2 20YL	COURTESY LAMPS DRIVER
2	M1 20PK	FUSED B(+)
3	Z2 20BK/LG	GROUND
4	G120 20WT/LB	INTRUSION SENSOR SIGNAL



DRIVER AIRBAG MODULE

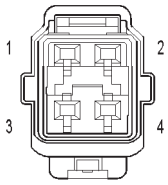
DRIVER AIRBAG MODULE

CAV	CIRCUIT	FUNCTION
1	BK/LB	DRIVER SQUIB NO. 1 LINE 1
2	DG/LB	DRIVER SQUIB NO. 1 LINE 2

DRIVER CYLINDER LOCK SWITCH

DRIVER CYLINDER LOCK SWITCH - 2 WAY

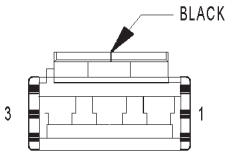
CAV	CIRCUIT	FUNCTION
1	P97 18LG	DRIVER DOOR SWITCH MUX
2	Z1 18BK	GROUND



DRIVER DOOR LOCK MOTOR

DRIVER DOOR LOCK MOTOR - 4 WAY

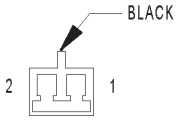
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	P34 18PK/BK	DRIVER DOOR UNLOCK DRIVER
4	P33 18OR/BK	DRIVER DOOR LOCK DRIVER



DRIVER DOOR LOCK SWITCH

DRIVER DOOR LOCK SWITCH - 3 WAY

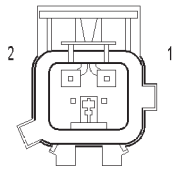
CAV	CIRCUIT	FUNCTION
1	L7 18BK/YL	HEADLAMP SWITCH OUTPUT
2	P97 20WT/DG	DRIVER DOOR SWITCH MUX
2	P97 18LG	DRIVER DOOR SWITCH MUX
3	Z1 20BK	GROUND



DRIVER SEAT BELT SWITCH

DRIVER SEAT BELT SWITCH - BLACK 2 WAY

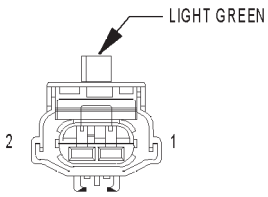
CAV	CIRCUIT	FUNCTION
1	G10 20LG/RD	SEAT BELT SWITCH SENSE
2	Z1 20BK	GROUND



ENGINE COOLANT TEMPERATURE SENSOR

ENGINE COOLANT TEMPERATURE SENSOR - 2 WAY

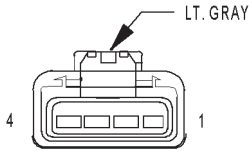
CAV	CIRCUIT	FUNCTION
1	K4 20BK/LB	SENSOR GROUND
2	K2 20TN/BK	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL



ENGINE OIL PRESSURE SWITCH

ENGINE OIL PRESSURE SWITCH - LIGHT GREEN 2 WAY

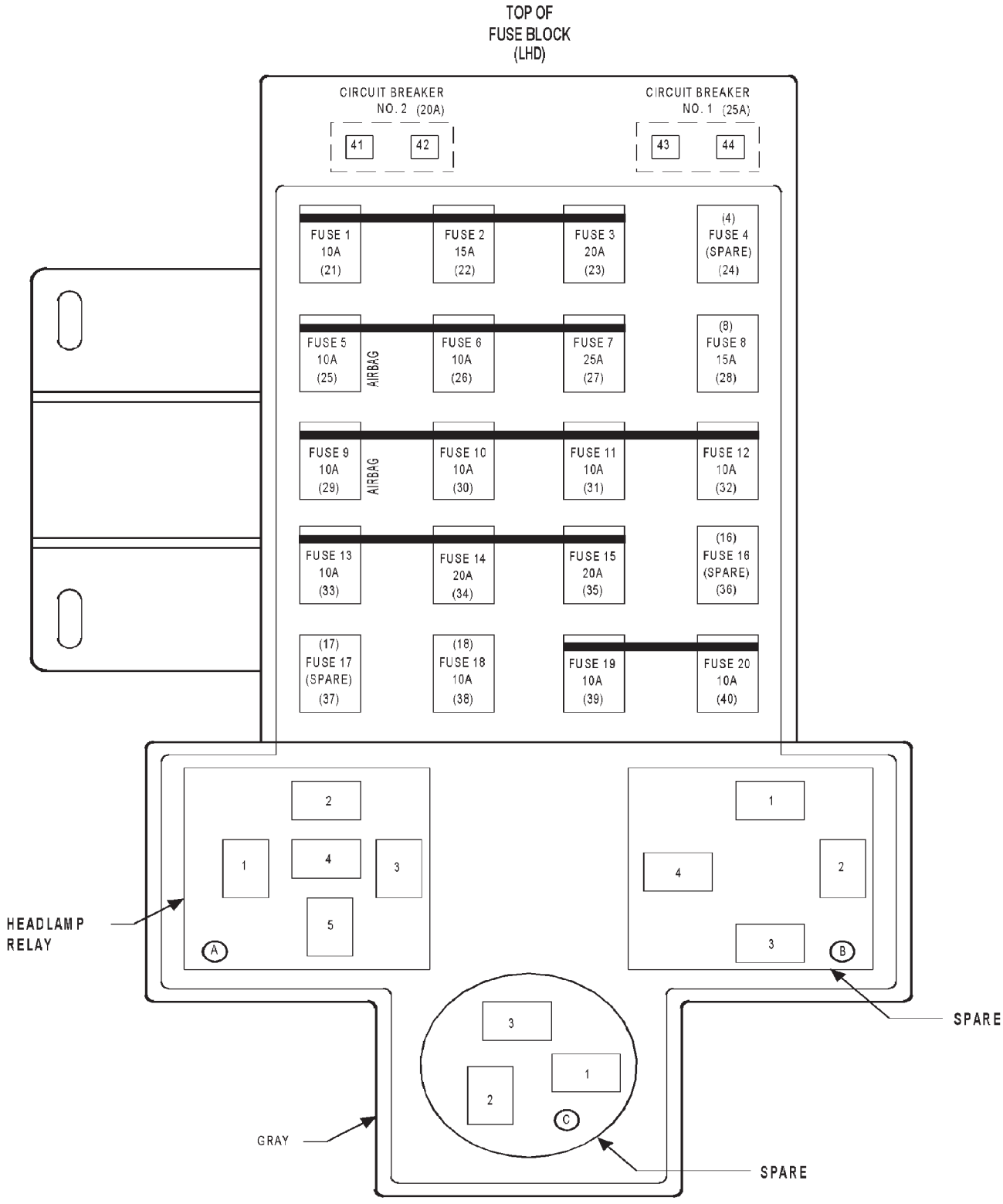
CAV	CIRCUIT	FUNCTION
1	G6 20GY	ENGINE OIL PRESSURE SWITCH SENSE
2	-	-



FUEL PUMP MODULE

FUEL PUMP MODULE - LT. GRAY 4 WAY

CAV	CIRCUIT	FUNCTION
1	Z1 16BK	GROUND
2	Z2 20BK/LG	GROUND
3	G4 20DB	FUEL LEVEL SENSOR SIGNAL
4	A141 16DG/WT	FUEL PUMP RELAY OUTPUT


TOP OF
FUSE BLOCK
(LHD)
CIRCUIT BREAKER
NO. 2 (20A)
41
42
CIRCUIT BREAKER
NO. 1 (25A)
43
44
FUSE 1
10A
(21)
FUSE 2
15A
(22)
FUSE 3
20A
(23)
(4)
FUSE 4
(SPARE)
(24)
FUSE 5
10A
(25)
AIRBAG
FUSE 6
10A
(26)
FUSE 7
25A
(27)
(8)
FUSE 8
15A
(28)
FUSE 9
10A
(29)
AIRBAG
FUSE 10
10A
(30)
FUSE 11
10A
(31)
FUSE 12
10A
(32)
FUSE 13
10A
(33)
FUSE 14
20A
(34)
FUSE 15
20A
(35)
(16)
FUSE 16
(SPARE)
(36)
(17)
FUSE 17
(SPARE)
(37)
(18)
FUSE 18
10A
(38)
FUSE 19
10A
(39)
FUSE 20
10A
(40)
HEADLAMP
RELAY
A
B
C
GRAY
SPARE
SPARE

FUSES

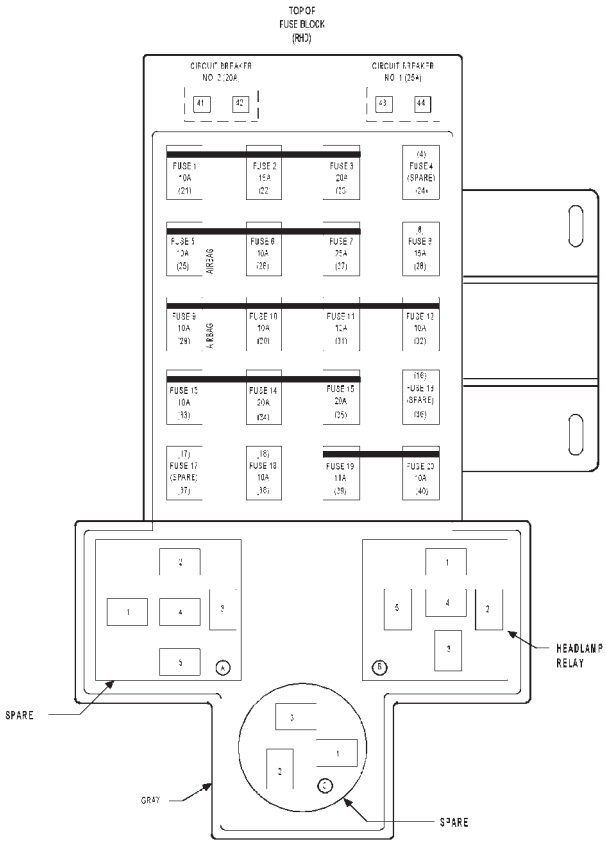
CAV	CIRCUIT	FUNCTION
1	F9 20RD/BK	FUSED B(+)
2	F33 18PK/RD	FUSED B(+)
3	F35 18RD	FUSED B(+)
4	-	-
5	F25 18TN/LG	FUSED IGNITION SWITCH OUTPUT (RUN)
6	F20 18WT	FUSED IGNITION SWITCH OUTPUT (RUN)
7	C1 14DG	FUSED IGNITION SWITCH OUTPUT (RUN)
8	F39 18PK/LG	HEADLAMP RELAY OUTPUT
9	F15 18DG/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
10	G5 20DB/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
11	F12 20DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
12	F18 20LG/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
12	F18 20LG/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
13	X12 18RD/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
14	F10 18YL/RD	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
15	F13 16DB	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
16	-	-
17	-	-
18	C16 20LB/YL	FUSED REAR WINDOW DEFOGGER SWITCH OUTPUT
19	L44 16VT/RD	FUSED RIGHT LOW BEAM OUTPUT
20	L43 18VT	FUSED LEFT LOW BEAM OUTPUT
20	L43 16VT	FUSED LEFT LOW BEAM OUTPUT

CIRCUIT BREAKERS

CAV	CIRCUIT	FUNCTION
C.B. NO. 1	F3 16LB/OR	FUSED B(+)
C.B. NO. 2	F21 14TN	FUSED IGNITION SWITCH OUTPUT (RUN)

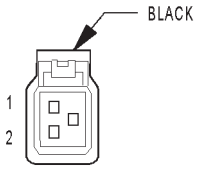
HEADLAMP RELAY (LHD)

CAV	CIRCUIT	FUNCTION
A1	Z1 20BK	GROUND
A2	L4 16VT/WT	HEADLAMP RELAY OUTPUT
A3	L3 16RD/OR	HEADLAMP RELAY CONTROL
A4	F34 18TN/BK	HEADLAMP RELAY OUTPUT
A5	F3 16LB/OR	FUSED B(+)


TOP OF
FUSE BLOCK
(RH)
CIRCUIT BREAKER
NO. 2 (20A)
CIRCUIT BREAKER
NO. 1 (25A)
41
42
43
44
FUSE 1
10A
(21)
FUSE 2
15A
(22)
FUSE 3
20A
(23)
(24)
FUSE 4
(SPARE)
(24)
FUSE 5
10A
(25)
AIRBAG
FUSE 6
10A
(26)
FUSE 7
25A
(27)
(28)
FUSE 8
15A
(28)
FUSE 9
10A
(29)
AIRBAG
FUSE 10
10A
(30)
FUSE 11
15A
(31)
FUSE 12
10A
(32)
FUSE 13
10A
(33)
FUSE 14
30A
(34)
FUSE 15
20A
(35)
(36)
FUSE 16
(SPARE)
(36)
(37)
FUSE 17
(SPARE)
(37)
(38)
FUSE 18
10A
(38)
FUSE 19
15A
(39)
FUSE 20
10A
(40)
A
B
C
HEADLAMP
RELAY
SPARE
GRAY
SPARE

HEADLAMP RELAY (RHD)

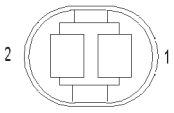
CAV	CIRCUIT	FUNCTION
B1	Z1 20BK	GROUND
B2	L4 16VT/WT	HEADLAMP RELAY OUTPUT
B3	L3 16RD/OR	HEADLAMP RELAY CONTROL
B4	-	-
B5	F3 16LB/OR	FUSED B(+)



HIGH NOTE HORN

HIGH NOTE HORN - BLACK 2 WAY

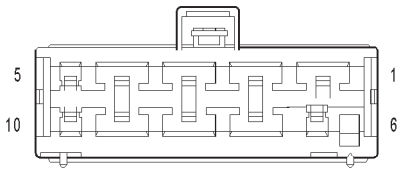
CAV	CIRCUIT	FUNCTION
1	X2 20DG/RD	HORN RELAY OUTPUT
2	Z1 20BK	GROUND



HOOD AJAR SWITCH

HOOD AJAR SWITCH - 2 WAY

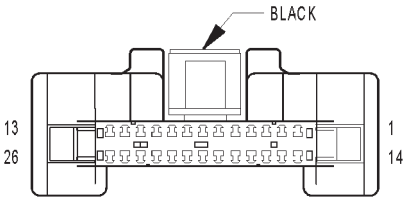
CAV	CIRCUIT	FUNCTION
1	G70 20BR/TN	HOOD AJAR SWITCH SENSE
2	Z1 20BK	GROUND
2	Z1 18BK	GROUND



IGNITION SWITCH

IGNITION SWITCH - 10 WAY

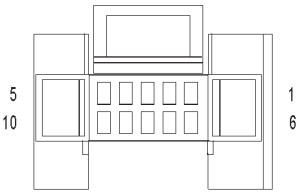
CAV	CIRCUIT	FUNCTION
1	A1 14RD	FUSED B(+)
2	A21 14DB	IGNITION SWITCH OUTPUT (RUN-START)
3	F30 16RD	IGNITION SWITCH OUTPUT (RUN-ACC)
4	F1 16DB/BK	FUSED B(+)
5	G26 20LB	KEY-IN IGNITION SWITCH SENSE
6	A41 14YL	FUSED IGNITION SWITCH OUTPUT (START)
7	A31 14BK/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
8	A22 12BK/OR	FUSED IGNITION SWITCH OUTPUT (RUN)
9	A2 12PK/BK	FUSED B(+)
10	-	-



INSTRUMENT CLUSTER-C1

INSTRUMENT CLUSTER C1 - BLACK 26 WAY

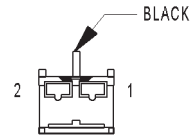
CAV	CIRCUIT	FUNCTION
1	Z1 18BK	GROUND
2	-	-
3	L7 18BK/YL	HEADLAMP SWITCH OUTPUT
4	M1 20PK	FUSED B(+)
5	-	-
6	-	-
7	M2 20YL	COURTESY LAMPS DRIVER
8	-	-
9	G75 20TN	LEFT DOOR AJAR SWITCH SENSE
9	G74 20TN/RD	RIGHT DOOR AJAR SWITCH SENSE
10	L161 18LG/OR	LEFT TURN SIGNAL (OUT)
11	L61 18LG	LEFT TURN SIGNAL (IN)
12	L160 18TN/RD	RIGHT TURN SIGNAL (OUT)
13	L60 18TN	RIGHT TURN SIGNAL (IN)
14	G5 20DB/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
15	-	-
16	-	-
17	L4 16VT/WT	DIMMER SWITCH LOW BEAM OUTPUT
18	L3 16RD/OR	DIMMER SWITCH HIGH BEAM OUTPUT
19	G26 20LB	KEY-IN IGNITION SWITCH SENSE
20	G10 20LG/RD	SEAT BELT SWITCH SENSE
21	G9 20GY/BK	RED BRAKE WARNING INDICATOR DRIVER
22	E2 20OR	PANEL LAMPS DRIVER
23	M9 20DB/OR	PASSENGER DOOR AJAR/RKE SENSE
24	G78 20TN/BK	LIFTGATE AJAR SWITCH SENSE
25	-	-
26	D25 20VT/YL	PCI BUS



INSTRUMENT CLUSTER - C2

INSTRUMENT CLUSTER C2 - 10 WAY

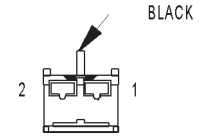
CAV	CIRCUIT	FUNCTION
1	L39 18LB	FOG LAMP SWITCH OUTPUT
2	G69 20BK/OR	VTSS INDICATOR DRIVER
3	-	-
4	-	-
5	-	-
6	L38 18BR/WT	REAR FOG LAMP SWITCH OUTPUT
7	E19 20RD	PANEL LAMPS DIMMER SIGNAL
8	-	-
9	G4 20DB	FUEL LEVEL SENSOR SIGNAL
10	-	-



LEFT FRONT DOOR SPEAKER

LEFT FRONT DOOR SPEAKER - BLACK 2 WAY

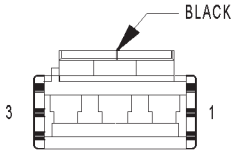
CAV	CIRCUIT	FUNCTION
1	X53 18DG	LEFT FRONT SPEAKER (+)
2	X55 18BR/RD	LEFT FRONT SPEAKER (-)



LEFT
INSTRUMENT
PANEL SPEAKER

LEFT INSTRUMENT PANEL SPEAKER - BLACK 2 WAY

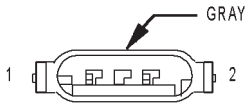
CAV	CIRCUIT	FUNCTION
1	X53 18VT/DG	LEFT INSTRUMENT PANEL SPEAKER (+)
2	X55 18BR/RD	LEFT INSTRUMENT PANEL SPEAKER (-)



LEFT REAR
DOOR LOCK
MOTOR

LEFT REAR DOOR LOCK MOTOR - BLACK 3 WAY

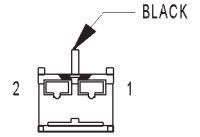
CAV	CIRCUIT	FUNCTION
1	P35 18OR/VT	DOOR LOCK DRIVER
2	-	-
3	P36 18PK/VT	DOOR UNLOCK DRIVER



LEFT REAR
FOG LAMP
(BUILT-UP-EXPORT)

LEFT REAR FOG LAMP (BUILT-UP-EXPORT) - GRAY 2 WAY

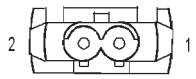
CAV	CIRCUIT	FUNCTION
1	L38 18BR/WT	REAR FOG LAMP SWITCH OUTPUT
2	Z1 18BK	GROUND



LEFT REAR
SPEAKER

LEFT REAR SPEAKER - BLACK 2 WAY

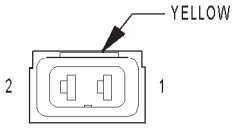
CAV	CIRCUIT	FUNCTION
1	X57 18BR/LB	LEFT REAR SPEAKER (-)
2	X51 18BR/YL	LEFT REAR SPEAKER (+)



LEFT
SEAT AIRBAG

LEFT SEAT AIRBAG - 2 WAY

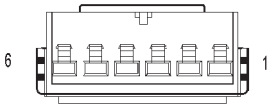
CAV	CIRCUIT	FUNCTION
1	R31 18OR	LEFT SEAT SQUIB LINE 2
2	R33 18WT	LEFT SEAT SQUIB LINE 1



LEFT
SEAT BELT
TENSIONER

LEFT SEAT BELT TENSIONER - YELLOW 2 WAY

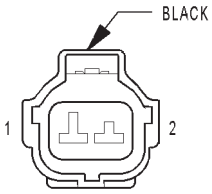
CAV	CIRCUIT	FUNCTION
1	R53 18LG/YL	LEFT SEAT BELT TENSIONER LINE 2
2	R55 18LG/DG	LEFT SEAT BELT TENSIONER LINE 1



LEFT SIDE
IMPACT AIRBAG
CONTROL MODULE
(FULL OPTIONS)

LEFT SIDE IMPACT AIRBAG CONTROL MODULE (FULL OPTIONS) - 6 WAY

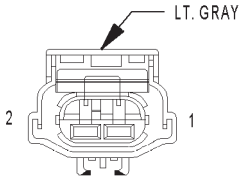
CAV	CIRCUIT	FUNCTION
1	F15 20DG/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
2	D25 20VT/YL	PCI BUS
3	R33 20LG/WT	LEFT SEAT SQUIB LINE 1
4	R31 20LG/OR	LEFT SEAT SQUIB LINE 2
5	-	-
6	Z6 20BK/PK	GROUND



LIFTGATE
AJAR SWITCH

LIFTGATE AJAR SWITCH - BLACK 2 WAY

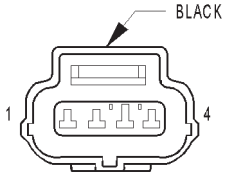
CAV	CIRCUIT	FUNCTION
1	G78 20TN/BK	LIFTGATE AJAR SWITCH SENSE
2	Z1 20BK	GROUND



LIFTGATE
CYLINDER
LOCK SWITCH

LIFTGATE CYLINDER LOCK SWITCH - LT. GRAY 2 WAY

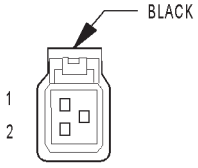
CAV	CIRCUIT	FUNCTION
1	P96 20WT/LG	PASSENGER DOOR SWITCH MUX
1	P97 20WT/LG	DRIVER DOOR SWITCH MUX
2	Z1 20BK	GROUND



LIFTGATE
LOCK
MOTOR

LIFTGATE LOCK MOTOR - BLACK 4 WAY

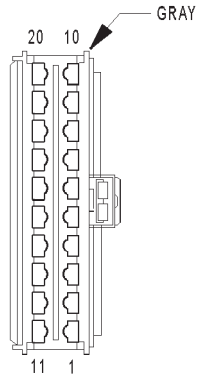
CAV	CIRCUIT	FUNCTION
1	P35 18OR/VT	DOOR LOCK DRIVER
2	-	-
3	P36 18PK/VT	DOOR UNLOCK DRIVER
4	-	-



LOW NOTE
HORN

LOW NOTE HORN - BLACK 2 WAY

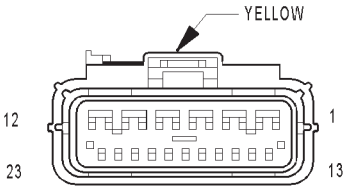
CAV	CIRCUIT	FUNCTION
1	X2 20DG/RD	HORN RELAY OUTPUT
2	Z1 20BK	GROUND



MULTI-FUNCTION SWITCH

MULTI-FUNCTION SWITCH - GRAY 20 WAY

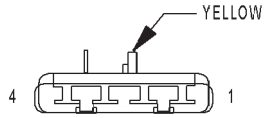
CAV	CIRCUIT	FUNCTION
1	-	-
2	L61 18LG	LEFT TURN SIGNAL
3	F13 18DB	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
4	L63 18DG/RD	LEFT REAR TURN SIGNAL
5	L62 18BR/RD	RIGHT REAR TURN SIGNAL
6	L60 18TN	RIGHT TURN SIGNAL
7	Z1 18BK	GROUND
8	E19 20RD	PANEL LAMPS DIMMER SIGNAL
9	L7 18BK/YL	HEADLAMP SWITCH OUTPUT
10	-	-
11	A15 18PK/DG	FUSED B(+)
12	L38 18BR/WT	HEADLAMP SWITCH OUTPUT
12	L38 18BR/WT	HEADLAMP SWITCH OUTPUT
13	F39 18PK/LG	FUSED HEADLAMP RELAY OUTPUT
13	F39 18PK/LG	FUSED B(+)
14	L39 18LB	FOG LAMP SWITCH OUTPUT
15	-	-
16	L4 16VT/WT	DIMMER SWITCH LOW BEAM OUTPUT
17	L3 16RD/OR	DIMMER SWITCH HIGH BEAM OUTPUT
18	F3 16LB/OR	FUSED B(+)
19	F3 16LB/OR	FUSED B(+)
20	F33 18PK/RD	FUSED B(+)



OCCUPANT RESTRAINT CONTROLLER

OCCUPANT RESTRAINT CONTROLLER - YELLOW 23 WAY

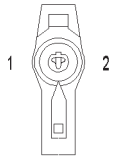
CAV	CIRCUIT	FUNCTION
1	R56 18LB/DG	RIGHT SEAT BELT TENSIONER LINE 1
2	R54 18LB/YL	RIGHT SEAT BELT TENSIONER LINE 2
3	-	-
4	-	-
5	R42 18BK/YL	PASSENGER SQUIB NO. 1 LINE 1
6	R44 18DG/YL	PASSENGER SQUIB NO. 1 LINE 2
7	R55 18LG/DG	LEFT SEAT BELT TENSIONER LINE 1
8	R53 18LG/YL	LEFT SEAT BELT TENSIONER LINE 2
9	-	-
10	-	-
11	R43 18BK/LB	DRIVER SQUIB NO. 1 LINE 1
12	R45 18DG/LB	DRIVER SQUIB NO. 1 LINE 2
13	-	-
14	F15 18DG/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
15	F25 18TN/LG	FUSED IGNITION SWITCH OUTPUT (RUN)
16	Z6 18BK/PK	GROUND
17	-	-
18	-	-
19	-	-
20	-	-
21	D25 20VT/YL	PCI BUS
22	-	-
23	-	-



PASSENGER AIRBAG

PASSENGER AIRBAG - YELLOW 4 WAY

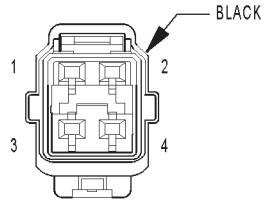
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	R44 18DG/YL	PASSENGER SQUIB NO. 1 LINE 2
4	R42 18BK/YL	PASSENGER SQUIB NO. 1 LINE 1



PASSENGER CYLINDER LOCK SWITCH

PASSENGER CYLINDER LOCK SWITCH - 2 WAY

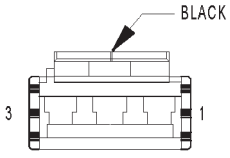
CAV	CIRCUIT	FUNCTION
1	P96 18LG	PASSENGER DOOR SWITCH MUX
2	Z1 18BK	GROUND



PASSENGER DOOR LOCK MOTOR

PASSENGER DOOR LOCK MOTOR - BLACK 4 WAY

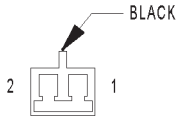
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	P36 18PK/BK	DOOR UNLOCK DRIVER
4	P35 18OR/BK	DOOR LOCK DRIVER



PASSENGER DOOR LOCK SWITCH

PASSENGER DOOR LOCK SWITCH - BLACK 3 WAY

CAV	CIRCUIT	FUNCTION
1	L7 18BK/YL	HEADLAMP SWITCH OUTPUT
2	P96 20WT/DG	PASSENGER DOOR SWITCH MUX
2	P96 18LG	PASSENGER DOOR SWITCH MUX
3	Z1 20BK	GROUND

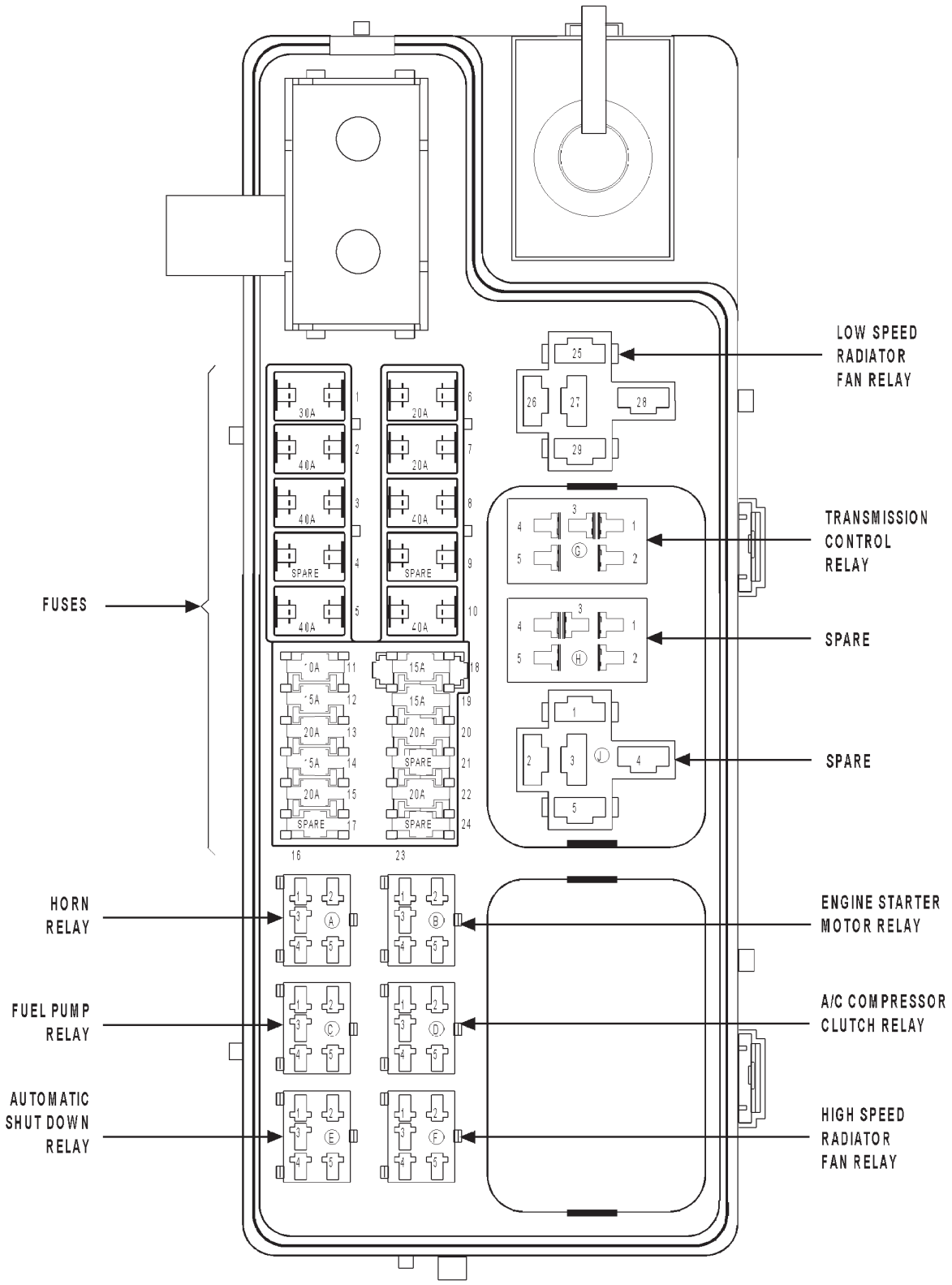


PASSENGER
SEAT BELT
SWITCH
(BUILT-UP-EXPORT)

PASSENGER SEAT BELT SWITCH (BUILT-UP-EXPORT) - BLACK 2 WAY

CAV	CIRCUIT	FUNCTION
1	G10 20LG/RD	SEAT BELT SWITCH SENSE
2	Z1 20BK	GROUND

POWER DISTRIBUTION CENTER



FUSES

CAV	CIRCUIT	FUNCTION
1	A1 14RD	FUSED B(+)
2	A10 12RD/DG	FUSED B(+)
3	A2 12PK/BK	FUSED B(+)
4	-	-
5	A16 12GY	FUSED B(+)
6	A120 16RD/LB	FUSED B(+)
7	A20 12RD/DB	FUSED B(+)
8	A4 12BK/PK	FUSED B(+)
9	-	-
10	A3 12RD/WT	FUSED B(+)
11	A17 20RD/BK	FUSED B(+)
12	F32 18PK/DB	FUSED B(+)
13	A14 18RD/WT	FUSED B(+)
14	F62 20RD	FUSED B(+)
15	A30 16RD/WT	FUSED B(+)
16	-	-
17	-	-
18	M1 20PK	FUSED B(+)
19	A15 18PK/DG	FUSED B(+)
20	F1 16DB/BK	FUSED B(+)
21	-	-
22	F39 18PK/LG	FUSED B(+)
23	-	-
24	-	-

A/C COMPRESSOR CLUTCH RELAY

CAV	CIRCUIT	FUNCTION
D1	C3 20DB/BK	A/C COMPRESSOR CLUTCH RELAY OUTPUT
D2	C28 20DB/OR	A/C COMPRESSOR CLUTCH RELAY CONTROL
D3	-	-
D4	F18 20LG/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
D5	A17 20RD/BK	FUSED B(+)

AUTOMATIC SHUT DOWN RELAY

CAV	CIRCUIT	FUNCTION
E1	A142 18DG/OR	AUTOMATIC SHUT DOWN RELAY OUTPUT
E2	K51 20DB/YL	AUTOMATIC SHUT DOWN RELAY CONTROL
E3	-	-
E4	A14 18RD/WT	FUSED B(+)
E5	A14 18RD/WT	FUSED B(+)

ENGINE STARTER MOTOR RELAY

CAV	CIRCUIT	FUNCTION
B1	T40 14BR	ENGINE STARTER MOTOR RELAY OUTPUT
B2	K90 20TN	ENGINE STARTER MOTOR RELAY CONTROL
B3	-	-
B4	A41 14YL	FUSED IGNITION SWITCH OUTPUT (START)
B5	A1 14RD	FUSED B(+)

FUEL PUMP RELAY

CAV	CIRCUIT	FUNCTION
C1	A141 16DG/WT	FUEL PUMP RELAY OUTPUT
C2	K31 20BR	FUEL PUMP RELAY CONTROL
C3	-	-
C4	F12 20DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
C5	A14 18RD/WT	FUSED B(+)

HIGH SPEED RADIATOR FAN RELAY

CAV	CIRCUIT	FUNCTION
F1	C25 12YL	HIGH SPEED RADIATOR FAN RELAY OUTPUT
F2	C27 20DB/PK	HIGH SPEED RADIATOR FAN RELAY CONTROL
F3	-	-
F4	F18 20LG/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
F5	A16 12GY	FUSED B(+)

HORN RELAY

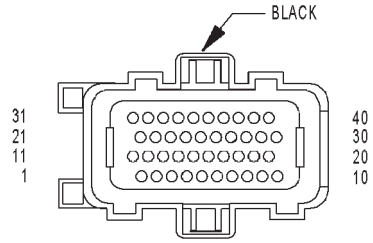
CAV	CIRCUIT	FUNCTION
A1	X2 20DG/RD	HORN RELAY OUTPUT
A2	X3 20BK/RD	HORN RELAY CONTROL
A3	-	-
A4	F62 20RD	FUSED B(+)
A5	F62 20RD	FUSED B(+)

LOW SPEED RADIATOR FAN RELAY

CAV	CIRCUIT	FUNCTION
25	F18 20LG/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
26	C23 12DG	LOW SPEED RADIATOR FAN RELAY OUTPUT
27	-	-
28	A16 12GY	FUSED B(+)
29	C24 20YL/RD	LOW SPEED RADIATOR FAN RELAY CONTROL

TRANSMISSION CONTROL RELAY

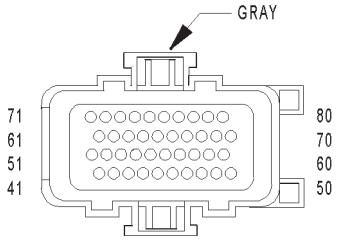
CAV	CIRCUIT	FUNCTION
G1	T16 16RD	TRANSMISSION CONTROL RELAY OUTPUT
G2	Z1 20BK	GROUND
G3	-	-
G4	T15 20LG	TRANSMISSION CONTROL RELAY CONTROL
G5	A30 16RD/WT	FUSED B(+)



POWERTRAIN CONTROL MODULE - C1

POWERTRAIN CONTROL MODULE C1 - BLACK 40 WAY

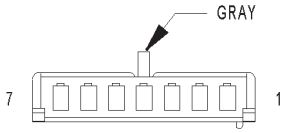
CAV	CIRCUIT	FUNCTION
1	-	-
2	-	-
3	K17 18DB/TN	IGNITION COIL NO. 2 DRIVER
4	-	-
5	V32 20YL/RD	SPEED CONTROL POWER SUPPLY
6	A142 18DG/OR	AUTOMATIC SHUT DOWN RELAY OUTPUT
7	K13 18YL/WT	FUEL INJECTOR NO. 3 DRIVER
8	K20 18DG	GENERATOR FIELD
9	-	-
10	Z12 18BK/TN	GROUND
11	K19 18BK/GY	IGNITION COIL NO. 1 DRIVER
12	G6 20GY	ENGINE OIL PRESSURE SWITCH SENSE
13	K11 18WT/DB	FUEL INJECTOR NO. 1 DRIVER
14	-	-
15	-	-
16	K14 18LB/BR	FUEL INJECTOR NO. 4 DRIVER
17	K12 18TN	FUEL INJECTOR NO. 2 DRIVER
18	K79 20OR/RD	OXYGEN SENSOR 1/1 CONTROL
19	-	-
20	F12 20DB/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
21	-	-
22	-	-
23	K119 20LG/BK	CLUTCH UPSTOP SWITCH SIGNAL
24	-	-
25	K42 20DB/LG	KNOCK SENSOR SIGNAL
26	K2 20TN/BK	ENGINE COOLANT TEMPERATURE SENSOR SIGNAL
27	K127 20BK/OR	OXYGEN SENSOR GROUND
28	-	-
29	-	-
30	K41 20BK/DG	OXYGEN SENSOR 1/1 SIGNAL
31	K90 20TN	ENGINE STARTER MOTOR RELAY CONTROL
32	K24 20GY/BK	CRANKSHAFT POSITION SENSOR SIGNAL
33	K44 20TN/YL	CAMSHAFT POSITION SENSOR SIGNAL
34	-	-
35	K22 20OR/DB	THROTTLE POSITION SENSOR SIGNAL
36	K1 20DG/RD	MAP SENSOR SIGNAL
37	-	-
38	C20 20BR	A/C SWITCH SENSE
39	-	-
40	K35 20GY/YL	EGR SOLENOID CONTROL



POWERTRAIN CONTROL MODULE - C2

POWERTRAIN CONTROL MODULE C2 - GRAY 40 WAY

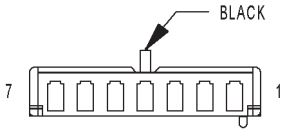
CAV	CIRCUIT	FUNCTION
41	V37 20RD/LG	SPEED CONTROL SWITCH SIGNAL
42	-	-
43	K4 20BK/LB	SENSOR GROUND
44	K7 20OR	8V SUPPLY
45	K10 20DB/OR	POWER STEERING PRESSURE SWITCH SENSE
46	A14 18RD/WT	FUSED B(+)
47	Z11 18BK/WT	GROUND
48	K40 20BR/WT	IDLE AIR CONTROL NO. 3 DRIVER
49	K60 20YL/BK	IDLE AIR CONTROL NO. 2 DRIVER
50	Z12 18BK/TN	GROUND
51	K141 20TN/WT	OXYGEN SENSOR 1/2 SIGNAL
52	K21 20BK/RD	INLET AIR TEMPERATURE SENSOR SIGNAL
53	-	-
54	-	-
55	C24 20YL/RD	LOW SPEED RADIATOR FAN RELAY CONTROL
56	V36 20TN/RD	SPEED CONTROL VACUUM SOLENOID CONTROL
57	K39 20GY/RD	IDLE AIR CONTROL NO. 1 DRIVER
58	K59 20VT/BK	IDLE AIR CONTROL NO. 4 DRIVER
59	D25 20VT/YL	PCI BUS
60	-	-
61	K6 20VT/WT	5V SUPPLY
62	K29 20WT/PK	BRAKE LAMP SWITCH SENSE
63	T10 20YL/DG	TORQUE MANAGEMENT REQUEST SENSE
64	C28 20DB/OR	A/C COMPRESSOR CLUTCH RELAY CONTROL
65	D21 20PK	SCI TRANSMIT
66	G7 20WT/OR	VEHICLE SPEED SENSOR SIGNAL
67	K51 20DB/YL	AUTOMATIC SHUT DOWN RELAY CONTROL
68	K52 20PK/BK	EVAP PURGE SOLENOID CONTROL
69	C27 20DB/PK	HIGH SPEED RADIATOR FAN RELAY CONTROL
70	K108 20VT/RD	EVAP PURGE SOLENOID SENSE
71	G9 20GY/BK	RED BRAKE WARNING INDICATOR DRIVER
72	K107 20OR/YL	LEAK DETECTION PUMP SWITCH SENSE
73	-	-
74	K31 20BR	FUEL PUMP RELAY CONTROL
75	D20 20LG	SCI RECEIVE
76	T41 20BK/WT	CLUTCH INTERLOCK SWITCH SIGNAL
76	T41 20BK/WT	PARK/NEUTRAL POSITION SWITCH SENSE (TRS T41)
77	K106 20WT/DG	LEAK DETECTION PUMP SOLENOID CONTROL
78	K54 20OR/BK	TORQUE CONVERTER CLUTCH SOLENOID CONTROL
79	-	-
80	V35 20LG/RD	SPEED CONTROL VENT SOLENOID CONTROL



RADIO - C1

RADIO C1 - GRAY 7 WAY

CAV	CIRCUIT	FUNCTION
1	-	-
2	X55 18RD/BR	LEFT FRONT SPEAKER (-)
3	X56 18DB/RD	RIGHT FRONT SPEAKER (-)
4	L7 18BK/YL	HEADLAMP SWITCH OUTPUT
5	E2 20OR	PANEL LAMPS DRIVER
6	X12 18RD/WT	FUSED IGNITION SWITCH OUTPUT (RUN-ACC)
7	M1 20PK	FUSED B(+)



RADIO - C2

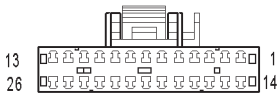
RADIO C2 - BLACK 7 WAY

CAV	CIRCUIT	FUNCTION
1	-	-
2	X51 18BR/YL	LEFT REAR SPEAKER (+)
3	X52 18DB/WT	RIGHT REAR SPEAKER (+)
4	X53 18DG	LEFT FRONT SPEAKER (+)
5	X54 18VT/DG	RIGHT FRONT SPEAKER (+)
6	X57 18BR/LB	LEFT FRONT SPEAKER (-)
7	X58 18DB/BK	RIGHT REAR SPEAKER (-)

RADIO - C3

RADIO C3 - 2 WAY

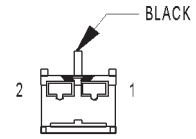
CAV	CIRCUIT	FUNCTION
1	D25 20VT/YL	PCI BUS
2	-	-



REMOTE KEYLESS ENTRY MODULE

REMOTE KEYLESS ENTRY MODULE - 26 WAY

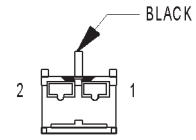
CAV	CIRCUIT	FUNCTION
1	L4 16VT/WT	DIMMER SWITCH LOW BEAM OUTPUT
2	L7 18BK/YL	HEADLAMP SWITCH OUTPUT
3	F35 18RD	FUSED B(+)
4	P35 18OR/BK	DOOR LOCK DRIVER
5	P34 18PK/BK	DRIVER DOOR UNLOCK DRIVER
6	P36 18PK/BK	DOOR UNLOCK DRIVER
6	P36 18PK/VT	DOOR UNLOCK DRIVER
7	M9 20DB/OR	PASSENGER DOOR AJAR/RKE SENSE
8	Z1 18BK	GROUND
9	F9 20RD/BK	FUSED B(+)
10	P97 20WT/DG	DRIVER DOOR SWITCH MUX
11	P96 20DG	PASSENGER DOOR SWITCH MUX
12	Z2 20BK/LG	GROUND
13	X161 20WT	ANTENNA COAX GROUND
14	G78 20TN/BK	LIFTGATE AJAR SWITCH SENSE
15	X5 20LB/RD	SIREN CONTROL
16	P33 18OR/BK	DRIVER DOOR LOCK DRIVER
17	G69 20BK/OR	VTSS INDICATOR DRIVER
18	X3 20BK/RD	HORN RELAY CONTROL
19	D25 20VT/YL	PCI BUS
20	G120 20WT/LB	INTRUSION SENSOR SIGNAL
21	-	-
22	G5 20DB/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
23	G70 20BR/TN	HOOD AJAR SWITCH SENSE
24	-	-
25	G74 20TN/RD	DRIVER DOOR AJAR SWITCH SENSE
25	G75 20TN	DRIVER DOOR AJAR SWITCH SENSE
26	X161 20WT	ANTENNA COAX CENTER



RIGHT FRONT
DOOR SPEAKER

RIGHT FRONT DOOR SPEAKER - BLACK 2 WAY

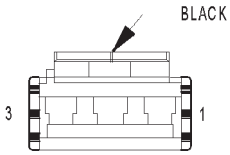
CAV	CIRCUIT	FUNCTION
1	X54 18DG	RIGHT FRONT SPEAKER (+)
2	X56 18BR/RD	RIGHT FRONT SPEAKER (-)



RIGHT
INSTRUMENT
PANEL SPEAKER

RIGHT INSTRUMENT PANEL SPEAKER - BLACK 2 WAY

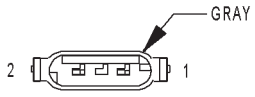
CAV	CIRCUIT	FUNCTION
1	X54 18VT	RIGHT INSTRUMENT PANEL SPEAKER (+)
2	X56 18DB/RD	RIGHT INSTRUMENT PANEL SPEAKER (-)



RIGHT REAR
DOOR LOCK MOTOR

RIGHT REAR DOOR LOCK MOTOR - BLACK 3 WAY

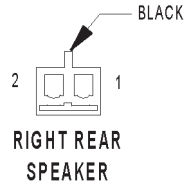
CAV	CIRCUIT	FUNCTION
1	P35 18OR/VT	DOOR LOCK DRIVER
2	-	-
3	P36 18PK/VT	DOOR UNLOCK DRIVER



RIGHT REAR
FOG LAMP
(BUILT-UP-EXPORT)

RIGHT REAR FOG LAMP (BUILT-UP-EXPORT) - GRAY 2 WAY

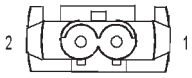
CAV	CIRCUIT	FUNCTION
1	L38 18BR/WT	REAR FOG LAMP SWITCH OUTPUT
2	Z1 18BK	GROUND



RIGHT REAR SPEAKER

RIGHT REAR SPEAKER - BLACK 2 WAY

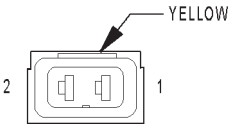
CAV	CIRCUIT	FUNCTION
1	X58 18DB/BK	RIGHT REAR SPEAKER (-)
2	X52 18DB/WT	RIGHT REAR SPEAKER (+)



RIGHT SEAT AIRBAG (FULL OPTIONS)

RIGHT SEAT AIRBAG (FULL OPTIONS) - 2 WAY

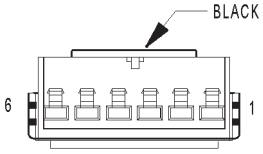
CAV	CIRCUIT	FUNCTION
1	R32 18OR	RIGHT SEAT SQUIB LINE 2
2	R34 18WT	RIGHT SEAT SQUIB LINE 1



RIGHT SEAT BELT TENSIONER

RIGHT SEAT BELT TENSIONER - YELLOW 2 WAY

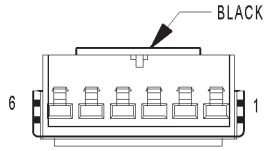
CAV	CIRCUIT	FUNCTION
1	R54 18LB/YL	RIGHT SEAT BELT TENSIONER LINE 2
2	R56 18LB/DG	RIGHT SEAT BELT TENSIONER LINE 1



RIGHT SIDE IMPACT AIRBAG CONTROL MODULE (FULL OPTIONS)

RIGHT SIDE IMPACT AIRBAG CONTROL MODULE (FULL OPTIONS) - BLACK 6 WAY

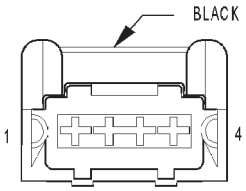
CAV	CIRCUIT	FUNCTION
1	F15 20DG/WT	FUSED IGNITION SWITCH OUTPUT (RUN-START)
2	D25 20VT/YL	PCI BUS
3	R34 20LB/WT	RIGHT SEAT SQUIB LINE 1
4	R32 20LB/OR	RIGHT SEAT SQUIB LINE 2
5	-	-
6	Z6 20BK/PK	GROUND



SENTRY KEY IMMOBILIZER MODULE

SENTRY KEY IMMOBILIZER MODULE - BLACK 6 WAY

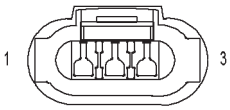
CAV	CIRCUIT	FUNCTION
5	Z2 20BK/LG	GROUND
6	M1 20PK	FUSED B(+)
1	-	-
2	D25 20VT/YL	PCI BUS
3	-	-
4	G5 20DB/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)



SIREN (BUILT-UP-EXPORT)

SIREN (BUILT-UP-EXPORT) - BLACK 4 WAY

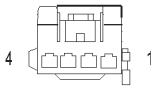
CAV	CIRCUIT	FUNCTION
1	X5 20LB/RD	SIREN CONTROL
2	X5 20LB/RD	SIREN CONTROL
3	Z1 20BK	GROUND
4	M1 20PK	FUSED B(+)



THROTTLE POSITION SENSOR

THROTTLE POSITION SENSOR - 3 WAY

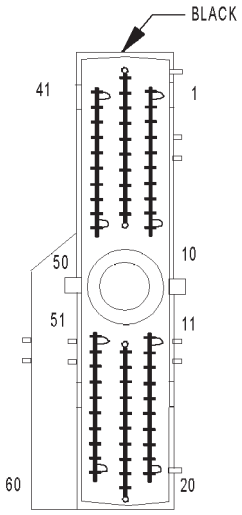
CAV	CIRCUIT	FUNCTION
1	K6 20VT/WT	5V SUPPLY
2	K22 20OR/DB	THROTTLE POSITION SENSOR SIGNAL
3	K4 20BK/LB	SENSOR GROUND



TRACTION CONTROL SWITCH

TRACTION CONTROL SWITCH - 4 WAY

CAV	CIRCUIT	FUNCTION
1	-	-
2	B27 18RD/YL	TRACTION CONTROL SWITCH SENSE
3	Z1 20BK	GROUND
4	E2 20OR	PANEL LAMPS DRIVER



TRANSMISSION CONTROL MODULE

TRANSMISSION CONTROL MODULE - BLACK 60 WAY

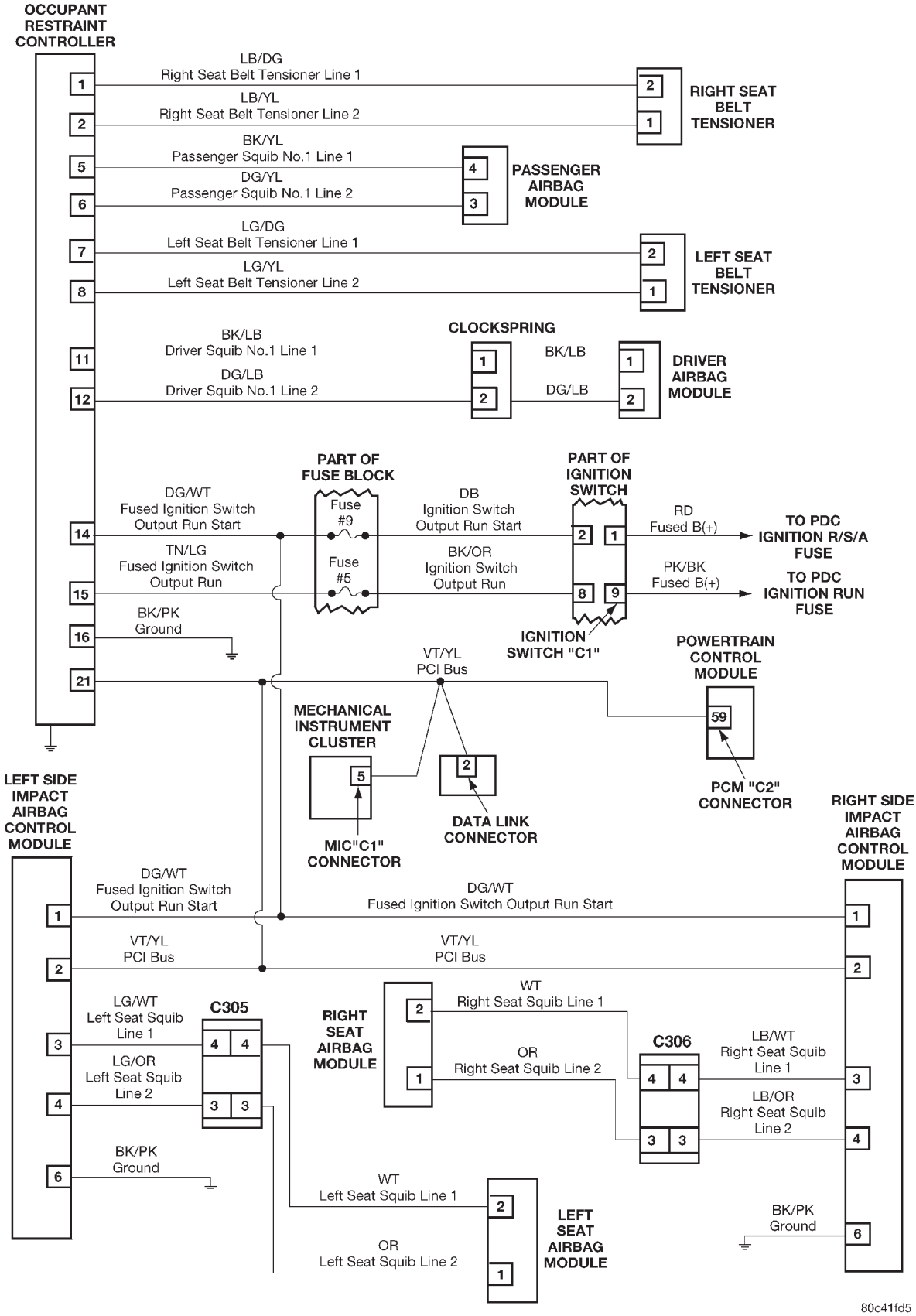
CAV	CIRCUIT	FUNCTION
1	T1 20LG/BK	TRS T1 SENSE
2	-	-
3	T3 20VT	TRS T3 SENSE
4	-	-
5	-	-
6	K24 20GY/BK	CRANKSHAFT POSITION SENSOR SIGNAL
7	D21 20PK	SCI TRANSMIT
8	A41 16YL	FUSED IGNITION SWITCH OUTPUT (START)
9	T9 18OR/BK	OVERDRIVE PRESSURE SWITCH SENSE
10	T10 20YL/DG	TORQUE MANAGEMENT REQUEST SENSE
11	F18 20LG/BK	FUSED IGNITION SWITCH OUTPUT (RUN-START)
12	K22 20OR/DB	THROTTLE POSITION SENSOR SIGNAL
13	T13 20DB/BK	SPEED SENSOR GROUND
14	T14 20LG/WT	OUTPUT SPEED SENSOR SIGNAL
15	T15 20LG	TRANSMISSION CONTROL RELAY CONTROL
16	T16 16RD	TRANSMISSION CONTROL RELAY OUTPUT
17	T16 16RD	TRANSMISSION CONTROL RELAY OUTPUT
18	-	-
19	T19 18WT	2-4 SOLENOID CONTROL
20	T20 18LB	LOW/REVERSE SOLENOID CONTROL
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	T41 20BK/WT	PARK/NEUTRAL POSITION SWITCH SENSE (TRS T41)
42	T42 20VT/WT	TRS T42 SENSE
43	D25 20VT/YL	PCI BUS
44	-	-
45	-	-
46	D6 20PK/LB	SCI RECEIVE (EATX)
47	T47 18YL/BK	2-4 PRESSURE SWITCH SENSE
48	-	-
49	-	-
50	T50 18DG	LOW/REVERSE PRESSURE SWITCH SENSE
51	K4 20BK/LB	SENSOR GROUND
52	T52 20RD/BK	INPUT SPEED SENSOR SIGNAL
53	Z14 16BK/YL	GROUND
54	T54 20VT/PK	TRANSMISSION TEMPERATURE SENSOR SIGNAL
55	-	-
56	A30 16RD/WT	FUSED B(+)
57	Z13 16BK/RD	GROUND
58	G7 20WT/OR	VEHICLE SPEED SENSOR SIGNAL
59	T59 18PK	UNDERDRIVE SOLENOID CONTROL
60	T60 18BR	OVERDRIVE SOLENOID CONTROL

NOTES

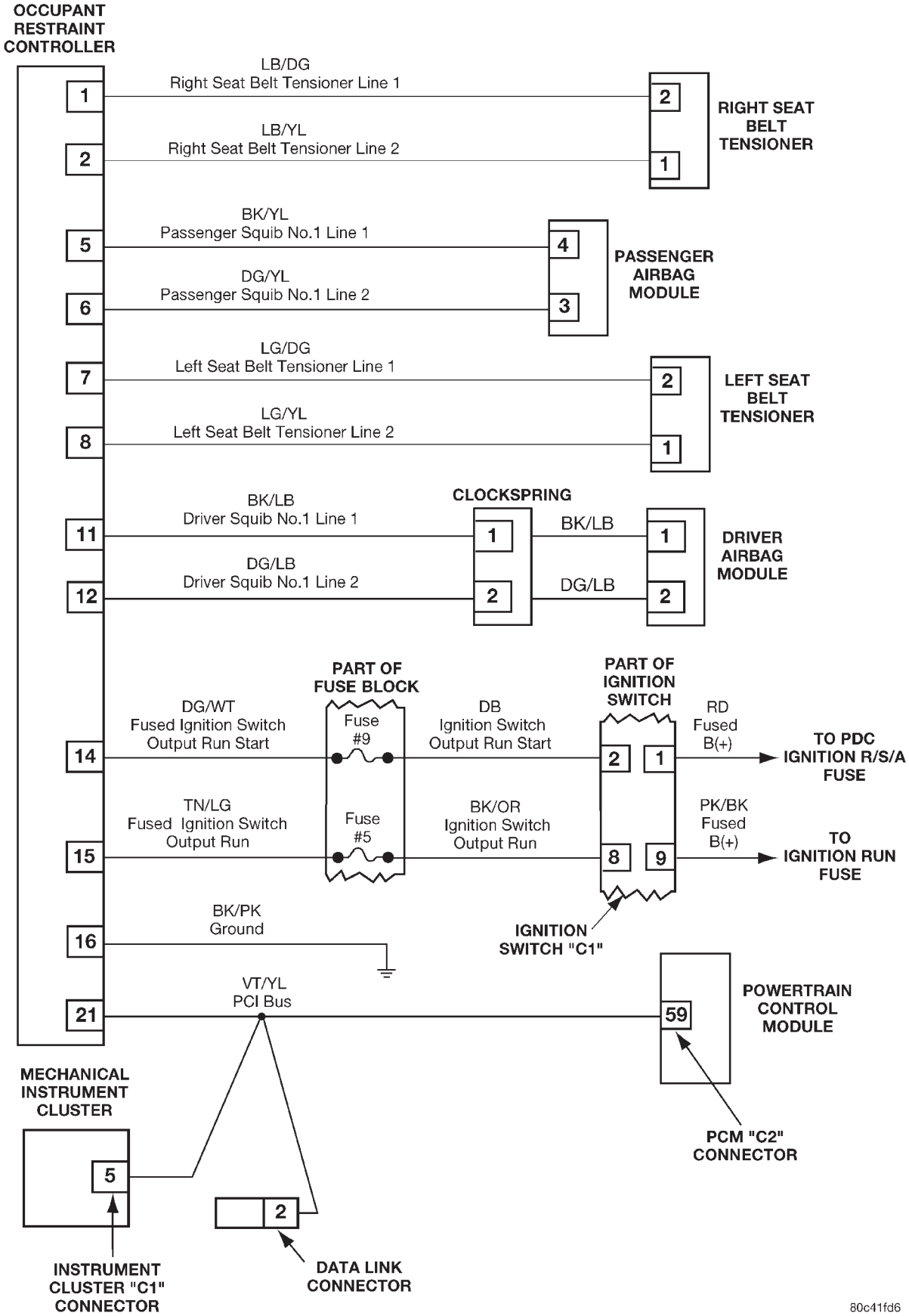
10.0 SCHEMATIC DIAGRAMS

10.1 AIRBAG SYSTEM

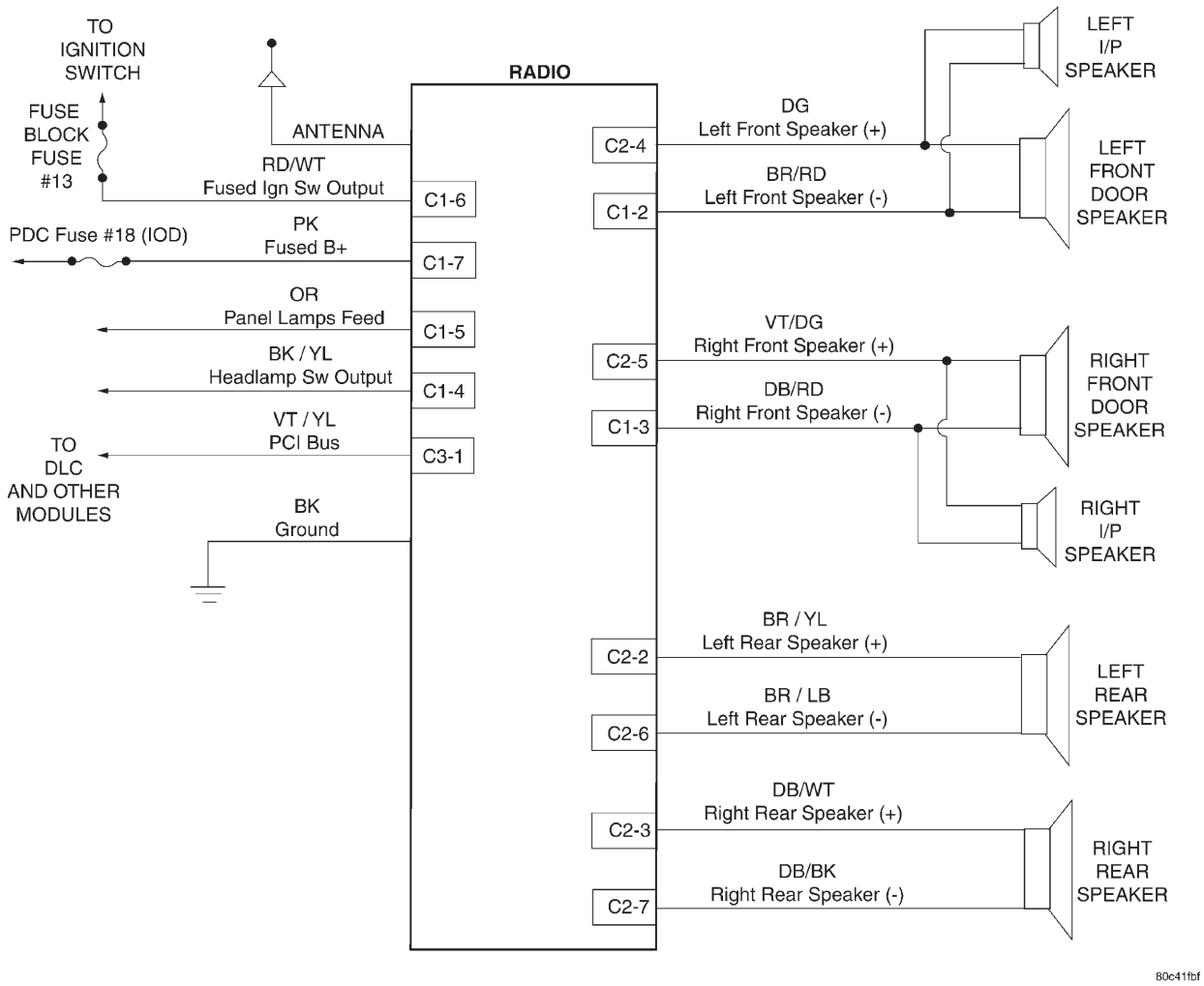
10.1.1 WITH SIACM



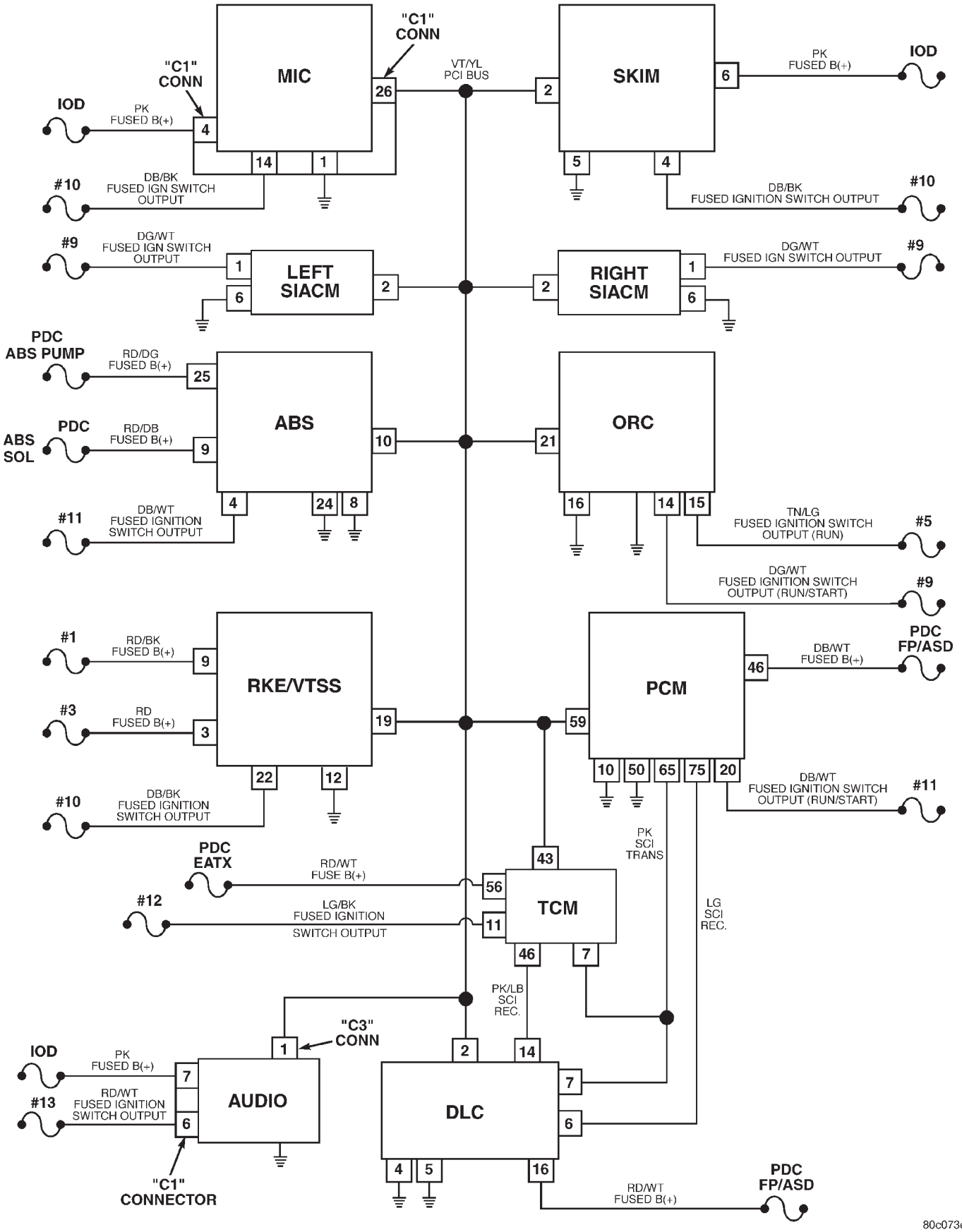
10.1 AIRBAG SYSTEM (Continued)
10.1.2 WITHOUT SIACM



10.2 AUDIO

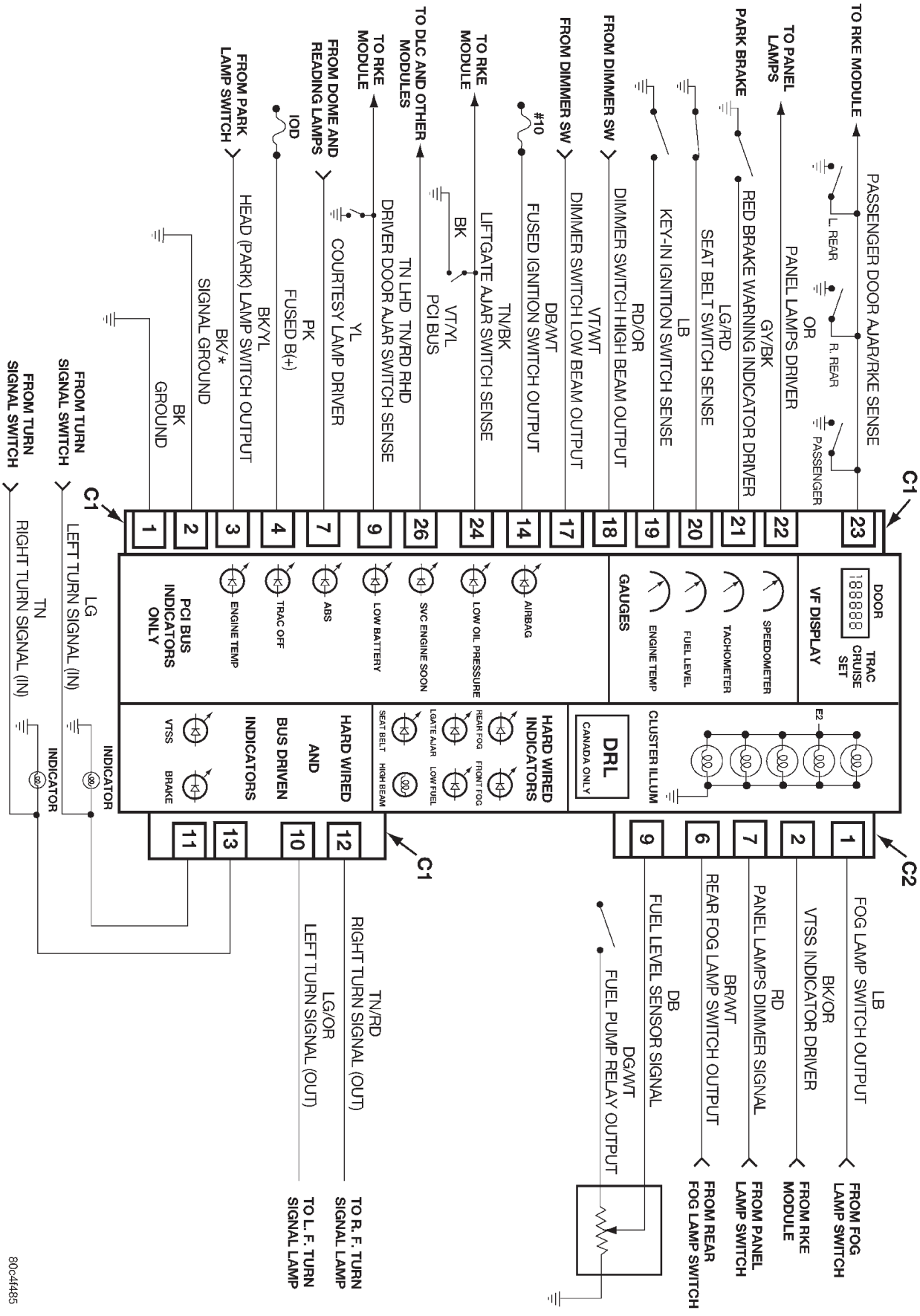

TO
IGNITION
SWITCH
FUSE
BLOCK
FUSE
#13
ANTENNA
RD/WT
Fused Ign Sw Output
C1-6
PDC Fuse #18 (IOD)
PK
Fused B+
C1-7
OR
Panel Lamps Feed
C1-5
BK / YL
Headlamp Sw Output
C1-4
VT / YL
PCI Bus
C3-1
TO
DLC
AND OTHER
MODULES
BK
Ground
RADIO
C2-4
DG
Left Front Speaker (+)
C1-2
BR/RD
Left Front Speaker (-)
LEFT
I/P
SPEAKER
LEFT
FRONT
DOOR
SPEAKER
C2-5
VT/DG
Right Front Speaker (+)
C1-3
DB/RD
Right Front Speaker (-)
RIGHT
FRONT
DOOR
SPEAKER
RIGHT
I/P
SPEAKER
C2-2
BR / YL
Left Rear Speaker (+)
C2-6
BR / LB
Left Rear Speaker (-)
LEFT
REAR
SPEAKER
C2-3
DB/WT
Right Rear Speaker (+)
C2-7
DB/BK
Right Rear Speaker (-)
RIGHT
REAR
SPEAKER
80c41fbf

10.3 COMMUNICATION

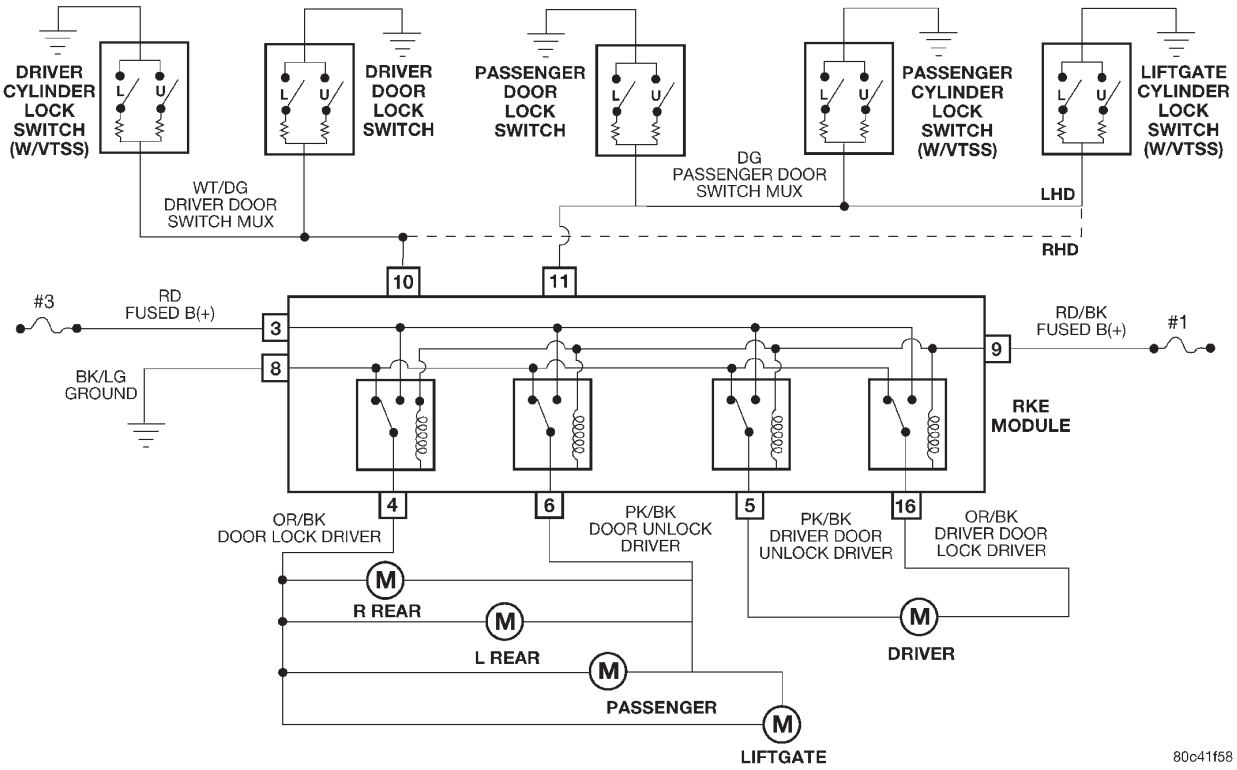


80c073e2

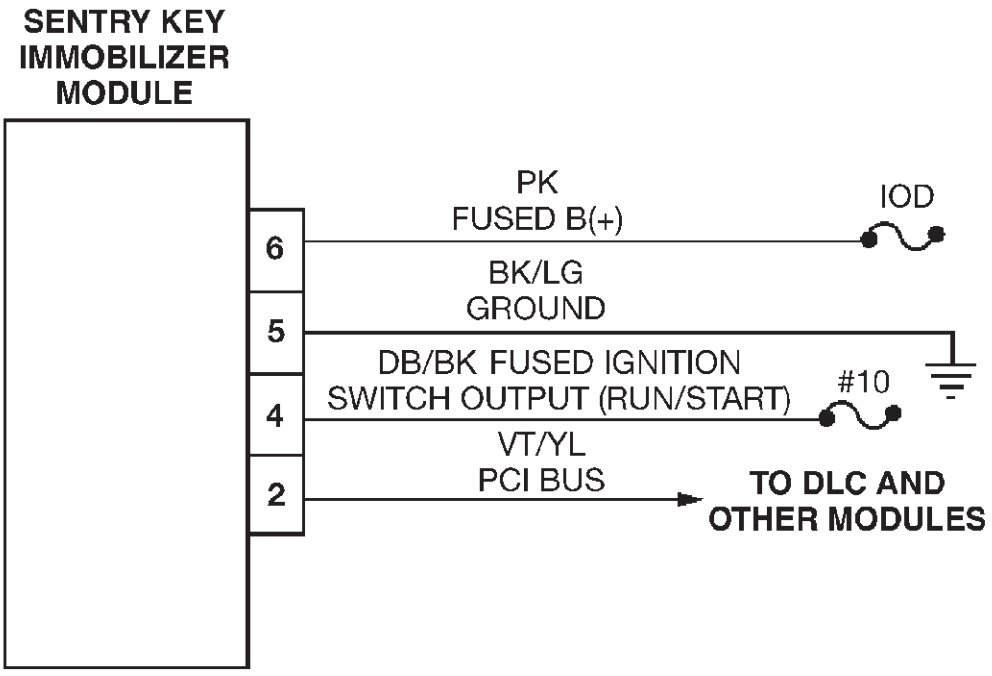
10.4 INSTRUMENT CLUSTER



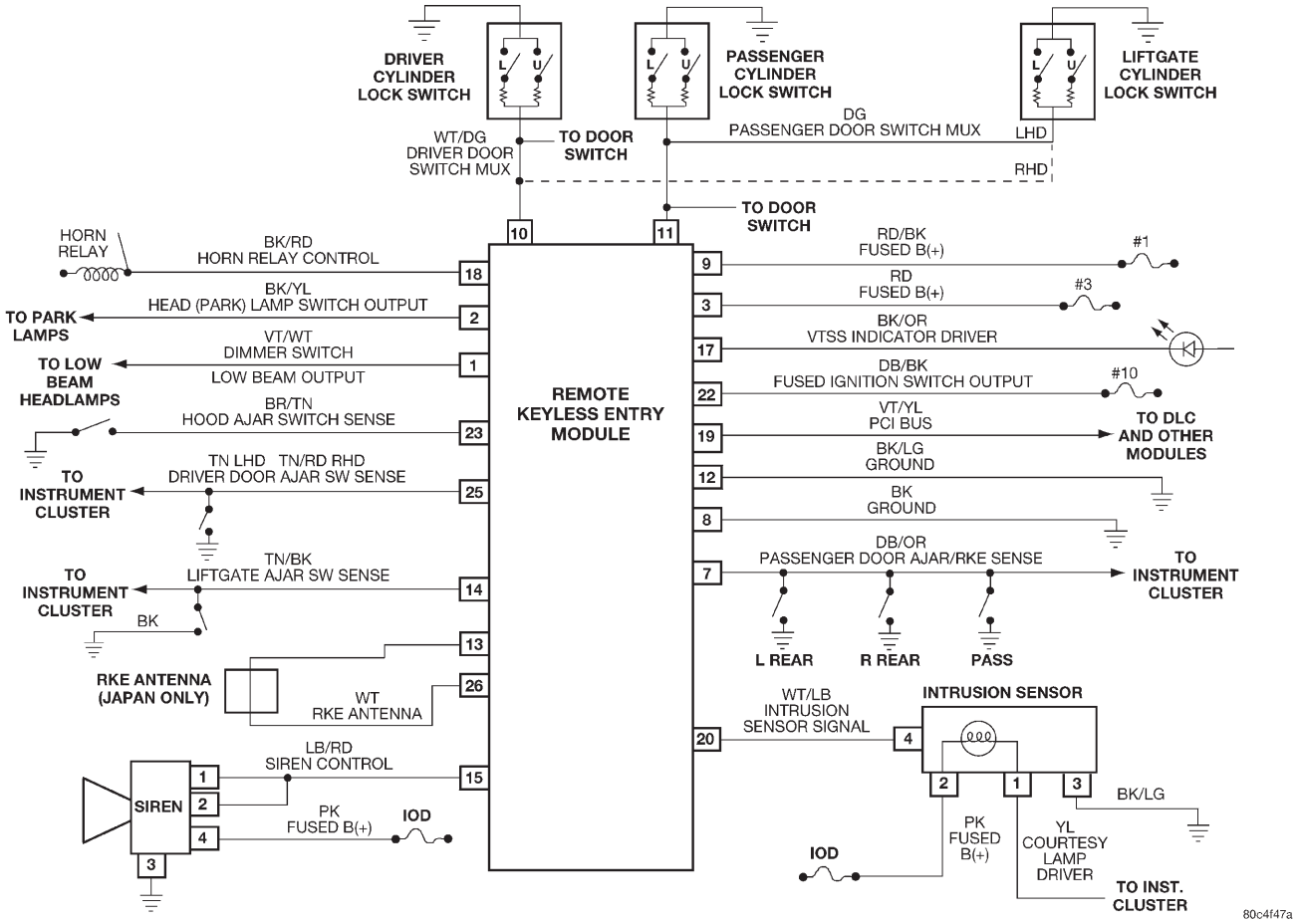
10.5 POWER DOOR LOCKS



10.6 SENTRY KEY IMMOBILIZER SYSTEM



10.7 VEHICLE THEFT SECURITY SYSTEM



NOTES