

# Restraints

## GENERAL

### SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE(SRSCM)

SRS CONTROL MODULE

### AIR BAG MODULE (DRIVER SIDE)

AIR BAG MODULE AND CLOCK SPRING

### AIR BAG MODULE (PASSENGER SIDE)

AIR BAG MODULE

### AIR BAG MODULE (CURTAIN AIR BAG)

## AIR BAG MODULE

### SEAT BELT PRETENSIONER

SEAT BELT PRETENSIONER

### SRS CONTROL SYSTEM

FRONT IMPACT SENSOR (FIS)

SIDE IMPACT SENSOR (SIS)

### TROUBLESHOOTING

### AIR BAG MODULE DISPOSAL

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The supplemental restraint system (SRS) is designed to supplement the seat belt to help reduce the risk or severity of injury to the driver and passenger by activating and deploying the driver, passenger, side airbag and belt pretensioner in certain frontal or side collisions.

The SRS (Airbag) consists of : a driver side airbag module located in the center of the steering wheel, which contains the folded cushion and an inflator unit ; a passenger side airbag module located in the passenger side crash pad contains the folded cushion assembled with inflator unit ; side airbag modules located in the front seat contain the folded cushion and an inflator unit ; curtain airbag modules located inside of the headliner which contains folded cushions and inflator units. The impact sensing function of the SRSCM is carried out by electronic accelerometer that continuously measure the vehicle's acceleration and delivers a corresponding signal through amplifying and filtering circuitry to the microprocessor.

### SRSCM (SRS CONTROL MODULE)

SRSCM will detect front impact with front impact sensor, and side impact with side impact sensor, and determine airbag module deployment.

1. DC/DC converter: DC/DC converter in power supply unit includes up/down transformer converter, and provide ignition voltage for 2 front airbag ignition circuits and the internal operation voltage of the SRSCM. If the internal operation voltage is below critical value setting, it will perform resetting.
2. Safety sensor: Safety sensor is located in airbag ignition circuit. Safety sensor will operate airbag circuit at any deployment condition and release airbag circuit safely at normal driving condition. Safety sensor is a double contact electro-mechanical switch that will close detecting deceleration above certain criteria.
3. Back up power supply: SRSCM has separate back up power supply, that will supply deployment energy instantly in low voltage condition or upon power failure by front crash.
4. Self diagnosis: SRSCM will constantly monitor current SRS operation status and detect system failure while vehicle power supply is on, system failure may be checked with trouble codes using scan tool. (Hi-Scan)

5. Airbag warning lamp on: Upon detecting error, the module will transmit signal to SRSCM indicator lamp located at cluster. MIL lamp will indicate driver SRS error. Upon ignition key on, SRS lamp will turn on for about six seconds.
6. Trouble code registration: Upon error occurrence in system, SRSCM will store DTC corresponding to the error. DTC can be cleared only by Hi-Scan. However, if an internal fault code is logged or if a crash is recorded the fault clearing should not happen.
7. Self diagnostic connector: Data stored in SRSCM memory will be output to Hi-Scan or other external output devices through connector located below driver side crash pad.
8. Once airbag is deployed, SRSCM should not be used again but replaced.
9. SRSCM will determine whether passenger put on seat belt by the signal from built-in switch in seat belt buckle, and deploy front seat airbag at each set crash speed.
10. Side airbag deployment will be determined by SRSCM that will detect satellite sensor impact signal upon side crash, irrespective to seat belt condition.

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**SPECIFICATION**

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| Item                                   | Resistance (Ω ) |
|----------------------------------------|-----------------|
| Driver Airbag (DAB)                    | 1.6 ~ 6.4       |
| Passenger Airbag (PAB)                 | 1.8 ~ 6.4       |
| Curtain Airbag (CAB)                   | 1.8 ~ 4.8       |
| Seat Belt Retractor Pretensioner (BPT) | 1.8 ~ 6.4       |

**TIGHTENING TORQUES**

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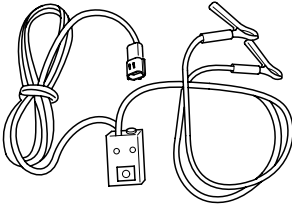
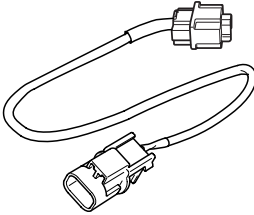
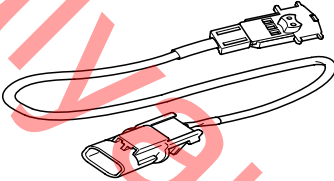
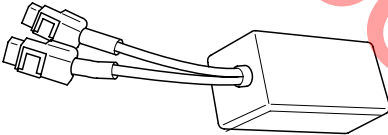
| Item                                    | kgf·m                               | Nm                        | lb-ft                     |
|-----------------------------------------|-------------------------------------|---------------------------|---------------------------|
| Driver Airbag (DAB)                     | 0.8 ~ 1.1                           | 7.9 ~ 10.8                | 5.8 ~ 8.0                 |
| Passenger Airbag (PAB)                  | Bolt : 1.9 ~ 2.7<br>Nut : 0.9 ~ 1.4 | 18.6 ~ 26.5<br>8.8 ~ 13.7 | 13.7 ~ 19.5<br>6.5 ~ 10.1 |
| Curtain Airbag (CAB)                    | 0.8 ~ 1.2                           | 7.8 ~ 11.8                | 5.8 ~ 8.7                 |
| Seat Belt Anchor Bolt (BPT)             | 4.0 ~ 5.5                           | 39.2 ~ 53.9               | 28.9 ~ 39.8               |
| SRSCM Mounting Bolt                     | 1.0 ~ 1.4                           | 10.2 ~ 13.8               | 7.5 ~ 10.2                |
| Front Impact Sensor (FIS) Mounting Bolt | 1.0 ~ 1.4                           | 10.2 ~ 13.8               | 7.5 ~ 10.2                |
| Side Impact Sensor (SIS) Mounting Bolt  | 1.0 ~ 1.4                           | 10.2 ~ 13.8               | 7.5 ~ 10.2                |

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RESTRAINTS

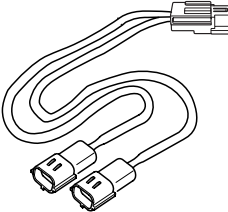
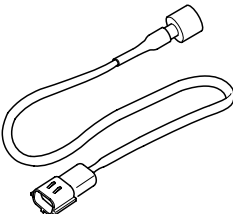
SPECIAL SERVICE TOOLS

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| Tool(Number and Name)             | Illustration                                                                                    | Use                                                         |
|-----------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Deployment tool<br>0957A-34100A   | <br>ARIE500A   | Airbag deployment tool                                      |
| Deployment adapter<br>0957A-3E110 | <br>SBLRT6008D | Use with deployment tool.<br>(PAB)                          |
| Deployment adapter<br>0957A-38500 | <br>ARIE500C  | Use with deployment tool.<br>(DAB, CAB, BPT)                |
| Dummy<br>0957A-38200              | <br>ARIE500D | Simulator to check the resistance<br>of each wiring harness |

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| Tool(Number and Name)        | Illustration                                                                                        | Use                               |
|------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------|
| Dummy adapter<br>0957A-3E100 |  <p>SBLRT6009D</p> | Use with dummy<br>(PAB)           |
| Dummy adapter<br>0957A-2G000 |  <p>ARIE500F</p>   | Use with dummy<br>(DAB, CAB, BPT) |

DAB : Driver Airbag

PAB : Passenger Airbag

SAB : Side Airbag

CAB : Curtain Airbag

BPT : Seat Belt Retractor Pretensioner

## PRECAUTIONS E915C2A3

### GENERAL PRECAUTIONS

Please read the following precautions carefully before performing the airbag system service. Observe the instructions described in this manual, or the airbags could accidentally deploy and cause damage or injuries.

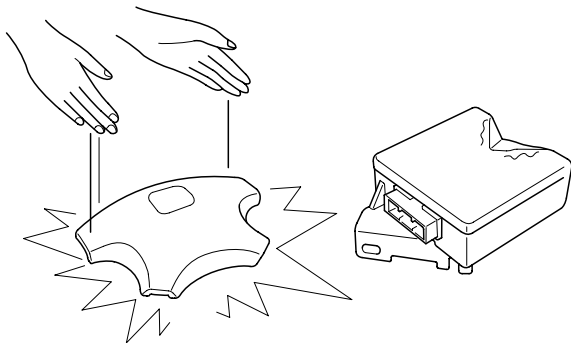
- Except when performing electrical inspections, always turn the ignition switch OFF and disconnect the negative cable from the battery, and wait at least three minutes before beginning work.



#### NOTE

*The contents in the memory are not erased even if the ignition switch is turned OFF or the battery cables are disconnected from the battery.*

- Use the replacement parts which are manufactured to the same standards as the original parts and quality. Do not install used SRS parts from another vehicle. Use only new parts when making SRS repairs.
- Carefully inspect any SRS part before you install it. Do not install any part that shows signs of being dropped or improperly handled, such as dents, cracks or deformation.



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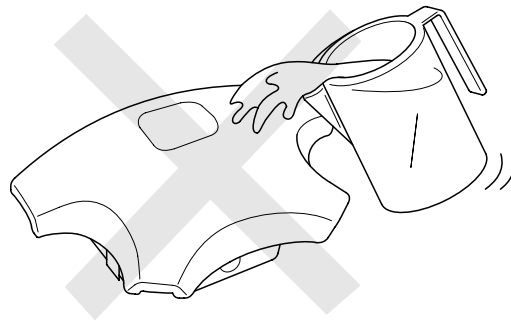
- Before removing any of the SRS parts (including the disconnection of the connectors), always disconnect the SRS connector.

### AIRBAG HANDLING AND STORAGE

Do not disassemble the airbags; it has no serviceable parts. Once an airbag has been deployed, it cannot be repaired or reused.

For temporary storage of the air bag during service, please observe the following precautions.

- Store the removed airbag with the pad surface up.
- Keep free from any oil, grease, detergent, or water to prevent damage to the airbag assembly.



ERKD002Z

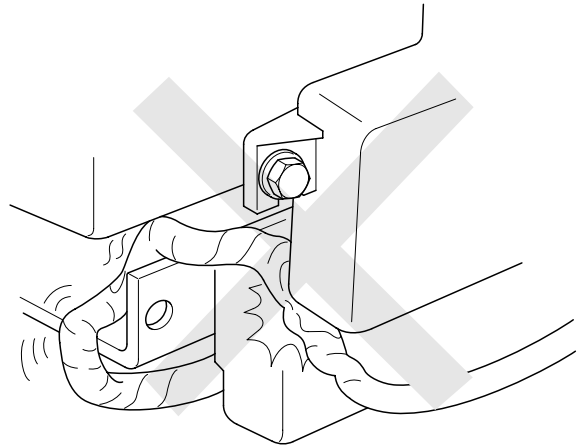
- Store the removed airbag on secure, flat surface away from any high heat source (exceeding 85°C/185°F).
- Never perform electrical inspections to the airbags, such as measuring resistance.
- Do not position yourself in front of the airbag assembly during removal, inspection, or replacement.
- Refer to the scrapping procedures for disposal of the damaged airbag.
- Be careful not to bump or impact the SRS unit or the side impact sensors whenever the ignition switch is ON, wait at least three minutes after the ignition switch is turned OFF before begin work.
- During installation or replacement, be careful not to bump (by impact wrench, hammer, etc.) the area around the SRS unit and the side impact sensor. The airbags could accidentally deploy and cause damage or injury.
- After a collision in which the airbags were deployed, replace the front airbags and the SRS unit. After a collision in which the side airbag was deployed, replace the side airbag, the front impact sensor and side impact sensor on the side where the side airbag deployed and the SRS unit. After a collision in which the airbags or the side air bags did not deploy, inspect for any damage or any deformation on the SRS unit and

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the side impact sensors. If there is any damage, replace the SRS unit, the front impact sensor and/or the side impact sensors.

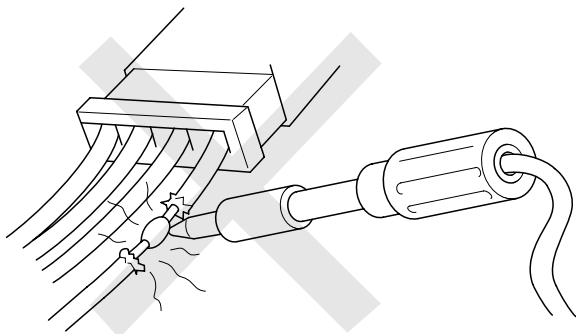
- Do not disassemble the SRS unit, the front impact sensor or the side impact sensors
- Turn the ignition switch OFF, disconnect the battery negative cable and wait at least three minutes before beginning installation or replacement of the SRS unit.
- Be sure the SRS unit, the front impact sensor and side impact sensors are installed securely with the mounting bolts.
- Do not spill water or oil on the SRS unit, or the front impact sensor or the side impact sensors and keep them away from dust.
- Store the SRS unit, the front impact sensor and the side impact sensors in a cool (15 ~ 25 °C/59 ~ 77 °F) and dry (30% ~ 80%, no moisture) area.



## WIRING PRECAUTIONS

SRS wiring can be identified by special yellow outer covering (except the SRS circuits under the front seats). Observe the instructions described in this section.

- Never attempt to modify, splice, or repair SRS wiring. If there is an open or damage in SRS wiring, replace the harness.



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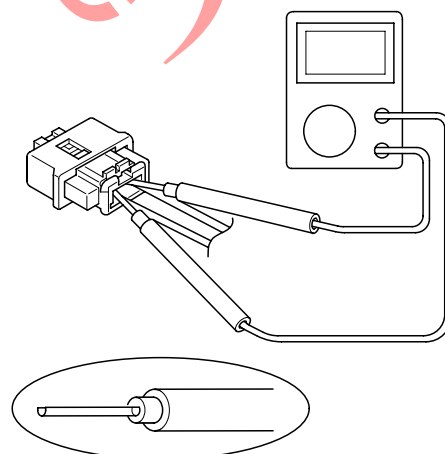
- Be sure to install the harness wires so that they are not pinched, or interfere with other parts.

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- Make sure all SRS ground locations are clean, and grounds are securely fastened for optimum metal-to-metal contact. Poor grounding can cause intermittent problems that are difficult to diagnose.

## PRECAUTIONS FOR ELECTRICAL INSPECTIONS

- When using electrical test equipment, insert the probe of the tester into the wire side of the connector. Do not insert the probe of the tester into the terminal side of the connector, and do not tamper with the connector.



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- Use a u-shaped probe. Do not insert the probe forcibly.
- Use specified service connectors for troubleshooting.

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RESTRAINTS

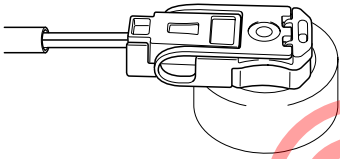
Using improper tools could cause an error in inspection due to poor metal contact.

2. Lift up the connector inserting the driver underlay the connector body.

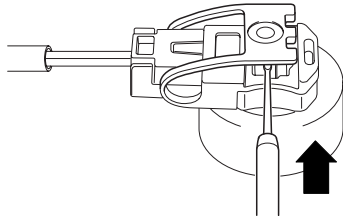
**AIRBAG CONNECTOR(I)**

**DISCONNECTING**

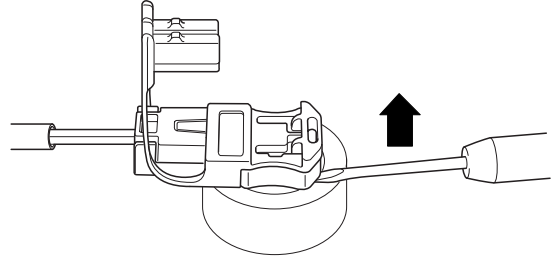
1. Remove the locking button using driver of connector to disconnect the connector.



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SBLRT6033D



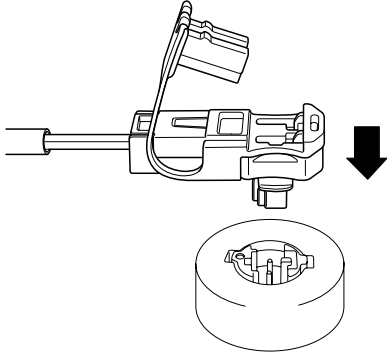
SBLRT6034D

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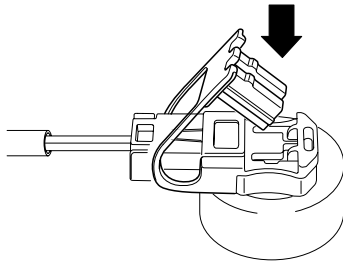
### CONNECTING

1. Connect the connector body before inserting the locking button of connector.

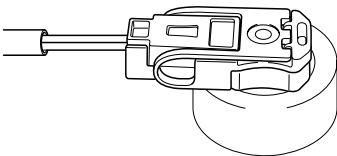


SBLRT6035D

2. Press firmly the locking button of connector until the connector click to lock.



SBLRT6036D

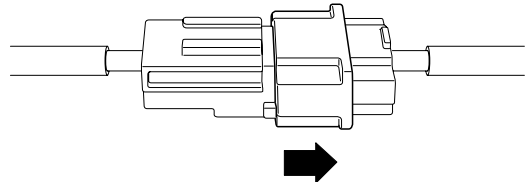


SBLRT6032D

### AIRBAG CONNECTOR(II)

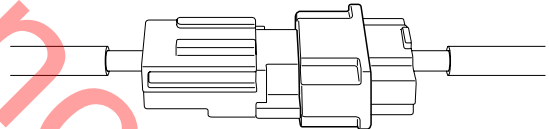
#### DISCONNECTING

1. Pull the outside part of the connector in the direction of an arrow below.

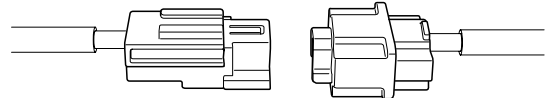


SBLRT6037D

2. Disconnect the connector completely.



SBLRT6040D



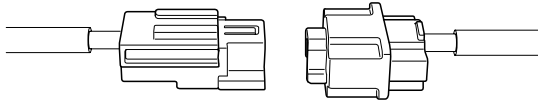
SBLRT6038D

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## RESTRAINTS

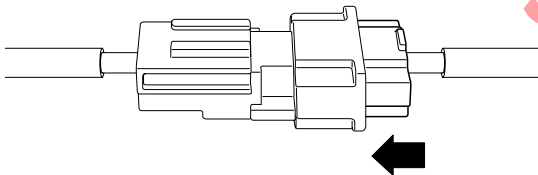
### CONNECTING

1. Arrange the connectors for connection.

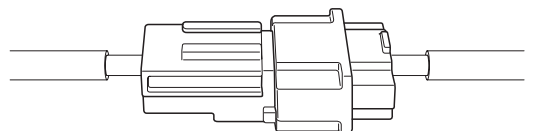


SBLRT6038D

2. Connect the connectors till occurring the sounds of locking completely in the direction of an arrow below.



SBLRT6039D



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### WARNING LAMP ACTIVATION

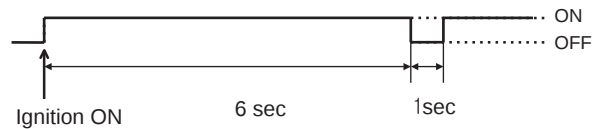
E2B5F9DA

#### WARNING LAMP BEHAVIOR AFTER IGNITION ON

As soon as the operating voltage is applied to the SRSCM ignition input, the SRSCM activates the warning lamp for a bulb check.

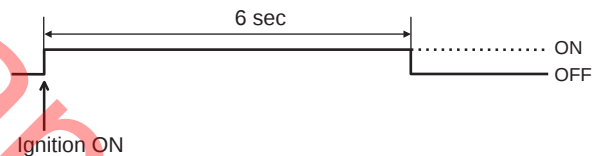
The lamp shall turn on for 6 seconds during the initialization phase and be turned off afterward. However, in order to indicate the driver, the warning lamp shall turn on for 6 seconds and off for one second then on continuously after the operating voltage is applied if any active fault exists.

1. Active fault or historical fault counter is greater or equal to 10



BRIF500A

2. Normal or historical fault counter is less than 10



BRIF500B

#### SRSCM INDEPENDENT WARNING LAMP ACTIVATION

There are certain fault conditions in which the SRSCM cannot function and thus cannot control the operation of the standard warning lamp. In these cases, the standard warning lamp is directly activated by appropriate circuitry that operates independently of the SRSCM. These cases are:

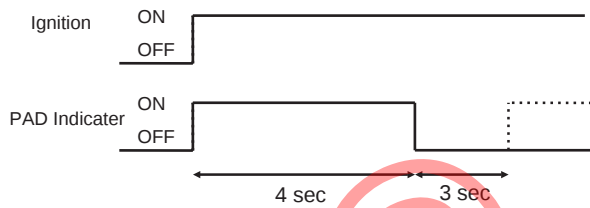
1. Loss of battery supply to the SRSCM : warning lamp turned on continuously.
2. Loss of internal operating voltage : warning lamp turned on continuously.
3. Loss of Microprocessor operation : warning lamp turned on continuously.
4. SRSCM not connected : warning lamp turned on continuously through the shorting bar.

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### PASSENGER AIRBAG DEACTIVATION (PAD) LAMP OPERATION

The SRSCM is designed with circuitry and software to drive a PAD lamp, which is used for depowered airbag system. For the PAD indicator circuitry to function properly, both the SRSCM and PAD indicator are sourced from the same ignition line. After ignition on, the PAD indicator will be turned on for 4 seconds and off for 3 seconds during the initialization phase. Thereafter the lamp will be turned on as long as the PAD switch is in the disabled position.



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### PASSENGER RESTRAINTS ACTIVATION WITH PAD SWITCH

The PAD switch affects the activation of the front passenger airbag only and the switch is controlled manually. The PAD switch will be functioned as follows:

| PAD Switch status | PAD Lamp | PAB      |
|-------------------|----------|----------|
| Phase-up          | ON → OFF | Enabled  |
| OFF               | ON       | Disabled |
| ON                | OFF      | Enabled  |
| Fault             | OFF      | Enabled  |

### COMPONENT REPLACEMENT AFTER DEPLOYMENT

EA6E180C



#### NOTE

Before doing any SRS repairs, use the Hi-Scan Pro to check for DTCs. Refer to the Diagnostic Trouble Code list for repairing of the related DTCs.

When the front airbag(s) deployed after a collision, replace the following items.

- SRSCM
- Deployed airbag(s)
- Seat belt pretensioner(s)
- Front impact sensors
- SRS wiring harnesses
- Inspect the clock spring for heat damage. If any damage found, replace the clock spring.

When the seat belt pretensioner(s) deployed after a collision, replace the following items.

- Seat belt pretensioner(s)
- SRSCM (if B1658 detected)
- Front impact sensors
- SRS wiring harnesses

When the side/curtain airbag(s) deployed after a collision, replace the following items.

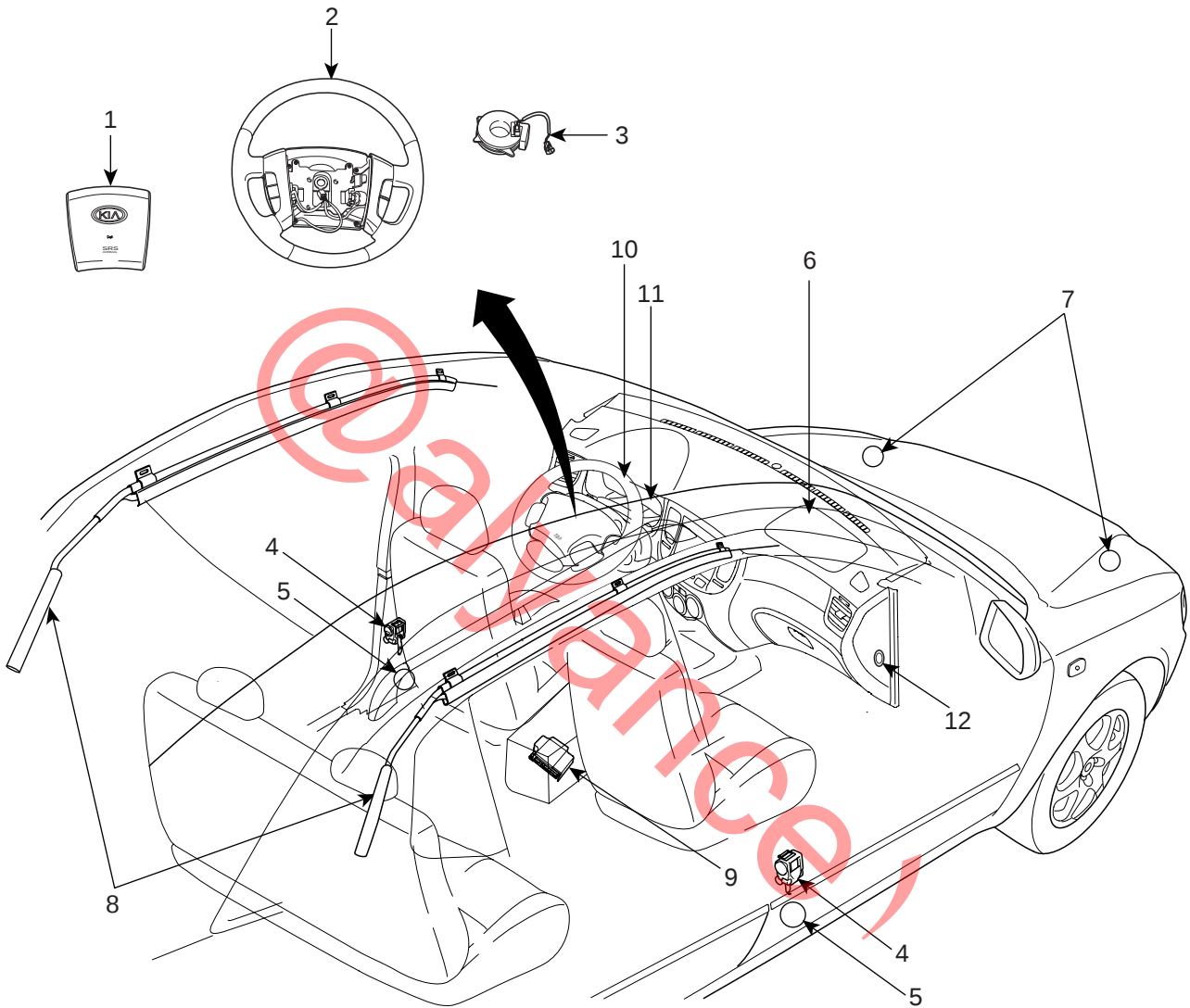
- SRSCM
- Deployed airbag(s)
- Side impact sensor(s) for the deployed side(s)
- SRS wiring harnesses

After the vehicle is completely repaired, confirm the SRS airbag system is OK.

- Turn the ignition switch ON, the SRS indicator should come on for about 6 seconds and then go off.

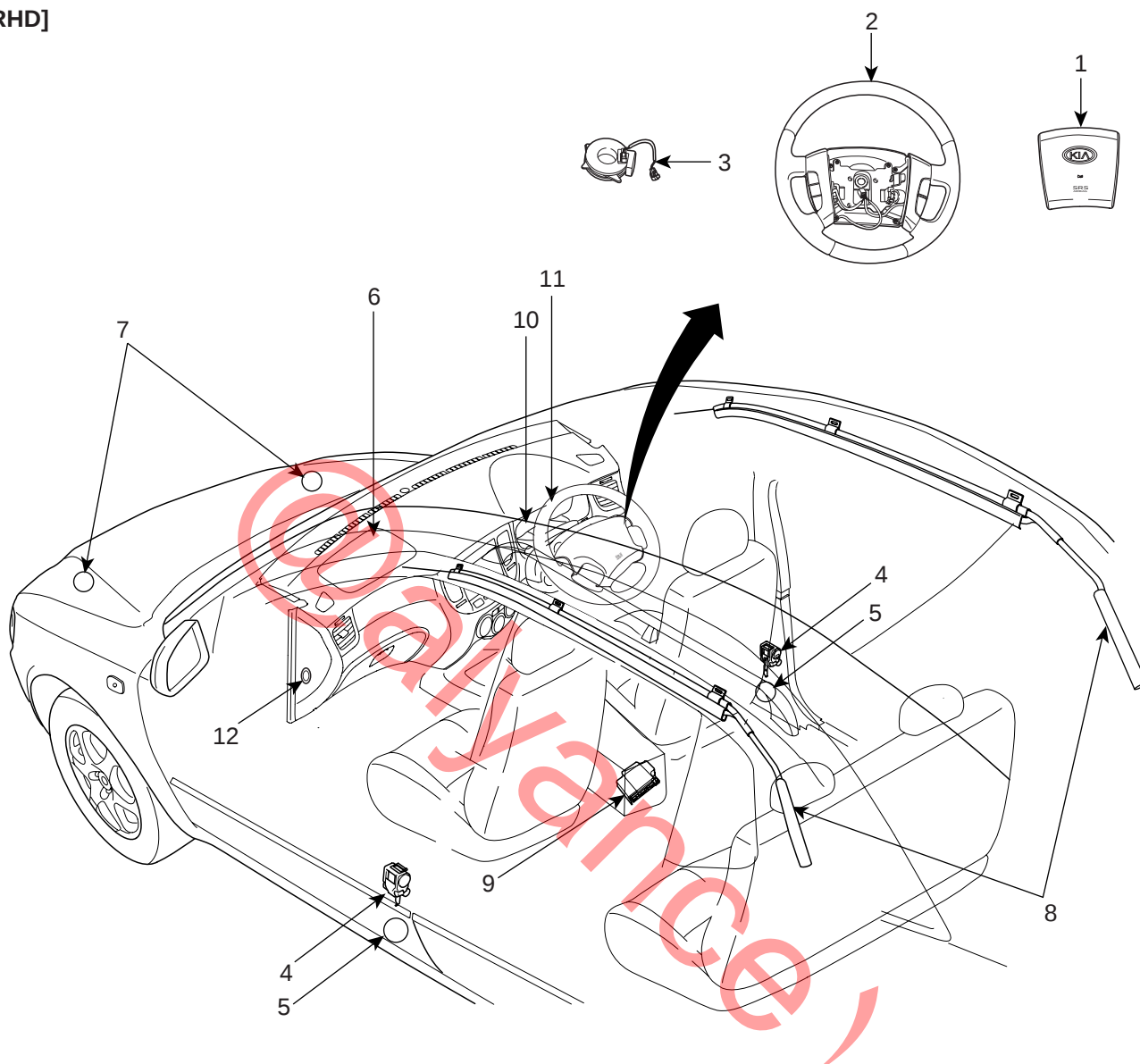
COMPONENTS E703CF82

[LHD]



- |                                 |                                                         |
|---------------------------------|---------------------------------------------------------|
| 1. Driver Airbag (DAB)          | 7. Front Impact Sensor (FIS)                            |
| 2. Steering Wheel               | 8. Curtain Airbag (CAB)                                 |
| 3. Clock Spring                 | 9. Supplemental Restraint System Control Module (SRSCM) |
| 4. Seat Belt Pretensioner (BPT) | 10. Airbag Warning Lamp                                 |
| 5. Side Impact Sensor (SIS)     | 11. Passenger Airbag Deactivation (PAD) Lamp            |
| 6. Passenger Airbag (PAB)       | 12. PAD Switch                                          |

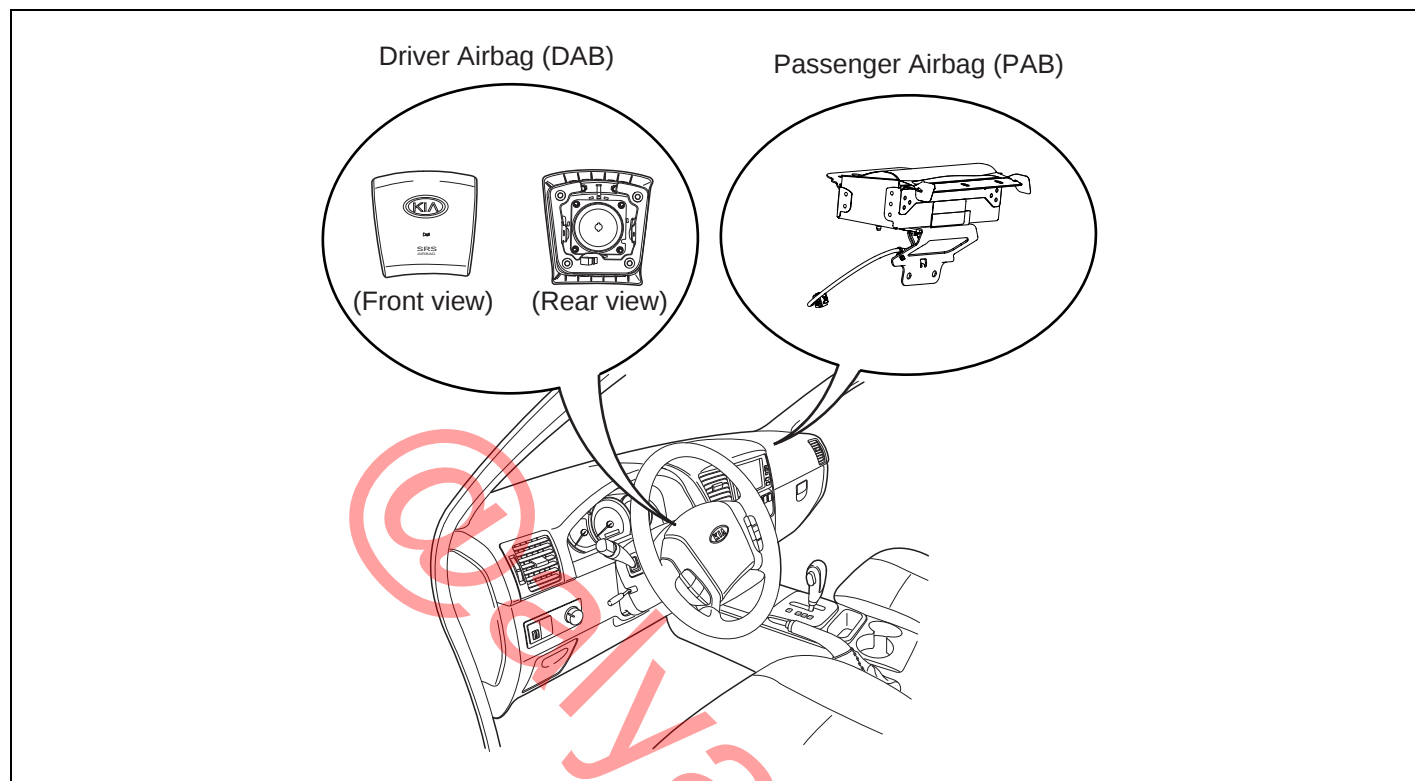
[RHD]



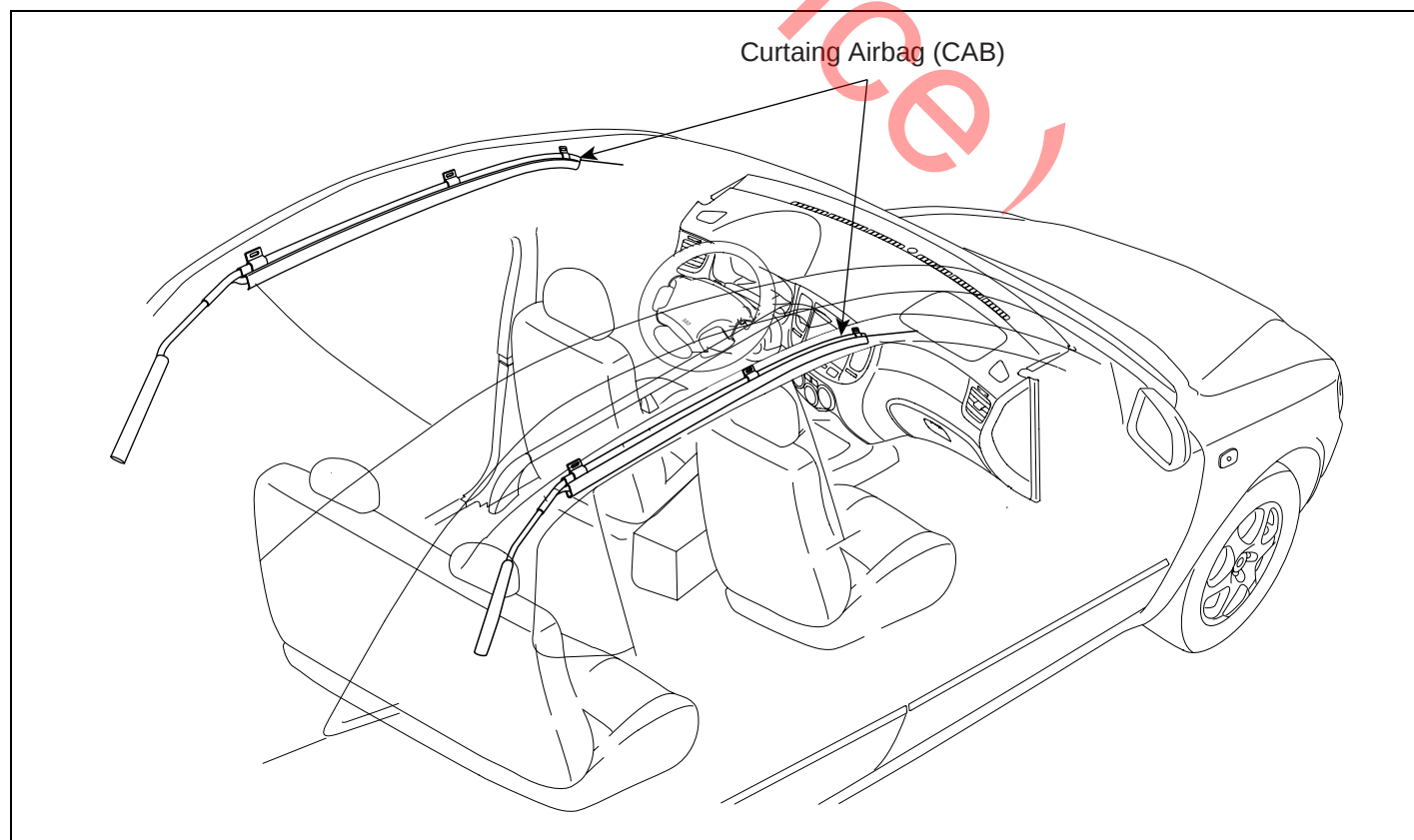
- |                                 |                                                         |
|---------------------------------|---------------------------------------------------------|
| 1. Driver Airbag (DAB)          | 7. Front Impact Sensor (FIS)                            |
| 2. Steering Wheel               | 8. Curtain Airbag (CAB)                                 |
| 3. Clock Spring                 | 9. Supplemental Restraint System Control Module (SRSCM) |
| 4. Seat Belt Pretensioner (BPT) | 10. Airbag Warning Lamp                                 |
| 5. Side Impact Sensor (SIS)     | 11. Passenger Airbag Deactivation (PAD) Lamp            |
| 6. Passenger Airbag (PAB)       | 12. PAD Switch                                          |

## COMPONENTS LOCATION

### DRIVER AIRBAG (DAB) / PASSENGER AIRBAG (PAB)



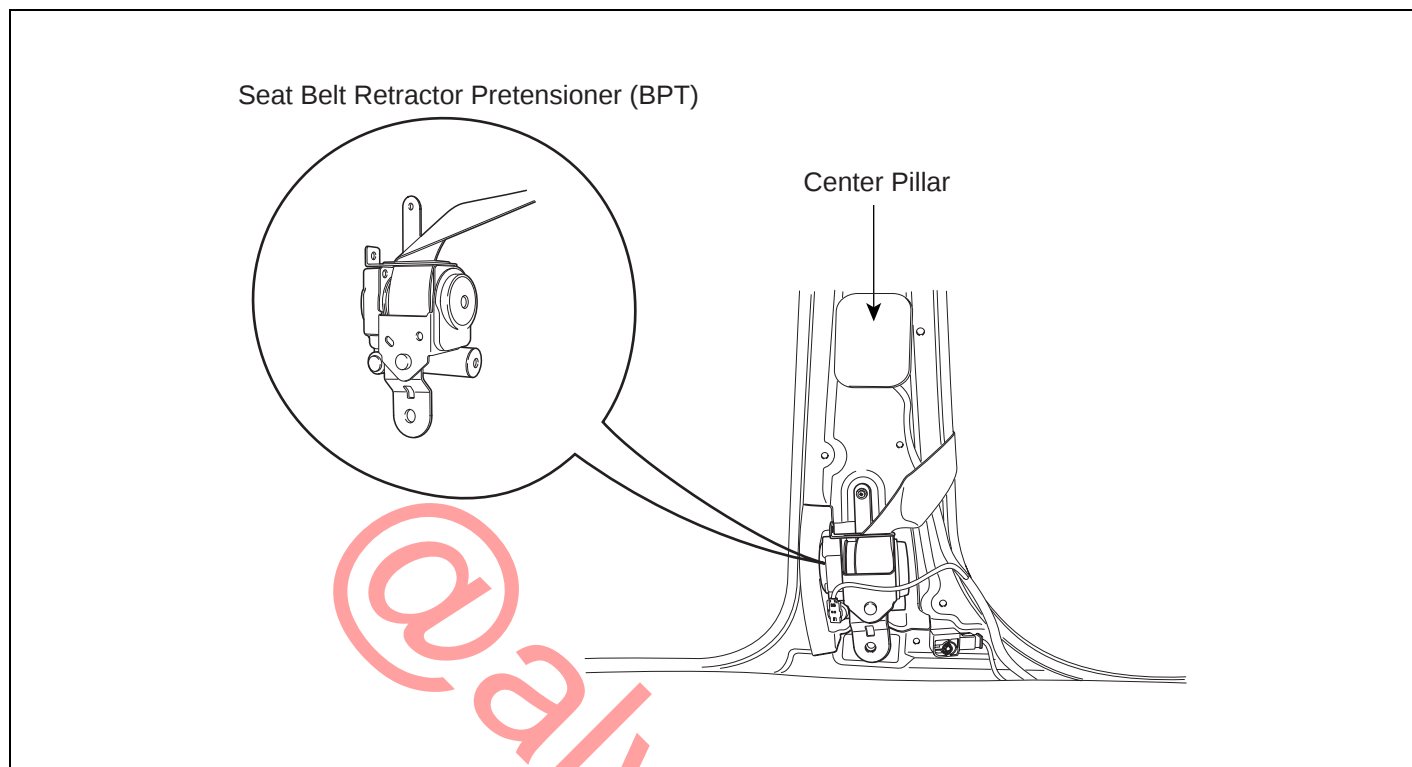
### CURTAIN AIRBAG (CAB)



GENERAL

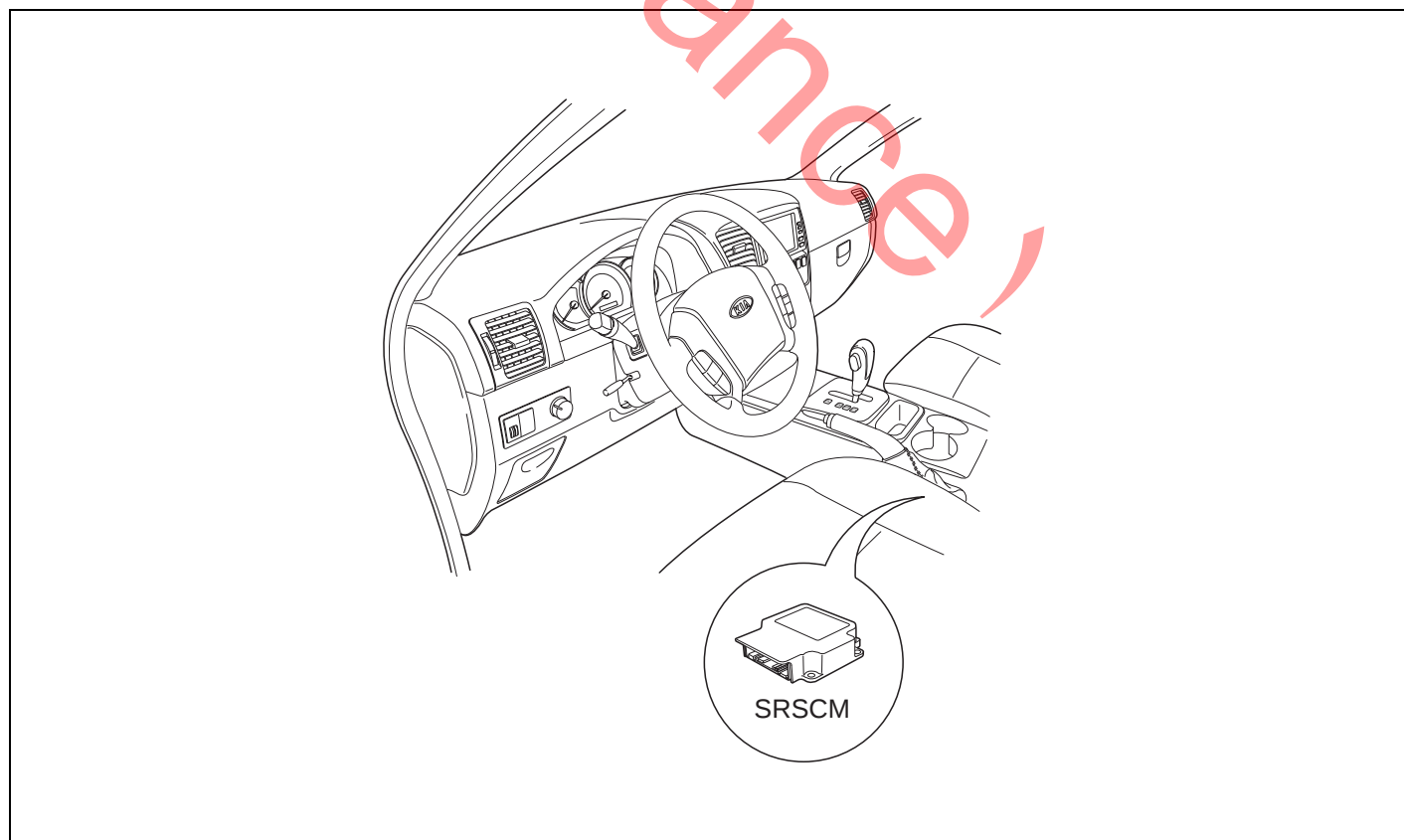
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SEAT BELT RETRACTOR PRETENSIONER (BPT)



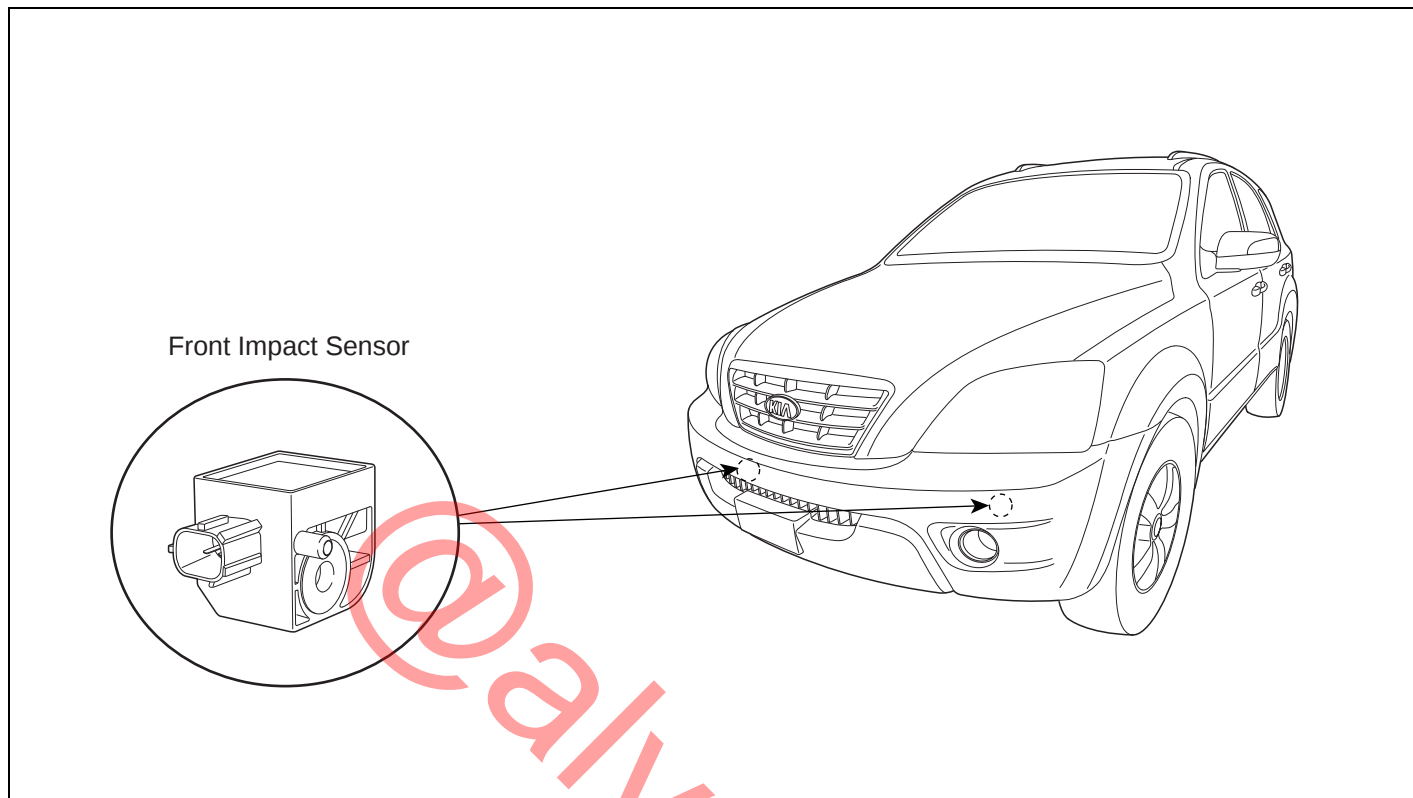
SBLRT6103L

SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE (SRSCM)

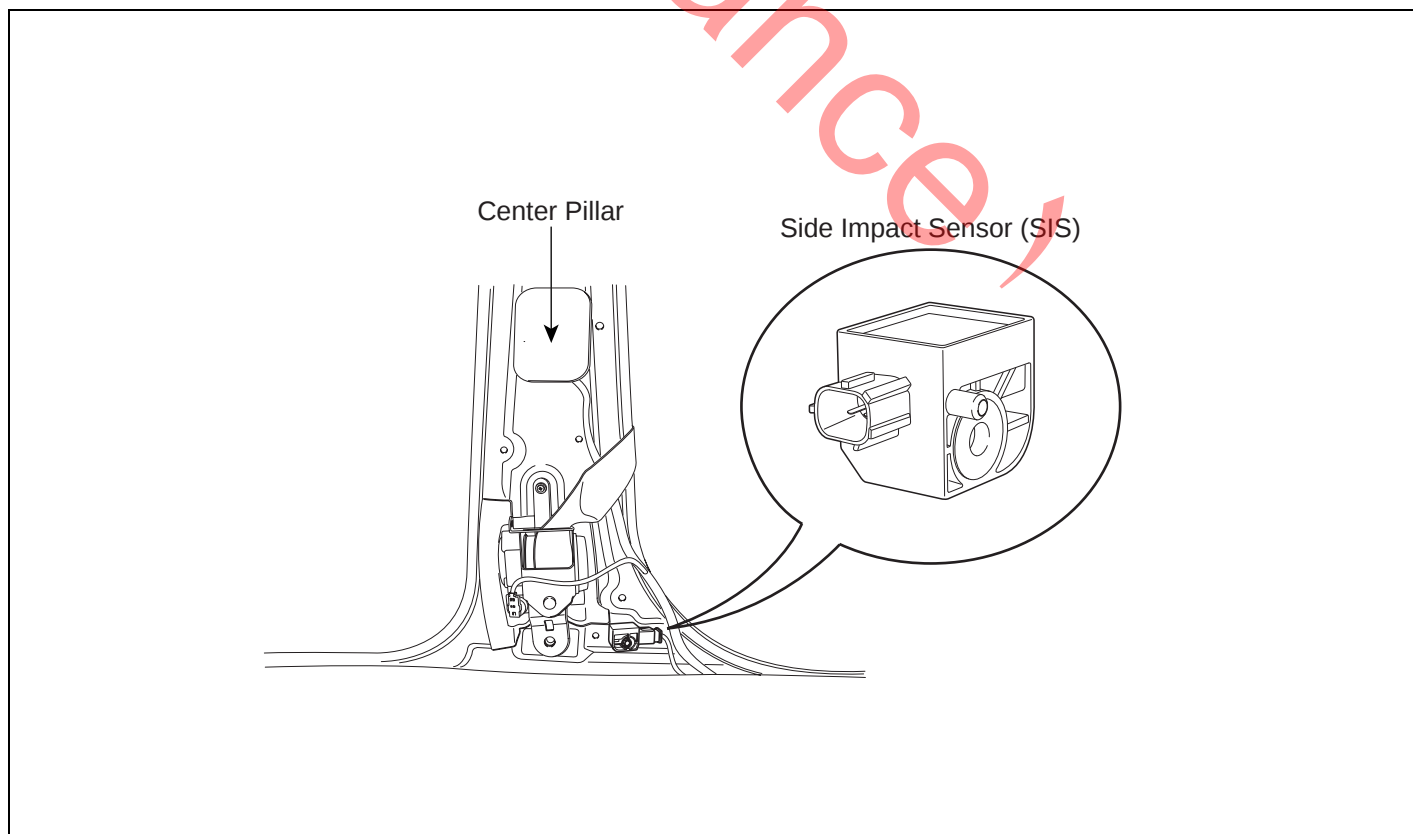


SBLRT6001D

FRONT IMPACT SENSOR (FIS)



SIDE IMPACT SENSOR (SIS)



## SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE(SRSCM)

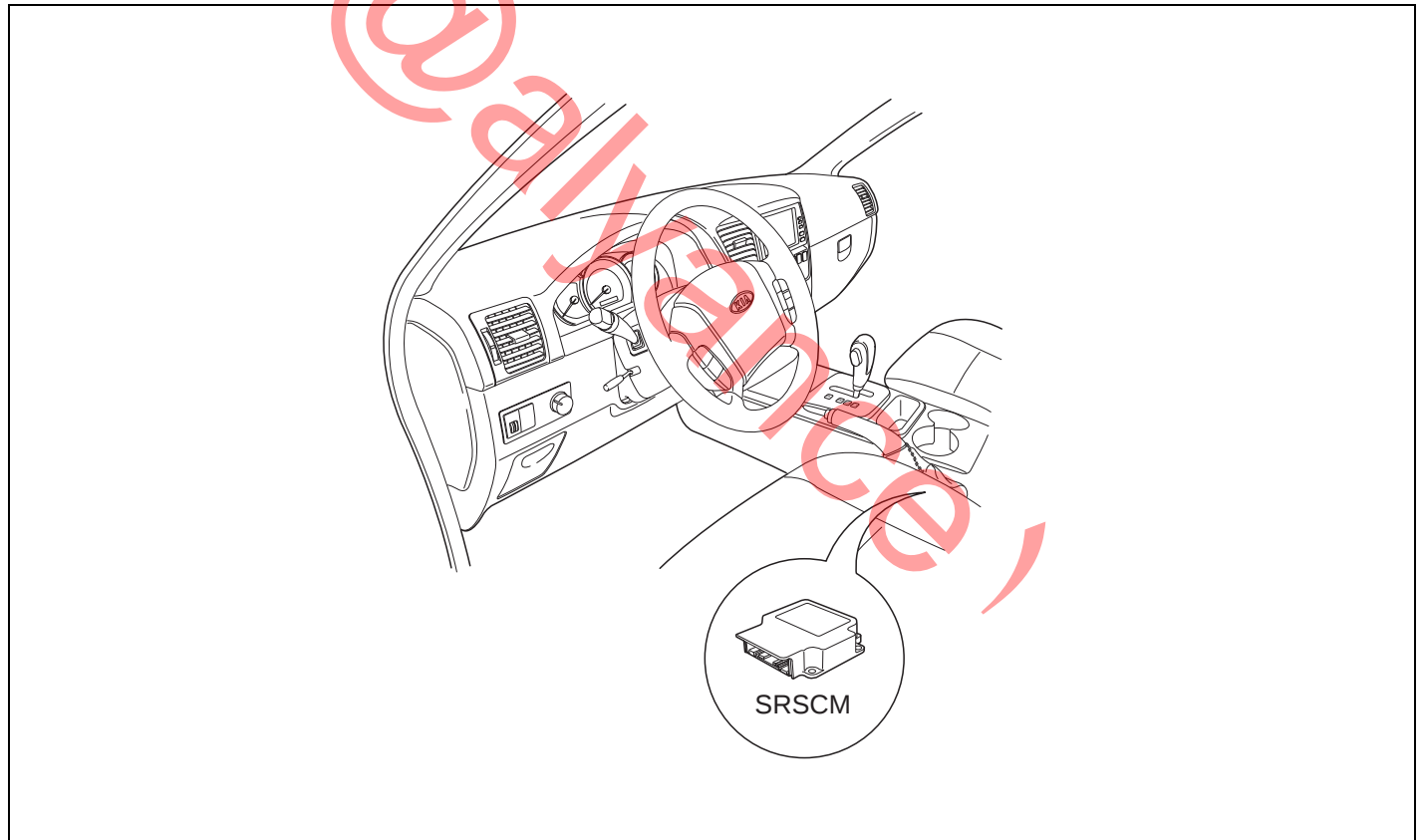
### SRS CONTROL MODULE

#### DESCRIPTION ECCF71AB

The primary purpose of the SRSCM (Supplemental Restraints System Control Module) is to discriminate between an event that warrants restraint system deployment and an event that does not. The SRSCM must decide whether to deploy the restraint system or not. After determining that pretensioners and/or airbag deployment is required, the SRSCM must supply sufficient power to the pretensioners and airbag igniters to initiate deployment.

The SRSCM determines that an impact may require deployment of the pretensioners and airbags from data obtained from impact sensors and other components in conjunction with a safing function. The SRSCM will not be ready to detect a crash or to activate the restraint system devices until the signals in the SRSCM circuitry stabilize. It is possible that the SRSCM could activate the safety restraint devices in approximately 2 seconds but is guaranteed to fully function after prove-out is completed. The SRSCM must perform a diagnostic routine and light a system readiness indicator at key-on. The system must perform a continuous diagnostic routine and provide fault annunciation through a warning lamp indicator in the event of fault detection. A serial diagnostic communication interface will be used to facilitate servicing of the restraint control system.

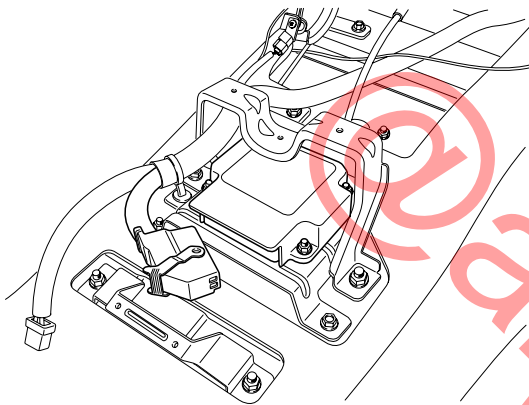
#### COMPONENTS EE414878



## REMOVAL

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1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable and wait for at least three minutes before beginning work.
3. Disconnect the DAB, PAB, CAB and BPT connectors.
4. Remove the floor console and heater ducts. (Refer to BD group)
5. Disconnect the SRSCM harness connector after pulling the connector locking lever.



SBLRT6002D

6. Remove the SRSCM mounting bolt (1EA) and nuts (2EA) from the SRSCM, then remove the SRSCM.

## INSTALLATION

E507F553

1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable and wait for at least three minutes before beginning work.
3. Install the SRSCM with the SRSCM mounting bolt and nuts.

---

Tightening torque (SRSCM Mounting bolt)  
: 1.0 ~ 1.4 kgf.m (10.2 ~ 13.8 Nm, 7.5 ~ 10.2 lb.ft)

---



### NOTE

*Use new mounting bolts when replacing the SRSCM after a collision.*

4. Connect the SRSCM harness connector completely with pushing the connector locking lever.
5. Install the heater ducts and floor console. (Refer to BD group)
6. Connect the DAB, PAB, CAB and BPT connectors.
7. Reconnect the battery negative cable.
8. After installing the SRSCM, confirm proper system operation:
  - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

## AIR BAG MODULE (DRIVER SIDE)

RT -19

# AIR BAG MODULE (DRIVER SIDE)

frontal crash occurs. The SRSCM determines deployment of Driver Airbag (DAB).



### CAUTION

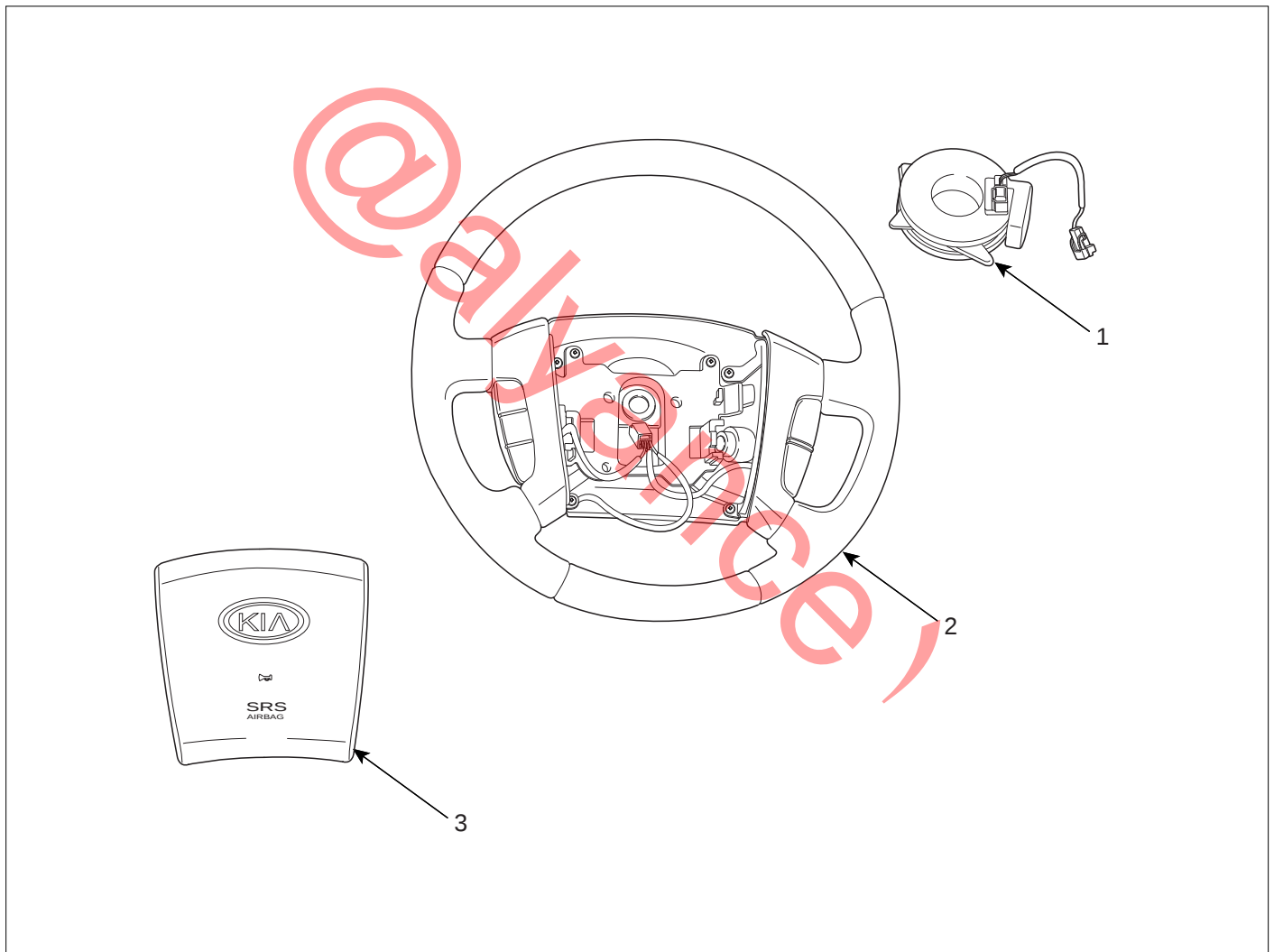
*Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.*

## AIR BAG MODULE AND CLOCK SPRING

### DESCRIPTION E19698E7

Driver Airbag (DAB) is installed in steering wheel and electrically connected to SRSCM via clockspring. It protects the driver from danger by deploying a bag when

### COMPONENTS E0833290



- 1. Clock Spring
- 2. Steering Wheel

- 3. Driver Airbag (DAB)

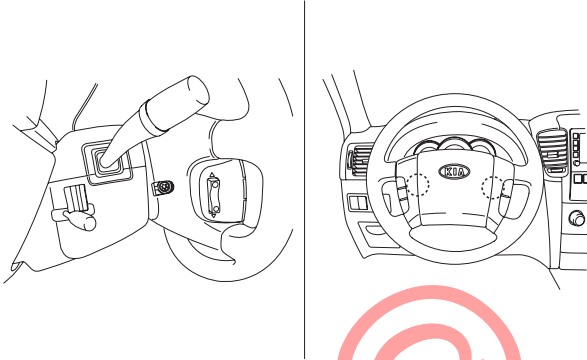
RT -20

RESTRAINTS

REMOVAL

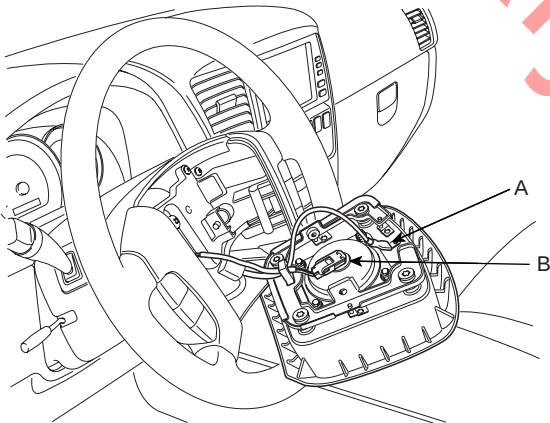
E0450A67

1. Disconnect the battery negative cable and wait for at least three minutes before beginning work.
2. Remove the airbag module mounting bolts(2EA).



SBLRT6508D

3. Disconnect the horn connector(A).



SBLRT6007D

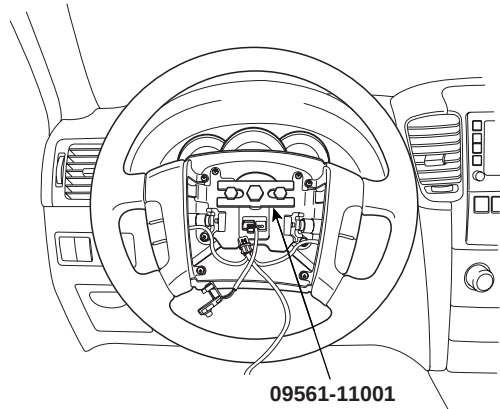
4. Release the connector locking pin, then disconnect the driver airbag module connector(B).



**CAUTION**

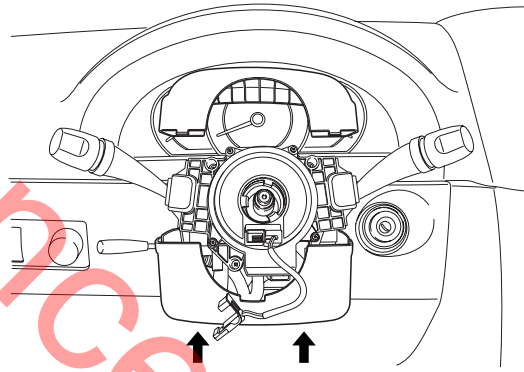
**The removed airbag module should be stored in a clean, dry place with the pad cover face up.**

5. Remove the steering wheel with SST (SST No. 09561-11001) after unfastening the mounting nut.



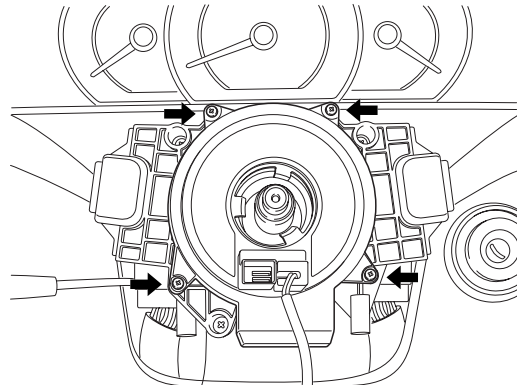
SBLRT6010D

6. Remove the steering wheel column cover after unscrewing 3 screws.



SBLRT6011D

7. Unscrew the clock spring tightening screws. (4EA)

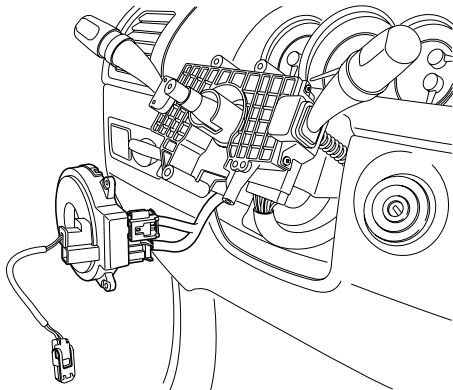


SBLRT6012D

## AIR BAG MODULE (DRIVER SIDE)

RT -21

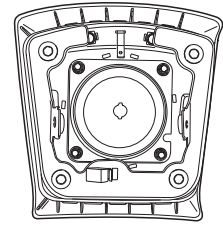
8. Disconnect the clock spring wiring harness and the horn wiring harness connector from the clock spring.
4. Check airbag inflator case for dents, cracks or deformities.



SBLRT6013D



(Front view)



(Rear view)

SBLRT6509L

### INSPECTION

E043119F

#### DRIVER AIRBAG (DAB)

If any improper parts are found during the following inspection, replace the airbag module with a new one.



#### CAUTION

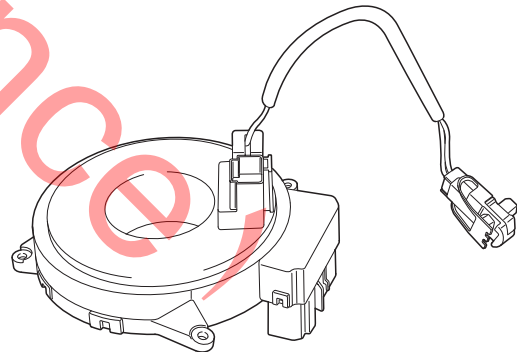
**Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.**

1. Check pad cover for dents, cracks or deformities.
2. Check the airbag module for denting, cracking or deformation.
3. Check hooks and connectors for damage, terminals for deformities, and harness for binds.

5. Install the airbag module to the steering wheel to check for fit or alignment with the wheel.

### CLOCKSPRING

1. If, as a result of the following checks, even one abnormal point is discovered, replace the clock spring with a new one.
2. Check connectors and protective tube for damage, and terminals for deformities.



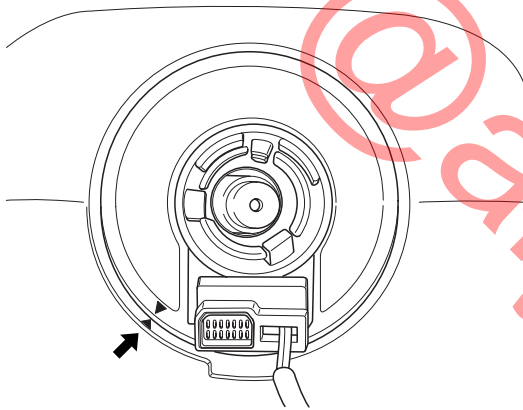
SBLRT6015D

## RT -22

## RESTRAINTS

### INSTALLATION EE7BDA1C

1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable from battery and wait for at least three minutes before beginning work.
3. Connect the clock spring harness connector and horn harness connector to the clock spring.
4. Install the clock spring with 4 screws.
5. Set the center position by getting marks between the clock spring and the cover into line. Make an array the mark ( ) by turning the clock spring clockwise to the stop and then 2.4 revolutions counterclockwise.



SBLRT6014D

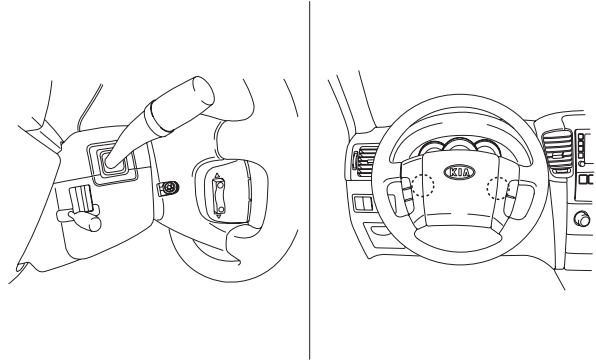
6. Install the steering wheel column cover and the steering wheel. (Refer to ST group)
7. Connect the Driver Airbag (DAB) module connector and horn connector, then install the Driver Airbag (DAB) module on the steering wheel.

8. Secure the Driver Airbag (DAB) with the new mounting bolts.

---

Tightening torque (DAB Mounting Bolt)  
: 0.8 ~ 1.1 kgf.m (7.9 ~ 10.8 Nm, 5.8 ~ 8.0 lb.ft)

---



SBLRT6508D

9. Connect the battery negative cable.
10. After installing the airbag, confirm proper system operation:
  - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.
  - Make sure horn button works.

## AIR BAG MODULE (PASSENGER SIDE)

RT -23

### AIR BAG MODULE (PASSENGER SIDE)

### AIR BAG MODULE

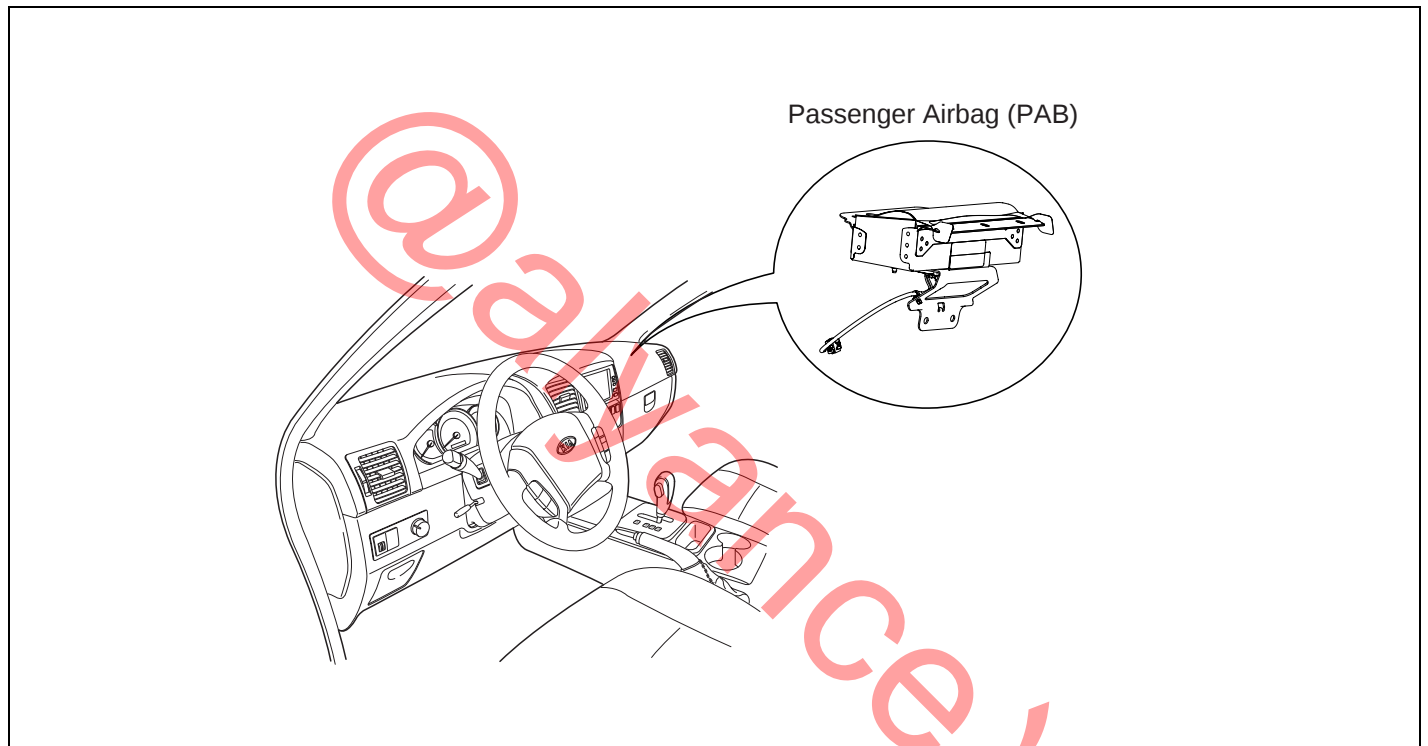
#### DESCRIPTION E9593A37

The passenger Airbag (PAB) is installed inside the crash pad and protects the front passenger in the event of a frontal crash. The SRSCM determines if and when to deploy the PAB.

#### CAUTION

*Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.*

#### COMPONENTS EF548B7A



SBLRT6130L

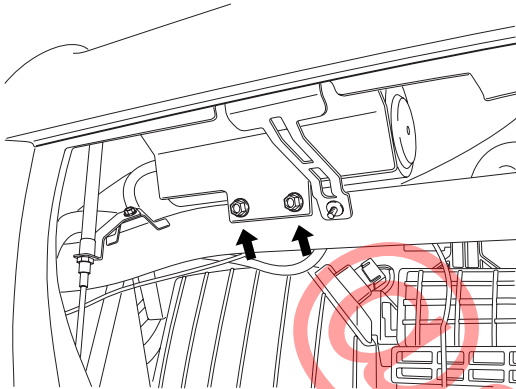
## RT -24

## RESTRAINTS

### REMOVAL

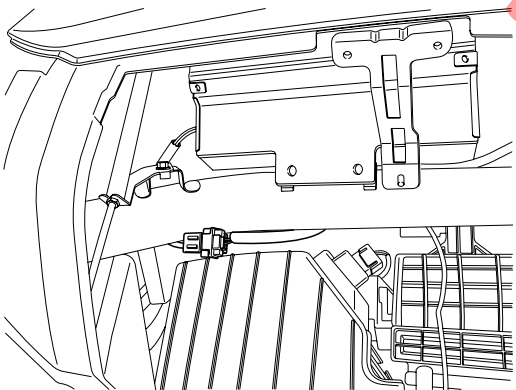
E4EB22D1

1. Disconnect the battery negative cable and wait for at least three minutes before beginning work.
2. Remove the glove box. (Refer to BD group)
3. Remove the PAB mounting bolts (2EA).



SBLRT6017D

4. Disconnect the PAB module connector.



SBLRT6018D

5. Remove the crash pad. (Refer to BD group)



#### NOTE

If the crash pad is damaged when the PAB is deployed, replace the damaged crash pad and PAB together.

6. Remove the heater duct from the crash pad.
7. Remove the mounting nuts(6EA) from the crash pad. Then remove the passenger airbag.



#### CAUTION

The removed airbag module should be stored in a clean and dry place with the pad cover face up.

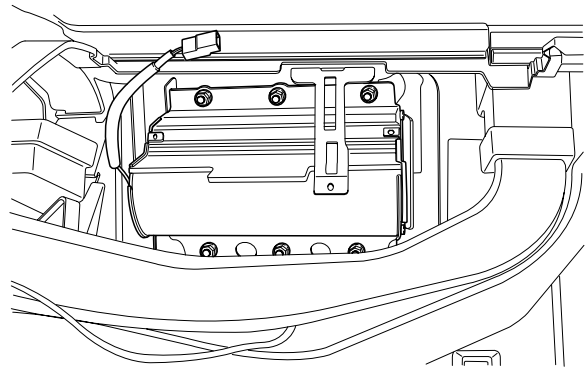
### INSTALLATION

E15B14BB

1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable from battery and wait for at least three minutes before beginning work.
3. Place a Passenger Airbag (PAB) on the crash pad and tighten the Passenger Airbag (PAB) mounting nuts.

Tightening torque

: 0.9 ~ 1.4 kgf.m (8.8 ~ 13.7 N.m, 6.5 ~ 10.1 lb.ft)



SBLRT6019D

4. Install the heater duct to the crash pad.
5. Install the crash pad. (Refer to BD group)
6. Tighten the PAB mounting bolt.

Tightening torque

: 1.9 ~ 2.7 kgf.m (18.6 ~ 26.5 N.m, 13.7 ~ 19.5 lb.ft)

7. Connect the Passenger Airbag (PAB) harness connector to the SRS main harness connector.
8. Reinstall the glove box. (Refer to BD group)
9. Reconnect the battery negative cable.
10. After installing the Passenger Airbag (PAB), confirm proper system operation:
  - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

## AIR BAG MODULE (CURTAIN AIR BAG)

RT -25

### AIR BAG MODULE (CURTAIN AIR BAG)

### AIR BAG MODULE

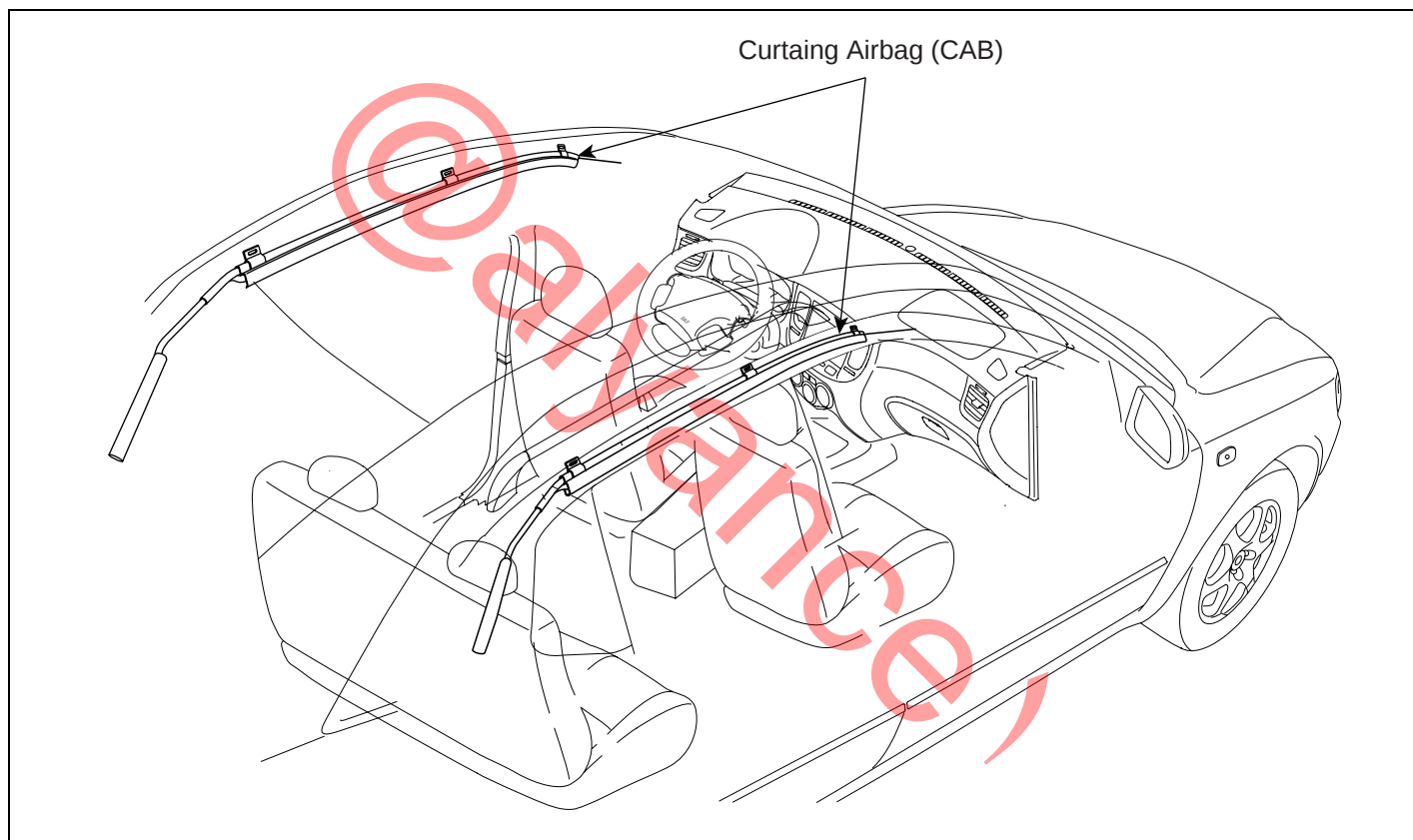
#### DESCRIPTION EF7FBAD3

Curtain airbags are installed inside the headliner (LH and RH) and protect the driver and passenger from danger when side crash occurs. The SRSCM determines deployment of curtain airbag by using side impact sensor (SIS) signal.

#### CAUTION

*Never attempt to measure the circuit resistance of the airbag module even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.*

#### COMPONENTS E4B3122F

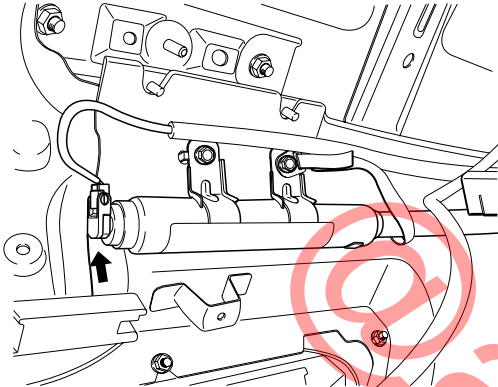


SBLRT6102L

## REMOVAL

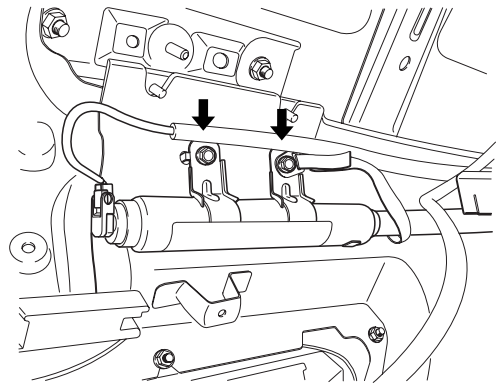
E41D5D56

1. Disconnect the battery negative cable and wait for at least 3 minutes before beginning work.
2. Remove the following parts. (Refer to BD group)
  - Side trim, Roof trim
3. Disconnect the Curtain Airbag harness connector.



SBLRT6004D

4. After loosening the mounting bolts(6EA) and nut (1EA) remove the curtain airbag.



SBLRT6511D

## INSTALLATION

E50B5670

1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable and wait for at least three minutes.
3. Install a Curtain Airbag (CAB) on the mounting bracket.
4. Tighten the CAB mounting bolts (6EA) and nut (1EA).

Tightening torque

: 0.8 ~ 1.2 kgf.m(7.8 ~ 11.8 Nm, 5.8 ~ 8.7 lb.ft)



### CAUTION

- **Never twist the airbag module when installing it. If the module is twisted, airbag module may operate abnormally.**

5. Connect the CAB connector.
6. Install the following parts. (Refer to BD group)
  - Side trim, Roof trim
7. Reconnect the battery negative cable.
8. After installing the Curtain Airbag (CAB), confirm proper system operation:
  - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

## SEAT BELT PRETENSIONER

RT -27

## SEAT BELT PRETENSIONER

## SEAT BELT PRETENSIONER

### DESCRIPTION E4167EBA

The Seat Belt Pretensioners (BPT) are installed inside Center Pillar (LH & RH). When a vehicle crashes with a certain degree of frontal impact, the pretensioner seat belt helps to reduce the severity of injury to the front seat occupants by retracting the seat belt webbing. This prevents the front occupants from thrusting forward and hitting the

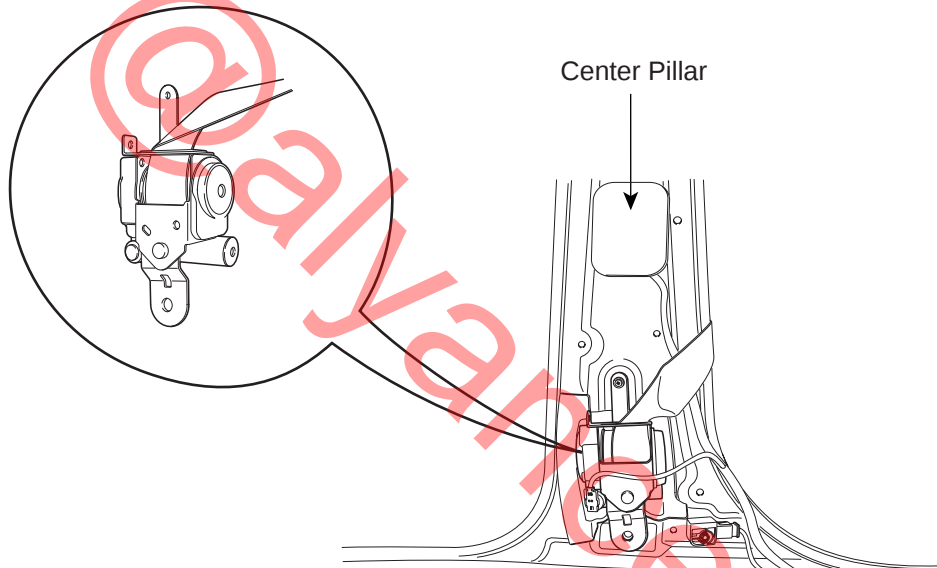
steering wheel or the instrument panel when the vehicle crashes.

### CAUTION

***Never attempt to measure the circuit resistance of the Seat Belt Pretensioner (BPT) even if you are using the specified tester. If the circuit resistance is measured with a tester, the pretensioner will be ignited accidentally. This will result in serious personal injury.***

### COMPONENTS E13C3CFE

Seat Belt Retractor Pretensioner (BPT)



SBLRT6103L

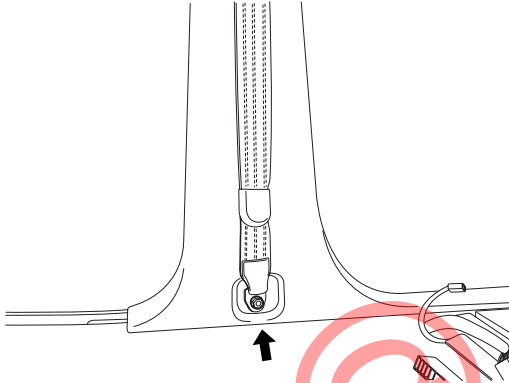
RT -28

RESTRAINTS

REMOVAL

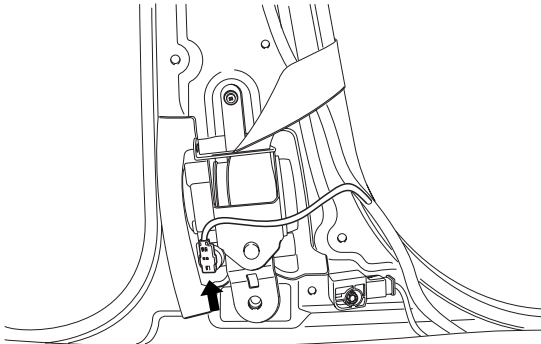
E3B165BB

1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.
2. Remove the lower anchor bolt.



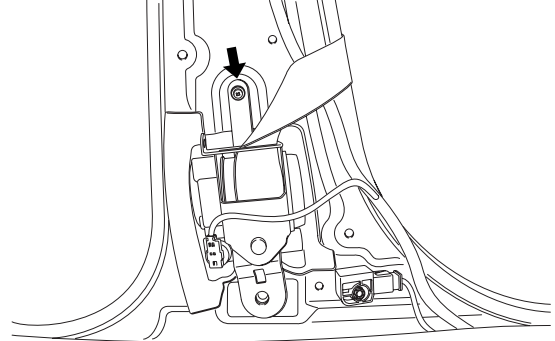
SBLRT6022D

3. Remove the following parts. (Refer to BD group)
  - Door scuff trim, Center pillar trim
4. Remove the upper anchor bolt.
5. Disconnect the Seat Belt Pretensioner connector.



SBLRT6024D

6. Loosen the Seat Belt Pretensioner mounting bolt and remove the Seat Belt Pretensioner.



SBLRT6532D

INSTALLATION

E3B35607

1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable and wait for at least three minutes.
3. Install the Seat Belt Pretensioner (BPT) with a bolt.

Tightening torque  
: 4.0 ~ 5.5 kgf.m (39.2 ~ 53.9 Nm, 28.9 ~ 39.8 lb.ft)

4. Connect the Seat Belt Pretentioner (BPT) connector.
5. Install the upper anchor bolts.

Tightening torque (Seat Belt Anchor Bolt)  
: 4.0 ~ 5.5 kgf.m (39.2 ~ 53.9 Nm, 28.9 ~ 39.8 lb.ft)

6. Install the center pillar trim.
7. Install the door scuff trim.
8. Install the lower anchor bolt.
9. Reconnect the battery negative cable.
10. After installing the Seat Belt Pretensioner (BPT), confirm proper system operation:
  - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

## SRS CONTROL SYSTEM

RT -29

# SRS CONTROL SYSTEM

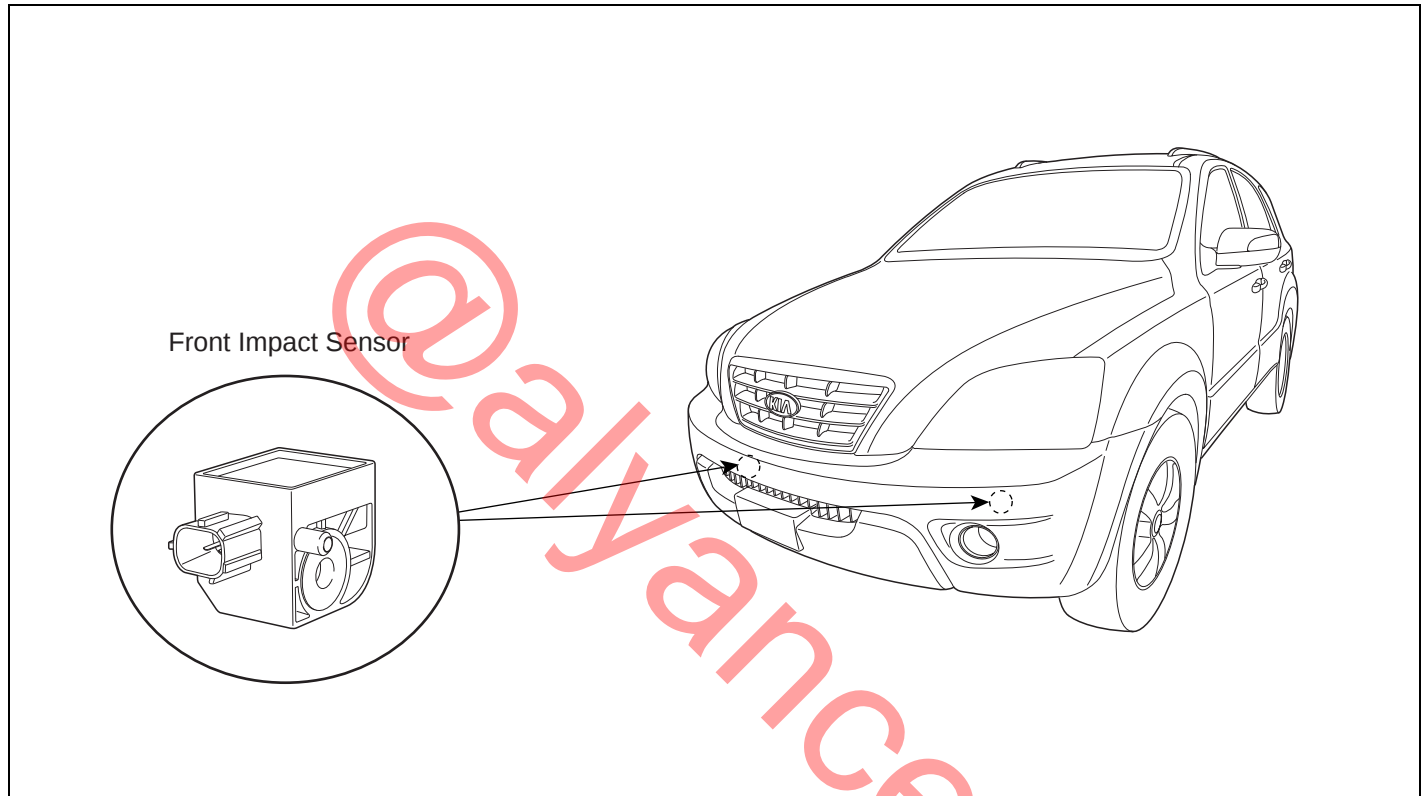
## FRONT IMPACT SENSOR (FIS)

to a collision at its mounting location. The primary purpose of the Front Impact Sensor (FIS) is to provide an indication of a collision. The Front Impact Sensor(FIS) sends acceleration data to the SRSCM.

### DESCRIPTION EBEE040F

The front impact sensor (FIS) is installed in the side member. They are remote sensors that detect acceleration due

### COMPONENTS E603A5DC



SBLRT6105L

## REMOVAL

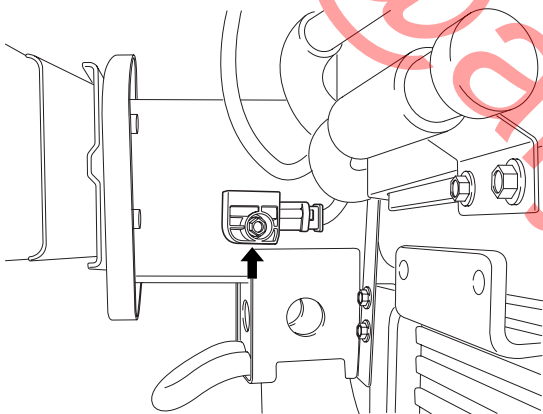
EDE19F4F



### CAUTION

- **Removal of the airbag must be performed according to the precautions/ procedures described previously.**
- **Before disconnecting the front impact sensor connector, disconnect the front airbag connector(s).**
- **Do not turn the ignition switch ON and do not connect the battery cable while replacing the front impact sensor.**

1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.
2. Remove the Front bumper. (Refer to BD group)
3. Remove the Front Impact Sensor mounting bolt.



SBLRT6026D

4. Disconnect the Front Impact Sensor connector.

## INSTALLATION

E50C4826



### CAUTION

- **Do not turn the ignition switch ON and do not contact the battery cable while replacing the front impact sensor.**

1. Install the new Front Impact Sensor.
2. Tighten the Front Impact Sensor mounting bolt.

Tightening torque

: 1.0 ~ 1.4 kgf.m (10.2 ~ 13.8 Nm, 7.5 ~ 10.2 lb.ft)

3. Connect the Front Impact Sensor connector.
4. Install the front bumper. (Refer to BD group)
5. Reconnect the battery negative cable.
6. After installing the Front Impact Sensor, confirm proper system operation: Turn the ignition switch ON the SRS indicator light should be turned on for about six seconds and then go off.

## SRS CONTROL SYSTEM

RT -31

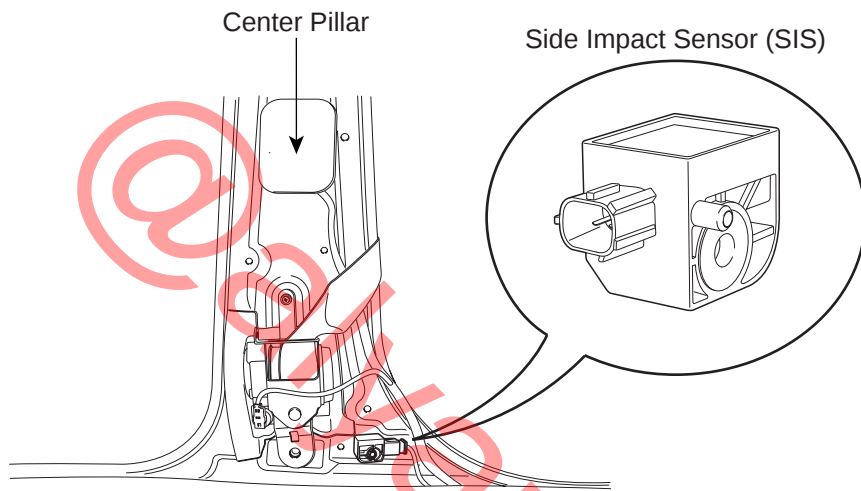
### SIDE IMPACT SENSOR (SIS)

#### DESCRIPTION E49F823B

The Side Impact Sensor (SIS) system consists of two front SIS which are installed in the center pillar (LH and RH). They are remote sensors that detect acceleration due to

collision at their mounting locations. The primary purpose of the Side Impact Sensor (SIS) is to provide an indication of a collision. The Side Impact Sensor (SIS) sends acceleration data to the SRSCM.

#### COMPONENTS E86DACCB



SBLRT6106L

## REMOVAL

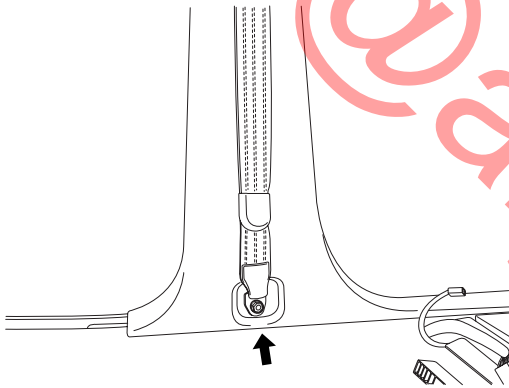
E34BD0EF



### CAUTION

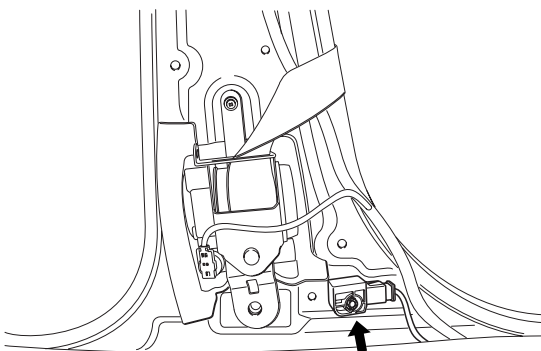
- **Removal of the airbag must be performed according to the precautions/procedures described previously.**
- **Before disconnecting the side impact sensor connector(s), disconnect the side airbag connector(s).**
- **Do not turn the ignition switch ON and do not connect the battery cable while replacing the side impact sensor.**

1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.
2. Remove the lower anchor bolt.



SBLRT6022D

3. Remove the following parts. (Refer to BD group)
  - Door scuff trim, Center pillar trim
4. Disconnect the Side Impact Sensor connector and remove the Side Impact Sensor mounting bolt.



SBLRT6522D

## INSTALLATION

E88CF110



### CAUTION

- **Do not turn the ignition switch ON and do not connect the battery cable while replacing the side impact sensor.**

1. Install the new Side Impact Sensor with the bolt then connect the SRS harness connector to the Side Impact Sensor.

Tightening torque

: 1.0 ~ 1.4 kgf.m (10.2 ~ 13.8 Nm, 7.5 ~ 10.2 lb.ft)

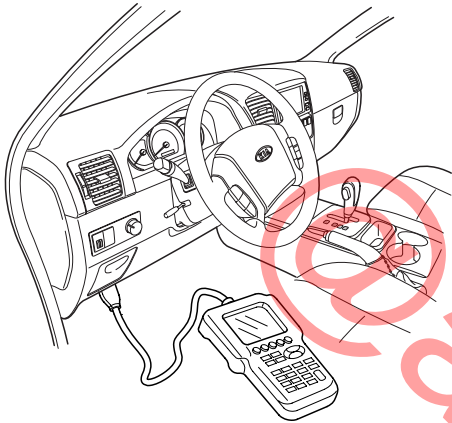
2. Install the center pillar trim. (Refer to BD group)
3. Install the door scuff trim. (Refer to BD group)
4. Install the lower anchor bolt.
5. Reconnect the battery negative cable.
6. After installing the Side Impact Sensor, confirm proper system operation: Turn the ignition switch ON, the SRS indicator light should be turned on for about six seconds and then go off.

## TROUBLESHOOTING

### DESCRIPTION E24ED7B0

#### HI-SCAN CHECK

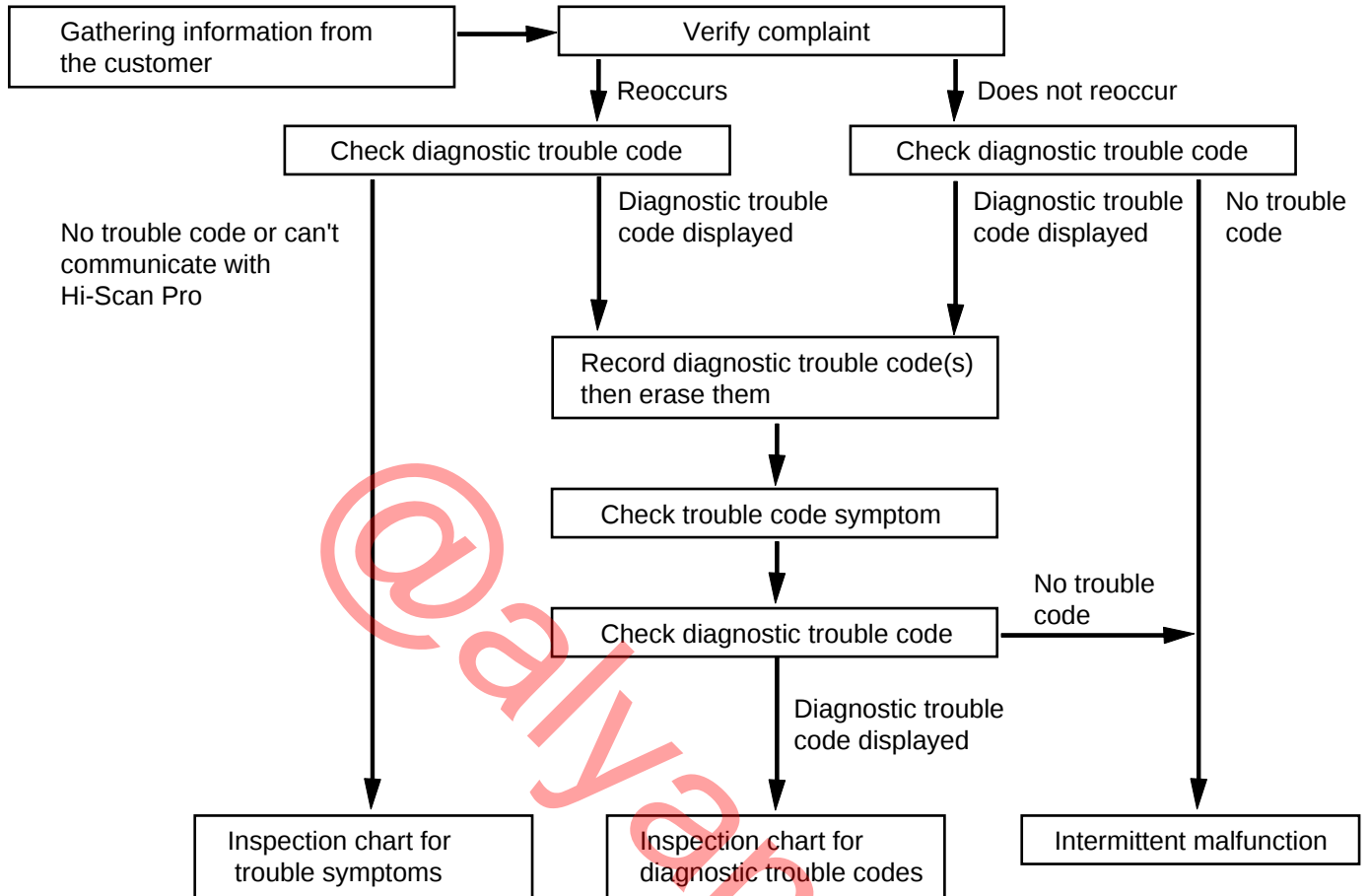
1. Turn the ignition switch off.
2. Connect the Hi-Scan Pro connector to the data link connector located under the crash pad.



SBLRT6899D

3. Turn the ignition switch on and power on the Hi-Scan Pro.
4. Read DTCs.
5. Find and repair the trouble, and clear the DTCs using Hi-Scan Pro.
6. Disconnect the Hi-Scan Pro.
7. Confirm proper system operation ;
  - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

DIAGNOSTIC TROUBLESHOOTING FLOW



## TROUBLESHOOTING

RT -35

### TERMINAL & CONNECTOR INSPECTION

Be sure to perform "TERMINAL & CONNECTOR INSPECTION" before doing "INSPECTION PROCEDURE" for troubleshooting of each DTC.

1. Visually inspect all connectors related to the affected circuit for damage and secure connection.
2. Inspect terminals for damage and corrosion.



#### CAUTION

**Avoid damaging connectors during the inspection process.**

3. Are any problems found?

**NO**

Go to next step (INSPECTION PROCEDURE).

**YES**

After repairing the trouble part, check whether DTC occurs or not.

### PREPARATION OF INSPECTION

Refer to the following steps while doing "INSPECTION PROCEDURE" which is described in the DTC troubleshooting section.

1. Turn the ignition switch to LOCK.
2. Disconnect the battery negative cable from the battery and wait for at least 3 minutes.
3. Remove the DAB module and disconnect the DAB connector.
4. Disconnect the connectors of the PAB, CAB, BPT, FIS and SIS.
5. Disconnect the SRSCM connector.

### CHECKING OF SHORT OR OPEN CIRCUIT

Refer to the following tips for checking of short or open circuit.

1. Shorting bar is located on the upper side of pin number from 2 to 25 of SRSCM connector.

2. When checking the short circuit shorting bar must be opened. Use a plastic clip to put into as a shorting bar opener for disconnecting shorting bar.
3. Use SST Dummy adapter (0957A-2G000) to measure resistance or voltage for checking of short or open circuit. Plug it into DAB (BPT) connector to avoid enlarging or damaging the connector pins.

### CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

1. Install the DAB module and connect the DAB connector.
2. Connect the connector of the PAB, CAB, BPT, FIS and SIS.
3. Connect the SRSCM connector.
4. Connect the battery negative cable to the battery.
5. Connect a Hi-Scan(Pro) to the data link connector.
6. Turn the ignition switch to ON.
7. Clear the DTC stored in the SRSCM memory with the Hi-Scan(Pro)
8. Turn the ignition switch to LOCK and wait for at least 30 seconds.
9. Turn the ignition switch to ON and wait for at least 30 seconds.
10. Check the vehicle again with the Hi-Scan(Pro). Does the above DTC(s) go off?

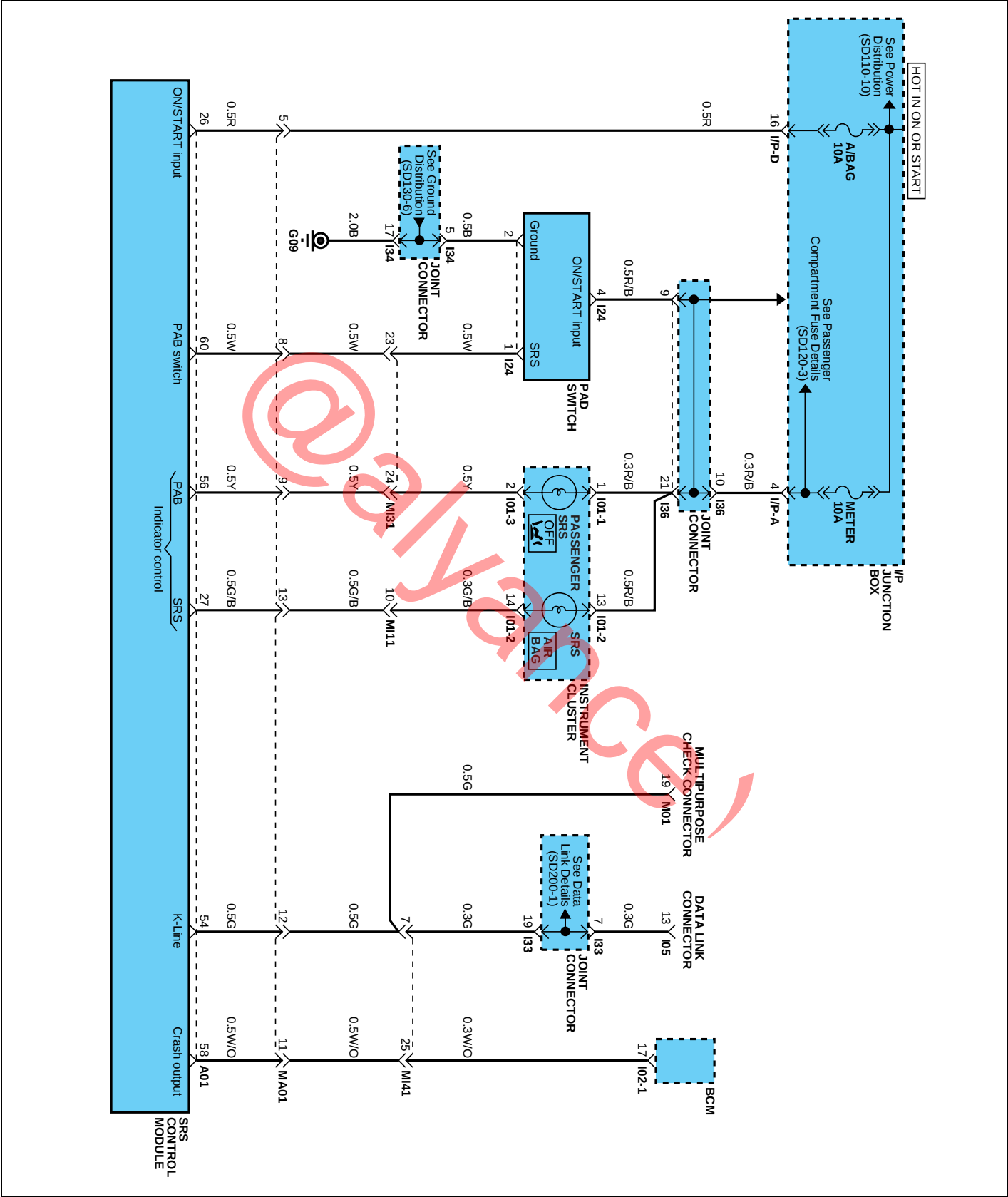
**YES**

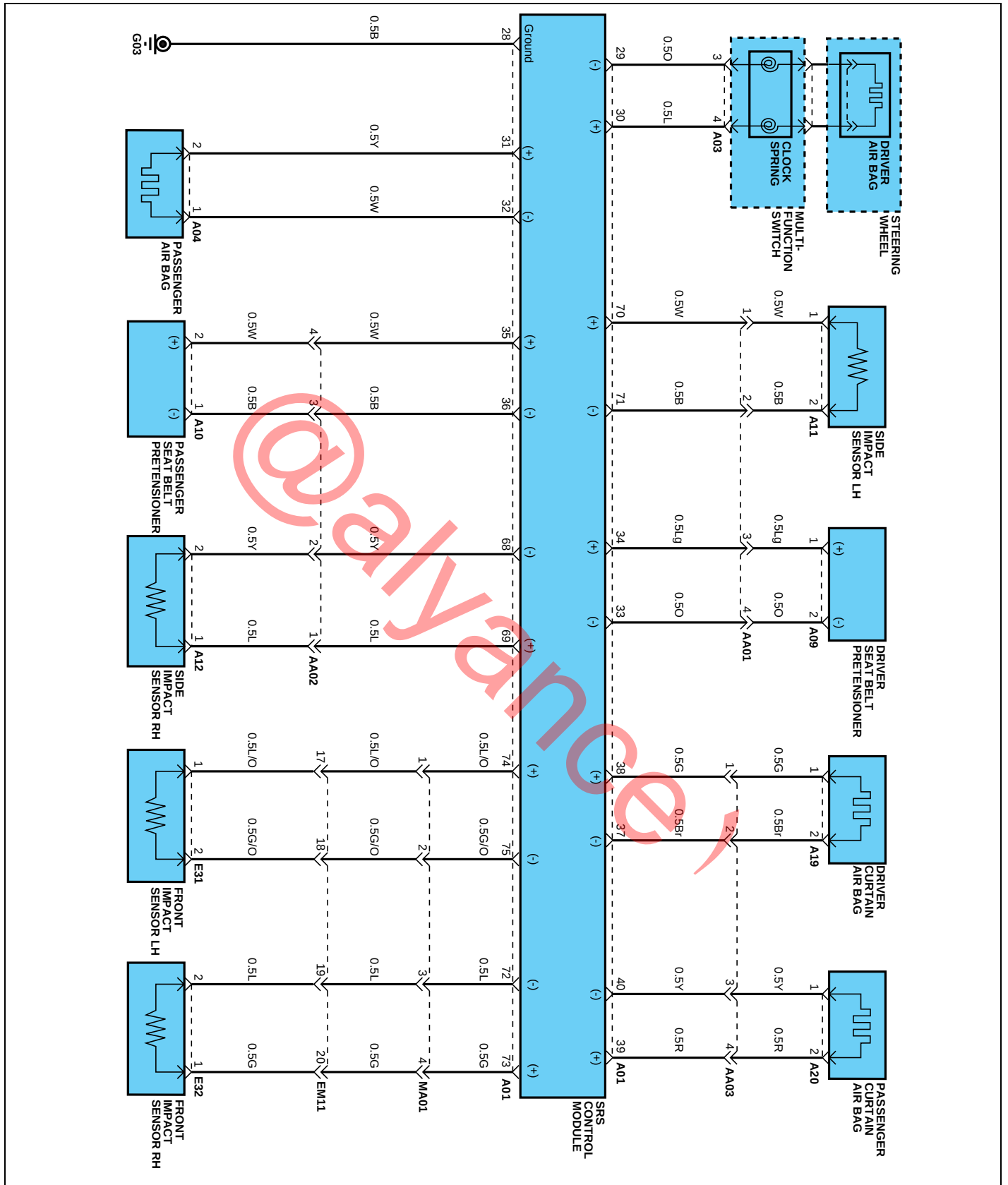
Problem is intermittent or was repaired and SRSCM memory was not cleared.

**NO**

Replace the SRSCM with a new one and then check the vehicle again. At this time, if the vehicle normally operates with a new one, the fault may be the SRSCM. Replace the SRSCM.

CIRCUIT DIAGRAM E4BAAC09







## TROUBLESHOOTING

RT -39

### DIAGNOSTIC TROUBLE CODES (DTC)

| DTC   | FAULT DESCRIPTION                                                 | REMARK  |
|-------|-------------------------------------------------------------------|---------|
| B1101 | Battery Voltage High                                              | RT - 41 |
| B1102 | Battery Voltage Low                                               | RT - 41 |
| B1103 | Communication Voltage too Low                                     | RT - 41 |
| B1326 | Front Impact Sensor [Driver] Short to Ground                      | RT - 44 |
| B1327 | Front Impact Sensor [Driver] Short to Battery                     | RT - 46 |
| B1328 | Front Impact Sensor [Driver] Defect                               | RT - 48 |
| B1329 | Front Impact Sensor [Driver] Communication Error                  | RT - 48 |
| B1330 | Front Impact Sensor [Driver] Wrong ID                             | RT - 51 |
| B1331 | Front Impact Sensor [Passenger] Short to Ground                   | RT - 44 |
| B1332 | Front Impact Sensor [Passenger] Short to Battery                  | RT - 46 |
| B1333 | Front Impact Sensor [Passenger] Defect                            | RT - 48 |
| B1334 | Front Impact Sensor [Passenger] Communication Error               | RT - 48 |
| B1335 | Front Impact Sensor [Passenger] Wrong ID                          | RT - 51 |
| B1346 | Driver Airbag Resistance too High                                 | RT - 52 |
| B1347 | Driver Airbag Resistance too Low                                  | RT - 52 |
| B1348 | Driver Airbag Circuit Short to Ground                             | RT - 55 |
| B1349 | Driver Airbag Circuit Short to Battery                            | RT - 58 |
| B1352 | Passenger Airbag Resistance too High                              | RT - 61 |
| B1353 | Passenger Airbag Resistance too Low                               | RT - 61 |
| B1354 | Passenger Airbag Circuit Short to Ground                          | RT - 64 |
| B1355 | Passenger Airbag Circuit Short to Battery                         | RT - 66 |
| B1361 | Seat Belt Pretensioner [Front-Driver] Resistance too High         | RT - 68 |
| B1362 | Seat Belt Pretensioner [Front-Driver] Resistance too Low          | RT - 68 |
| B1363 | Seat Belt Pretensioner [Front-Driver] Circuit Short to Ground     | RT - 71 |
| B1364 | Seat Belt Pretensioner [Front-Driver] Circuit Short to Battery    | RT - 73 |
| B1367 | Seat Belt Pretensioner [Front-Passenger] Resistance too High      | RT - 68 |
| B1368 | Seat Belt Pretensioner [Front-Passenger] Resistance too Low       | RT - 68 |
| B1369 | Seat Belt Pretensioner [Front-Passenger] Circuit Short to Ground  | RT - 71 |
| B1370 | Seat Belt Pretensioner [Front-Passenger] Circuit Short to Battery | RT - 73 |
| B1395 | Squib Interconnection Fault                                       | RT - 76 |
| B1400 | Side Impact Sensor [Front-Driver] Defect                          | RT - 77 |
| B1401 | Side Impact Sensor [Front-Driver] Short to Ground                 | RT - 80 |
| B1402 | Side Impact Sensor [Front-Driver] Short to Battery                | RT - 82 |
| B1403 | Side Impact Sensor [Front-Passenger] Defect                       | RT - 77 |
| B1404 | Side Impact Sensor [Front-Passenger] Short to Ground              | RT - 80 |
| B1405 | Side Impact Sensor [Front-Passenger] Short to Battery             | RT - 82 |
| B1409 | Side Impact Sensor [Front-Driver] Communication Error             | RT - 77 |

RT -40

RESTRAINTS

| DTC   | FAULT DESCRIPTION                                                           | REMARK   |
|-------|-----------------------------------------------------------------------------|----------|
| B1410 | Side Impact Sensor [Front-Passenger] Communication Error                    | RT - 77  |
| B1414 | Side Impact Sensor [Front-Driver] Wrong ID                                  | RT - 84  |
| B1415 | Side Impact Sensor [Front-Passenger] Wrong ID                               | RT - 84  |
| B1473 | Curtain Airbag [Driver] Resistance too High                                 | RT - 85  |
| B1474 | Curtain Airbag [Driver] Resistance too Low                                  | RT - 85  |
| B1475 | Curtain Airbag [Driver] Circuit Short to Ground                             | RT - 89  |
| B1476 | Curtain Airbag [Driver] Circuit Short to Battery                            | RT - 91  |
| B1477 | Curtain Airbag [Passenger] Resistance too High                              | RT - 85  |
| B1478 | Curtain Airbag [Passenger] Resistance too Low                               | RT - 85  |
| B1479 | Curtain Airbag [Passenger] Circuit Short to Ground                          | RT - 89  |
| B1480 | Curtain Airbag [Passenger] Circuit Short to Battery                         | RT - 91  |
| B1527 | Passenger Airbag Deactivation Switch Open or Short to Battery               | RT - 94  |
| B1528 | Passenger Airbag Deactivation Switch Short or Short to Ground               | RT - 98  |
| B1529 | Passenger Airbag Deactivation Switch Defect                                 | RT - 101 |
| B1620 | Supplemental Restraint System Control Module Internal Fault (Replace SRSCM) | RT - 105 |
| B1650 | Crash Recorded - Frontal (Replace SRSCM)                                    | RT - 106 |
| B1651 | Crash Recorded - Driver Side (Replace SRSCM)                                | RT - 106 |
| B1652 | Crash Recorded - Passenger Side (Replace SRSCM)                             | RT - 106 |
| B1657 | Crash Recorded - Belt Pretensioner Only                                     | RT - 106 |
| B1658 | Belt Pretensioner 6 times Deployment (Replace SRSCM)                        | RT - 106 |
| B2500 | Warning Lamp Fault                                                          | RT - 107 |
| B2505 | Passenger Airbag Deactivation Lamp Fault                                    | RT - 111 |

## TROUBLESHOOTING

RT -41

|           |                           |
|-----------|---------------------------|
| DTC B1101 | BATTERY VOLTAGE TOO HIGH  |
| DTC B1102 | BATTERY VOLTAGE TOO LOW   |
| DTC B1103 | COMMUNICATION VOLTAGE LOW |

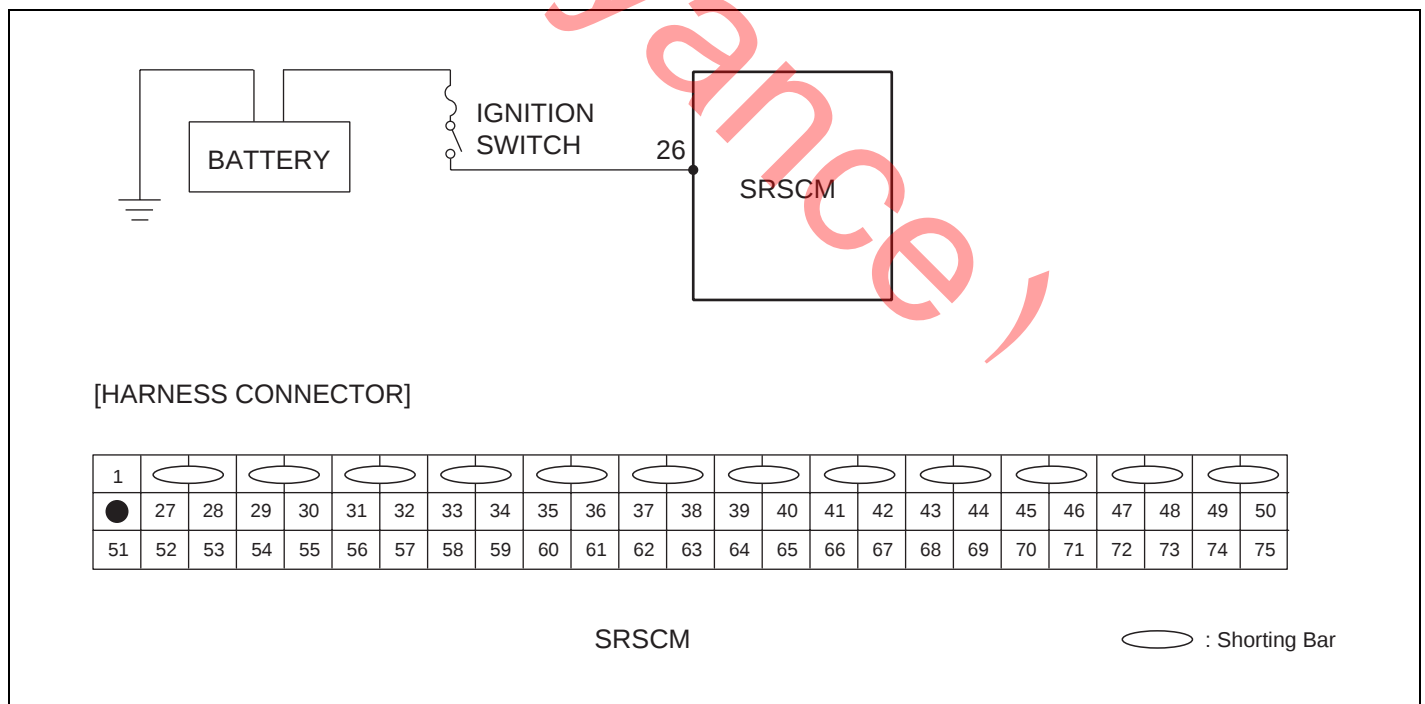
### DTC DESCRIPTION E0263EC0

The SRSCM sets above DTC(s) if it detects that the battery voltage of restraints system is too high or too low. When the voltage returns to normal, the SRS warning light automatically goes off and a malfunction is no longer indicated. The SRSCM can communicate with outside equipment as Front Impact Sensor (FIS), Side Impact Sensor (SIS) when battery voltage is 10.6 V or above. The SRSCM sets B1103 code if it detects their malfunction through mounting outside equipments continuously when battery voltage is 10.6V below.

### DTC DETECTING CONDITION E02CF8F9

| DTC   | Condition                                                                                                        | Probable cause                                                                                                              |
|-------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| B1101 | Battery Voltage > 16.5 V for 4 seconds after IG ON                                                               | <ul style="list-style-type: none"> <li>• Battery</li> <li>• Generator</li> <li>• Wiring Harness</li> <li>• SRSCM</li> </ul> |
| B1102 | Battery Voltage < 10.6 V for 4 seconds after IG ON                                                               |                                                                                                                             |
| B1103 | Battery Voltage < 10.6 V for 4 seconds after IG ON<br>The malfunction of the restraints system outside equipment |                                                                                                                             |

### SCHEMATIC DIAGRAM E460A1C6



SBLRT6210L

### SPECIFICATION E43DFADC

Voltage : 10.6 ~ 16.5 V

## TERMINAL & CONNECTOR INSPECTION

EC4827F3

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE

EA28265C

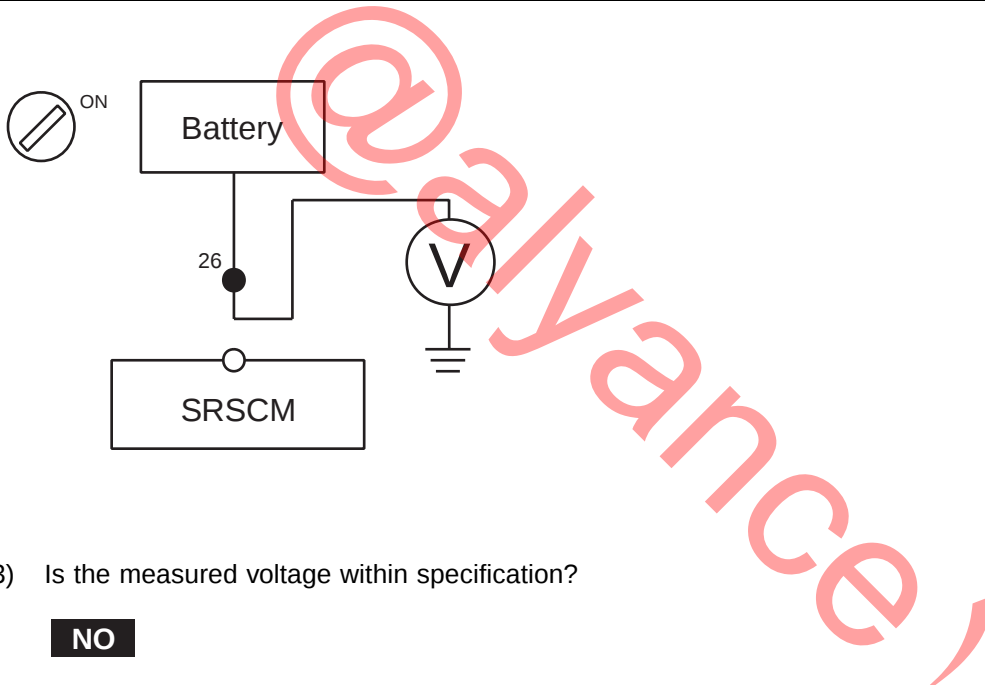
### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### 2. CHECK SOURCE VOLTAGE

- 1) Turn the ignition switch to ON.
- 2) Measure voltage between the terminal 26 of SRSCM harness connector and chassis ground.

Specification (voltage) : 10.6 ~ 16.5 V



SBLRT6211L

### 3) Is the measured voltage within specification?

**NO**

Check the battery.

**YES**

Replace the SRSCM with a new one, and then check the vehicle again. At this time, if the vehicle normally operates with a new SRSCM, the fault may be the SRSCM(Replace SRSCM).

### 3. CHECK THE BATTERY

- 1) Check the battery.
  - Refer to "EE" group in this SERVICE MANUAL.
 Is the battery normal?

**YES**

Check the generator.

**NO**

Repair or replace the battery.(Refer to "EE" group in this SERVICE MANUAL)

## TROUBLESHOOTING

RT -43

### 4. CHECK GENERATOR

- 1) Check the generator.
  - Refer to "EE" group in this SERVICE MANUAL.
 Is the generator normal?

**YES**

Check wiring harness.

**NO**

Repair or replace the generator.(Refer to "EE" group in this SERVICE MANUAL)

### 5. CHECK WIRING HARNESS

- 1) Check the wiring harness between the battery and SRSCM.  
Is the wiring harness normal?

**YES**

Check the DTC again.

**NO**

Repair or Replace the wiring harness.

### 6. CHECK THE DTC AGAIN

- 1) Turn the ignition switch to LOCK and wait for at least 30 seconds.



#### **CAUTION**

***Check again that the battery negative cable is disconnected from the battery.***

- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC?

**YES**

Perform the troubleshooting procedures associated with those codes.

**NO**

Problem is intermittent or was repaired and SRSCM memory was not cleared.

RT -44

RESTRAINTS

**DTC B1326 FRONT IMPACT SENSOR [DRIVER] SHORT TO GROUND**  
**DTC B1331 FRONT IMPACT SENSOR [PASSENGER] SHORT TO GROUND**

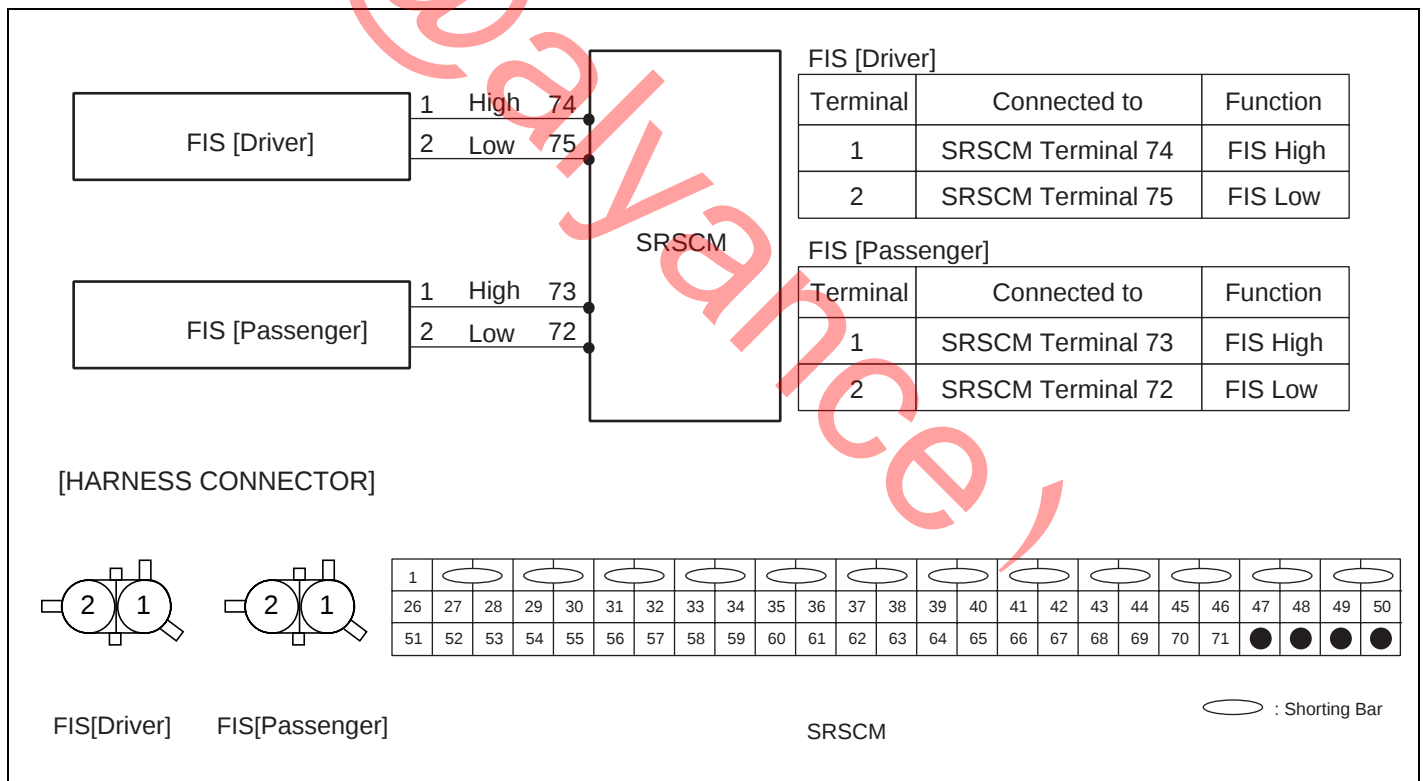
**DTC DESCRIPTION** E5EE0DD3

The detecting system for front crash consists of the SRSCM and two Front Impact Sensors (FIS). The SRSCM sets above DTC(s) if it detects short to ground on the FIS circuit.

**DTC DETECTING CONDITION** ED0DA1A6

| DTC            | Condition                                                                                                                                                        | Probable cause                                                                                                                       |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| B1326<br>B1331 | <ul style="list-style-type: none"> <li>Short to ground between FIS and SRSCM</li> <li>Front Impact Sensor(FIS) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to ground on Wiring Harness</li> <li>Front Impact Sensor(FIS)</li> <li>SRSCM</li> </ul> |

**SCHEMATIC DIAGRAM** EE068E9D



SBLRT6220L

**TERMINAL & CONNECTOR INSPECTION** EB9AB00B

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

**INSPECTION PROCEDURE** EBA9DD37

1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

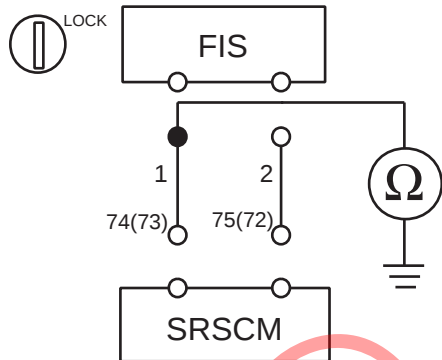
## TROUBLESHOOTING

RT -45

### 2. CHECK FIS CIRCUIT

- 1) Measure resistance between the terminal 1 of FIS harness connector and chassis ground.

specification(resistance) :  $\infty \Omega$



SBLRT6221L

- 2) Is the measured resistance within specification?

**YES**

Check Front Impact Sensor.

**NO**

Repair or replace the wiring harness between the FIS and the SRSCM.

### 3. CHECK FRONT IMPACT SENSOR

- 1) Replace the front impact sensor(FIS) with a new one.
  - Refer to "Front Impact Sensor(FIS)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to FIS?

**YES**

Go to next step.

**NO**

Replace the Front Impact Sensor(FIS).

### 4. CLEAR THE DTC AND CHECK THE DTC AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

RT -46

RESTRAINTS

**DTC B1327 FRONT IMPACT SENSOR [DRIVER] SHORT TO BATTERY**  
**DTC B1332 FRONT IMPACT SENSOR [PASSENGER] SHORT TO BATTERY**

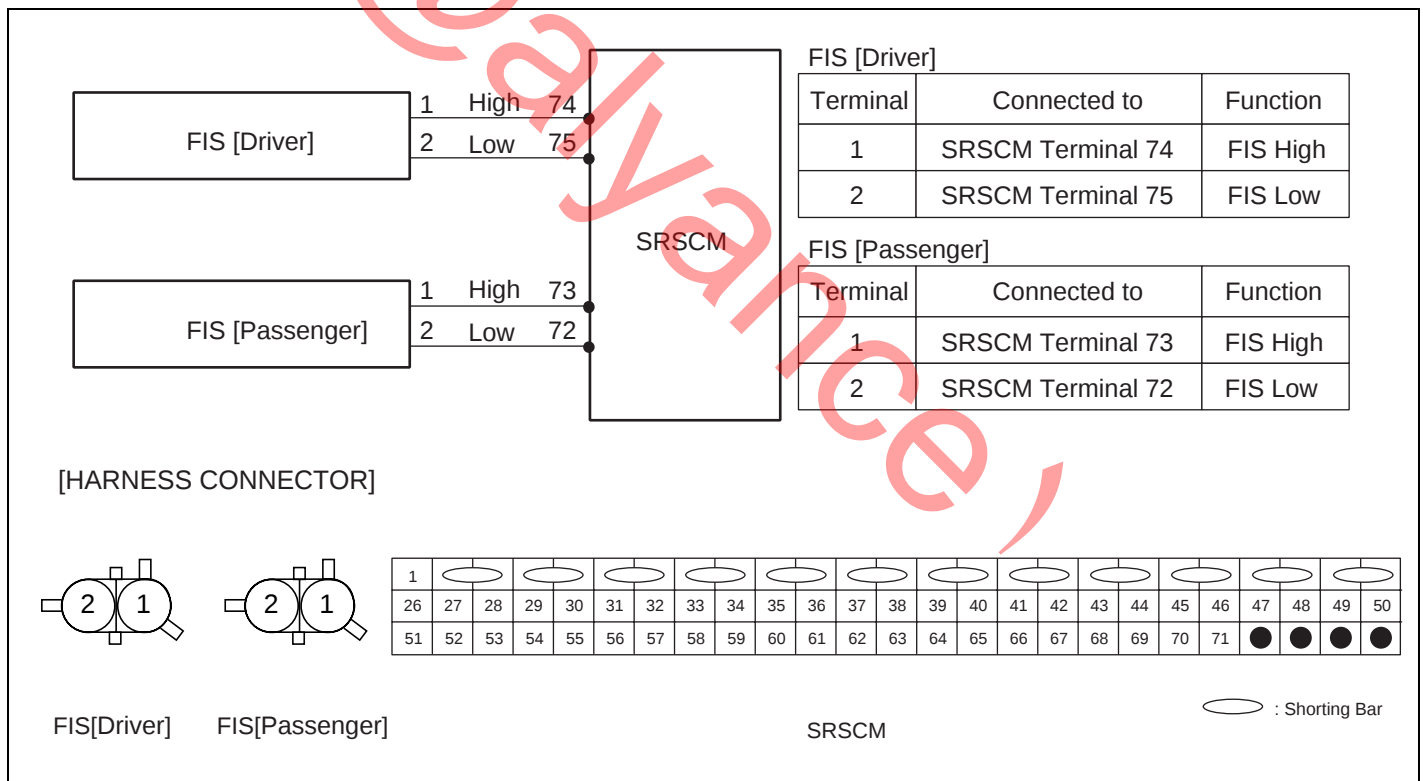
**DTC DESCRIPTION** ECF62D8B

The detecting system for front crash consists of the SRSCM and two Front Impact Sensors (FIS). The SRSCM sets above DTC(s) if it detects short to battery on the FIS circuit.

**DTC DETECTING CONDITION** EBBDEFA3

| DTC            | Condition                                                                                                                                                              | Probable cause                                                                                                                             |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| B1327<br>B1332 | <ul style="list-style-type: none"> <li>Short to battery line between FIS and SRSCM</li> <li>Front Impact Sensor(FIS) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to battery line on Wiring Harness</li> <li>Front Impact Sensor(FIS)</li> <li>SRSCM</li> </ul> |

**SCHEMATIC DIAGRAM** EC734759



SBLRT6220L

**TERMINAL & CONNECTOR INSPECTION** E283653D

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

**INSPECTION PROCEDURE** E29FB001

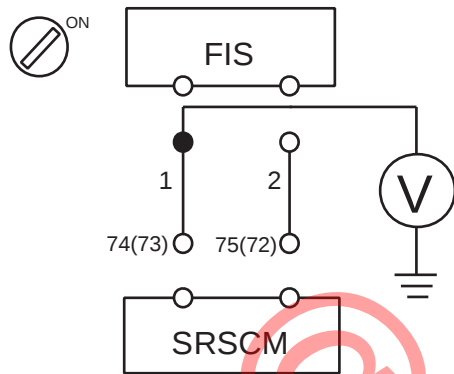
1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.
2. CHECK FIS CIRCUIT

## TROUBLESHOOTING

RT -47

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal 1 of FIS harness connector and chassis ground.

specification(voltage) : Approximately 0 V



SBLRT6222L

- 4) Is the measured voltage within specification?

**YES**

Check Front Impact Sensor.

**NO**

Repair the short to battery line circuit on wiring harness between the FIS and the SRSCM.

### 3. CHECK FRONT IMPACT SENSOR

- 1) Replace the front impact sensor(FIS) with a new one.
  - Refer to "Front Impact Sensor(FIS)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to FIS?

**YES**

Go to next step.

**NO**

Replace the Front Impact Sensor(FIS).

### 4. CLEAR THE DTC AND CHECK THE DTC AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

RT -48

RESTRAINTS

|           |                                                     |
|-----------|-----------------------------------------------------|
| DTC B1328 | FRONT IMPACT SENSOR [DRIVER] DEFECT                 |
| DTC B1329 | FRONT IMPACT SENSOR [DRIVER] COMMUNICATION ERROR    |
| DTC B1333 | FRONT IMPACT SENSOR [PASSENGER] DEFECT              |
| DTC B1334 | FRONT IMPACT SENSOR [PASSENGER] COMMUNICATION ERROR |

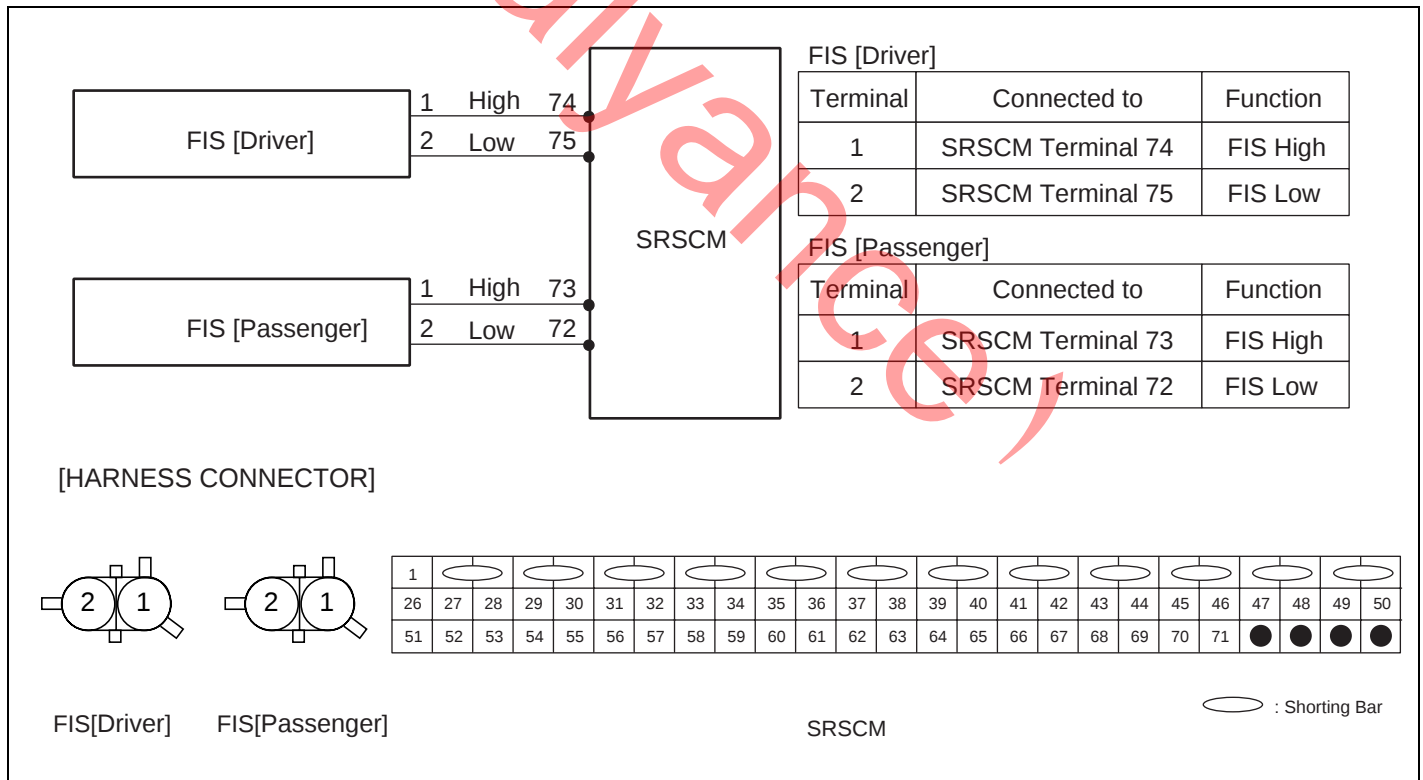
DTC DESCRIPTION E3EC260A

The detecting system for front crash consists of the SRSCM and two Front Impact Sensors (FIS). The SRSCM sets above DTC(s) if it detects that any FIS is defective or there is communication error between any FIS and the SRSCM.

DTC DETECTING CONDITION E0BDC22F

| DTC                              | Condition                                                                                                                                             | Probable cause                                                                                                    |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| B1328<br>B1329<br>B1333<br>B1334 | <ul style="list-style-type: none"> <li>Open between FIS and SRSCM</li> <li>Front Impact Sensor(FIS) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Wiring Harness</li> <li>Front Impact Sensor(FIS)</li> <li>SRSCM</li> </ul> |

SCHEMATIC DIAGRAM E2AA4609



SBLRT6220L

TERMINAL & CONNECTOR INSPECTION ECAC7931

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -49

### INSPECTION PROCEDURE

EB342E09

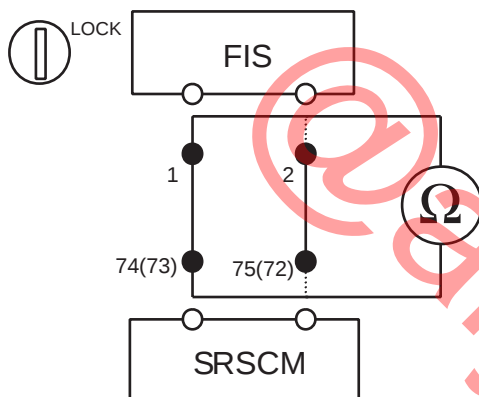
#### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

#### 2. CHECK FIS CIRCUIT

- 1) Measure resistance between the terminal 1 of FIS harness connector and the terminal 74(73) of SRSCM harness connector.
- 2) Measure resistance between the terminal 2 of FIS harness connector and the terminal 75(72) of SRSCM harness connector.

Specification (resistance) : below 1  $\Omega$



SBLRT6223L

- 3) Is the measured resistance within specification?

**YES**

Check Front Impact Sensor.

**NO**

Repair or replace the wiring harness between the FIS and the SRSCM.

#### 3. CHECK FRONT IMPACT SENSOR

- 1) Replace the front impact sensor(FIS) with a new one.
  - Refer to "Front Impact Sensor(FIS)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.

- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to FIS?

**YES**

Go to next step.

**NO**

Replace the Front Impact Sensor(FIS).

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

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## TROUBLESHOOTING

RT -51

**DTC B1330 FRONT IMPACT SENSOR [DRIVER] WRONG ID**  
**DTC B1335 FRONT IMPACT SENSOR [PASSENGER] WRONG ID**

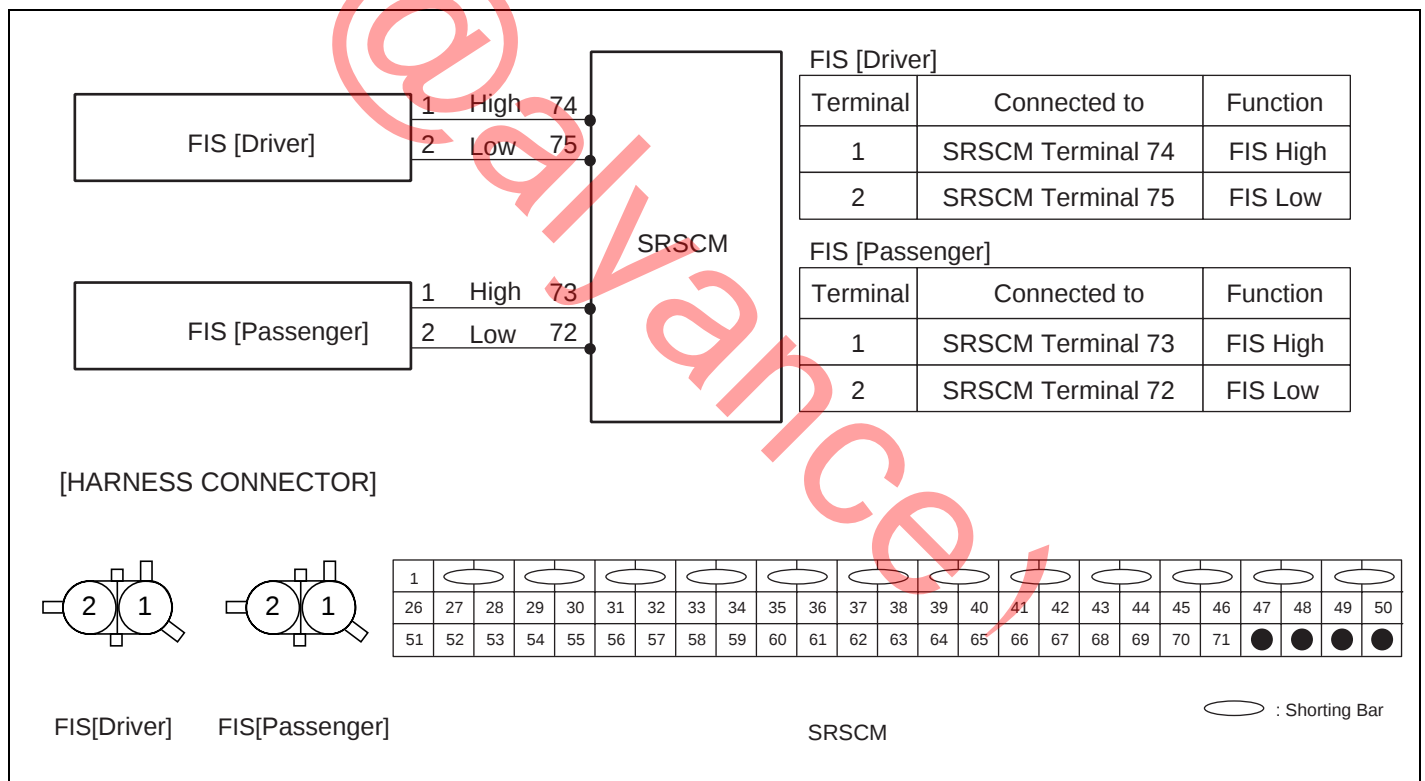
### DTC DESCRIPTION ECF43815

The detecting system for front crash consists of the SRSCM and two Front Impact Sensors (FIS). The SRSCM sets above DTC(s) if it detects wrong FIS is used.

### DTC DETECTING CONDITION EF87DBCC

| DTC            | Condition                                                                                                   | Probable cause                                                                            |
|----------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| B1330<br>B1335 | <ul style="list-style-type: none"> <li>Wrong Front Impact Sensor(FIS)</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Front Impact Sensor(FIS)</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM E14A21C4



SBLRT6220L

### TERMINAL & CONNECTOR INSPECTION E16FA0B2

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### INSPECTION PROCEDURE E171444B

If above DTC is detected replace the Front Impact Sensor.

DTC B1346 DRIVER AIRBAG RESISTANCE TOO HIGH

DTC B1347 DRIVER AIRBAG RESISTANCE TOO LOW

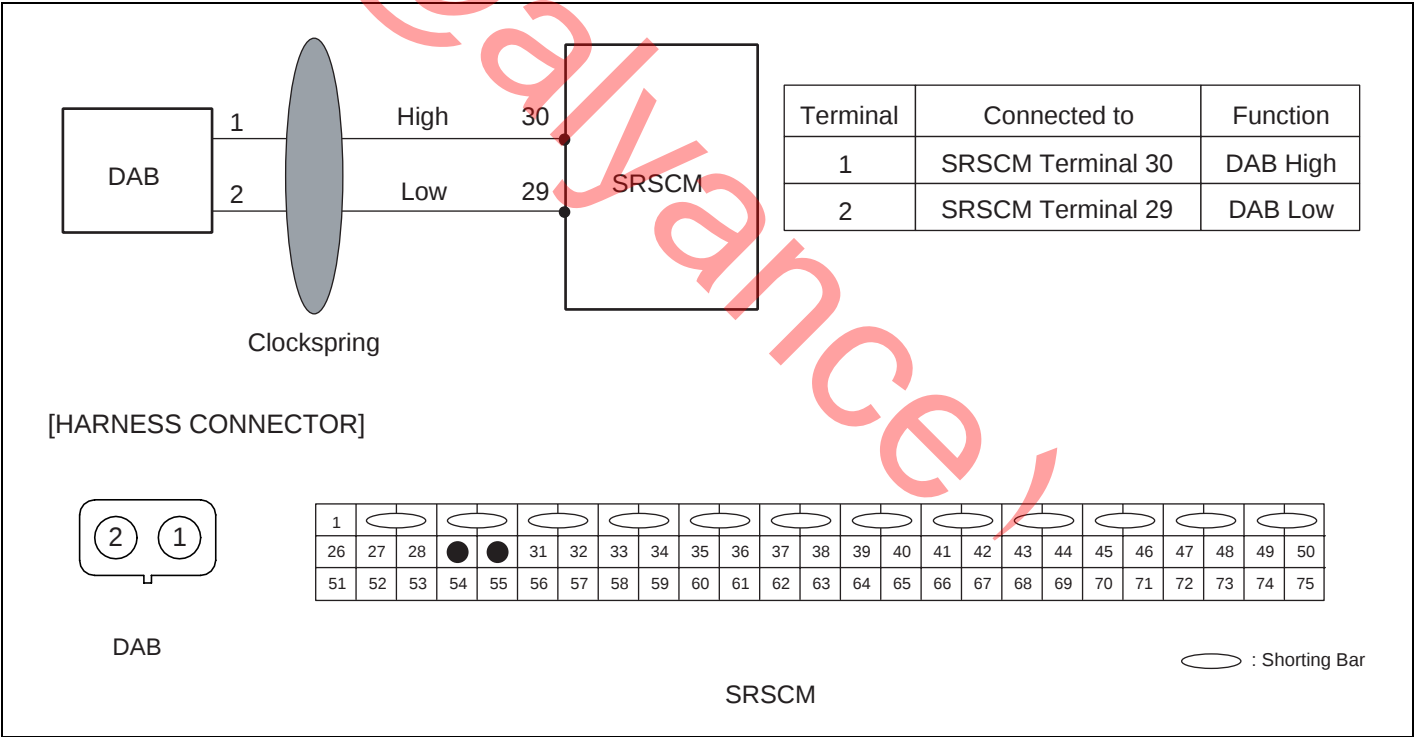
DTC DESCRIPTION EFB92994

The Driver Airbag circuit consists of the SRSCM, Clockspring and the Driver Airbag (DAB). The SRSCM sets above DTC(s) if it detects that the resistance of DAB squib is too high or low.

DTC DETECTING CONDITION E7B42F6E

| DTC            | Condition                                                                                                                                                                                                        | Probable cause                                                                                                                                              |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1346<br>B1347 | <ul style="list-style-type: none"><li>Too high or low resistance between DAB high(+) and DAB low (-)</li><li>Driver Airbag (DAB) Malfunction</li><li>Clockspring Malfunction</li><li>SRSCM Malfunction</li></ul> | <ul style="list-style-type: none"><li>Open or short circuit on wiring harness</li><li>Driver Airbag (DAB) squib</li><li>Clockspring</li><li>SRSCM</li></ul> |

SCHEMATIC DIAGRAM E43B7579



SBLRT6230L

SPECIFICATION E28BE0B8

DAB resistance : 1.6 ~ 6.4 Ω

TERMINAL & CONNECTOR INSPECTION E66FD84C

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -53

### INSPECTION PROCEDURE EBC88CD3

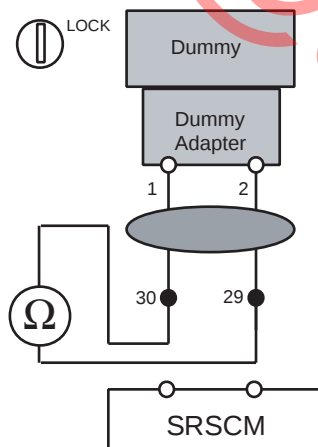
1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.
2. CHECK DAB RESISTANCE

#### CAUTION

**Never attempt to measure the circuit resistance of the airbag module(squib) even if you are using the specified tester.**

- 1) Connect the Dummy and the Dummy Adapter on DAB harness connector.
  - Refer to "SPECIAL SERVICE TOOL" section in this SERVICE MANUAL for the SST No. of Dummy and Dummy Adapter.
- 2) Measure resistance between the terminal 30 and 29 of SRSCM harness connector.

Specification (resistance) : 1.6 ~ 6.4  $\Omega$



SBLRT6231L

- 3) Is the measured resistance within specification?

**NO**

Check open circuit.

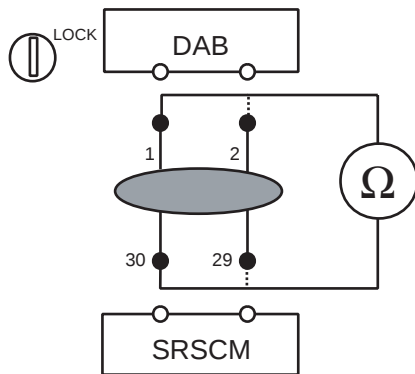
**YES**

Replace the Driver Airbag(DAB) module.

3. CHECK OPEN CIRCUIT

- 1) Measure resistance between the terminal 1 of DAB harness connector and the terminal 30 of SRSCM harness connector.
- 2) Measure resistance between the terminal 2 of DAB harness connector and the terminal 29 of SRSCM harness connector.

Specification (resistance) : below 1  $\Omega$



SBLRT6232L

3) Is the measured resistance within specification?

**YES**

Check short circuit.

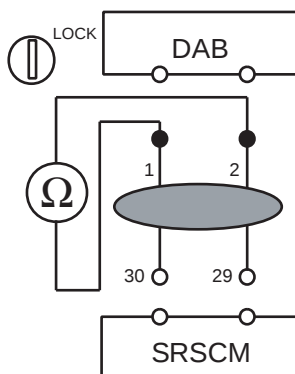
**NO**

Repair or replace the wiring harness between the DAB and the clockspring or between the clockspring and the SRSCM.

#### 4. CHECK SHORT CIRCUIT

1) Measure resistance between the terminal 1 and 2 of DAB harness connector.

Specification (resistance) :  $\infty \Omega$



SBLRT6233L

2) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between the DAB and the clockspring or between the clockspring and the SRSCM.

#### 5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -55

### DTC B1348 DRIVER AIRBAG RESISTANCE CIRCUIT SHORT TO GROUND

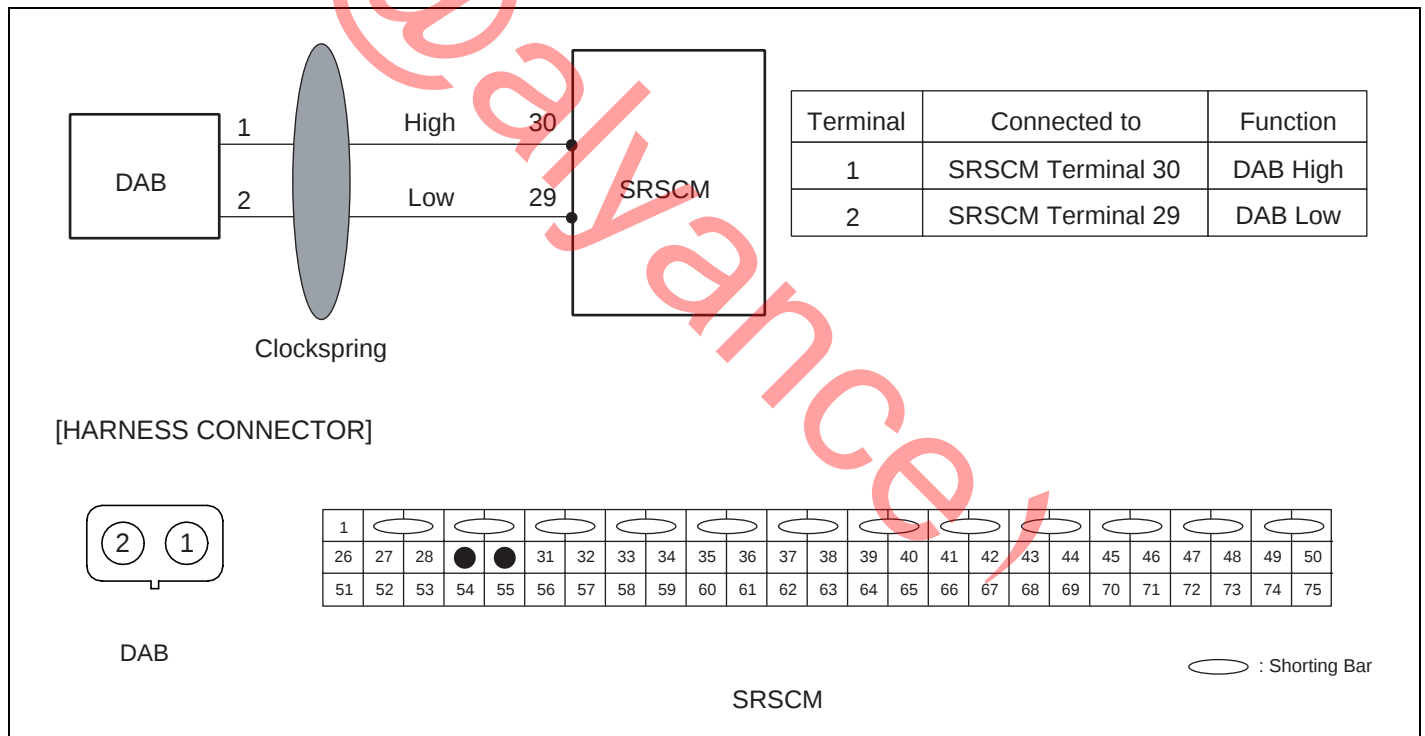
#### DTC DESCRIPTION E8857516

The Driver Airbag circuit consists of the SRSCM, Clockspring and the Driver Airbag (DAB). The SRSCM sets above DTC(s) if it detects short to ground on the DAB circuit.

#### DTC DETECTING CONDITION EDEAA31B

| DTC   | Condition                                                                                                                                                                                                                                                 | Probable cause                                                                                                                                                     |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1348 | <ul style="list-style-type: none"> <li>Short to ground between DAB and clockspring</li> <li>Short to ground between clockspring and SRSCM</li> <li>Driver Airbag (DAB) Malfunction</li> <li>Clockspring Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to ground circuit on wiring harness</li> <li>Driver Airbag (DAB) squib</li> <li>Clockspring</li> <li>SRSCM</li> </ul> |

#### SCHEMATIC DIAGRAM E7452174



SBLRT6230L

#### TERMINAL & CONNECTOR INSPECTION EF24FC93

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE

E8231ED6

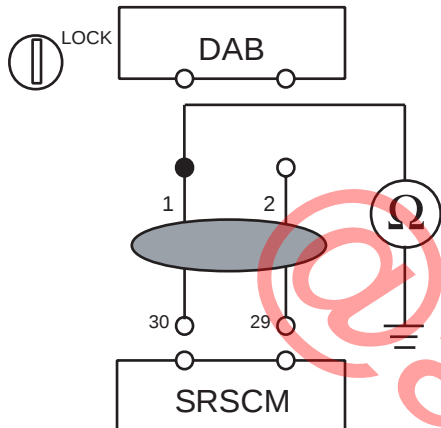
### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### 2. CHECK SHORT TO GROUND

- 1) Measure resistance between the terminal 1 of DAB harness connector and chassis ground.

Specification (resistance) : infinite



SBLRT6234L

- 2) Is the measured resistance within specification?

**YES**

Check the DAB Module.

**NO**

Repair or replace the wiring harness between the DAB and the clockspring or between the clockspring and the SRSCM.

### 3. CHECK THE DAB MODULE

- 1) Replace the Driver Airbag(DAB) with a new one.
  - Refer to "Driver Airbag(DAB)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.

## TROUBLESHOOTING

RT -57

- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to DAB?

**YES**

Check the clockspring.

**NO**

Replace the Driver Airbag(DAB).

### 4. CHECK THE CLOCKSPRING

- 1) Check the clockspring.  
Is the clockspring normal?

**YES**

Go to next step.

**NO**

Replace the clockspring.

5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

RT -58

RESTRAINTS

## DTC B1349 DRIVER AIRBAG RESISTANCE CIRCUIT SHORT TO BATTERY

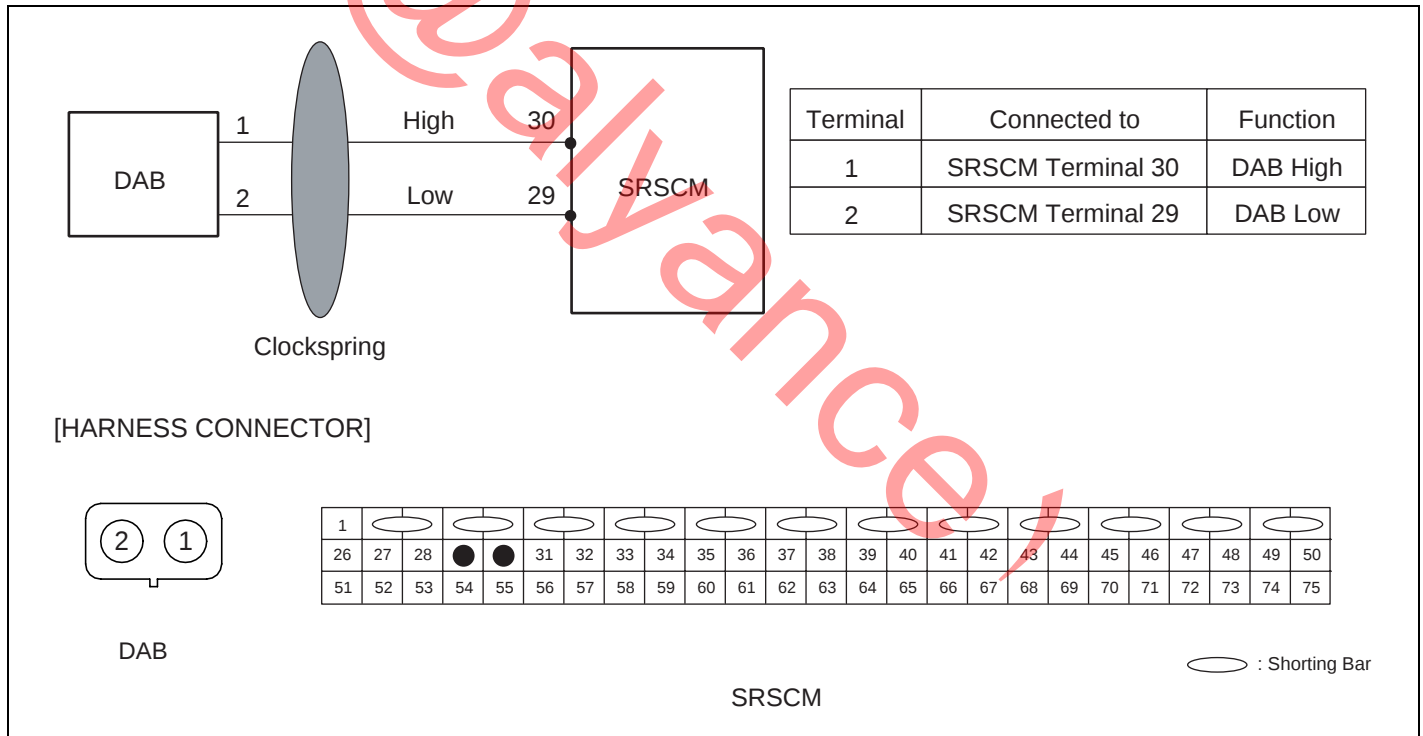
### DTC DESCRIPTION EBEDC615

The Driver Airbag circuit consists of the SRSCM, Clockspring and the Driver Airbag (DAB). The SRSCM sets above DTC(s) if it detects short to battery line on the DAB circuit.

### DTC DETECTING CONDITION EC4BA437

| DTC   | Condition                                                                                                                                                                                                                                                             | Probable cause                                                                                                                                                   |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1349 | <ul style="list-style-type: none"> <li>Short to battery line between DAB and clockspring</li> <li>Short to battery line between clockspring and SRSCM</li> <li>Driver Airbag (DAB) Malfunction</li> <li>Clockspring Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to battery line on wiring harness</li> <li>Driver Airbag (DAB) squib</li> <li>Clockspring</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM E7DD8B59



SBLRT6230L

### TERMINAL & CONNECTOR INSPECTION E6607887

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -59

### INSPECTION PROCEDURE

ECBB0522

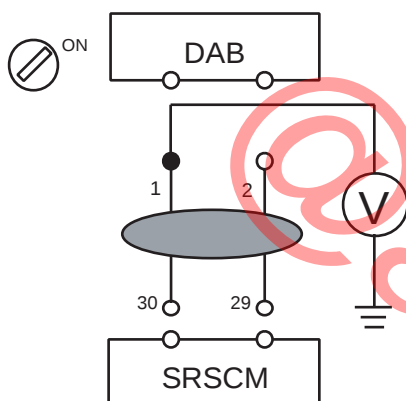
#### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

#### 2. CHECK SHORT TO BATTERY LINE

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal 1 of DAB harness connector and chassis ground.

Specification (voltage) : Approximately 0 V



SBLRT6235L

#### 4) Is the measured voltage within specification?

**YES**

Check the DAB module.

**NO**

Repair or replace the wiring harness between the DAB and the clockspring or between the clockspring and the SRSCM.

#### 3. CHECK THE DAB MODULE

- 1) Replace the Driver Airbag(DAB) with a new one.
  - Refer to "Driver Airbag(DAB)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.

- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to DAB?

**YES**

Check the clockspring.

**NO**

Replace the Driver Airbag(DAB).

4. CHECK THE CLOCKSPRING

- 1) Check the clockspring.  
Is the clockspring normal?

**YES**

Go to next step.

**NO**

Replace the clockspring.

5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

TROUBLESHOOTING

RT -61

DTC B1352 PASSENGER AIRBAG RESISTANCE TOO HIGH  
DTC B1353 PASSENGER AIRBAG RESISTANCE TOO LOW

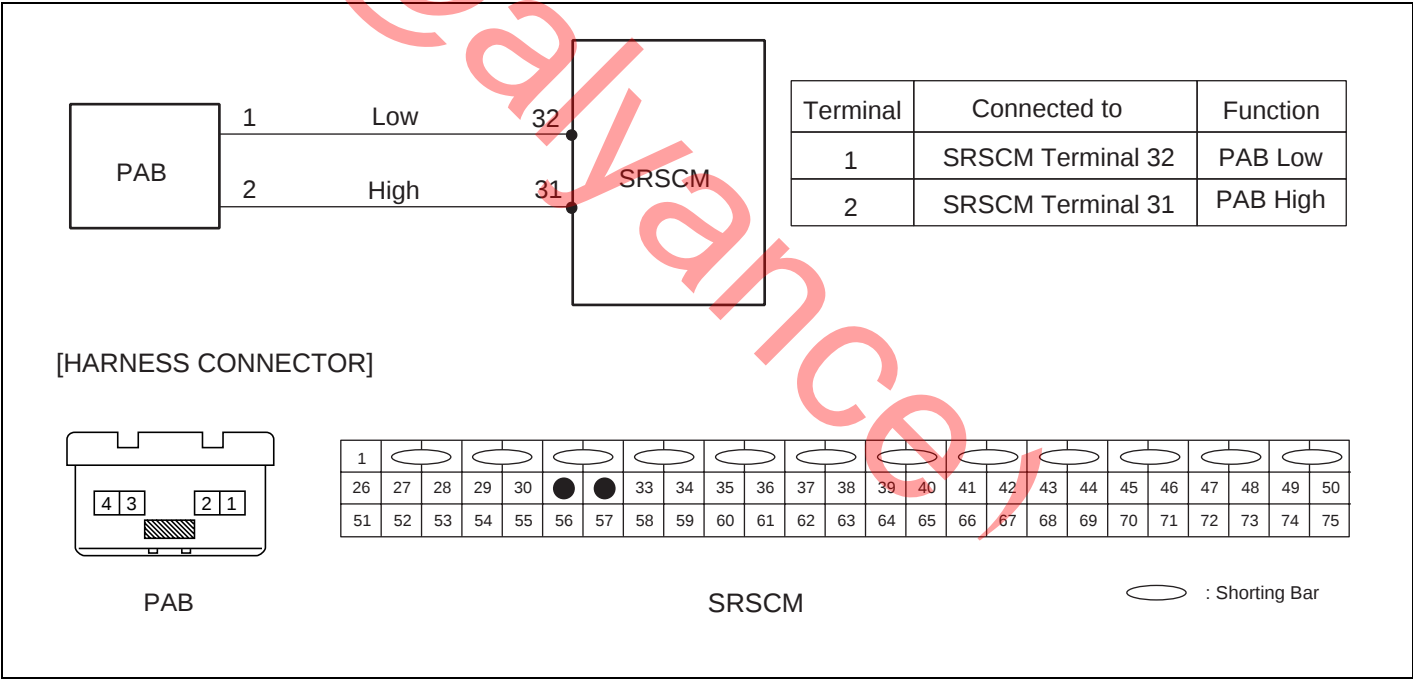
DTC DESCRIPTION EFA671A4

The Passenger Airbag circuit consists of the SRSCM and the Passenger Airbag (PAB). The SRSCM sets above DTC(s) if it detects that the resistance of PAB squib is too high or low.

DTC DETECTING CONDITION E71070B2

| DTC            | Condition                                                                                                                                                                           | Probable cause                                                                                                                             |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| B1352<br>B1353 | <ul style="list-style-type: none"><li>Too high or low resistance between PAB high(+) and PAB low (-)</li><li>Passenger Airbag (PAB) Malfunction</li><li>SRSCM Malfunction</li></ul> | <ul style="list-style-type: none"><li>Open or short circuit on wiring harness</li><li>Passenger Airbag (PAB) squib</li><li>SRSCM</li></ul> |

SCHEMATIC DIAGRAM E00881BB



SBLRT6240L

SPECIFICATION E69C3EA8

PAB resistance : 1.8 ~ 6.4 Ω

TERMINAL & CONNECTOR INSPECTION E1DCF032

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE

E8418581

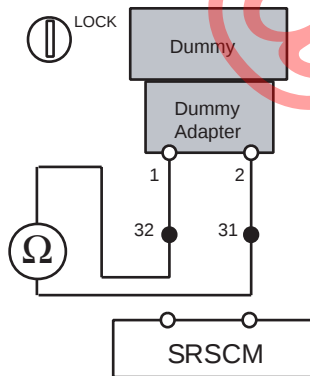
1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.
2. CHECK PAB RESISTANCE

 **CAUTION**

**Never attempt to measure the circuit resistance of the airbag module(squib) even if you are using the specified tester.**

- 1) Connect the Dummy and the Dummy Adapter on PAB harness connector.
  - Refer to "SPECIAL SERVICE TOOL" section in this SERVICE MANUAL for the SST No. of Dummy and Dummy Adapter.
- 2) Measure resistance between the terminal 32 and 31 of SRSCM harness connector.

Specification (resistance) : 1.8 ~ 6.4  $\Omega$



SBLRT6241L

- 3) Is the measured resistance within specification?

**YES**

Replace the Passenger Airbag(PAB) module.

**NO**

Check open circuit.

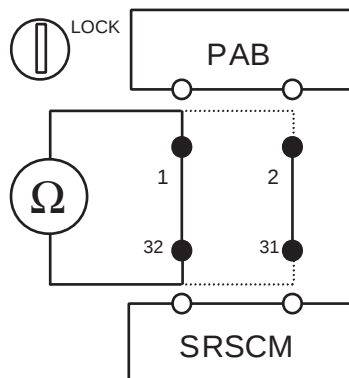
3. CHECK OPEN CIRCUIT

- 1) Measure resistance between the terminal 1 of PAB harness connector and the terminal 32 of SRSCM harness connector.
- 2) Measure resistance between the terminal 2 of PAB harness connector and the terminal 31 of SRSCM harness connector.

Specification (resistance) : below 1  $\Omega$

## TROUBLESHOOTING

RT -63



SBLRT6242L

3) Is the measured resistance within specification?

**YES**

Check short circuit.

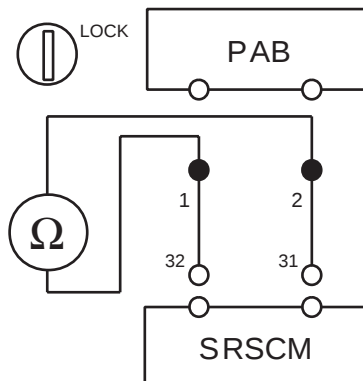
**NO**

Repair or replace the wiring harness between the PAB and the SRSCM.

### 4. CHECK SHORT CIRCUIT

1) Measure resistance between the terminal 1 and 2 of PAB harness connector.

Specification (resistance) : infinite



SBLRT6243L

2) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between the PAB and the SRSCM.

### 5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

DTC B1354 PASSENGER AIRBAG RESISTANCE CIRCUIT SHORT TO GROUND

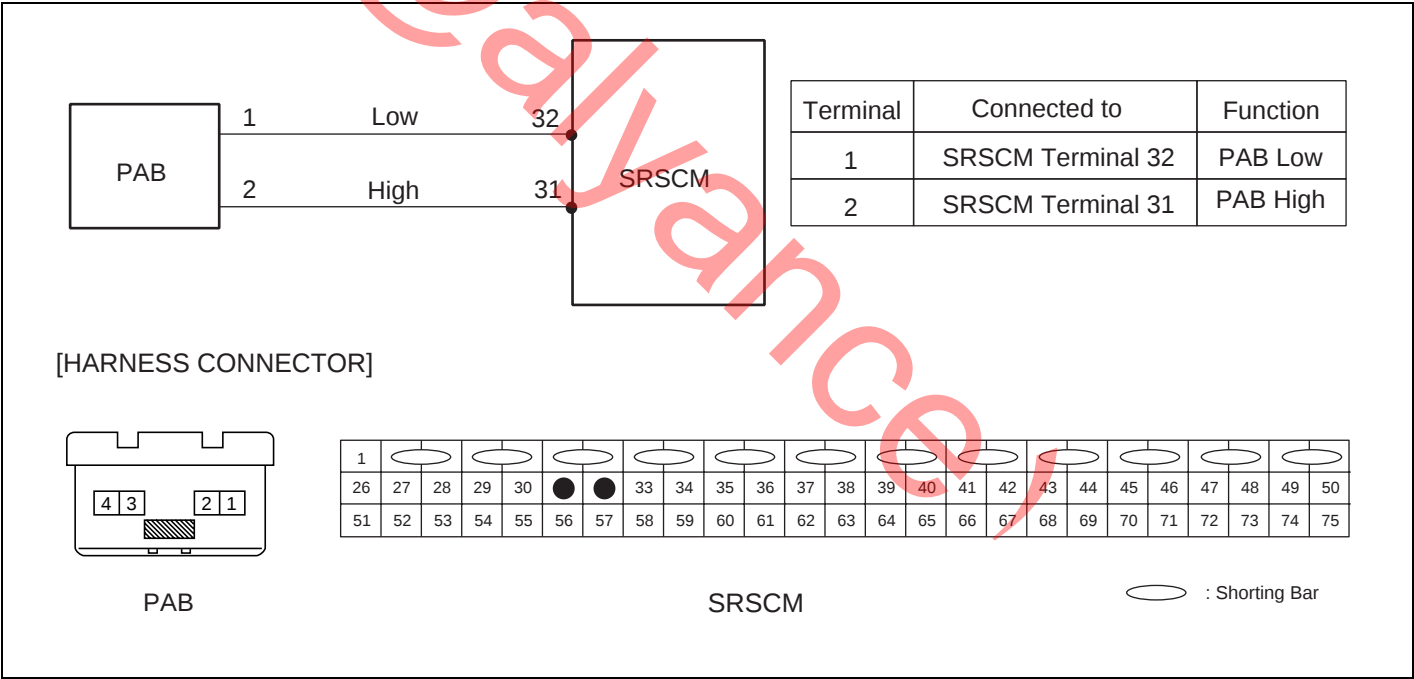
DTC DESCRIPTION E8568D94

The Passenger Airbag circuit consists of the SRSCM and the Passenger Airbag (PAB). The SRSCM sets above DTC(s) if it detects short to ground on the PAB circuit.

DTC DETECTING CONDITION EB6C385A

| DTC   | Condition                                                                                                                                                         | Probable cause                                                                                                                       |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| B1354 | <ul style="list-style-type: none"><li>Short to ground between PAB module and SRSCM</li><li>Passenger Airbag (PAB) Malfunction</li><li>SRSCM Malfunction</li></ul> | <ul style="list-style-type: none"><li>Short to ground on wiring harness</li><li>Passenger Airbag (PAB) squib</li><li>SRSCM</li></ul> |

SCHEMATIC DIAGRAM E6A95081



SBLRT6240L

TERMINAL & CONNECTOR INSPECTION E0C1965C

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

INSPECTION PROCEDURE E8AB760A

- PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

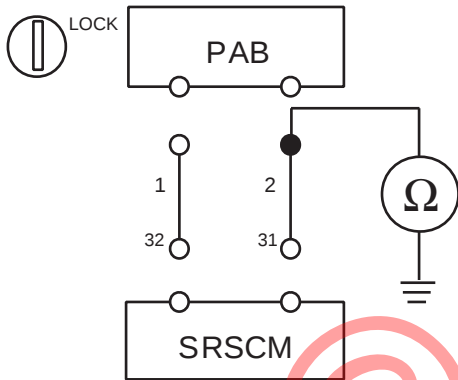
## TROUBLESHOOTING

RT -65

### 2. CHECK SHORT TO GROUND

- 1) Measure resistance between the terminal 2 of PAB harness connector and chassis ground.

Specification (resistance) : infinite



SBLRT6244L

- 2) Is the measured resistance within specification?

**YES**

Check the PAB Module.

**NO**

Repair or replace the wiring harness between the PAB and the SRSCM.

### 3. CHECK THE PAB MODULE

- 1) Replace the Passenger Airbag (PAB) with a new one.
  - Refer to "Passenger Airbag (PAB)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to PAB?

**YES**

Go to next step.

**NO**

Replace PAB module.

### 4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

RT -66

RESTRAINTS

## DTC B1355 PASSENGER AIRBAG CIRCUIT SHORT TO BATTERY

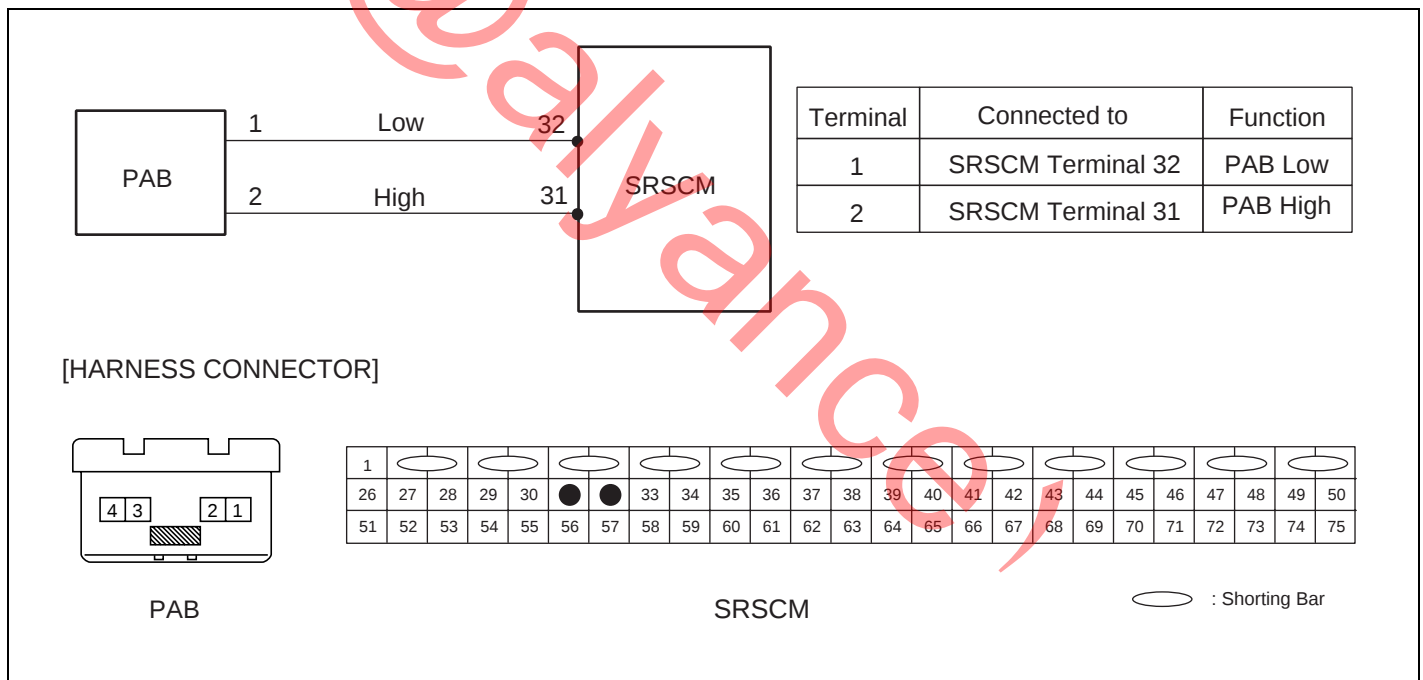
### DTC DESCRIPTION E9F54B5F

The Passenger Airbag circuit consists of the SRSCM and the Passenger Airbag (PAB). The SRSCM sets above DTC(s) if it detects short to battery line on the PAB circuit.

### DTC DETECTING CONDITION E9D89E39

| DTC   | Condition                                                                                                                                                            | Probable cause                                                                                                                                         |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1355 | <ul style="list-style-type: none"> <li>Short to battery line between PAB and SRSCM</li> <li>Passenger Airbag (PAB) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to battery line circuit on wiring harness</li> <li>Passenger Airbag (PAB) squib</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM E2FEC588



SBLRT6240L

### TERMINAL & CONNECTOR INSPECTION EC5A213D

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### INSPECTION PROCEDURE EBF2C8C7

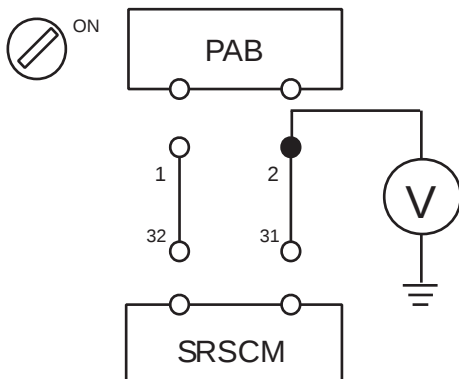
- PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.
- CHECK SHORT TO BATTERY LINE
  - Connect the battery negative cable to the battery.
  - Turn the ignition switch to ON.

## TROUBLESHOOTING

RT -67

- 3) Measure voltage between the terminal 2 of PAB harness connector and chassis ground.

Specification (voltage) : Approximately 0 V



SBLRT6245L

- 4) Is the measured voltage within specification?

**YES**

Check the PAB Module.

**NO**

Repair the short to battery line circuit on wiring harness between the PAB and the SRSCM.

### 3. CHECK THE PAB MODULE

- 1) Replace the Passenger Airbag(PAB) with a new one.
  - Refer to "Passenger Airbag(PAB)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to PAB?

**YES**

Go to next step.

**NO**

Replace PAB module.

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

RT -68

RESTRAINTS

|           |                                                                 |
|-----------|-----------------------------------------------------------------|
| DTC B1361 | SEAT BELT PRETENSIONER [FRONT-DRIVER]<br>RESISTANCE TOO HIGH    |
| DTC B1362 | SEAT BELT PRETENSIONER [FRONT-DRIVER]<br>RESISTANCE TOO LOW     |
| DTC B1367 | SEAT BELT PRETENSIONER [FRONT-PASSENGER]<br>RESISTANCE TOO HIGH |
| DTC B1368 | SEAT BELT PRETENSIONER [FRONT-PASSENGER]<br>RESISTANCE TOO LOW  |

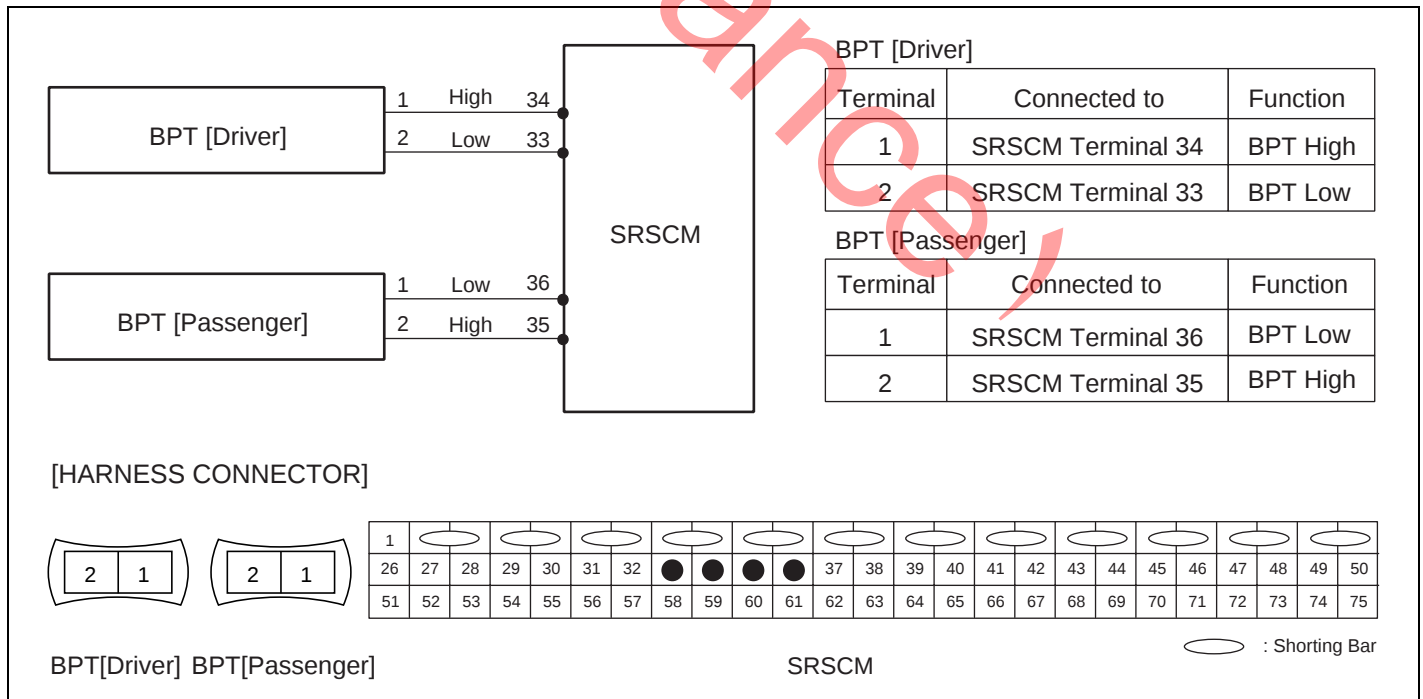
DTC DESCRIPTION E5E4C460

The Seat Belt Pretensioner circuit consists of the SRSCM and two Seat Belt Pretensioners (BPT). The SRSCM sets above DTC(s) if it detects that the resistance of BPT squib is too high or low.

DTC DETECTING CONDITION EB0714DE

| DTC                              | Condition                                                                                                                                                                                     | Probable cause                                                                                                                                       |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1361<br>B1362<br>B1367<br>B1368 | <ul style="list-style-type: none"> <li>Too high or low resistance between BPT high(+) and BPT low (-)</li> <li>Seat Belt Pretensioner (BPT) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Open or short circuit on wiring harness</li> <li>Seat Belt Pretensioner (BPT) squib</li> <li>SRSCM</li> </ul> |

SCHEMATIC DIAGRAM ED9CDDE7



SBLRT6250L

SPECIFICATION E609C78B

BPT resistance : 1.8 ~ 6.4 Ω

## TROUBLESHOOTING

RT -69

### TERMINAL & CONNECTOR INSPECTION

E26841C2

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### INSPECTION PROCEDURE

E0EB316D

#### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

#### 2. CHECK BPT RESISTANCE

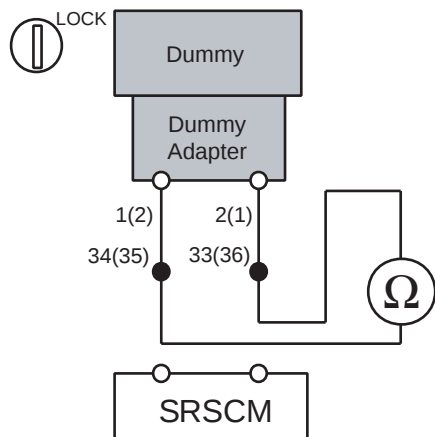


#### CAUTION

**Never attempt to measure the circuit resistance of the airbag module(squib) even if you are using the specified tester.**

- 1) Connect the Dummy and the Dummy Adapter on BPT harness connector.
  - Refer to "SPECIAL SERVICE TOOL" section in this SERVICE MANUAL for the SST No. of Dummy and Dummy Adapter.
- 2) Measure resistance between the terminal 34(35) and 33(36) of SRSCM harness connector.

Specification (resistance) : 1.8 ~ 6.4  $\Omega$



SBLRT6251L

- 3) Is the measured resistance within specification?

**YES**

Replace the Seat Belt Pretensioner(BPT) module.

**NO**

Check open circuit.

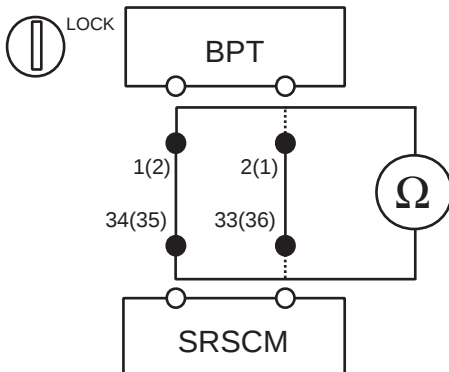
#### 3. CHECK OPEN CIRCUIT

- 1) Measure resistance between the terminal 1(2) of BPT harness connector and the terminal 34(35) of SRSCM harness connector.
- 2) Measure resistance between the terminal 2(1) of BPT harness connector and the terminal 33(36) of SRSCM harness connector.

RT -70

RESTRAINTS

Specification (resistance) : below 1  $\Omega$



SBLRT6252L

3) Is the measured resistance within specification?

**YES**

Check short circuit.

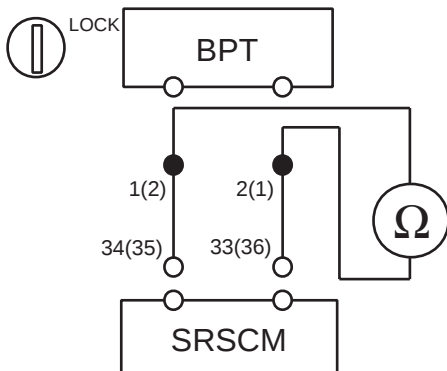
**NO**

Repair or replace the wiring harness between the BPT and the SRSCM.

4. CHECK SHORT CIRCUIT

1) Measure resistance between the terminal 1(2) and 2(1) of BPT harness connector.

Specification (resistance) : infinite



SBLRT6253L

2) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between the BPT and the SRSCM.

5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -71

**DTC B1363 SEAT BELT PRETENSIONER [FRONT-DRIVER]  
CIRCUIT SHORT TO GROUND**  
**DTC B1369 SEAT BELT PRETENSIONER [FRONT-PASSENGER]  
CIRCUIT SHORT TO GROUND**

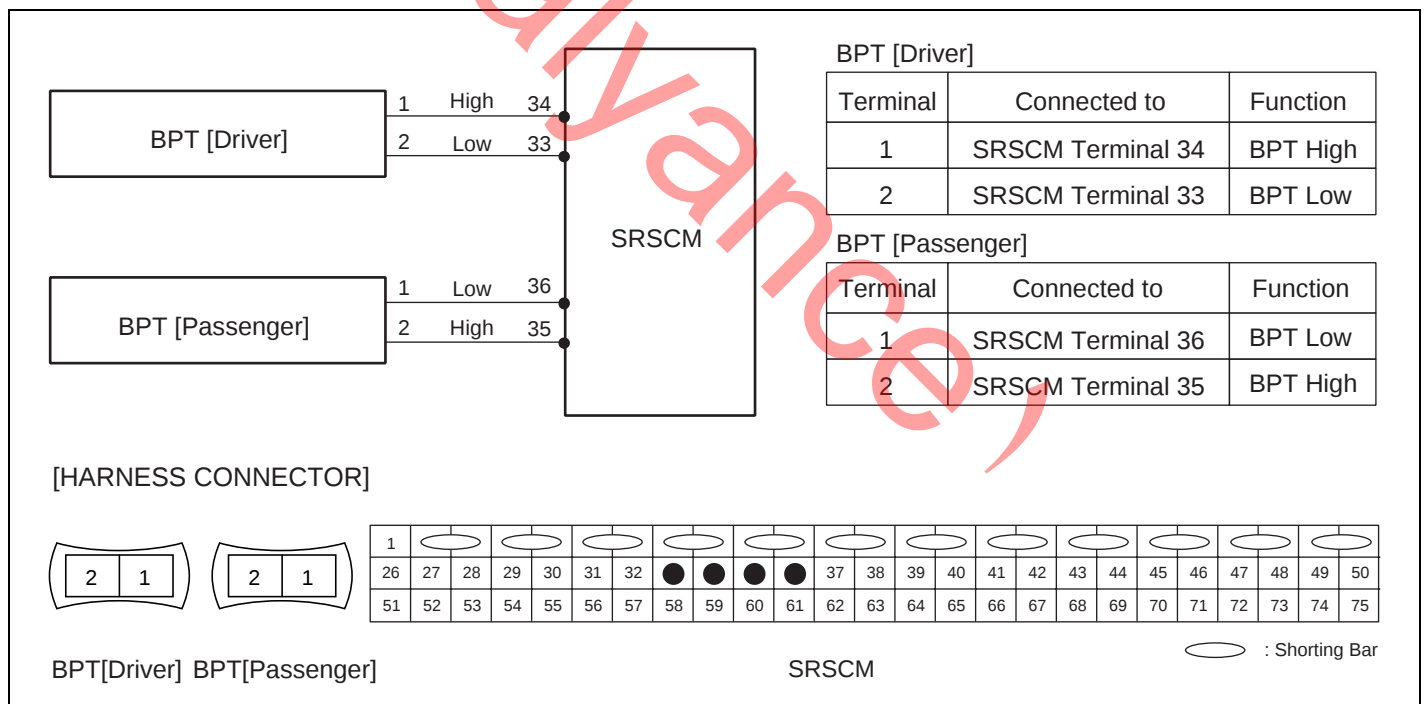
### DTC DESCRIPTION E424B2CF

The Seat Belt Pretensioner consists of the SRSCM and two Seat Belt Pretensioners (BPT). The SRSCM sets above DTC(s) if it detects short to ground on the BPT circuit.

### DTC DETECTING CONDITION E7DB074E

| DTC            | Condition                                                                                                                                                            | Probable cause                                                                                                                                         |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1363<br>B1369 | <ul style="list-style-type: none"> <li>Short to ground between BPT and SRSCM</li> <li>Seat Belt Pretensioner (BPT) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to ground circuit on wiring harness</li> <li>Seat Belt Pretensioner (BPT) squib</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM E0B0CB0A



SBLRT6250L

### TERMINAL & CONNECTOR INSPECTION E61C7A42

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

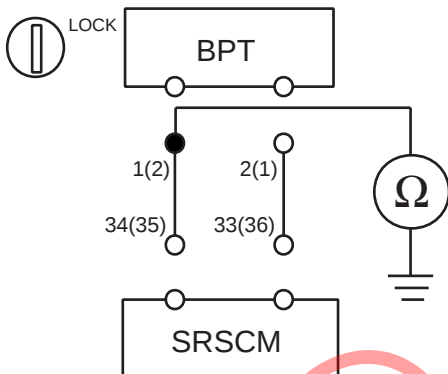
### INSPECTION PROCEDURE ED1E80E8

- PREPARATION**  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

2. CHECK SHORT TO GROUND

- 1) Measure resistance between the terminal 1(2) of BPT harness connector and chassis ground.

Specification (resistance) : infinite



SBLRT6254L

- 2) Is the measured resistance within specification?

**YES**

Check the BPT Module.

**NO**

Repair or replace the wiring harness between the BPT and the SRSCM.

3. CHECK THE BPT MODULE

- 1) Replace the Belt Pretensioner (BPT) with a new one.
  - Refer to "Belt Pretensioner (BPT)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to Belt Pretensioner (BPT)?

**YES**

Go to next step.

**NO**

Replace BPT module.

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -73

**DTC B1364 SEAT BELT PRETENSIONER [FRONT-DRIVER]  
CIRCUIT SHORT TO BATTERY**  
**DTC B1370 SEAT BELT PRETENSIONER [FRONT-PASSENGER]  
CIRCUIT SHORT TO BATTERY**

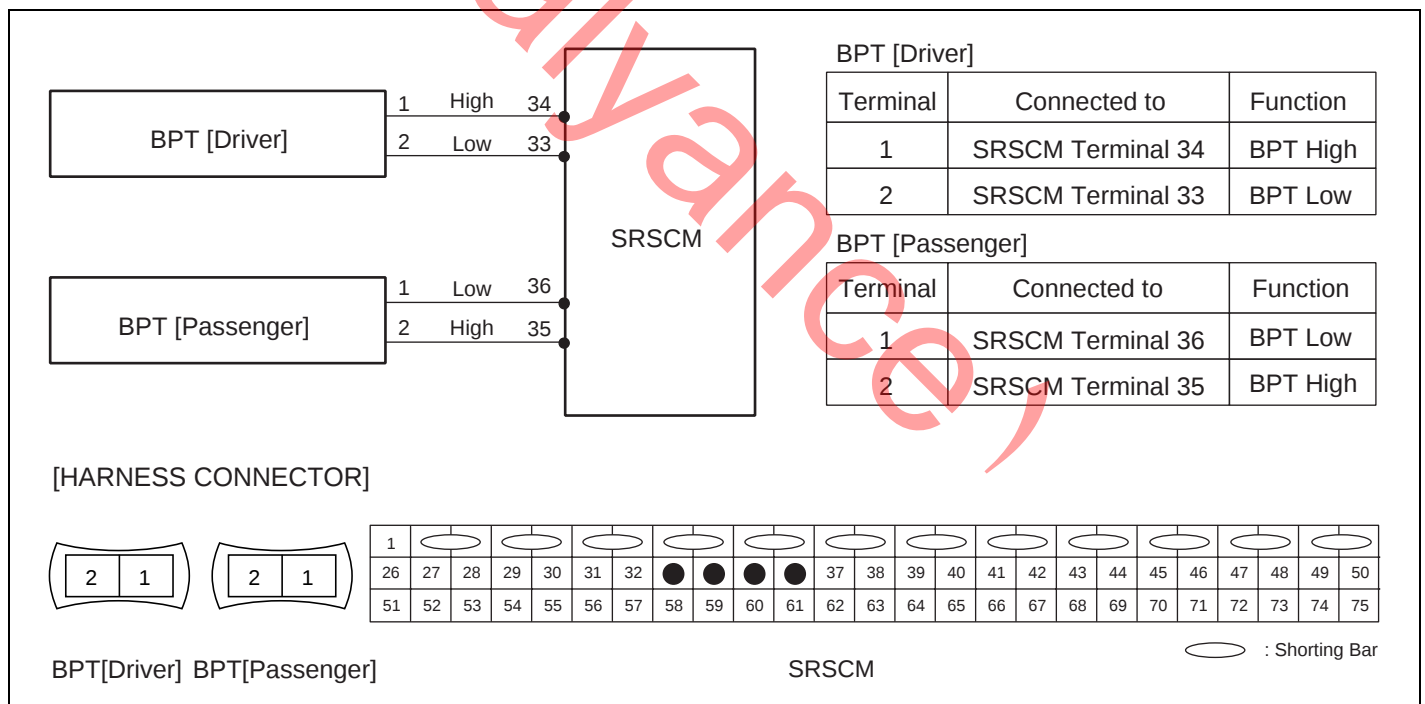
### DTC DESCRIPTION E6196895

The Seat Belt Pretensioner consists of the SRSCM and two Seat Belt Pretensioners (BPT). The SRSCM sets above DTC(s) if it detects short to battery line on the BPT circuit.

### DTC DETECTING CONDITION E31AE084

| DTC            | Condition                                                                                                                                                                  | Probable cause                                                                                                                                               |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1364<br>B1370 | <ul style="list-style-type: none"> <li>Short to battery line between BPT and SRSCM</li> <li>Seat Belt Pretensioner (BPT) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to battery line circuit on wiring harness</li> <li>Seat Belt Pretensioner (BPT) squib</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM EA9BC3BC



SBLRT6250L

### TERMINAL & CONNECTOR INSPECTION EBEEE926

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE

E79D17F8

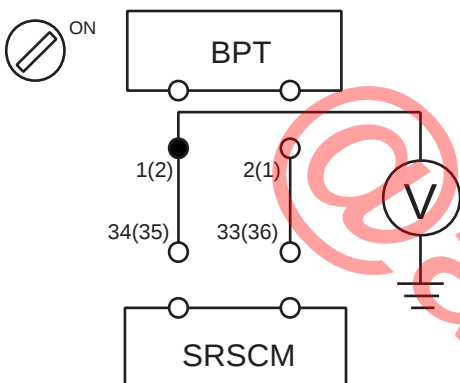
### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### 2. CHECK SHORT TO BATTERY LINE

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal 1(2) of BPT harness connector and chassis ground.

Specification (voltage) : Approximately 0 V



SBLRT6255L

- 4) Is the measured voltage within specification?

**YES**

Check the BPT Module.

**NO**

Repair the short to battery line circuit on wiring harness between the BPT and the SRSCM.

### 3. CHECK THE BPT MODULE

- 1) Replace the Belt Pretensioner (BPT) with a new one.
  - Refer to "Belt Pretensioner (BPT)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.

## TROUBLESHOOTING

RT -75

- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to Belt Pretensioner (BPT)?

**YES**

Go to next step.

**NO**

Replace BPT module.

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

@alyance,

## DTC B1395 FIRING LOOPS INTERCONNECTION FAULT

### DTC DESCRIPTION E027D453

While start up phase, SRSCM will measure cross link of squibs. If one of them is failed during interconnection test, then SRSCM will store interconnection fault. Once the interconnection fault is detected, it remains active continuously till the fault is erased. Only one fault code is assigned for all interconnection fault.

### TERMINAL & CONNECTOR INSPECTION EECD3199

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### INSPECTION PROCEDURE E0656F8A

1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.
2. CHECK SHORT CIRCUIT
  - 1) Measure resistance between following squibs.  
(DAB - PAB, , DAB - CAB, DAB - BPT, PAB - CAB, PAB - BPT, CAB - BPT)

---

Specification (resistance) : infinite

---

- 2) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between two squibs.

3. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -77

|           |                                                             |
|-----------|-------------------------------------------------------------|
| DTC B1400 | SIDE IMPACT SENSOR [FRONT-DRIVER] DEFECT                    |
| DTC B1403 | SIDE IMPACT SENSOR [FRONT-PASSENGER] DEFECT                 |
| DTC B1409 | SIDE IMPACT SENSOR [FRONT-DRIVER]<br>COMMUNICATION ERROR    |
| DTC B1410 | SIDE IMPACT SENSOR [FRONT-PASSENGER]<br>COMMUNICATION ERROR |

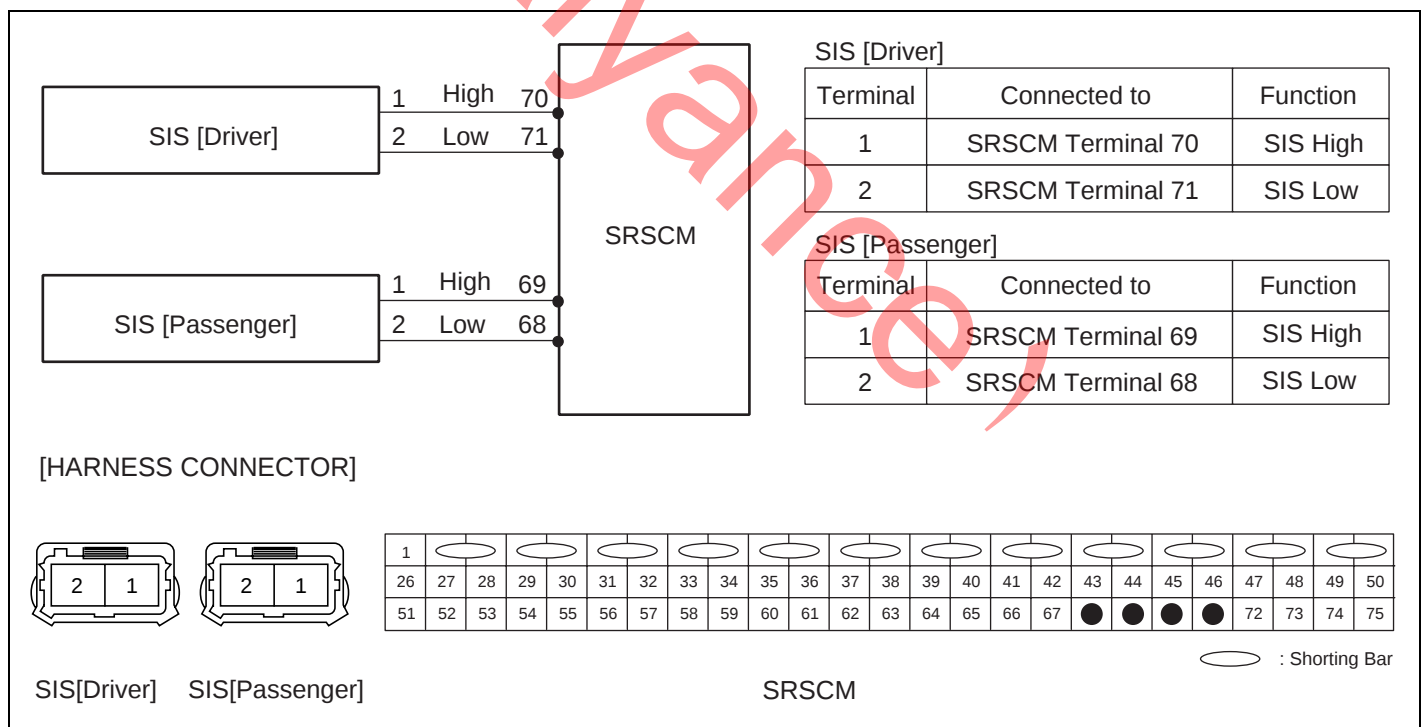
### DTC DESCRIPTION E7C1CA1D

The detecting system for side crash consists of the SRSCM and four Side Impact Sensors (SIS). The SRSCM sets above DTC(s) if it detects that any SIS is defective or there is communication error between any SIS and the SRSCM.

### DTC DETECTING CONDITION EFA2D8F7

| DTC                              | Condition                                                                                                                                             | Probable cause                                                                                                    |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| B1400<br>B1403<br>B1409<br>B1410 | <ul style="list-style-type: none"> <li>Open between SIS and SRSCM</li> <li>Side Impact Sensor (SIS) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Wiring Harness</li> <li>Side Impact Sensor (SIS)</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM EB8523E1



SBLRT6260L

### TERMINAL & CONNECTOR INSPECTION E276ABDE

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE EE9E71F6

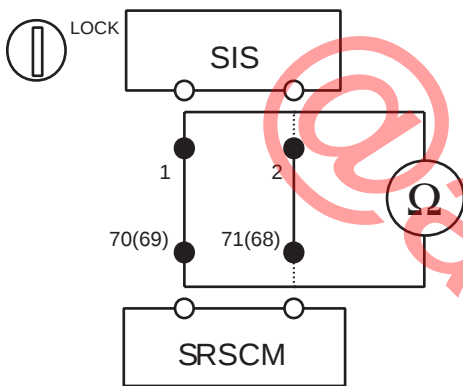
### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### 2. CHECK SIS CIRCUIT

- 1) Measure resistance between the terminal 1 of SIS harness connector and the terminal 70(69) of SRSCM harness connector.
- 2) Measure resistance between the terminal 2 of SIS harness connector and the terminal 71(68) of SRSCM harness connector.

Specification (resistance) : below 1  $\Omega$



SBLRT6261L

- 3) Is the measured resistance within specification?

**YES**

Check Side Impact Sensor.

**NO**

Repair or replace the wiring harness between the SIS and the SRSCM.

### 3. CHECK THE SIDE IMPACT SENSOR

- 1) Replace the Side Impact Sensor(SIS) with a new one.
  - Refer to "Side Impact Sensor(SIS)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.

## TROUBLESHOOTING

RT -79

- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to Side Impact Sensor(SIS)?

**YES**

Go to next step.

**NO**

Replace SIS.

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

@alyance,

RT -80

RESTRAINTS

**DTC B1401 SIDE IMPACT SENSOR [FRONT-DRIVER] CIRCUIT SHORT TO GROUND**  
**DTC B1404 SIDE IMPACT SENSOR [FRONT-PASSENGER] CIRCUIT SHORT TO GROUND**

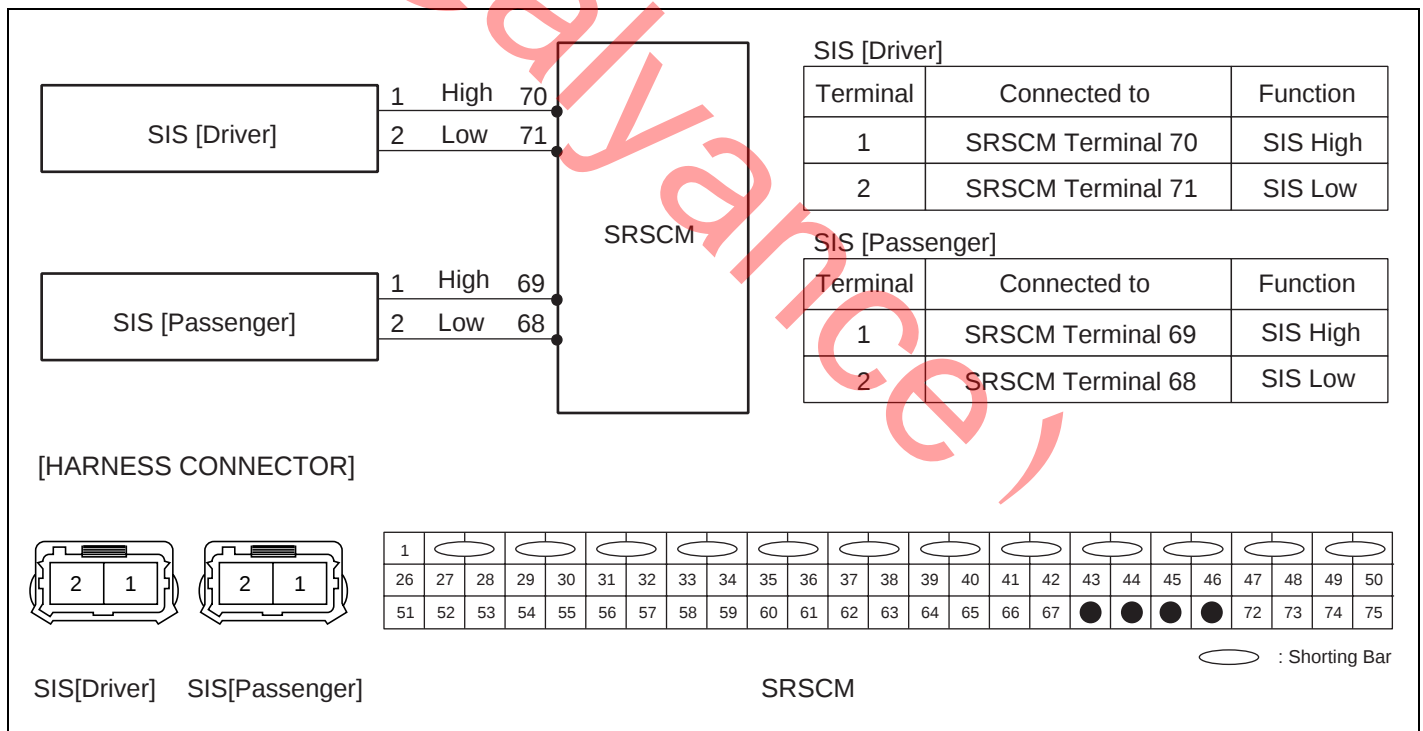
### DTC DESCRIPTION E97ECDA8

The detecting system for side crash consists of the SRSCM and four Side Impact Sensors (SIS). The SRSCM sets above DTC(s) if it detects short to ground on the SIS circuit.

### DTC DETECTING CONDITION E0FA7544

| DTC            | Condition                                                                                                                                                        | Probable cause                                                                                                                               |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| B1401<br>B1404 | <ul style="list-style-type: none"> <li>Short to ground between SIS and SRSCM</li> <li>Side Impact Sensor (SIS) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to ground circuit on wiring harness</li> <li>Side Impact Sensor (SIS)</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM EE98102E



SBLRT6260L

### TERMINAL & CONNECTOR INSPECTION EF53CDBA

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### INSPECTION PROCEDURE E384A624

1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

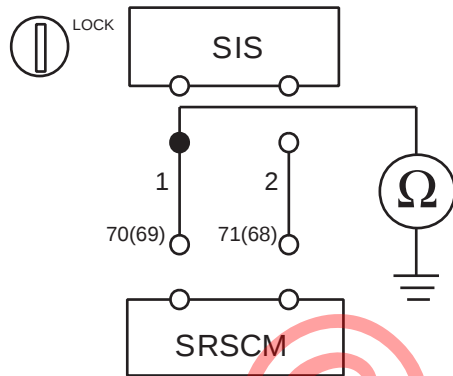
## TROUBLESHOOTING

RT -81

### 2. CHECK SHORT TO GROUND

- 1) Measure resistance between the terminal 1 of SIS harness connector and chassis ground.

Specification (resistance) : infinite



SBLRT6262L

- 2) Is the measured resistance within specification?

**YES**

Check the SIS.

**NO**

Repair or replace the wiring harness between the SIS and the SRSCM.

### 3. CHECK THE SIDE IMPACT SENSOR

- 1) Replace the Side Impact Sensor(SIS) with a new one.
  - Refer to "Side Impact Sensor(SIS)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to Side Impact Sensor(SIS)?

**YES**

Go to next step.

**NO**

Replace SIS module.

### 4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

|                  |                                                                          |
|------------------|--------------------------------------------------------------------------|
| <b>DTC B1402</b> | <b>SIDE IMPACT SENSOR [FRONT-DRIVER] CIRCUIT<br/>SHORT TO BATTERY</b>    |
| <b>DTC B1405</b> | <b>SIDE IMPACT SENSOR [FRONT-PASSENGER] CIRCUIT<br/>SHORT TO BATTERY</b> |

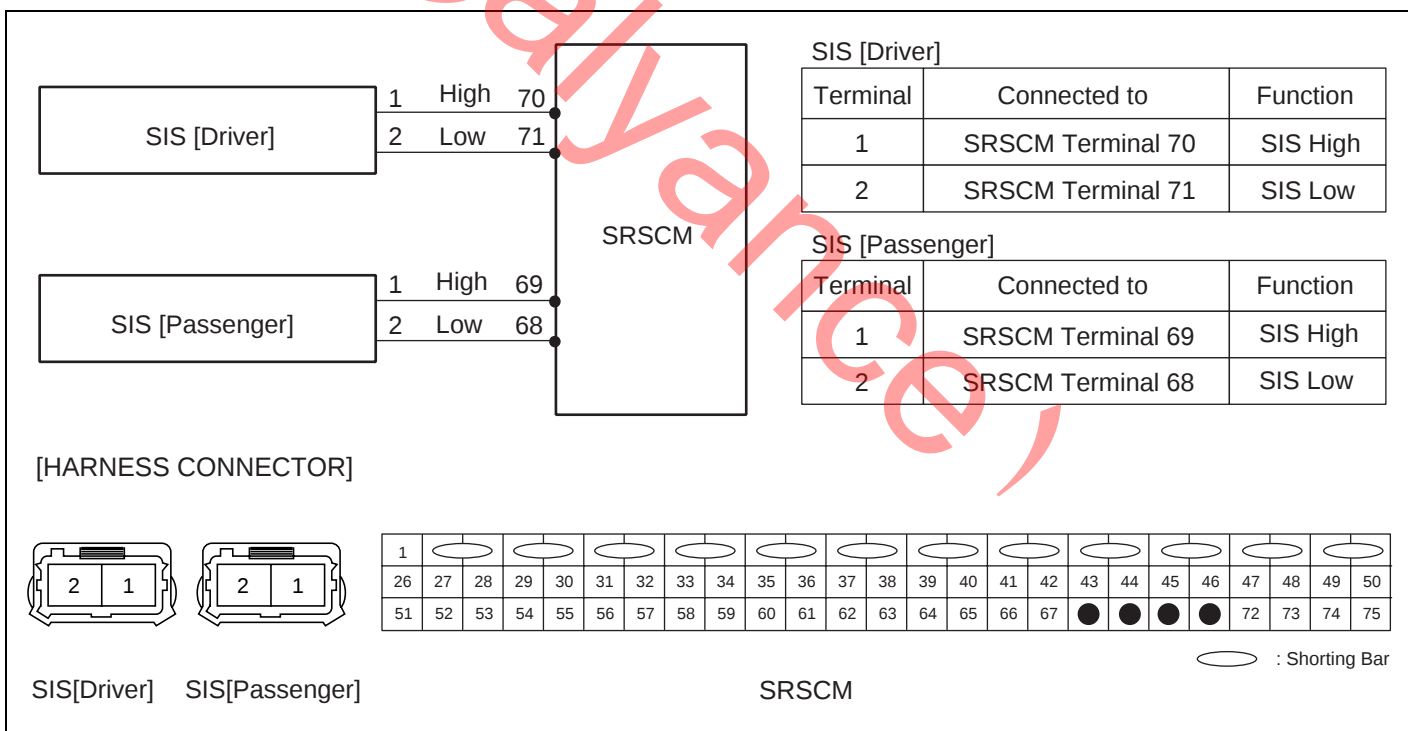
| DTC DESCRIPTION                                                         | EF82BE9A |
|-------------------------------------------------------------------------|----------|
| P0001 Fuel Volume Regulator Control Circuit Low                         |          |
| P0002 Fuel Volume Regulator Control Circuit High                        |          |
| P0003 Fuel Volume Regulator Control Circuit Intermittent or No Response |          |
| P0004 Fuel Volume Regulator Control Circuit Open                        |          |
| P0005 Fuel Volume Regulator Control Circuit Shorted                     |          |
| P0006 Fuel Volume Regulator Control Circuit Malfunction                 |          |
| P0007 Fuel Volume Regulator Control Circuit Faulty                      |          |
| P0008 Fuel Volume Regulator Control Circuit Error                       |          |
| P0009 Fuel Volume Regulator Control Circuit Abnormal                    |          |
| P0010 Fuel Volume Regulator Control Circuit Stuck                       |          |
| P0011 Fuel Volume Regulator Control Circuit Jammed                      |          |
| P0012 Fuel Volume Regulator Control Circuit Blocked                     |          |
| P0013 Fuel Volume Regulator Control Circuit Leaking                     |          |
| P0014 Fuel Volume Regulator Control Circuit Contaminated                |          |
| P0015 Fuel Volume Regulator Control Circuit Corroded                    |          |
| P0016 Fuel Volume Regulator Control Circuit Cracked                     |          |
| P0017 Fuel Volume Regulator Control Circuit Bent                        |          |
| P0018 Fuel Volume Regulator Control Circuit Twisted                     |          |
| P0019 Fuel Volume Regulator Control Circuit Broken                      |          |
| P0020 Fuel Volume Regulator Control Circuit Missing                     |          |
| P0021 Fuel Volume Regulator Control Circuit Installed Incorrectly       |          |
| P0022 Fuel Volume Regulator Control Circuit Damaged                     |          |
| P0023 Fuel Volume Regulator Control Circuit Overheated                  |          |
| P0024 Fuel Volume Regulator Control Circuit Underheated                 |          |
| P0025 Fuel Volume Regulator Control Circuit Frozen                      |          |
| P0026 Fuel Volume Regulator Control Circuit Thawed                      |          |
| P0027 Fuel Volume Regulator Control Circuit Dry                         |          |
| P0028 Fuel Volume Regulator Control Circuit Wet                         |          |
| P0029 Fuel Volume Regulator Control Circuit Dirty                       |          |
| P0030 Fuel Volume Regulator Control Circuit Clean                       |          |
| P0031 Fuel Volume Regulator Control Circuit Oiled                       |          |
| P0032 Fuel Volume Regulator Control Circuit Greased                     |          |
| P0033 Fuel Volume Regulator Control Circuit Lubricated                  |          |
| P0034 Fuel Volume Regulator Control Circuit Sealed                      |          |
| P0035 Fuel Volume Regulator Control Circuit Unsealed                    |          |
| P0036 Fuel Volume Regulator Control Circuit Pressurized                 |          |
| P0037 Fuel Volume Regulator Control Circuit Depressurized               |          |
| P0038 Fuel Volume Regulator Control Circuit Ventilated                  |          |
| P0039 Fuel Volume Regulator Control Circuit Non-ventilated              |          |
| P0040 Fuel Volume Regulator Control Circuit Filtered                    |          |
| P0041 Fuel Volume Regulator Control Circuit Unfiltered                  |          |
| P0042 Fuel Volume Regulator Control Circuit Monitored                   |          |
| P0043 Fuel Volume Regulator Control Circuit Not-monitored               |          |
| P0044 Fuel Volume Regulator Control Circuit Alarmed                     |          |
| P0045 Fuel Volume Regulator Control Circuit Silent                      |          |
| P0046 Fuel Volume Regulator Control Circuit Active                      |          |
| P0047 Fuel Volume Regulator Control Circuit Inactive                    |          |
| P0048 Fuel Volume Regulator Control Circuit Enabled                     |          |
| P0049 Fuel Volume Regulator Control Circuit Disabled                    |          |
| P0050 Fuel Volume Regulator Control Circuit Locked                      |          |
| P0051 Fuel Volume Regulator Control Circuit Unlocked                    |          |
| P0052 Fuel Volume Regulator Control Circuit Secured                     |          |
| P0053 Fuel Volume Regulator Control Circuit Unsecured                   |          |
| P0054 Fuel Volume Regulator Control Circuit Protected                   |          |
| P0055 Fuel Volume Regulator Control Circuit Unprotected                 |          |
| P0056 Fuel Volume Regulator Control Circuit Encrypted                   |          |
| P0057 Fuel Volume Regulator Control Circuit Decrypted                   |          |
| P0058 Fuel Volume Regulator Control Circuit Signed                      |          |
| P0059 Fuel Volume Regulator Control Circuit Unsigned                    |          |
| P0060 Fuel Volume Regulator Control Circuit Verified                    |          |
| P0061 Fuel Volume Regulator Control Circuit Unverified                  |          |
| P0062 Fuel Volume Regulator Control Circuit Approved                    |          |
| P0063 Fuel Volume Regulator Control Circuit Disapproved                 |          |
| P0064 Fuel Volume Regulator Control Circuit Authorized                  |          |
| P0065 Fuel Volume Regulator Control Circuit Unauthorized                |          |
| P0066 Fuel Volume Regulator Control Circuit Permitted                   |          |
| P0067 Fuel Volume Regulator Control Circuit Not-permitted               |          |
| P0068 Fuel Volume Regulator Control Circuit Allowed                     |          |
| P0069 Fuel Volume Regulator Control Circuit Not-allowed                 |          |
| P0070 Fuel Volume Regulator Control Circuit Succeeded                   |          |
| P0071 Fuel Volume Regulator Control Circuit Failed                      |          |
| P0072 Fuel Volume Regulator Control Circuit Passed                      |          |
| P0073 Fuel Volume Regulator Control Circuit Not-passed                  |          |
| P0074 Fuel Volume Regulator Control Circuit Completed                   |          |
| P0075 Fuel Volume Regulator Control Circuit Incomplete                  |          |
| P0076 Fuel Volume Regulator Control Circuit Executed                    |          |
| P0077 Fuel Volume Regulator Control Circuit Not-executed                |          |
| P0078 Fuel Volume Regulator Control Circuit Terminated                  |          |
| P0079 Fuel Volume Regulator Control Circuit Not-terminated              |          |
| P0080 Fuel Volume Regulator Control Circuit Interrupted                 |          |
| P0081 Fuel Volume Regulator Control Circuit Not-interrupted             |          |
| P0082 Fuel Volume Regulator Control Circuit Suspended                   |          |
| P0083 Fuel Volume Regulator Control Circuit Not-suspended               |          |
| P0084 Fuel Volume Regulator Control Circuit Resumed                     |          |
| P0085 Fuel Volume Regulator Control Circuit Not-resumed                 |          |
| P0086 Fuel Volume Regulator Control Circuit Paused                      |          |
| P0087 Fuel Volume Regulator Control Circuit Not-paused                  |          |
| P0088 Fuel Volume Regulator Control Circuit Running                     |          |
| P0089 Fuel Volume Regulator Control Circuit Not-running                 |          |
| P0090 Fuel Volume Regulator Control Circuit Stopped                     |          |
| P0091 Fuel Volume Regulator Control Circuit Not-stopped                 |          |
| P0092 Fuel Volume Regulator Control Circuit Started                     |          |
| P0093 Fuel Volume Regulator Control Circuit Not-started                 |          |
| P0094 Fuel Volume Regulator Control Circuit Waiting                     |          |
| P0095 Fuel Volume Regulator Control Circuit Not-waiting                 |          |
| P0096 Fuel Volume Regulator Control Circuit Ready                       |          |
| P0097 Fuel Volume Regulator Control Circuit Not-ready                   |          |
| P0098 Fuel Volume Regulator Control Circuit Busy                        |          |
| P0099 Fuel Volume Regulator Control Circuit Not-busy                    |          |
| P0100 Fuel Volume Regulator Control Circuit Idle                        |          |
| P0101 Fuel Volume Regulator Control Circuit Not-idle                    |          |
| P0102 Fuel Volume Regulator Control Circuit Awake                       |          |
| P0103 Fuel Volume Regulator Control Circuit Not-awake                   |          |
| P0104 Fuel Volume Regulator Control Circuit Asleep                      |          |
| P0105 Fuel Volume Regulator Control Circuit Not-asleep                  |          |
| P0106 Fuel Volume Regulator Control Circuit Online                      |          |
| P0107 Fuel Volume Regulator Control Circuit Not-online                  |          |
| P0108 Fuel Volume Regulator Control Circuit Offline                     |          |
| P0109 Fuel Volume Regulator Control Circuit Not-offline                 |          |
| P0110 Fuel Volume Regulator Control Circuit Connected                   |          |
| P0111 Fuel Volume Regulator Control Circuit Not-connected               |          |
| P0112 Fuel Volume Regulator Control Circuit Disconnected                |          |
| P0113 Fuel Volume Regulator Control Circuit Not-disconnected            |          |
| P0114 Fuel Volume Regulator Control Circuit Attached                    |          |
| P0115 Fuel Volume Regulator Control Circuit Not-attached                |          |
| P0116 Fuel Volume Regulator Control Circuit Detached                    |          |
| P0117 Fuel Volume Regulator Control Circuit Not-detached                |          |
| P0118 Fuel Volume Regulator Control Circuit Merged                      |          |
| P0119 Fuel Volume Regulator Control Circuit Not-merged                  |          |
| P0120 Fuel Volume Regulator Control Circuit Split                       |          |
| P0121 Fuel Volume Regulator Control Circuit Not-split                   |          |
| P0122 Fuel Volume Regulator Control Circuit Joined                      |          |
| P0123 Fuel Volume Regulator Control Circuit Not-joined                  |          |
| P0124 Fuel Volume Regulator Control Circuit Separated                   |          |
| P0125 Fuel Volume Regulator Control Circuit Not-separated               |          |
| P0126 Fuel Volume Regulator Control Circuit Reunited                    |          |
| P0127 Fuel Volume Regulator Control Circuit Not-reunited                |          |
| P0128 Fuel Volume Regulator Control Circuit Divided                     |          |
| P0129 Fuel Volume Regulator Control Circuit Not-divided                 |          |
| P0130 Fuel Volume Regulator Control Circuit Multiplied                  |          |
| P0131 Fuel Volume Regulator Control Circuit Not-multiplied              |          |
| P0132 Fuel Volume Regulator Control Circuit Reduced                     |          |
| P0133 Fuel Volume Regulator Control Circuit Not-reduced                 |          |
| P0134 Fuel Volume Regulator Control Circuit Increased                   |          |
| P0135 Fuel Volume Regulator Control Circuit Not-increased               |          |
| P0136 Fuel Volume Regulator Control Circuit Decreased                   |          |
| P0137 Fuel Volume Regulator Control Circuit Not-decreased               |          |
| P0138 Fuel Volume Regulator Control Circuit Fluctuated                  |          |
| P0139 Fuel Volume Regulator Control Circuit Not-fluctuated              |          |
| P0140 Fuel Volume Regulator Control Circuit Stabilized                  |          |
| P0141 Fuel Volume Regulator Control Circuit Not-stabilized              |          |
| P0142 Fuel Volume Regulator Control Circuit Oscillated                  |          |
| P0143 Fuel Volume Regulator Control Circuit Not-oscillated              |          |
| P0144 Fuel Volume Regulator Control Circuit Vibrated                    |          |
| P0145 Fuel Volume Regulator Control Circuit Not-vibrated                |          |
| P0146 Fuel Volume Regulator Control Circuit Shook                       |          |
| P0147 Fuel Volume Regulator Control Circuit Not-shook                   |          |
| P0148 Fuel Volume Regulator Control Circuit Trembled                    |          |
| P0149 Fuel Volume Regulator Control Circuit Not-trembled                |          |
| P0150 Fuel Volume Reg                                                   |          |

The detecting system for side crash consists of the SRSCM and four Side Impact Sensors (SIS). The SRSCM sets above DTC(s) if it detects short to battery line on the SIS circuit.

## DTC DETECTING CONDITION

| DTC            | Condition                                                                                                                                                                    | Probable cause                                                                                                                                           |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1402<br>B1405 | <ul style="list-style-type: none"> <li>• Short to battery line between SIS and SRSCM</li> <li>• Side Impact Sensor (SIS) Malfunction</li> <li>• SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>• Short to battery line circuit on wiring harness</li> <li>• Side Impact Sensor (SIS)</li> <li>• SRSCM</li> </ul> |

**SCHEMATIC DIAGRAM**



SBLRT6260L

## TERMINAL & CONNECTOR INSPECTION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE

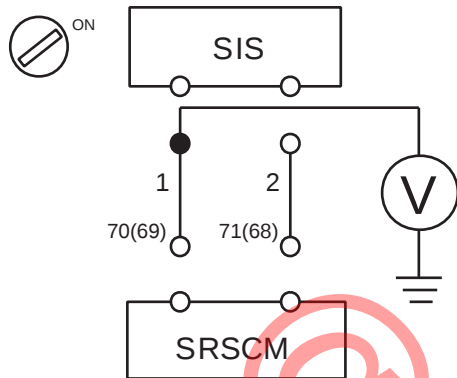
1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.
2. CHECK SHORT TO BATTERY LINE

## TROUBLESHOOTING

RT -83

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal 1 of SIS harness connector and chassis ground.

Specification(voltage) : Approximately 0V



SBLRT6263L

- 4) Is the measured voltage within specification?

**YES**

Check the SIS Module.

**NO**

Repair the short to battery line circuit on wiring harness between the SIS and the SRSCM.

### 3. CHECK THE SIS MODULE

- 1) Replace the Side Impact Sensor(SIS) with a new one.
  - Refer to "Side Impact Sensor(SIS)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to Side Impact Sensor(SIS)?

**YES**

Go to next step.

**NO**

Replace SIS module.

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

RT -84

RESTRAINTS

**DTC B1414 SIDE IMPACT SENSOR [FRONT-DRIVER] WRONG ID**  
**DTC B1415 SIDE IMPACT SENSOR [FRONT-PASSENGER] WRONG ID**

**DTC DESCRIPTION** E7BCC6BD

The detecting system for side crash consists of the SRSCM and four Side Impact Sensors (SIS). The SRSCM sets above DTC(s) if it detects that wrong SIS is used.

**DTC DETECTING CONDITION** E2A0FF8A

| DTC            | Condition                                                                                                   | Probable cause                                                                            |
|----------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| B1414<br>B1415 | <ul style="list-style-type: none"> <li>Wrong Side Impact Sensor (SIS)</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Side Impact Sensor (SIS)</li> <li>SRSCM</li> </ul> |

**TERMINAL & CONNECTOR INSPECTION** E394EEA7

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

**INSPECTION PROCEDURE** E04EC6EF

If above DTC is detected replace the side impact sensor.



## TERMINAL & CONNECTOR INSPECTION

E67565A8

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE

E0265A0E

### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### 2. CHECK CAB RESISTANCE

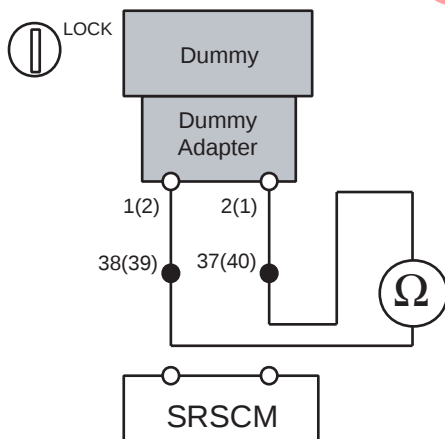


#### CAUTION

**Never attempt to measure the circuit resistance of the airbag module(squib) even if you are using the specified tester.**

- 1) Connect the Dummy and the Dummy Adapter on CAB harness connector.
  - Refer to "SPECIAL SERVICE TOOL" section in this SERVICE MANUAL for the SST No. of Dummy and Dummy Adapter.
- 2) Measure resistance between the terminal 38(39) and 37(40) of SRSCM harness connector.

Specification (resistance) : 1.8 ~ 4.8  $\Omega$



SBLRT6271L

- 3) Is the measured resistance within specification?

**YES**

Replace the Curtain Airbag(CAB) module.

**NO**

Check open circuit.

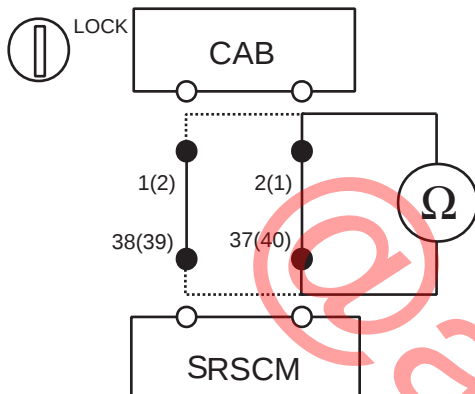
## TROUBLESHOOTING

RT -87

### 3. CHECK OPEN CIRCUIT

- 1) Measure resistance between the terminal 1(2) of CAB harness connector and the terminal 38(39) of SRSCM harness connector.
- 2) Measure resistance between the terminal 2(1) of CAB harness connector and the terminal 37(40) of SRSCM harness connector.

Specification (resistance) : below 1  $\Omega$



SBLRT6272L

- 3) Is the measured resistance within specification?

**YES**

Check short circuit.

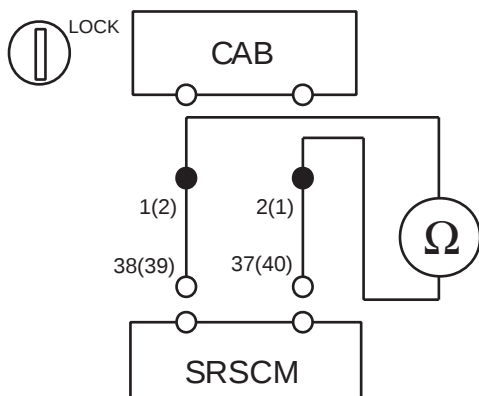
**NO**

Repair or replace the wiring harness between the CAB and the SRSCM.

### 4. CHECK SHORT CIRCUIT

- 1) Measure resistance between the terminal 1(2) and 2(1) of CAB harness connector.

Specification (resistance) : infinite



SBLRT6273L

- 2) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between the CAB and the SRSCM.

5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

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## TROUBLESHOOTING

RT -89

### DTC B1475 CURTAIN AIRBAG [DRIVER] CIRCUIT SHORT TO GROUND DTC B1479 CURTAIN AIRBAG [PASSENGER] CIRCUIT SHORT TO GROUND

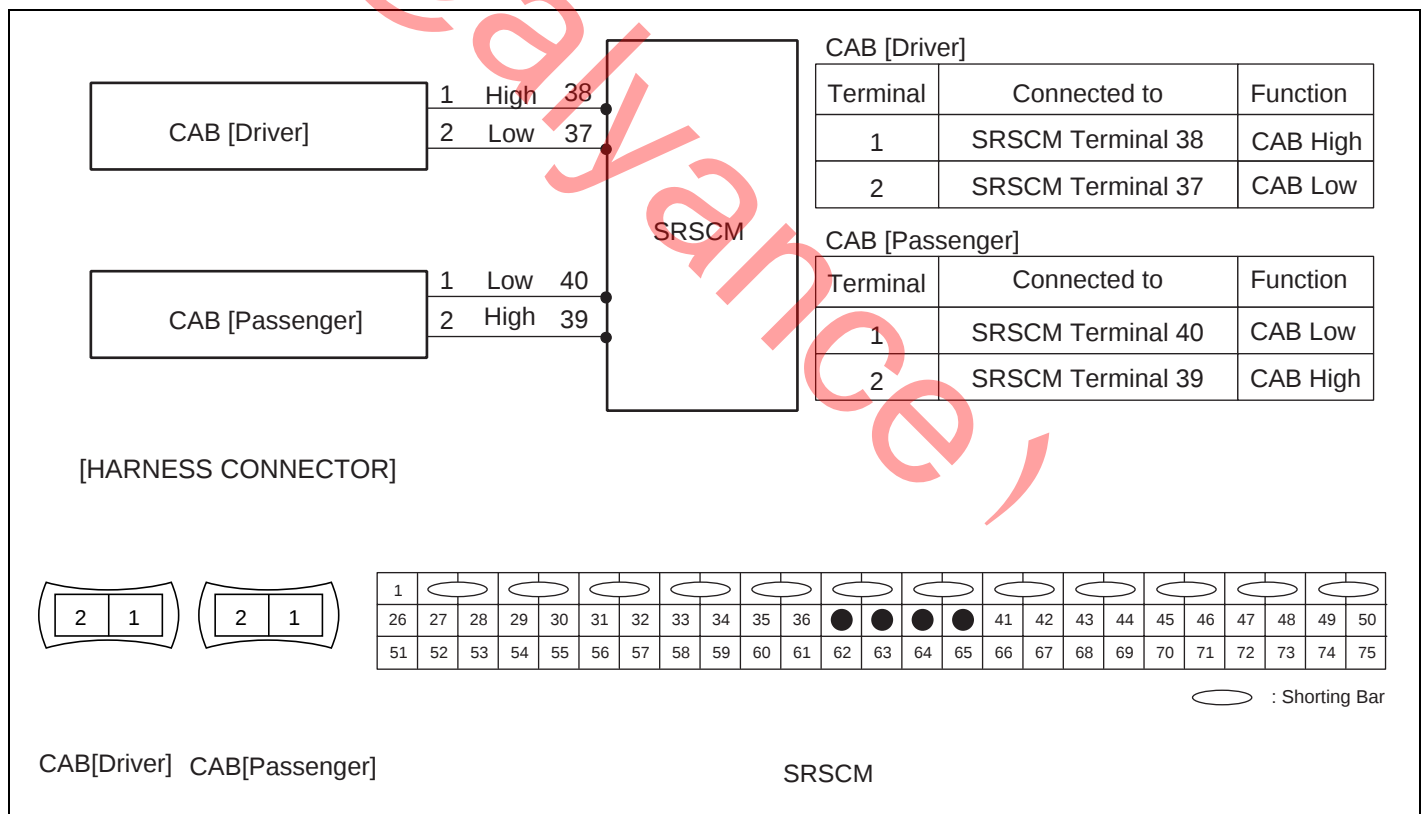
#### DTC DESCRIPTION EF4CB9A5

The CAB squib circuit consists of the SRSCM and two Curtain Airbags (CAB). It causes the SRS to deploy when the SRS deployment conditions are satisfied. The above DTC is recorded when short to ground is detected in the CAB squib circuit.

#### DTC DETECTING CONDITION EAAE5911

| DTC            | Condition                                                                                                                                                    | Probable cause                                                                                                                                 |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| B1475<br>B1479 | <ul style="list-style-type: none"> <li>Short to ground between CAB and SRSCM</li> <li>Curtain Airbag (CAB) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to ground circuit on wiring harness</li> <li>Curtain Airbag (CAB) squib</li> <li>SRSCM</li> </ul> |

#### SCHEMATIC DIAGRAM E6EFB078



SBLRT6270L

#### TERMINAL & CONNECTOR INSPECTION E7200741

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

#### INSPECTION PROCEDURE E3A2F149

1. PREPARATION  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

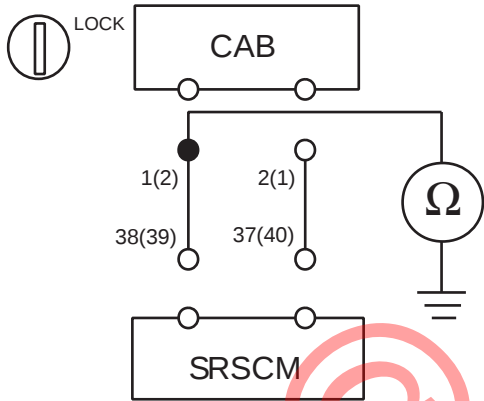
RT -90

RESTRAINTS

2. CHECK SHORT TO GROUND

- 1) Measure resistance between the terminal 1(2) of CAB harness connector and chassis ground.

Specification (resistance) : infinite



SBLRT6274L

- 2) Is the measured resistance within specification?

**YES**

Check the CAB Module..

**NO**

Repair or replace the wiring harness between the CAB and the SRSCM.

3. CHECK THE CAB MODULE

- 1) Replace the Curtain Airbag(CAB) with a new one.
  - Refer to "Curtain Airbag(CAB)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.
- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to Curtain Airbag(CAB)?

**YES**

Go to next step.

**NO**

Replace CAB module.

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -91

### DTC B1476 CURTAIN AIRBAG [DRIVER] CIRCUIT SHORT TO BATTERY DTC B1480 CURTAIN AIRBAG [PASSENGER] CIRCUIT SHORT TO BATTERY

#### DTC DESCRIPTION

E8242B75

The CAB squib circuit consists of the SRSCM and CAB. It causes the SRS to deploy when the SRS deployment conditions are satisfied. The above DTC is recorded when short to battery is detected in the CAB squib circuit.

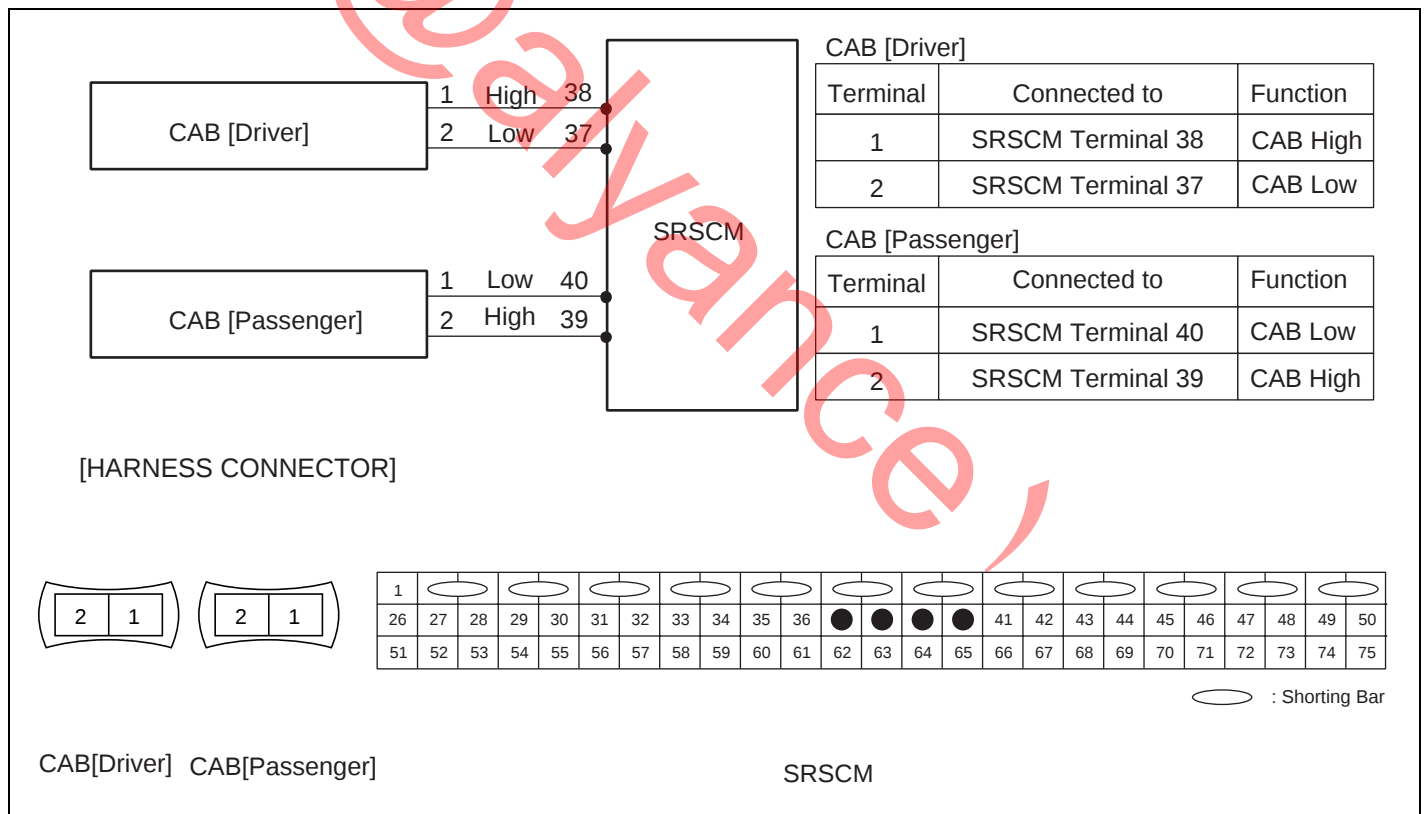
#### DTC DETECTING CONDITION

EC02CD65

| DTC            | Condition                                                                                                                                                     | Probable cause                                                                                                                                       |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1476<br>B1480 | <ul style="list-style-type: none"> <li>Short to battery between CAB and SRSCM</li> <li>Curtain Airbag (CAB) Malfunction</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Short to battery line circuit on wiring harness</li> <li>Curtain Airbag (CAB) squib</li> <li>SRSCM</li> </ul> |

#### SCHEMATIC DIAGRAM

ED9E23C3



SBLRT6270L

#### TERMINAL & CONNECTOR INSPECTION

E7691A8D

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE E8312668

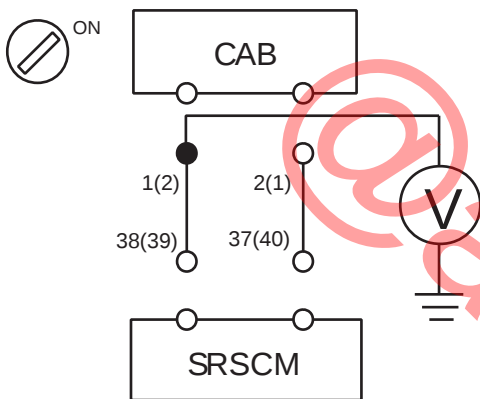
### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### 2. CHECK SHORT TO BATTERY LINE

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal 1(2) of CAB harness connector and chassis ground.

Specification (voltage) : Approximately 0 V



SBLRT6275L

- 4) Is the measured voltage within specification?

**YES**

Check the CAB Module.

**NO**

Repair the short to battery line circuit on wiring harness between the CAB and the SRSCM.

### 3. CHECK THE CAB MODULE

- 1) Replace the Curtain Airbag(CAB) with a new one.
  - Refer to "Curtain Airbag(CAB)" section in this SERVICE MANUAL.
- 2) Install the DAB module and connect the DAB connector.
- 3) Connect the connectors of the PAB, CAB, BPT, FIS and SIS.
- 4) Connect the SRSCM connector.
- 5) Connect the battery negative cable to the battery.
- 6) Connect a Hi-Scan(Pro) to the data link connector.

## TROUBLESHOOTING

RT -93

- 7) Turn the ignition switch to ON and check the vehicle again.  
Does Hi-Scan (Pro) indicate any DTC related to Curtain Airbag(CAB)?

**YES**

Go to next step.

**NO**

Replace CAB module.

4. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

@alyance,

## DTC B1527 PASSENGER AIRBAG DEACTIVATION SWITCH OPEN OR SHORT TO BATTERY

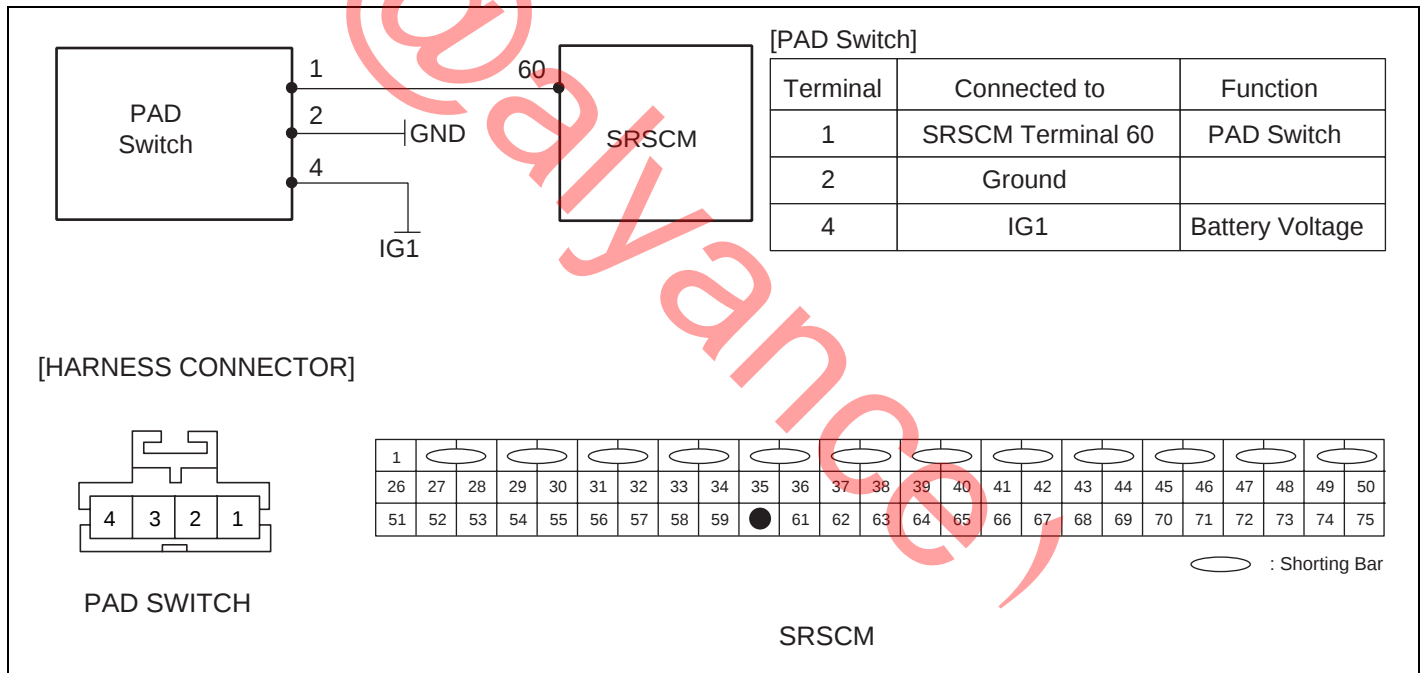
### DTC DESCRIPTION E1D5D6A9

The deactivation system for the passenger airbag consists of the SRSCM and the Passenger Airbag Deactivation(PAD) switch. The above DTC is recored when PAD switch open or short to battery is detected in the PAD circuit.

### DTC DETECTING CONDITION E5D70D59

| DTC   | Condition                                                                                                                                                        | Probable cause                                                                                      |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| B1527 | <ul style="list-style-type: none"> <li>Short to battery line between PAD switch and SRSCM</li> <li>SRSCM mMalfunction</li> <li>PAD switch malfunction</li> </ul> | <ul style="list-style-type: none"> <li>PAD switch</li> <li>Wiring harness</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM E536DF43



SBLRT6280L

### SPECIFICATION EF7E0AD8

| PAD Switch Status        | Current (mA) | Related DTC |
|--------------------------|--------------|-------------|
| Open or Short to Battery | < 2.4        | B1527       |
| PAD Enabled Position     | 3.7 ~ 7.5    |             |
| PAD Disabled Position    | 10 ~ 17      |             |
| Short or Short to Ground | > 22         | B1528       |

## TROUBLESHOOTING

RT -95

### TERMINAL & CONNECTOR INSPECTION EBF7AADF

Refer to the DESCRIPTION in this TROUBLESHOOTING part.

### INSPECTION PROCEDURE E9B16395

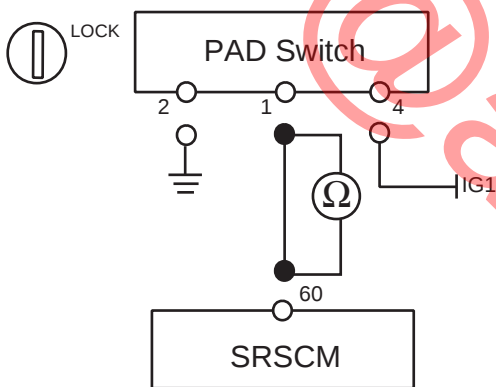
#### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING part.

#### 2. CHECK OPEN CIRCUIT

- 1) Disconnect the connector of the PAD switch.
- 2) Measure resistance between the terminal 60 of the SRSCM harness connector and 1 of PAD switch connector.

Specification (resistance) : below 1  $\Omega$



SBLRT6281L

#### 3) Is the measured resistance within specification?

**YES**

Check short to battery line.

**NO**

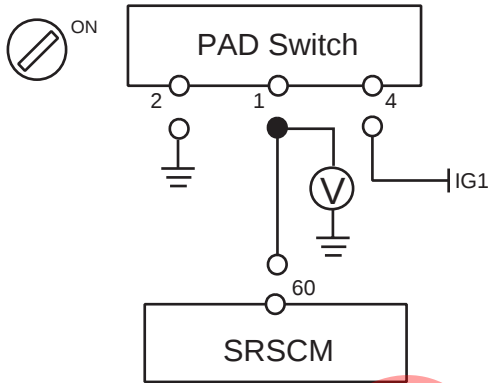
Replace the harness between the SRSCM and the PAD switch.

#### 3. CHECK SHORT TO BATTERY LINE

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Turn the ignition switch to LOCK, and wait for 30 seconds.

- 4) Measure voltage between the terminal 1 of PAD switch harness connector and chassis ground.

Specification (voltage) : Approximately 0 V



SBLRT6282L

- 5) Is the measured voltage within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between the PAD switch and the SRSCM.

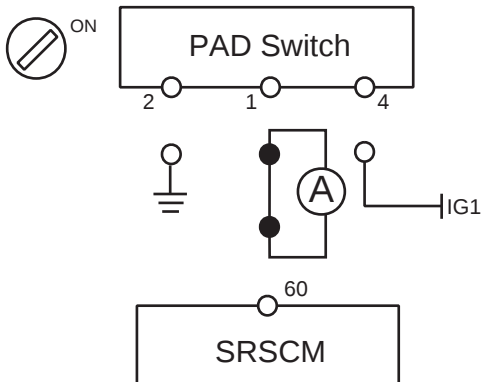
#### 4. CHECK THE PAD SWITCH

- 1) Connect the SRSCM connector.
- 2) Connect the PAD switch.
- 3) Connect the battery negative cable to the battery.
- 4) Turn the ignition switch to ON.
- 5) Measure current between the terminal 60 of the SRSCM harness connector and 1 of PAD switch connector.

Specification (current) :

PAD switch (Enabled position) : 3.7 ~ 7.5 mA

PAD switch (Disabled position) : 10 ~ 17 mA



SBLRT6283L

6) Is the measured current within specification?

**YES**

Go to next step.

**NO**

Replace the PAD switch.

5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING part.

RT -98

RESTRAINTS

## DTC B1528 PASSENGER AIRBAG DEACTIVATION SWITCH SHORT OR SHORT TO GROUND

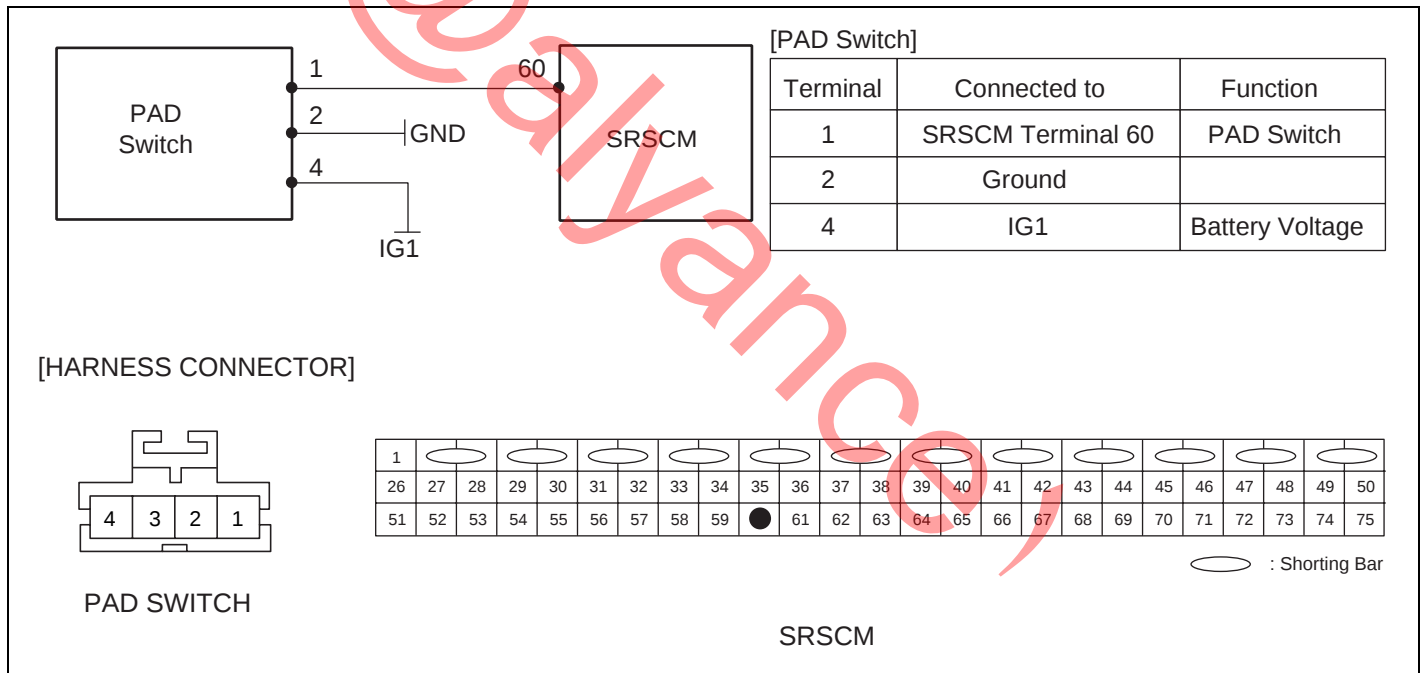
### DTC DESCRIPTION E45B275C

The deactivation system for the passenger airbag consists of the SRSCM and the Passenger Airbag Deactivation(PAD) switch. The above DTC is recored when PAD switch short or short to ground is detected in the PAD system circuit.

### DTC DETECTING CONDITION E2A88B03

| DTC   | Condition                                                                                                                                                 | Probable cause                                                                                      |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| B1528 | <ul style="list-style-type: none"> <li>Short to ground between PAD switch and SRSCM</li> <li>PAD switch malfunction</li> <li>SRSCM malfunction</li> </ul> | <ul style="list-style-type: none"> <li>PAD switch</li> <li>Wiring harness</li> <li>SRSCM</li> </ul> |

### SCHEMATIC DIAGRAM E5831580



SBLRT6280L

### SPECIFICATION E3048475

| PAD Switch Status        | Current (mA) | Related DTC |
|--------------------------|--------------|-------------|
| Open or Short to Battery | < 2.4        | B1527       |
| PAD Enabled Position     | 3.7 ~ 7.5    |             |
| PAD Disabled Position    | 10 ~ 17      |             |
| Short or Short to Ground | > 22         | B1528       |

### TERMINAL & CONNECTOR INSPECTION E5D631A2

Refer to the DESCRIPTION in this TROUBLESHOOTING part.

## TROUBLESHOOTING

RT -99

### INSPECTION PROCEDURE EC6B0301

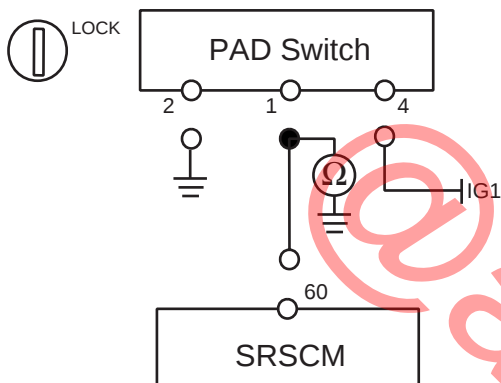
#### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING part.

#### 2. CHECK SHORT TO GROUND

- 1) Disconnect the connector of the PAD switch.
- 2) Measure resistance between the terminal 1 of PAD switch connector and chassis ground.

Specification (resistance) : infinite



SBLRT6284L

#### 3) Is the measured resistance within specification?

**YES**

Check short circuit.

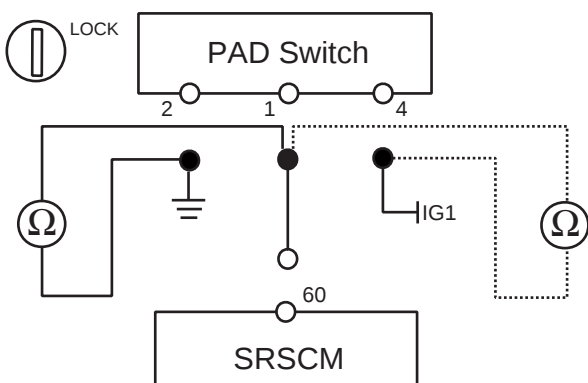
**NO**

Replace the harness between the SRSCM and the PAD switch.

#### 3. CHECK SHORT CIRCUIT

- 1) Measure resistance between 1 and 2 of PAD switch connector.
- 2) Measure resistance between 1 and 4 of PAD switch connector.

Specification (resistance) : infinite



SBLRT6285L

RT -100

RESTRAINTS

3) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between the PAD switch and the SRSCM.

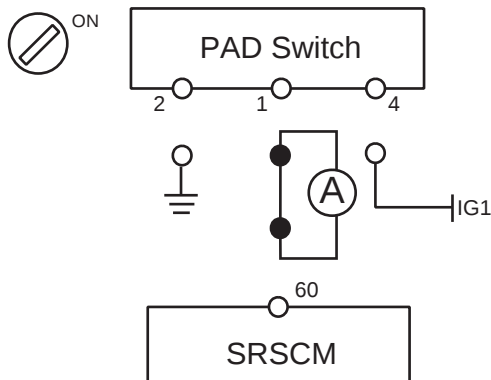
4. CHECK THE PAD SWITCH

- 1) Connect the SRSCM connector.
- 2) Connect the PAD switch.
- 3) Connect the battery negative cable to the battery.
- 4) Turn the ignition switch to ON.
- 5) Measure current between the terminal 60 of the SRSCM harness connector and 1 of PAD switch connector.

Specification (current) :

PAD switch (Enabled position) : 3.7 ~ 7.5 mA

PAD switch (Disabled position) : 10 ~ 17 mA



SBLRT6286L

6) Is the measured current within specification?

**YES**

Go to next step.

**NO**

Replace the PAD switch.

5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING part.

## TROUBLESHOOTING

RT -101

### DTC B1529 PASSENGER AIRBAG DEACTIVATION SWITCH DEFECT DTC B1530 PASSENGER AIRBAG DEACTIVATION SWITCH INSTABILITY

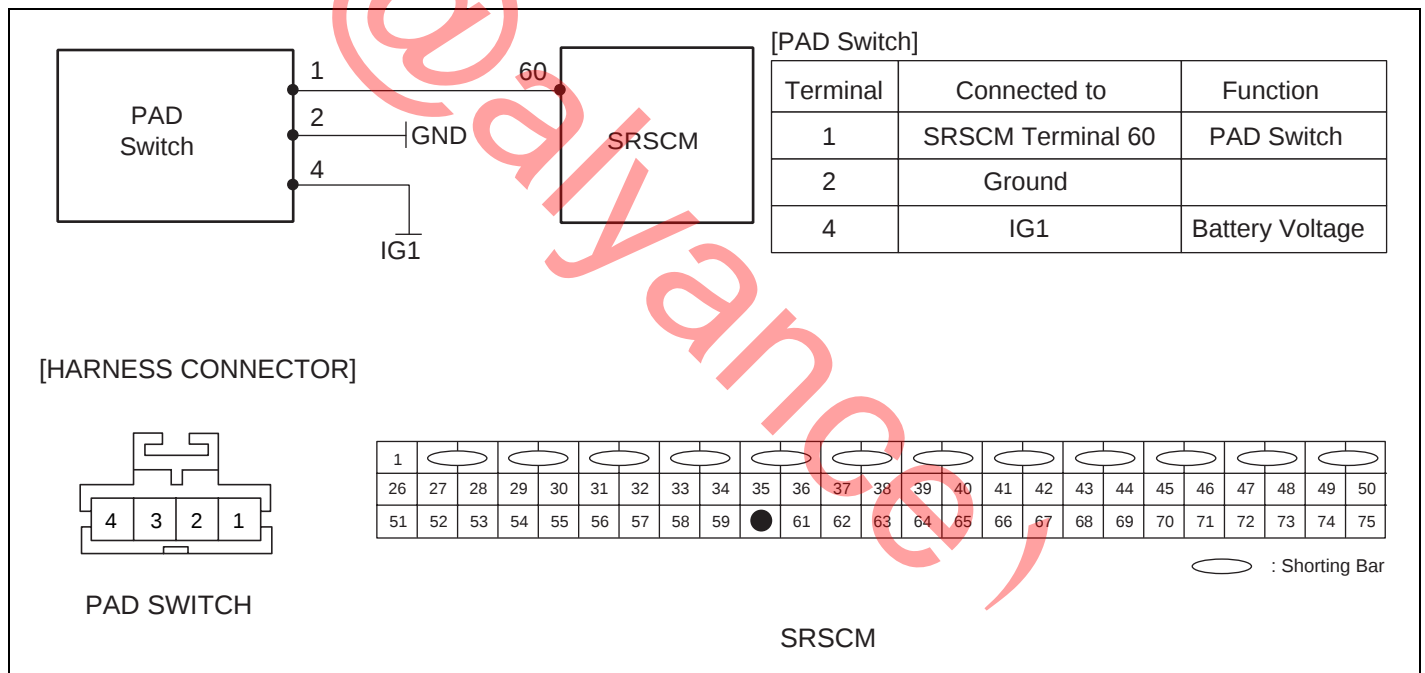
#### DTC DESCRIPTION E93F913D

The deactivation system for the passenger airbag consists of the SRSCM and the Passenger Airbag Deactivation(PAD) switch. The above DTC is recored when the defect or instability of PAD switch is detected in the PAD system circuit.

#### DTC DETECTING CONDITION E0DA1574

| DTC            | Condition                                                                                             | Probable cause                                                                                      |
|----------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| B1529<br>B1530 | <ul style="list-style-type: none"> <li>PAD switch malfunction</li> <li>SRSCM — Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>PAD switch</li> <li>Wiring harness</li> <li>SRSCM</li> </ul> |

#### SCHEMATIC DIAGRAM E2D3CB53



SBLRT6280L

#### SPECIFICATION E94FE925

| PAD Switch Status        | Current (mA) | Related DTC |
|--------------------------|--------------|-------------|
| Open or Short to Battery | < 2.4        | B1527       |
| PAD Enabled Position     | 3.7 ~ 7.5    |             |
| PAD Disabled Position    | 10 ~ 17      |             |
| Short or Short to Ground | > 22         | B1528       |

## TERMINAL & CONNECTOR INSPECTION

E5D6C715

Refer to the DESCRIPTION in this TROUBLESHOOTING part.

## INSPECTION PROCEDURE

E1677313

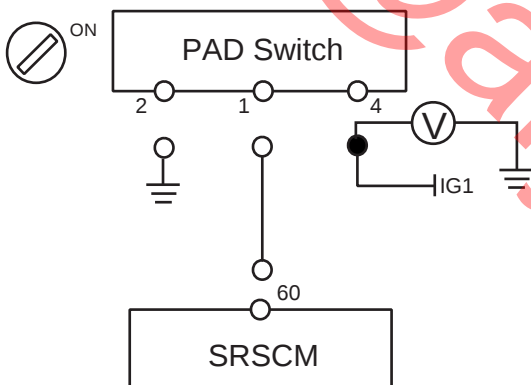
### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING part.

### 2. CHECK POWER SUPPLY

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal and 4 of PAD switch connector and chassis ground.

Specification (voltage) : 10.6 ~ 16.5 V



SBLRT6287L

- 4) Is the measured voltage within specification?

**YES**

Check ground circuit.

**NO**

Replace the harness between the battery line and the PAD switch.

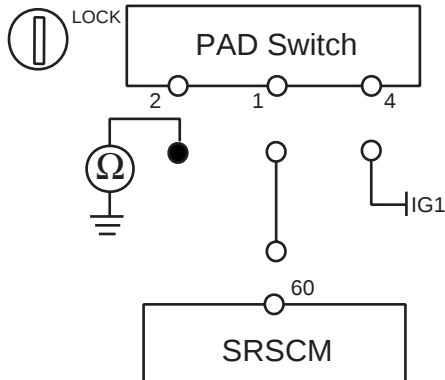
### 3. CHECK GROUND CIRCUIT

- 1) Turn the ignition switch to OFF.
- 2) Disconnect the battery negative cable from the battery.
- 3) Disconnect the connector of the PAD switch.
- 4) Measure resistance between the terminal 2 of PAD switch connector and chassis ground.

Specification (resistance) : 0  $\Omega$

## TROUBLESHOOTING

RT -103



SBLRT6288L

5) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair or replace the wiring harness between the PAD switch and the chassis ground.

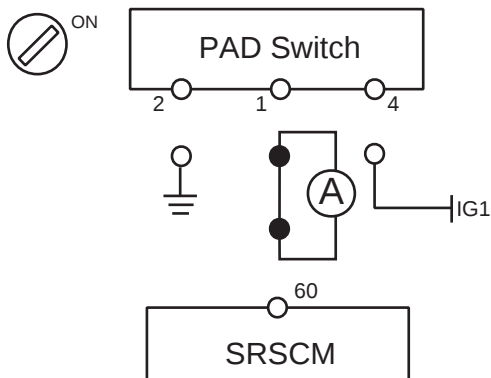
### 4. CHECK THE PAD SWITCH

- 1) Connect the SRSCM connector.
- 2) Connect the PAD switch.
- 3) Connect the battery negative cable to the battery.
- 4) Turn the ignition switch to ON.
- 5) Measure current between the terminal 60 of the SRSCM harness connector and 1 of PAD switch connector.

Specification (current) :

PAD switch (Enabled position) : 3.7 ~ 7.5 mA

PAD switch (Disabled position) : 10 ~ 17 mA



SBLRT6286L

- 6) Is the measured current within specification?

**YES**

Go to next step.

**NO**

Replace the PAD switch.

5. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING part.

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TROUBLESHOOTING

RT -105

**DTC B1620 SUPPLEMENTAL RESTRAINT SYSTEM CONTROL MODULE  
INTERNAL FAULT (REPLACE SRSCM)**

**DTC DESCRIPTION** E2A27131

The Supplemental Restraint System Control Module (SRSCM) runs diagnostics to monitor the condition of its internal circuits and all external components in the restraint system. If a fault is detected in the electronic accelerometer or in the microprocessor, the SRSCM will inhibit deployment to minimize the risk of inadvertent deployments. Once an internal fault is qualified, the internal fault is latched and warning lamp will be turned on. If an internal fault is qualified, the SRSCM must be replaced. The Hi-Scan tool can't clear an internal fault. All internal faults are DTC B1620.

**DTC DETECTING CONDITION** E29CDD22

| DTC   | Condition                                                                                                                              | Probable cause                                          |
|-------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| B1620 | <ul style="list-style-type: none"> <li>SRSCM internal fault : acceleration sensor, microcomputer power supply, watchdog etc</li> </ul> | <ul style="list-style-type: none"> <li>SRSCM</li> </ul> |

**INSPECTION PROCEDURE** E5F53E4E

If the above mentioned DTC is confirmed it can't be cleared by Hi-Scan tool, the SRSCM should be replaced.

|           |                                                      |
|-----------|------------------------------------------------------|
| DTC B1650 | CRASH RECORDED - FRONTAL (REPLACE SRSCM)             |
| DTC B1651 | CRASH RECORDED - DRIVER SIDE (REPLACE SRSCM)         |
| DTC B1652 | CRASH RECORDED - PASSENGER SIDE (REPLACE SRSCM)      |
| DTC B1657 | CRASH RECORDED - BELT PRETENSIONER ONLY              |
| DTC B1658 | BELT PRETENSIONER 6 TIMES DEPLOYMENT (REPLACE SRSCM) |

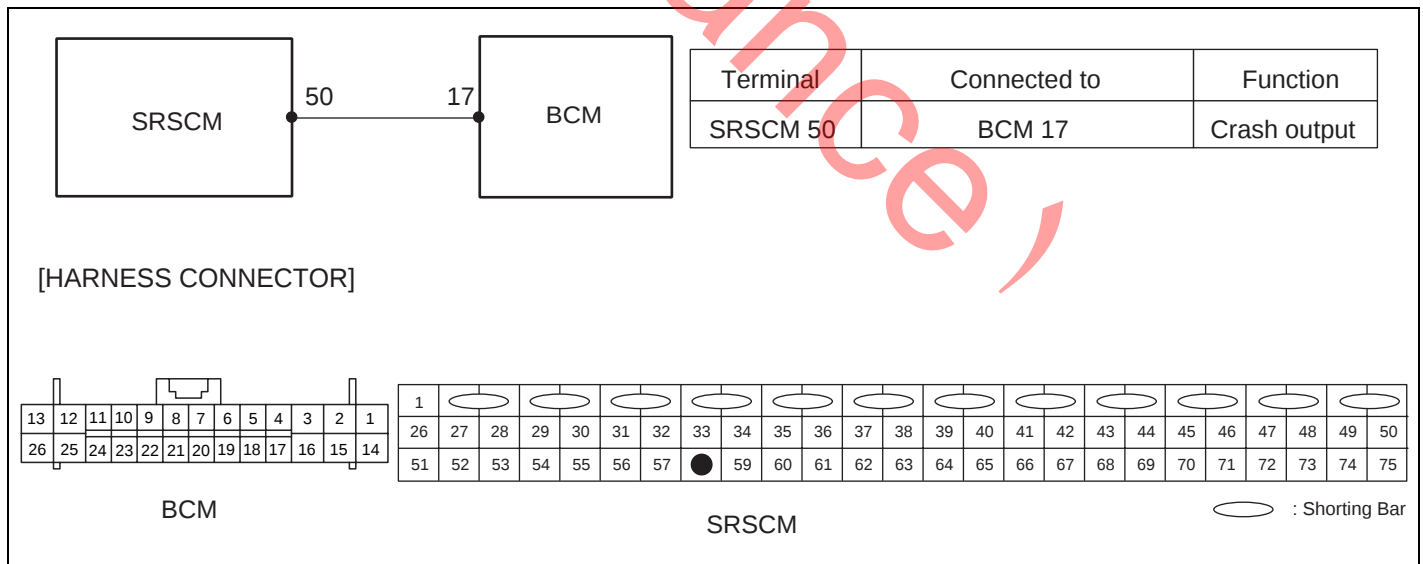
## DTC DESCRIPTION EDC1215F

When a deployment of any restraint system for seat belt pretensioner and frontal and side air bags occurs, the crash output is activated. The purpose of this output is to signal BCM (Body Control Module) in the vehicle to unlock the vehicle doors. If a crash output is in progress, a second crash output signal will not be sent unless the first one is completed. The SRSCM doesn't perform diagnostics on the crash output function. After a frontal or side crash event is sensed and algorithm makes firing decision, above mentioned crash record is stored after squib deployment.

## DTC DETECTING CONDITION EBD32503

| DTC                                       | Condition                                                                                                                         | Probable cause                                                                                                                                   |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| B1650<br>B1651<br>B1652<br>B1657<br>B1658 | <ul style="list-style-type: none"> <li>Frontal crash</li> <li>Side crash</li> <li>Seat belt pretensioner only deployed</li> </ul> | <ul style="list-style-type: none"> <li>SRSCM</li> <li>Front Impact Sensor</li> <li>Side Impact Sensor</li> <li>Seat Belt Pretensioner</li> </ul> |

## SCHEMATIC DIAGRAM EC279D28



SBLRT6290L

## INSPECTION PROCEDURE EEFE25D3

If the above mentioned DTC is confirmed it can't be cleared by Hi-Scan tool except for the B1657, and the SRSCM should be replaced. However, for the DTC B1657, Belt pretensioner only deployment, it can be erased for 5 times and the SRSCM can be reusable. If the deployment of Belt pretensioner reaches to 6 times, the SRSCM will set DTC B1658 and the SRSCM should be replaced accordingly.

## TROUBLESHOOTING

RT -107

### DTC B2500 SRS WARNING LAMP FAILURE

#### DTC DESCRIPTION

E94AAE61

The SRS warning lamp is located in the cluster. When the airbag system is normal, the SRS warning lamp turns on for approx. 6 seconds after the ignition switch is turned to ON, and then turns off automatically. If there is a malfunction in the airbag system, the SRS warning lamp lights up to inform the driver of the abnormality. The SRSCM shall measure the voltage at the SRS warning lamp output pin, both when the lamp is on and when the lamp is off, to detect whether the commanded state matches the actual state.

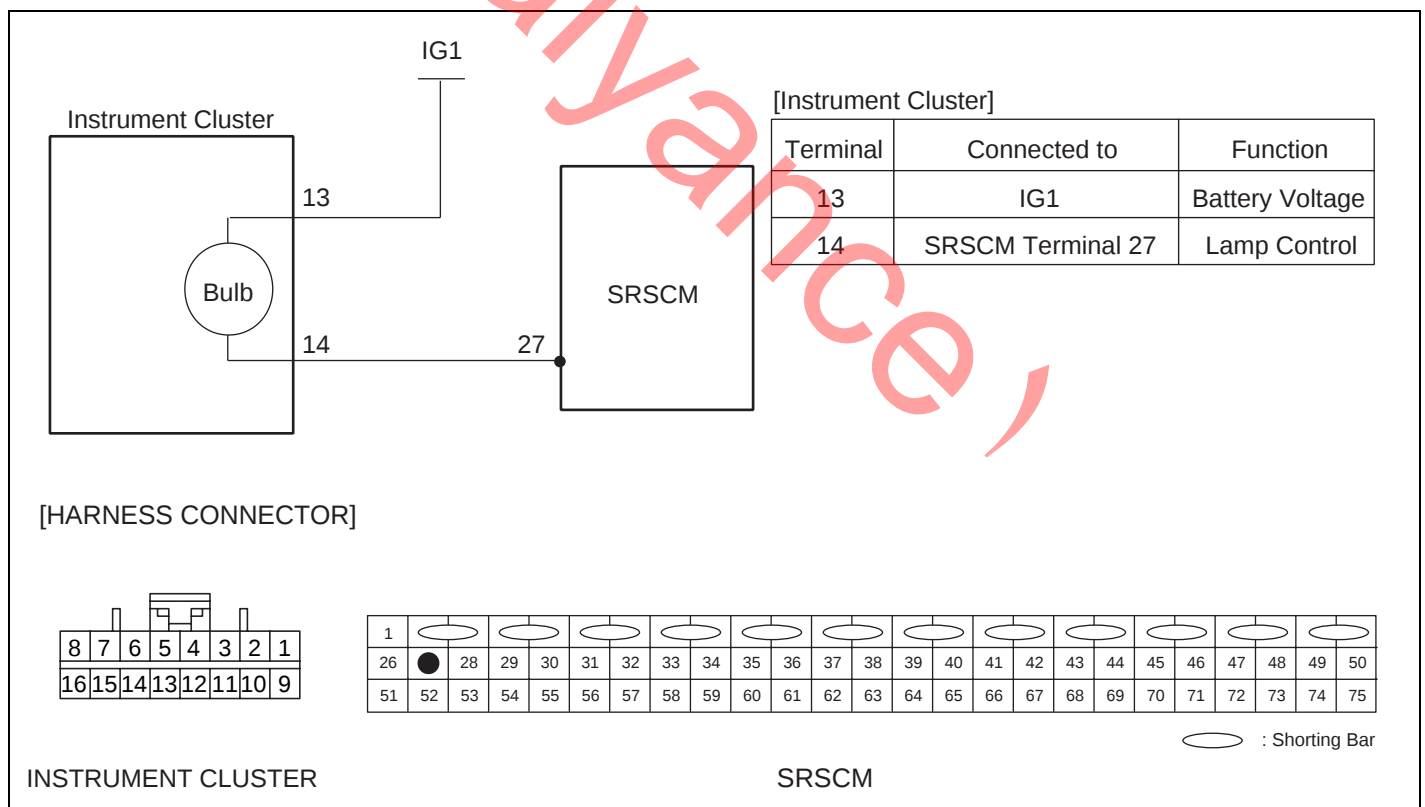
#### DTC DETECTING CONDITION

EDEB4A4B

| DTC   | Condition                                                                                                                                                                                                                                    | Probable cause                                                                                                           |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| B2500 | <ul style="list-style-type: none"> <li>Airbag fuse</li> <li>Warning Lamp Bulb</li> <li>Open between warning lamp and SRSCM</li> <li>Short to ground or battery line between the warning lamp and SRSCM</li> <li>SRSCM Malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Fuse</li> <li>Warning lamp bulb</li> <li>Wiring Harness</li> <li>SRSCM</li> </ul> |

#### SCHEMATIC DIAGRAM

E40E535F



SBLRT6300L

#### TERMINAL & CONNECTOR INSPECTION

E7B1FDA3

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

**INSPECTION PROCEDURE** EDF952B4

1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

2. CHECK THE FUSE

- 1) Remove the airbag fuse and the airbag warning lamp fuse from junction box.
- 2) Inspect the fuses. Are the fuses normal?

**YES**

Check the warning lamp bulb.

**NO**

Repair or replace the fuses.

3. CHECK THE WARNING LAMP BULB

- 1) Remove the bulb from the instrument cluster.
- 2) Inspect the bulb. Is the bulb normal?

**YES**

Check source voltage.

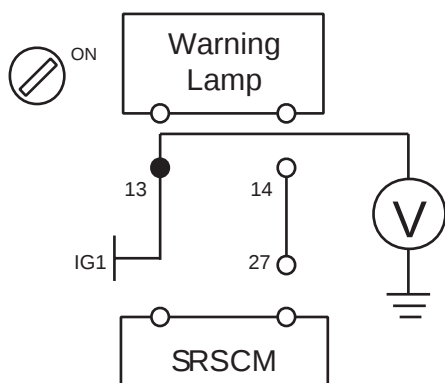
**NO**

Repair or replace the bulb.

4. CHECK SOURCE VOLTAGE

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal 13 of the Instrument Cluster harness connector and chassis ground.

Specification (voltage) : 10.6 ~ 16.5 V



## TROUBLESHOOTING

RT -109

- 4) Is the measured voltage within specification?

**YES**

Check short to battery line.

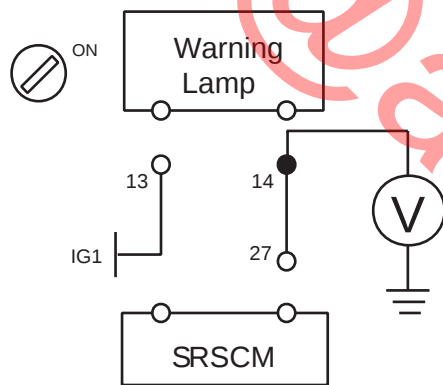
**NO**

Repair or replace the wiring harness between ignition switch and the Warning Lamp.

### 5. CHECK SHORT TO BATTERY LINE

- 1) Measure voltage between the terminal 14 of the Instrument Cluster harness connector and chassis ground.

Specification (voltage) : Approximately 0 V



SBLRT6302L

- 2) Is the measured voltage within specification?

**YES**

Check short or short to ground.

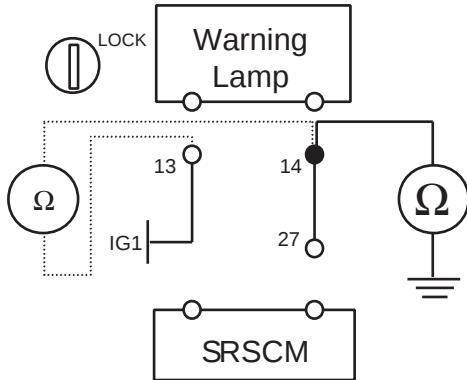
**NO**

Repair the short to battery line circuit on wiring harness between the SRSCM and the Warning Lamp.

### 6. CHECK SHORT OR SHORT TO GROUND

- 1) Turn the ignition switch to LOCK.
- 2) Disconnect the battery negative cable from the battery.
- 3) Measure resistance between the terminal 14 of the Instrument Cluster harness connector and chassis ground.
- 4) Measure resistance between the terminal 13 and 14 of the Instrument Cluster harness connector.

Specification (resistance) : infinite



SBLRT6303L

5) Is the measured resistance within specification?

**YES**

Check open circuit.

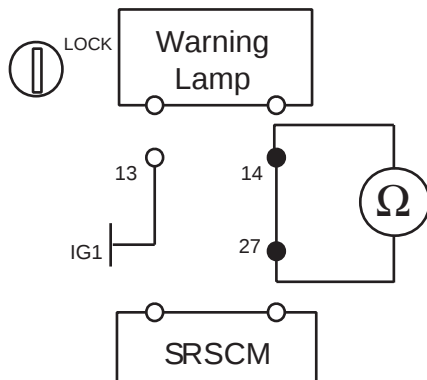
**NO**

Repair the short or short to ground circuit on wiring harness between the SRSCM and the Warning Lamp.

## 7. CHECK OPEN CIRCUIT

- 1) Measure resistance between the terminal 14 of the Instrument Cluster connector and the terminal 27 of SRSCM harness connector.

Specification (resistance) : below 1  $\Omega$



SBLRT6304L

2) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair the open circuit on wiring harness between the SRSCM and the Warning Lamp.

8. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## TROUBLESHOOTING

RT -111

### DTC B2505 PASSENGER AIRBAG DISABLE LAMP FAILURE

#### DTC DESCRIPTION

EB37F5CA

The SRSCM shall detect and record the following situations. And a single fault code shall be assigned as PAD Lamp Fault for all PAD lamp fault conditions. This fault code shall be set whenever either of the fault conditions is detected. If both fault conditions are not detected, the fault code shall not be detected.

1. The bulb is short, or there is a short to battery condition on the PAD lamp input connection to the SRSCM. This condition is only detectable while the PAD lamp is commanded ON. If a short to battery condition is detected, the PAD lamp shall be commanded OFF for 15 seconds to protect the circuit.
2. The bulb is open, or there is a short to ground condition. This condition is only detectable while the PAD lamp is commanded OFF. If the PAD lamp is ON and a short to ground condition is present, the SRSCM shall command the PAD lamp OFF for a maximum of 1ms during each diagnostic cycle.

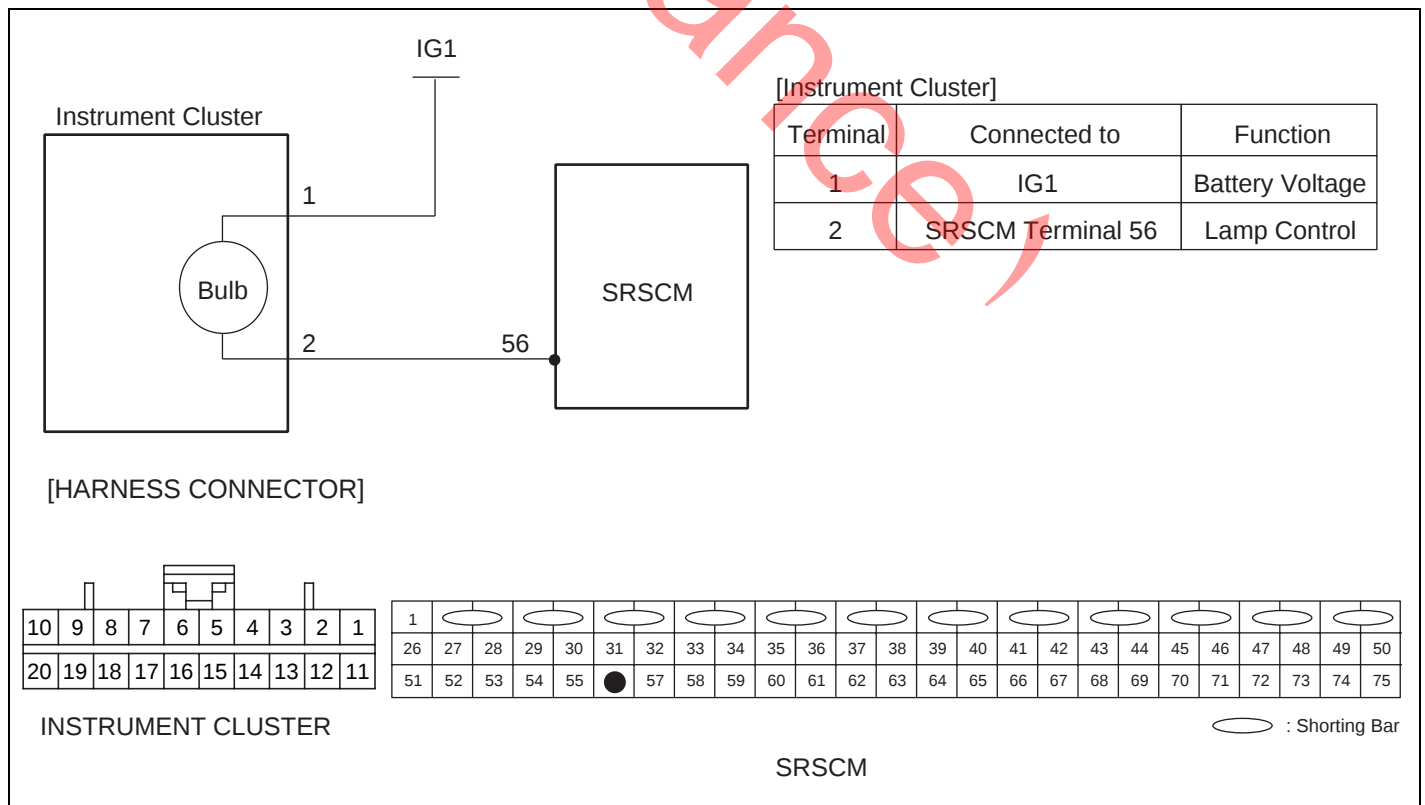
#### DTC DETECTING CONDITION

EE99B95B

| DTC   | Condition                                                                                                                                                                                                             | Probable cause                                                                                                       |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| B2505 | <ul style="list-style-type: none"> <li>PAD lamp bulb open or short</li> <li>Open between PAD lamp and SRSCM</li> <li>Short to ground or battery line between PAD lamp and SRSCM</li> <li>SRSCM malfunction</li> </ul> | <ul style="list-style-type: none"> <li>Fuse</li> <li>PAD lamp bulb</li> <li>Wiring Harness</li> <li>SRSCM</li> </ul> |

#### SCHEMATIC DIAGRAM

E4BC358D



## TERMINAL & CONNECTOR INSPECTION E11FDFA8

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

## INSPECTION PROCEDURE E83DF308

### 1. PREPARATION

Refer to the DESCRIPTION in this TROUBLESHOOTING section.

### 2. CHECK THE FUSE

- 1) Remove the airbag fuse and the PAD lamp fuse from junction box.
- 2) Inspect the fuses. Are the fuses normal?

**YES**

Check the PAD lamp bulb.

**NO**

Repair or replace the fuses.

### 3. CHECK THE PAD LAMP BULB

- 1) Remove the bulb from the instrument cluster.
- 2) Inspect the bulb. Is the bulb normal?

**YES**

Check source voltage.

**NO**

Repair or replace the bulb.

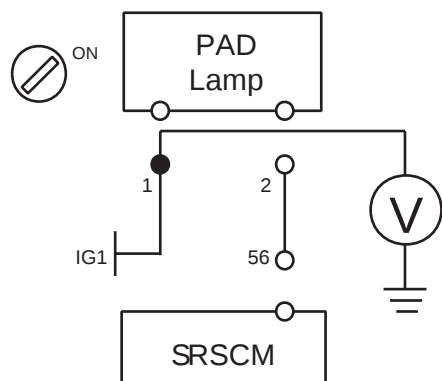
### 4. CHECK SOURCE VOLTAGE

- 1) Connect the battery negative cable to the battery.
- 2) Turn the ignition switch to ON.
- 3) Measure voltage between the terminal 1 of the Instrument Cluster harness connector and chassis ground.

---

Specification (voltage) : 10.6 ~ 16.5 V

---



SBLRT6311L

4) Is the measured voltage within specification?

**YES**

Check short to battery line.

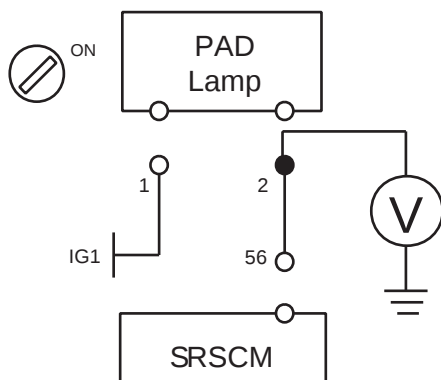
**NO**

Repair or replace the wiring harness between ignition switch and the PAD Lamp.

#### 5. CHECK SHORT TO BATTERY LINE

1) Measure voltage between the terminal 2 of the Instrument Cluster harness connector and chassis ground.

Specification (voltage) : Approximately 0 V



SBLRT6312L

2) Is the measured voltage within specification?

**YES**

Check short or short to ground.

**NO**

Repair the short to battery line circuit on wiring harness between the SRSCM and the PAD Lamp.

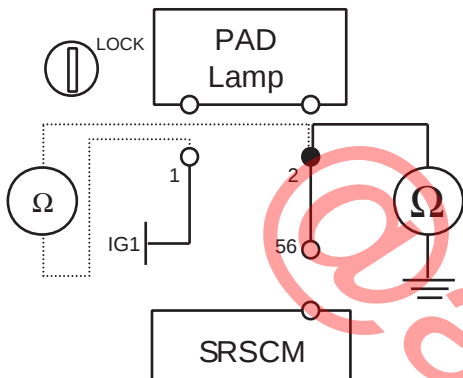
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RESTRAINTS

6. CHECK SHORT OR SHORT TO GROUND

- 1) Turn the ignition switch to LOCK.
- 2) Disconnect the battery negative cable from the battery.
- 3) Measure resistance between the terminal 2 of the Instrument Cluster harness connector and chassis ground.
- 4) Measure resistance between the terminal 1 and 2 of the Instrument Cluster harness connector.

Specification (resistance) : infinite



SBLRT6313L

- 5) Is the measured resistance within specification?

**YES**

Check open circuit.

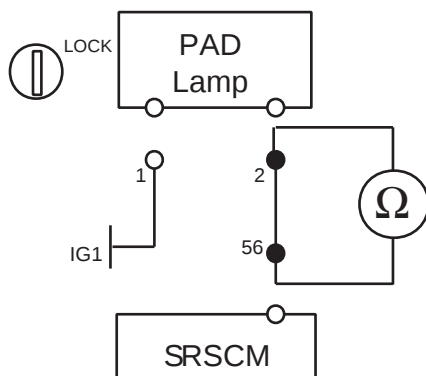
**NO**

Repair the short or short to ground circuit on wiring harness between the SRSCM and the PAD Lamp.

7. CHECK OPEN CIRCUIT

- 1) Measure resistance between the terminal 2 of the Instrument Cluster connector and the terminal 56 of SRSCM harness connector.

Specification (resistance) : below 1  $\Omega$



SBLRT6314L

## TROUBLESHOOTING

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- 2) Is the measured resistance within specification?

**YES**

Go to next step.

**NO**

Repair the open circuit on wiring harness between the SRSCM and the PAD Lamp.

8. CLEAR THE DTC AND CHECK THE VEHICLE AGAIN  
Refer to the DESCRIPTION in this TROUBLESHOOTING section.

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## AIR BAG MODULE DISPOSAL

### AIRBAG DISPOSAL E50F62AD

#### SPECIAL TOOL REQUIRED

Deployment tool 0957A-34100A

Before scrapping any airbags or side airbags (including those in a whole vehicle to be scrapped), the airbags or side airbags must be deployed. If the vehicle is still within the warranty period, before deploying the airbags or side airbags, the Technical Manager must give approval and/or special instruction. Only after the airbags or side airbags have been deployed (as the result of vehicle collision, for example), can they be scrapped.

If the airbags or side airbags appear intact (not deployed), treat them with extreme caution. Follow this procedure.

#### DEPLOYING AIRBAGS IN THE VEHICLE

If an SRS equipped vehicle is to be entirely scrapped, its airbags or side airbags should be deployed while still in the vehicle. The airbags or side airbags should not be considered as salvageable parts and should never be installed in another vehicle.

1. Turn the ignition switch OFF, and disconnect the battery negative cable and wait at least three minutes.
2. Confirm that each airbag or side airbag is securely mounted.
3. Confirm that the special tool is functioning properly by following the check procedure.

#### DRIVER'S AIRBAG :

1. Remove the driver's airbag and install the SST(0957A-38500).
2. Install the driver's airbag on the steering wheel.

#### FRONT PASSENGER'S AIRBAG :

1. Remove the glove box, then disconnect the 2P connector between the front passenger's airbag and SRS main harness.
2. Install the SST(0957A-3E110).

#### CURTAIN AIRBAG :

1. Disconnect the 2P connector between the curtain airbag and wire harness.
2. Install the SST(0957A-38500).

#### SEAT BELT PRETENSIONER :

1. Disconnect the 2P connector from the seat belt pretensioner.
2. Install the SST(0957A-38500).
3. Place the deployment tool at least thirty feet (10 meters) away from the airbag.
4. Connect a 12 volt battery to the tool.
5. Push the tool's deployment switch. The airbag should deploy (deployment is both highly audible and visible: a loud noise and rapid inflation of the bag, followed by slow deflection)
6. Dispose of the complete airbag. No part of it can be reused. Place it in a sturdy plastic bag and seal it securely.



## AIR BAG MODULE DISPOSAL

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### DEPLOYING THE AIRBAG OUT OF THE VEHICLE

If an intact airbag has been removed from a scrapped vehicle, or has been found defective or damaged during transit, storage or service, it should be deployed as follows :

1. Confirm that the special tool is functioning properly by following the check procedure.
2. Position the airbag face up, outdoors on flat ground at least thirty feet (10meters) from any obstacles or people.

### DISPOSAL OF DAMAGED AIRBAG

1. If installed in a vehicle, follow the removal procedure of driver's airbag front passenger's and side airbag.
2. In all cases, make a short circuit by twisting together the two airbag inflator wires.
3. Package the airbag in exactly the same packing that the new replacement part came in.