

Restraint > General Information > General Information

General

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. 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.
3. 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)
4. 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.
5. 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.
6. 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.
7. Once airbag is deployed, SRSCM should not be used again but replaced.

Restraint > General Information > Specifications

Specification

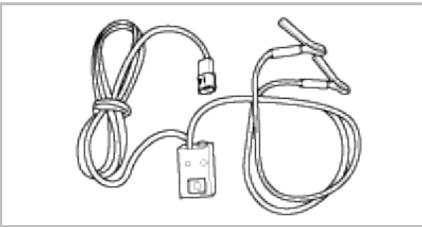
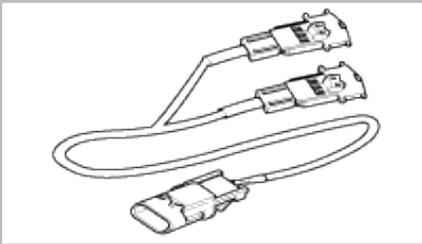
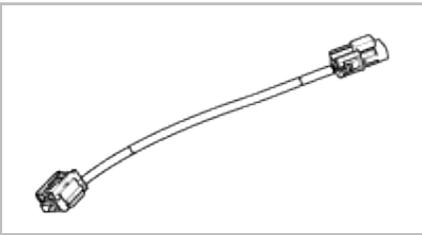
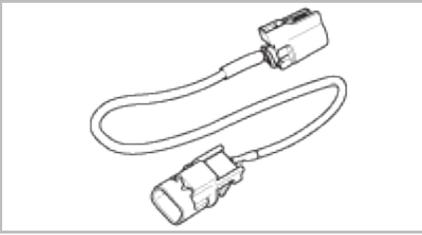
Item	Resistance (Ω)
Driver Airbag (DAB)	1.5 ~ 5.7
Passenger Airbag (PAB)	1.5 ~ 5.7
Side Airbag (SAB)	1.5 ~ 5.7
Curtain Airbag (CAB)	1.5 ~ 5.7
Seat Belt Retractor Pretensioner (BPT)	1.5 ~ 5.7

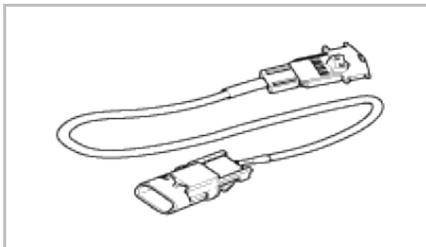
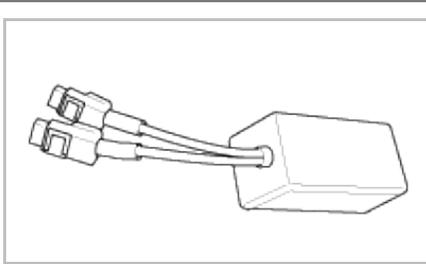
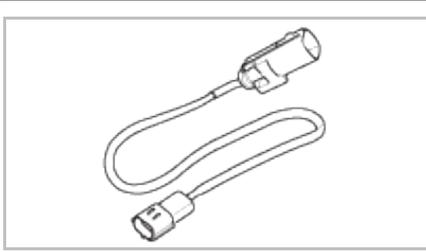
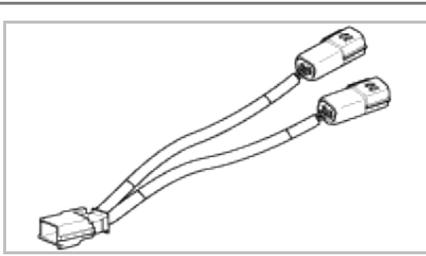
Tightening Torques

Item	Nm	kgf.m	lb-ft
Driver Airbag (DAB)	7.8 ~ 10.8	0.8 ~ 1.1	5.8 ~ 8.0
Passenger Airbag (PAB)	6.9 ~ 10.8 3.9 ~ 6.9	Bolt : 0.7 ~ 1.1 Nut : 0.4 ~ 0.7	5.1 ~ 8.0 2.9 ~ 5.0
Curtain Airbag (CAB)	18.6 ~ 26.5	1.9 ~ 2.7	13.7 ~ 19.5
Side Airbag (SAB)	5.9 ~ 7.8	0.6 ~ 0.8	4.3 ~ 5.8
Seat Belt Anchor Bolt (BPT)	39.2 ~ 53.9	4.0 ~ 5.5	28.9 ~ 39.8
SRSCM	6.9 ~ 8.8	0.7 ~ 0.9	5.1 ~ 6.5
Front Impact Sensor (FIS) Mounting nut	6.9 ~ 8.8	0.7 ~ 0.9	5.1 ~ 6.5
Side Impact Sensor (SIS) Mounting Bolt	6.9 ~ 8.8	0.7 ~ 0.9	5.1 ~ 6.5

Restraint > General Information > Special Service Tools

Special Service Tools

Tool(Number and Name)	Illustration	Use
Deployment tool 0957A-34100A		Airbag deployment tool
Deployment adapter 0957A-38510		Use with deployment tool. (DAB)
Deployment adapter 0957A-2E110		Use with deployment tool. (PAB)
Deployment adapter 0957A-3F100		Use with deployment tool. (SAB)

Deployment adapter 0957A-38500		Use with deployment tool. (CAB, BPT)
Dummy 0957A-38200		Simulator to check the resistance of each wiring harness
Dummy adapter 0957A-3F000		Use with dummy (SAB)
Dummy adapter 0957A-2G000		Use with dummy (DAB, CAB, BPT)
Dummy adapter 0957A-2E100		Use with dummy (PAB)

DAB : Driver Airbag

PAB : Passenger Airbag

SAB : Side Airbag

CAB : Curtain Airbag

BPT : Seat Belt Retractor Pretensioner

Restraint > General Information > General Safety Information and Caution

Precautions

General Precautions

Please read the following precautions carefully before performing the airbag system service.

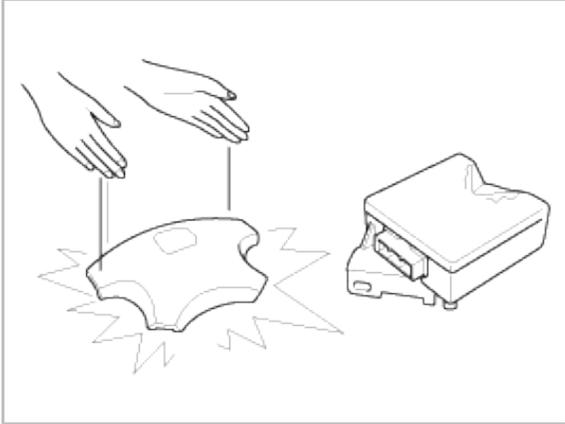
Observe the instructions described in this manual, or the airbags could accidentally deploy and cause damage or injuries.

- 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.



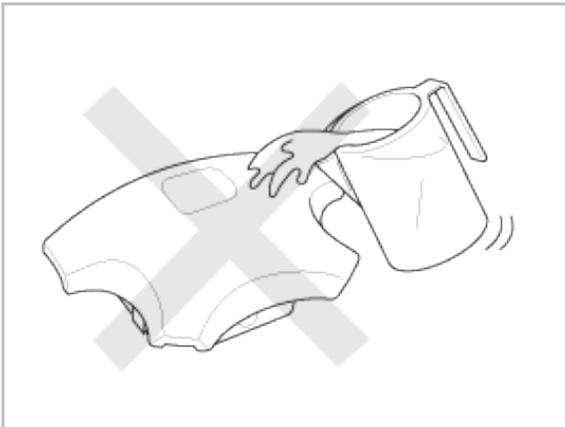
- Before removing any of the SRS parts (including the disconnection of the connectors), always disconnect the SRS connector.

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.



- 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 or front 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 and the front impact sensors. The airbags could accidentally deploy and cause damage or injury.
- Replace the front airbag module, SRSCM, FIS when deploying the front airbag. Replace the airbag wiring when the

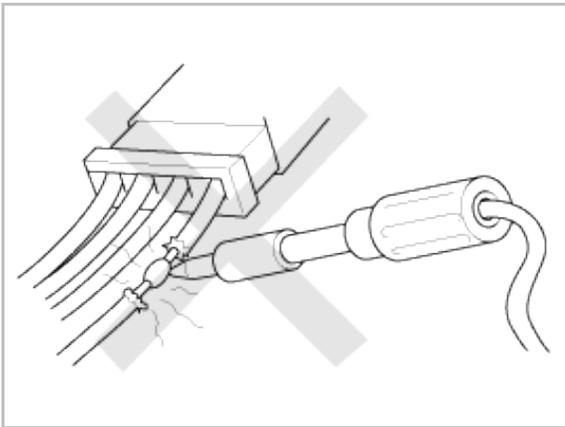
airbag wiring get damaged. Replace the side airbag module, the curtain airbag module, SRSCM, SIS when deploying the side airbag. Replace the airbag when the airbag wiring get damaged.

- 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 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% relative humidity, no moisture) area.

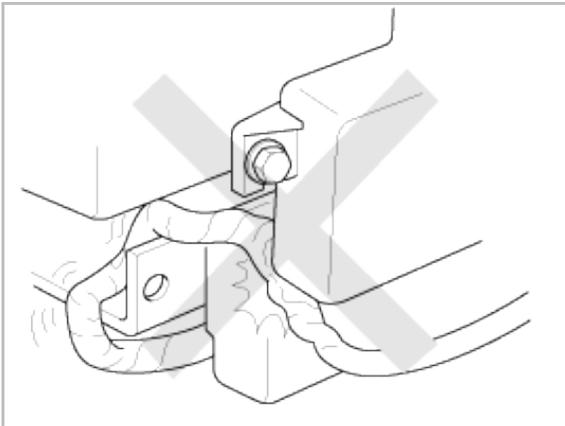
Wiring Precautions

SRS wiring can be identified by special yellow outer covering. 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.



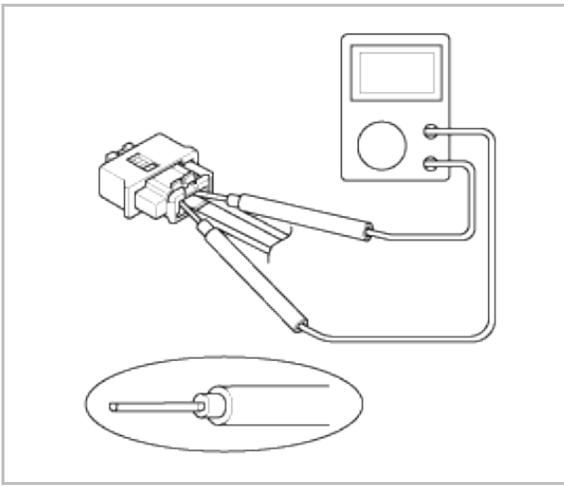
- Be sure to install the harness wires so that they are not pinched, or interfere with other parts.



- 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.



- Use a u-shaped probe. Do not insert the probe forcibly.
- Use specified service connectors for troubleshooting.
Using improper tools could cause an error in inspection due to poor metal contact.

Spring-laded Lock Connector

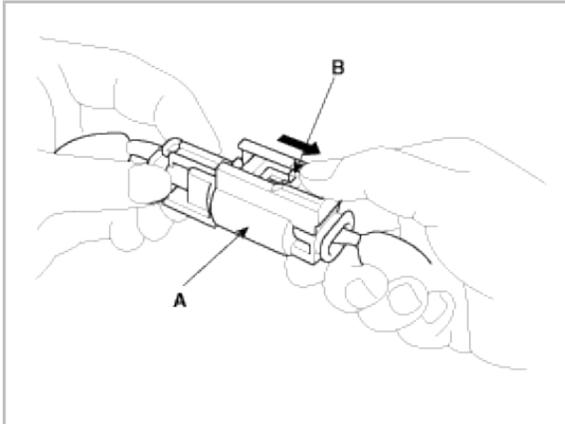
Some SRS system connectors have a spring-loaded lock.

Airbag Connector

Disconnecting

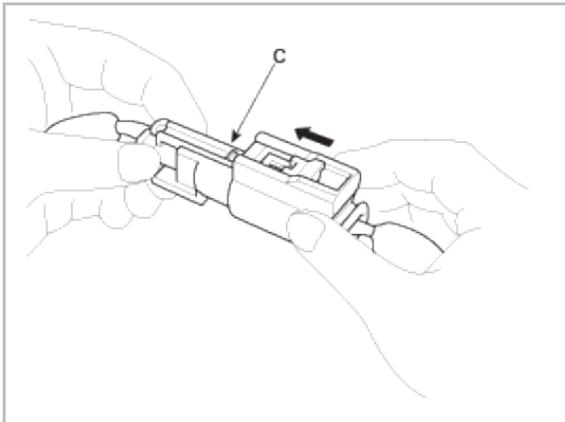
To release the lock, pull the spring-loaded sleeve (A) and the slider (B), while holding the opposite half of the connector.

Pull the connector halves apart. Be sure to pull on the sleeve and not on the connector half.



Connecting

Hold both connector halves and press firmly until the projection (C) of the sleeve-side connector clicks to lock.



Warning Lamp Activation

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.

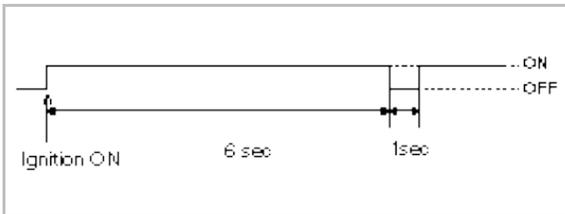
The lamp shall turn on for 6 seconds during the initialization phase and be turned off afterward.

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.

If the variant coding is not performed, the airbag warning lamp is turned on for 4 seconds and then is blinking after IG ON.

If the variant coding is normally performed, the airbag warning lamp normally operates.

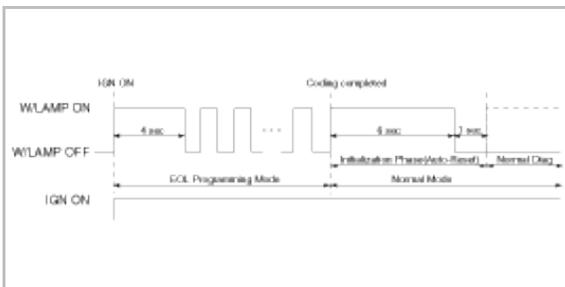
1. Active fault or historical fault counter is greater or equal to 10



2. Normal or historical fault counter is less than 10.



3. SRSCM Variant Coding not performed.



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.

Telltale Lamp Activation

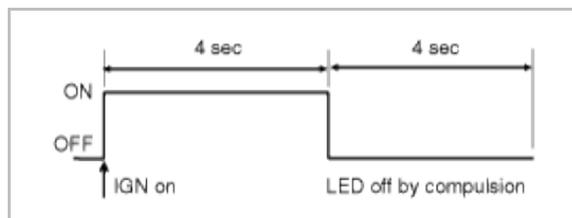
The Telltale Lamp indicates the Passenger Airbag(PAB) enabled and disabled status based on occupant status of passenger seat. If the passenger seat is empty or occupied with child (or child seat), the Passenger Airbag is disabled and the Telltale Lamp is turned ON to inform the driver that the PAB is disabled. As soon as operating voltage is applied to the SRSCM ignition input, the SRSCM activates telltale lamp prove out. OCS will send an defect status to the SRSCM as a default setting for passenger airbag deployment during the prove out period. Occupant status

information and telltale status are as below table.

Occupant Status	Telltale Lamp	PAB
Empty	ON	Disabled
Child (Small Occupant)	ON	Disabled
Adult (Large Occupant)	OFF	Enabled
Defect	OFF	Enabled

After ignition on, telltale lamp will turn on for 4 seconds and turn off for 4 seconds during the initialization phase and be turned off afterward until receipt of first valid suppression message from OCS system.

It is possible to turn off the telltale lamp when the larger child than 6 years old sits on the passenger side seat.



Restraint > General Information > Repair procedures

Component Replacement after Deployment

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.
- If any damage found, or problem to occupant detection, replace the Passenger seat with PODS system.

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

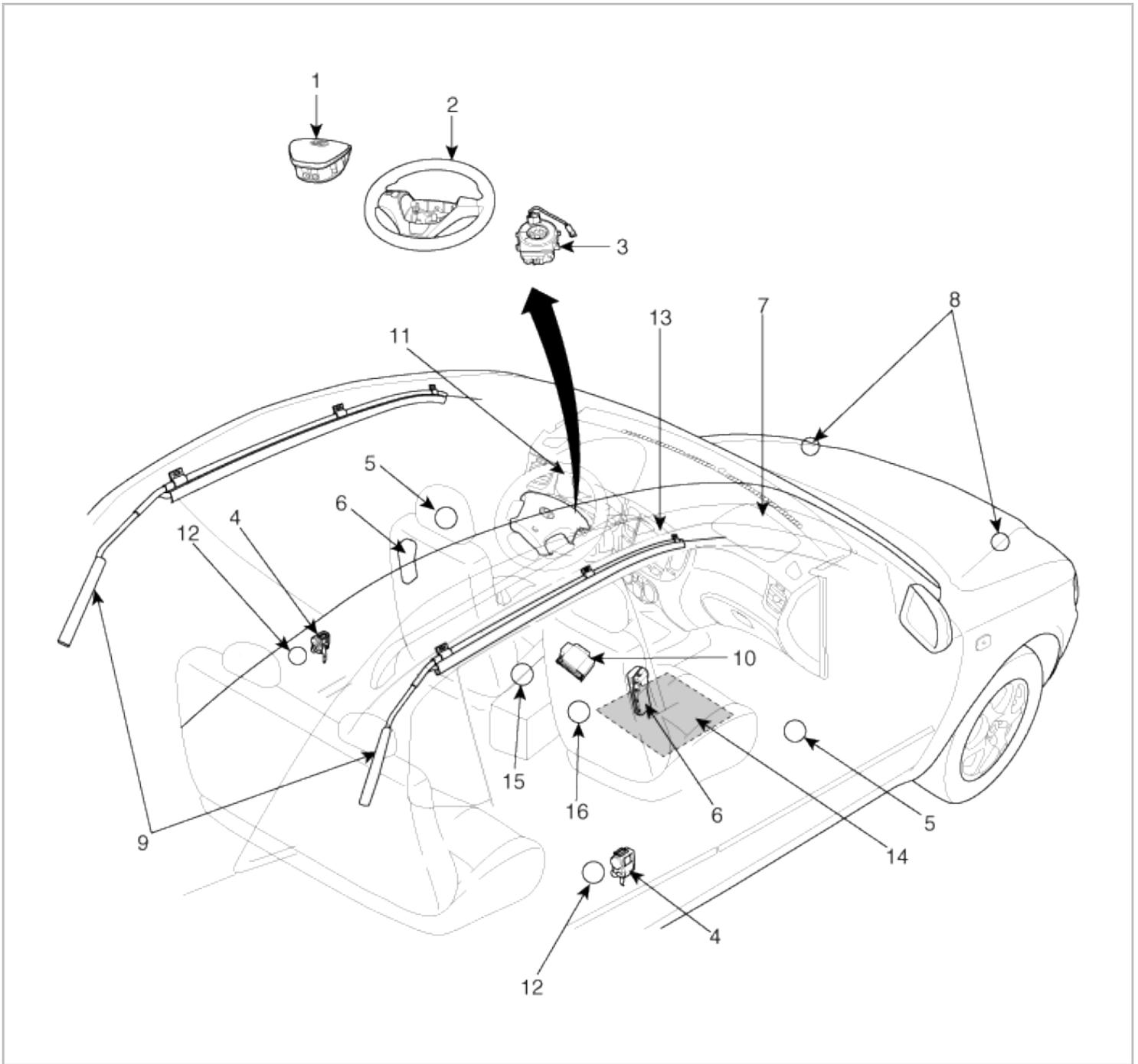
- SRSCM
- Deployed airbag(s)
- Side impact sensor(s) for the deployed side(s)
- SRS wiring harnesses

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.

Restraint > General Information > Components and Components Location

Components



1. Driver Airbag (DAB)

2. Steering Wheel

3. Clock Spring

4. Seat Belt Pretensioner (BPT)

5. Side Pressure Sensor (P-SIS)

6. Side Airbag (SAB)

7. Passenger Airbag (PAB)

8. Front Impact Sensor (FIS)

9. Curtain Airbag (CAB)

10. Supplemental Restraint System Control Module (SRSCM)

11. Airbag Warning Lamp

12. Side Impact Sensor (SIS)

13. Telltale Lamp

14. Passenger Occupant Detecting System (PODS)

15. Seat Belt Buckle Switch

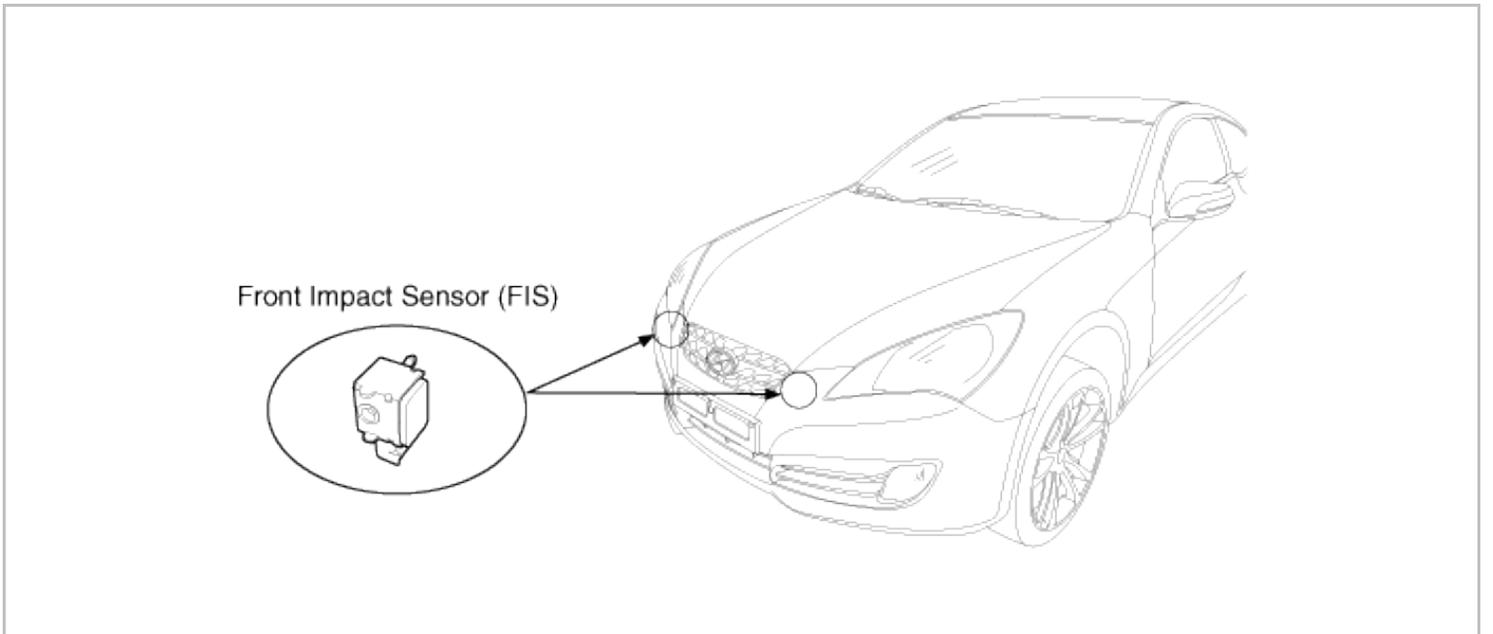
16. Seat Belt Buckle switch & Belt tension sensor

Components Location

Supplemental Restraint System Control Module (SRSCM)



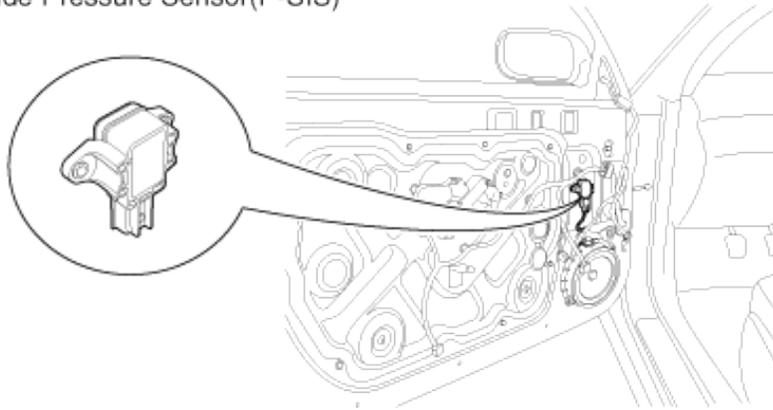
Front Impact Sensor (FIS)



Side Impact Sensor (SIS)

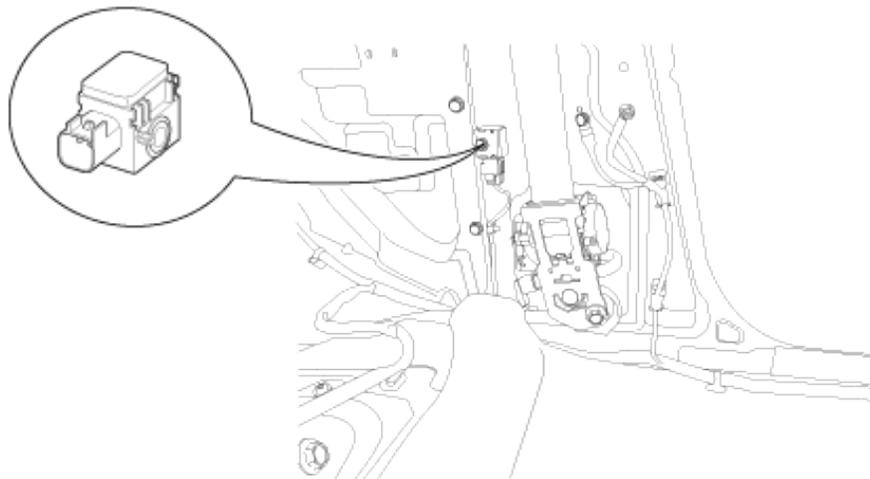
[Front]

Side Pressure Sensor(P-SIS)



[Rear]

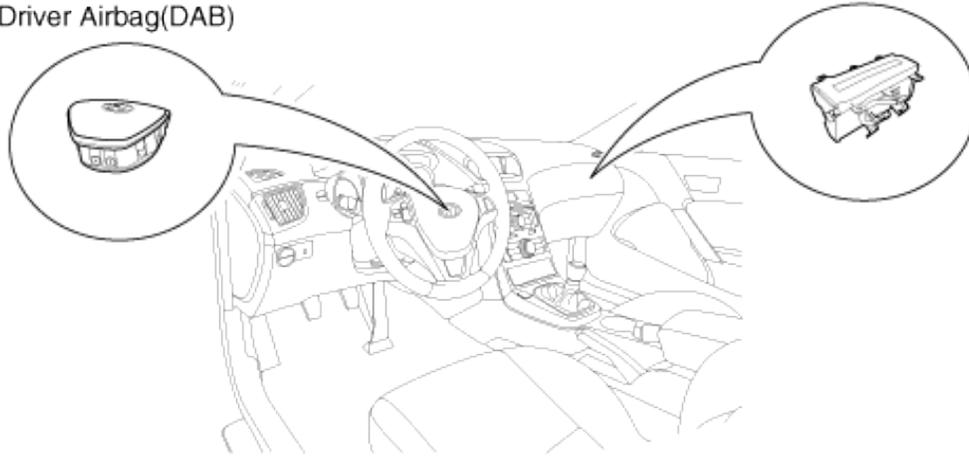
Side Impact Sensor (SIS)



Driver Airbag (DAB) / Passenger Airbag (PAB)

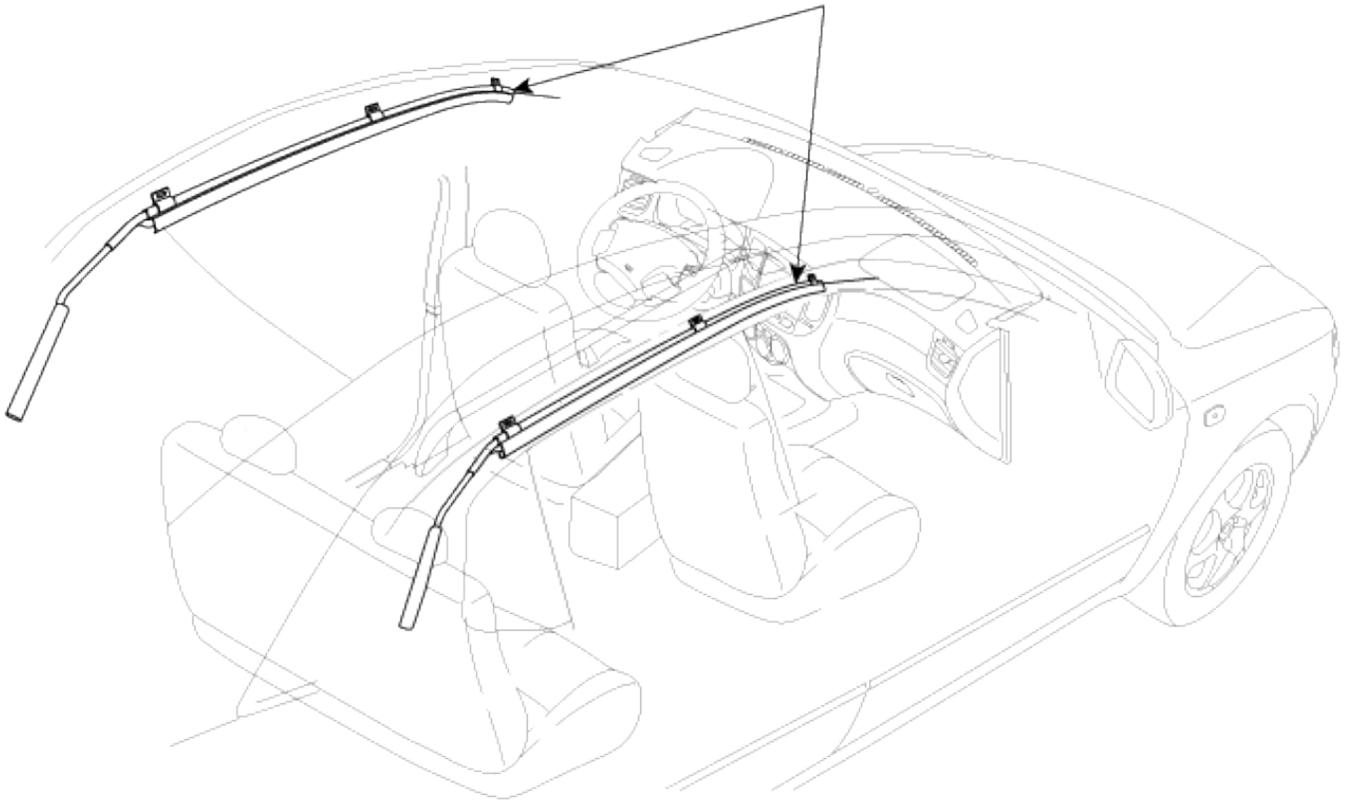
Driver Airbag(DAB)

Passenger Airbag(PAB)

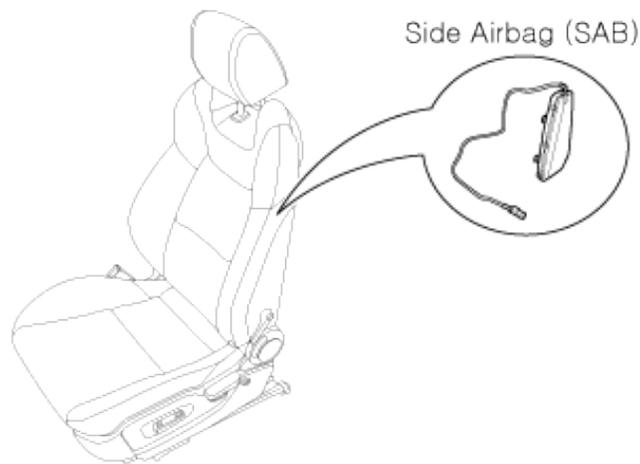


Curtain Airbag (CAB)

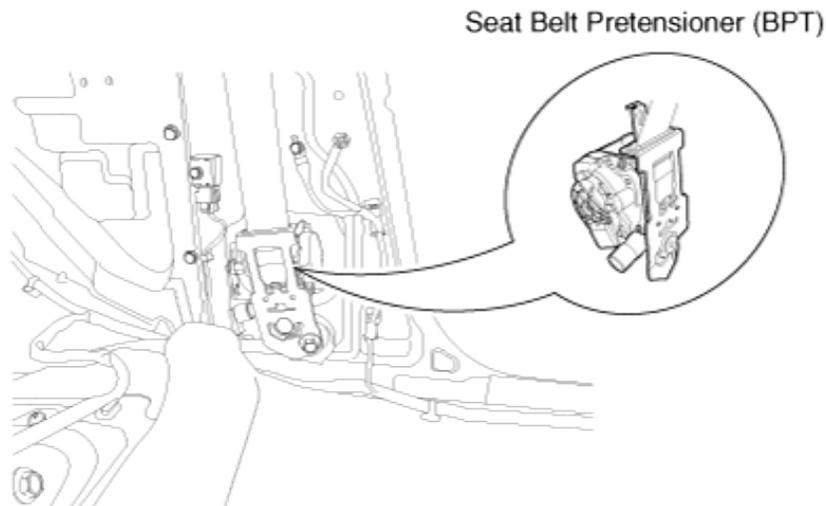
Curtain Airbag (CAB)



Side Airbag (SAB)



Seat Belt Pretensioner (BPT)



Restraint > SRSCM > SRS Control Module (SRSCM) > Description and Operation

Description

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.

Restraint > SRSCM > SRS Control Module (SRSCM) > Components and Components Location

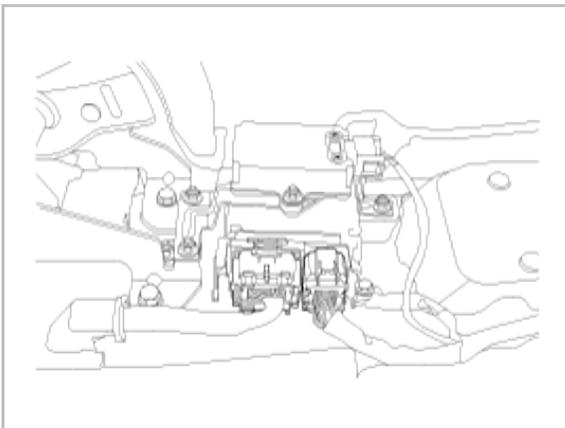
Components



Restraint > SRSCM > SRS Control Module (SRSCM) > Repair procedures

Removal

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, SAB, CAB and BPT connectors.
4. Remove the floor console. (Refer to the Body group - console)
5. Disconnect the SRSCM harness connector from the SRSCM.



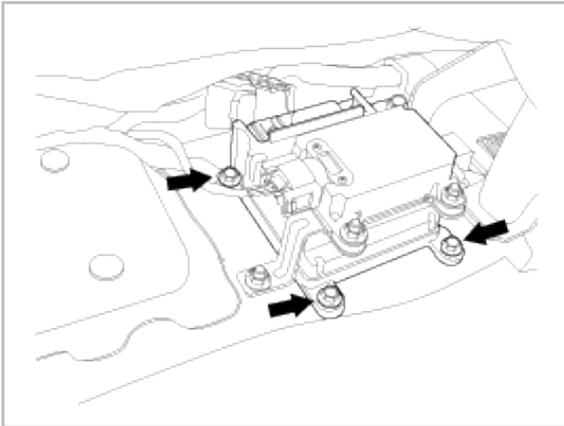
6. Remove the SRSCM mounting bolts(3EA) from the SRSCM, then remove the SRSCM.

Installation

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 bolts.

Tightening torque (SRSCM Mounting Bolt)

: 6.9 ~ 8.8 Nm (0.7 ~ 0.9 kgf.m, 5.1 ~ 6.5 lb.ft)

**NOTE**

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

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

Variant coding

After replacing the SRSCM with a new one, MUST perform the “Variant Coding” procedure.

NOTE

1. On SRSCM variant coding mode, the airbag warning lamp is periodically blinking (ON: 0.5sec., OFF: 0.5sec.) until the coding is normally completed.
2. If the variant coding is failed, DTC B1762 (ACU Coding Error) will be displayed and the warning lamp will be turned on.
In this case, perform the variant coding procedure again after confirming the cause in “DTC Fault State Information”.
Variant Coding can be performed up to 255 times, but if the number of coding work exceeds 255 times, DTC B1683 (Exceed Maximum coding Number) will be displayed and SRSCM must be replaced.
3. If the battery voltage is low (less than 9V), DTC B1102 will be displayed. In this case, charge the battery before anything else, and then perform the variant coding procedure.
Because, although Variant Coding is normally performed, DTC B1762 (ACU Coding Error) and B1102 (Battery Voltage Low) are displayed simultaneously.

Variant coding Procedure

- On-Line type on GDS

1. Ignition "OFF", connect scantool.
 2. Ignition "ON" & Engine "OFF" select vehicle name and airbag system.
 3. Select Variant coding mode.
 4. Follow steps on the screen as below.
- 1) Initial ACU Variant Coding screen

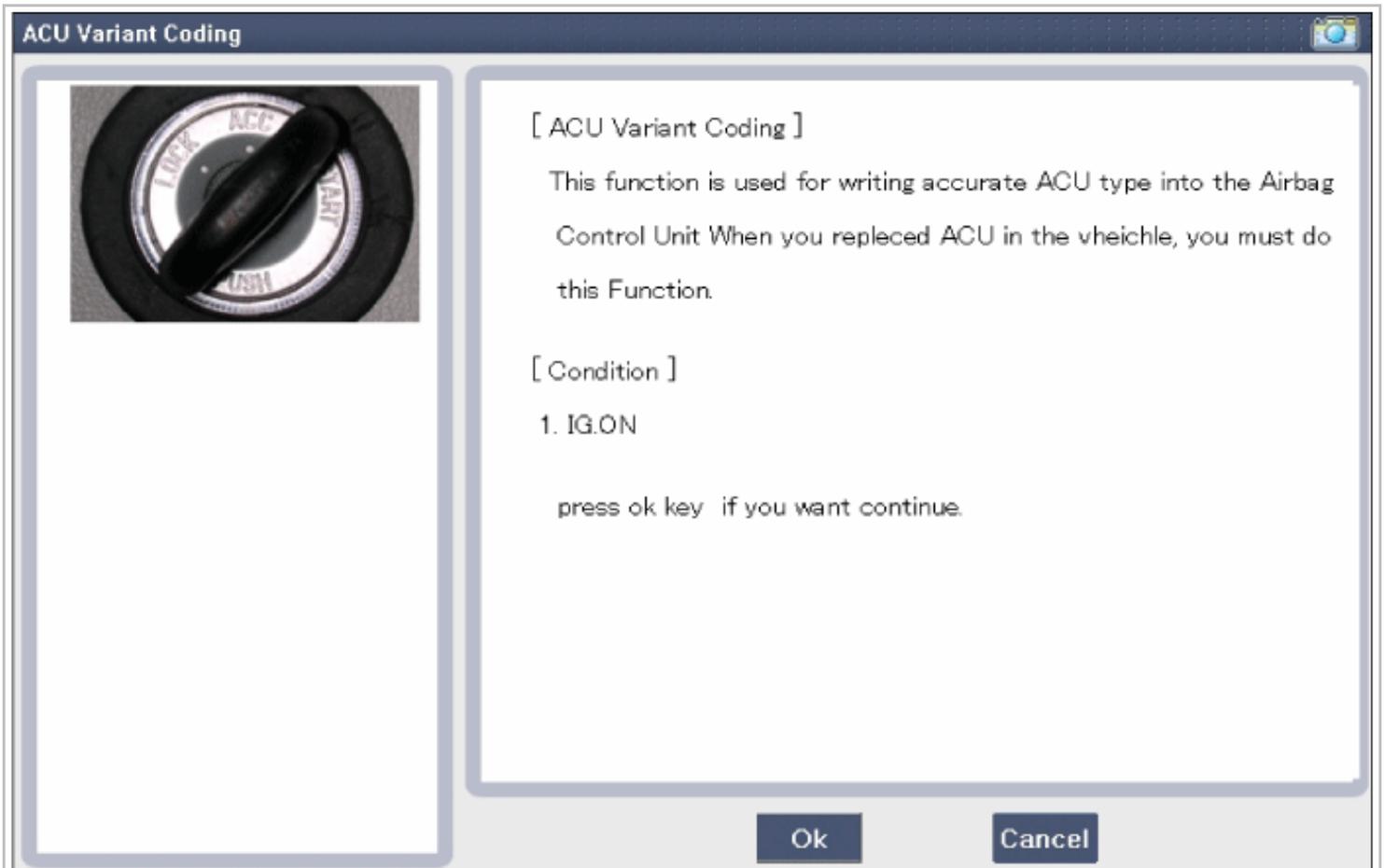


Fig.1

- 2) VIN Code entering screen

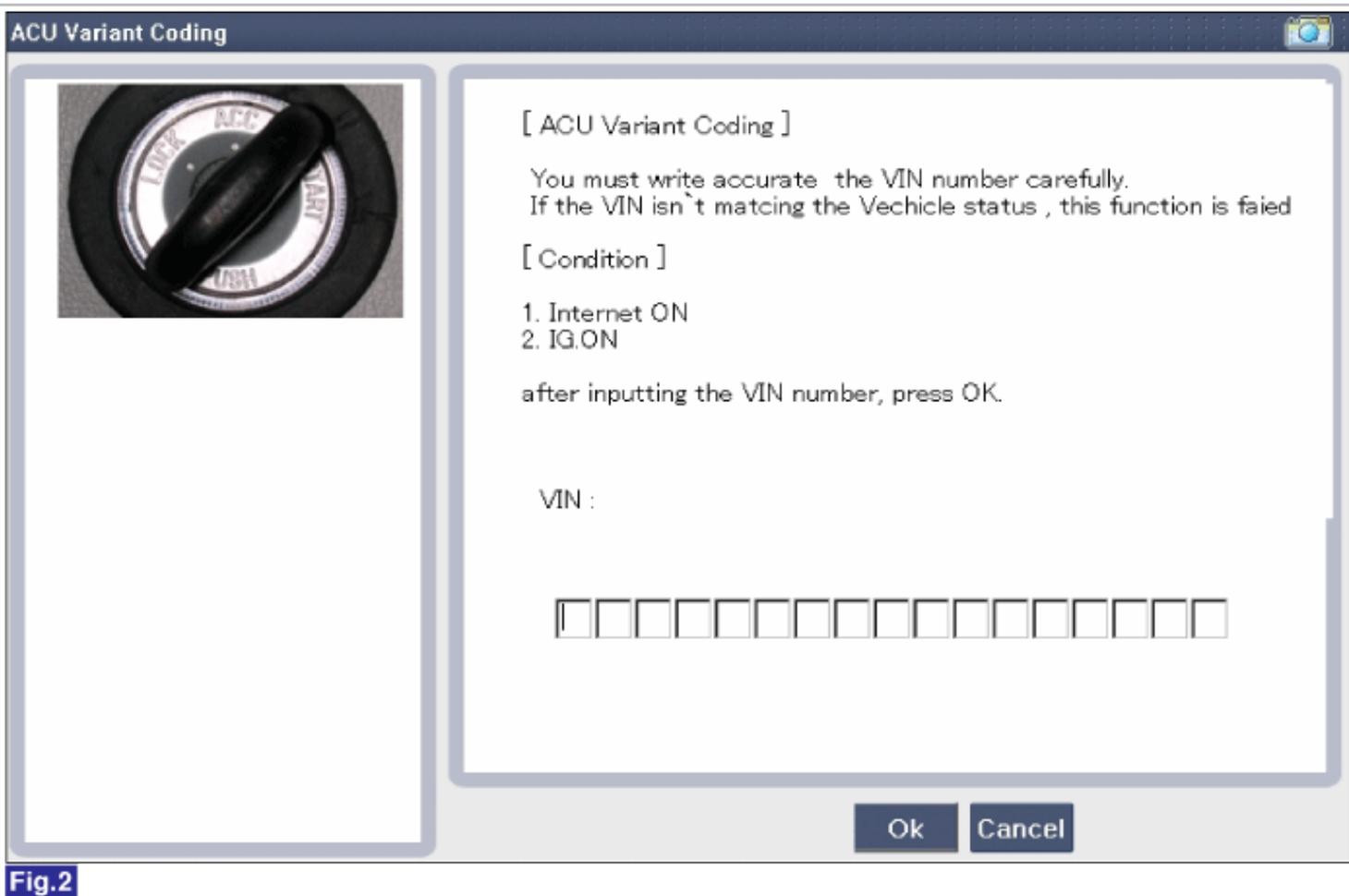


Fig.2

3) Variant coding's proceeding screen-1

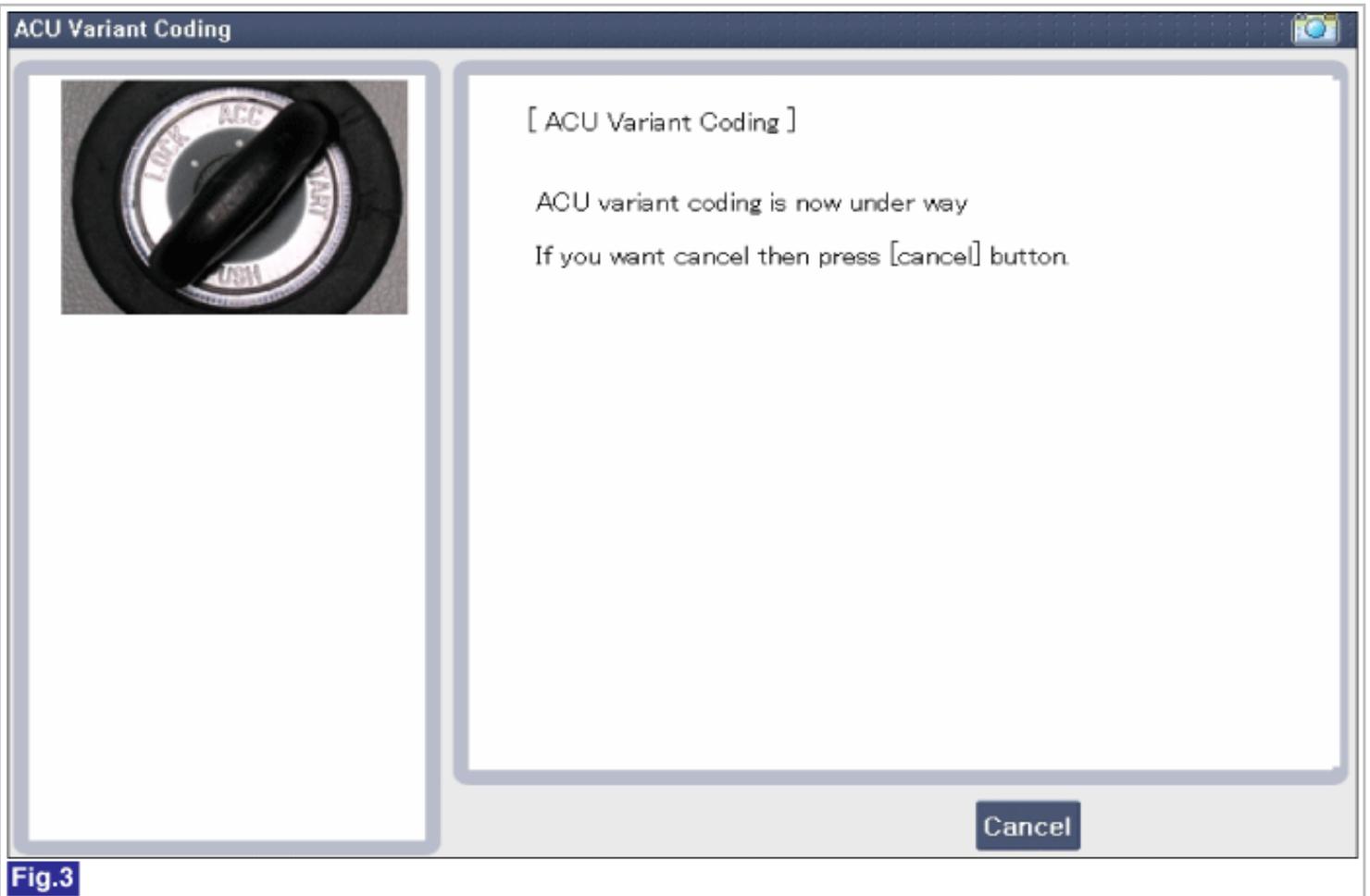


Fig.3

4) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.4

5) Variant coding is completed



*** Variant Coding is complete.***

ACU CODING CODE : BK
ACU Info. : SAB+CAB(Dep/3.8/ESP)

warning

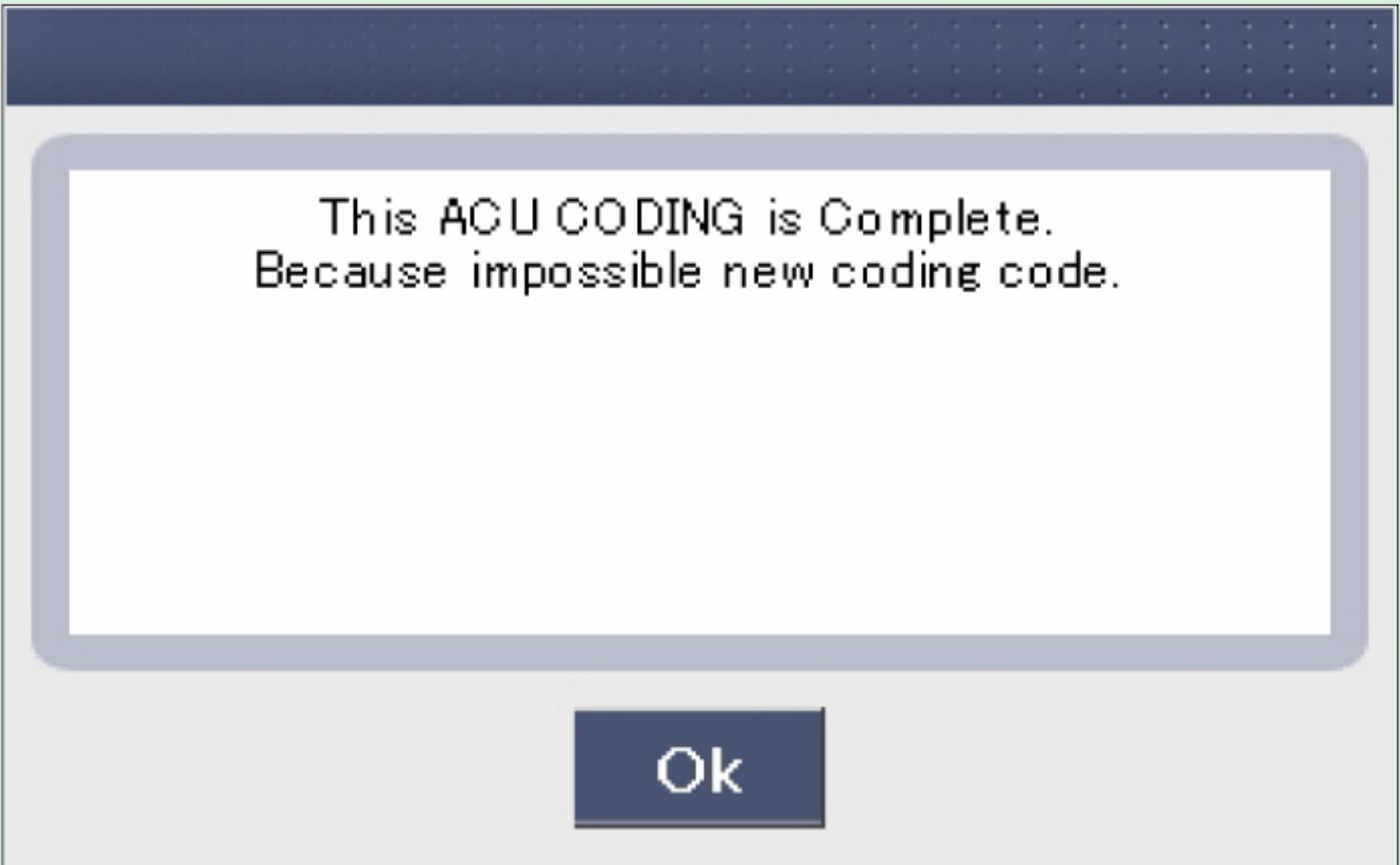
After Variant Coding process, please make it sure that the ACU Information corresponds with the real car information(airbag ignition circuit /engine informaion /braking system information) before delivery.

Ok

Fig.5

NOTE

- 1) Screen of Retrying the Variant coding after finishing variant coding

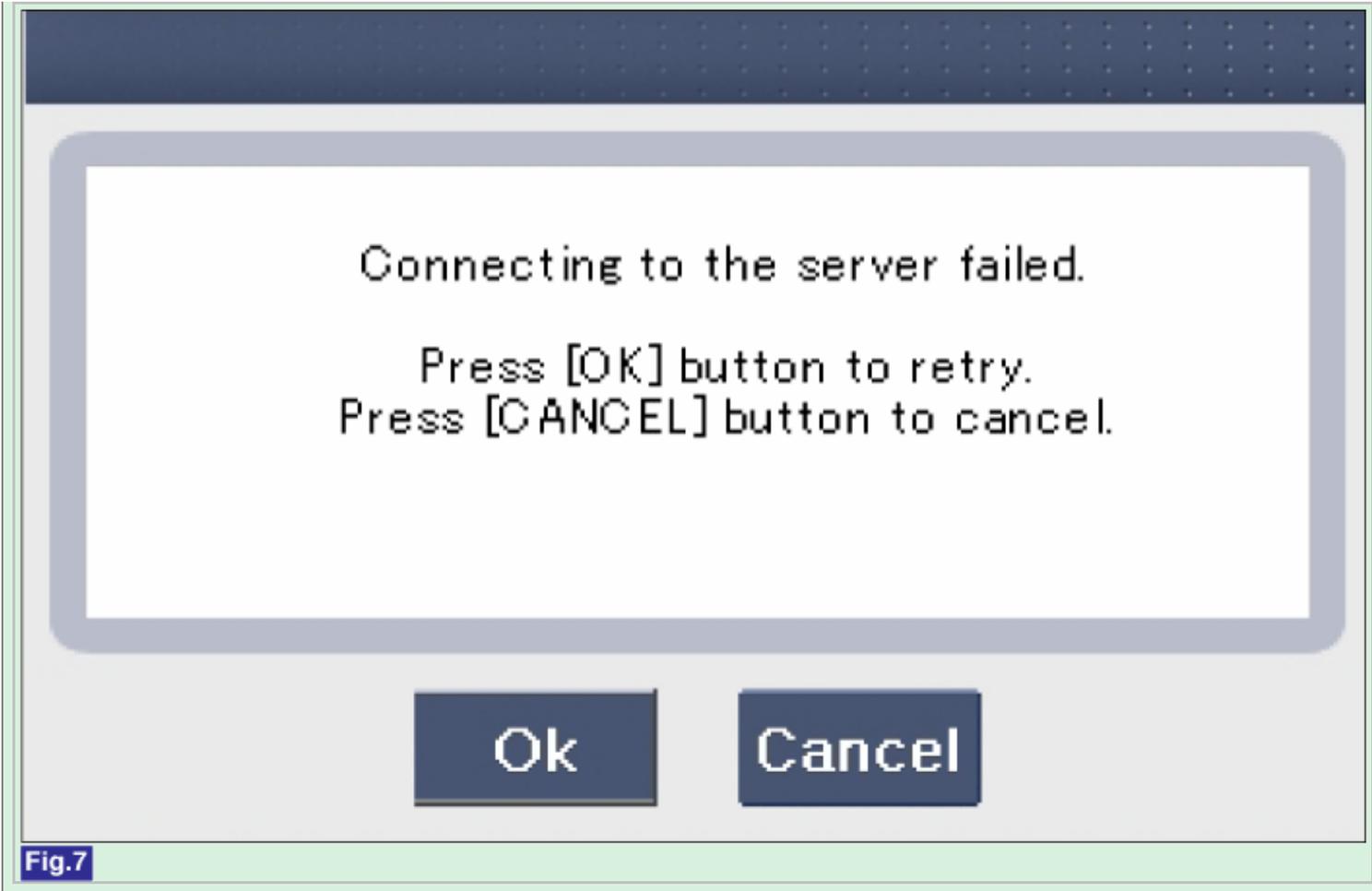
The image shows a screenshot of a device screen with a dark blue header bar at the top. The main content area is light gray and contains a white rounded rectangle with a thick gray border. Inside this rectangle, the text reads: "This ACU CODING is Complete. Because impossible new coding code." Below the rectangle is a dark blue button with the text "Ok" in white. The entire screen is framed by a thin green border.

This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.6

2) Screen of communication failure

A screenshot of a software dialog box with a light gray background and a dark blue header bar. The dialog box has a white central area with a thick gray border. Inside, the text reads: "Connecting to the server failed." followed by "Press [OK] button to retry." and "Press [CANCEL] button to cancel." Below the text are two dark blue buttons with white text: "Ok" and "Cancel".

Connecting to the server failed.
Press [OK] button to retry.
Press [CANCEL] button to cancel.

Fig.7

■ **Off-line type on GDS (This can be used when not connecting to internet)**

1) Initial ACU Variant Coding screen

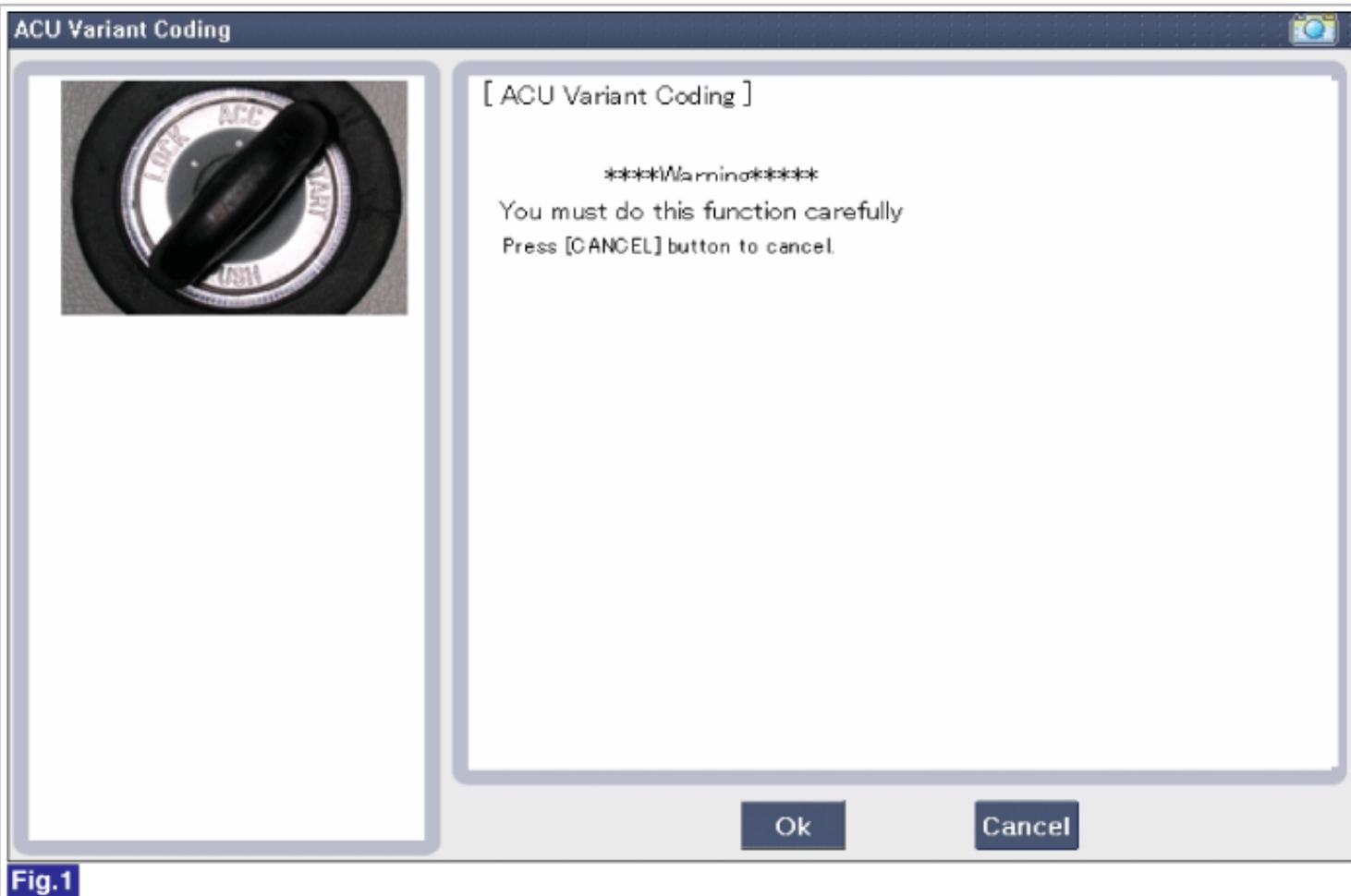


Fig.1

2) ACU CODING Code entering screen

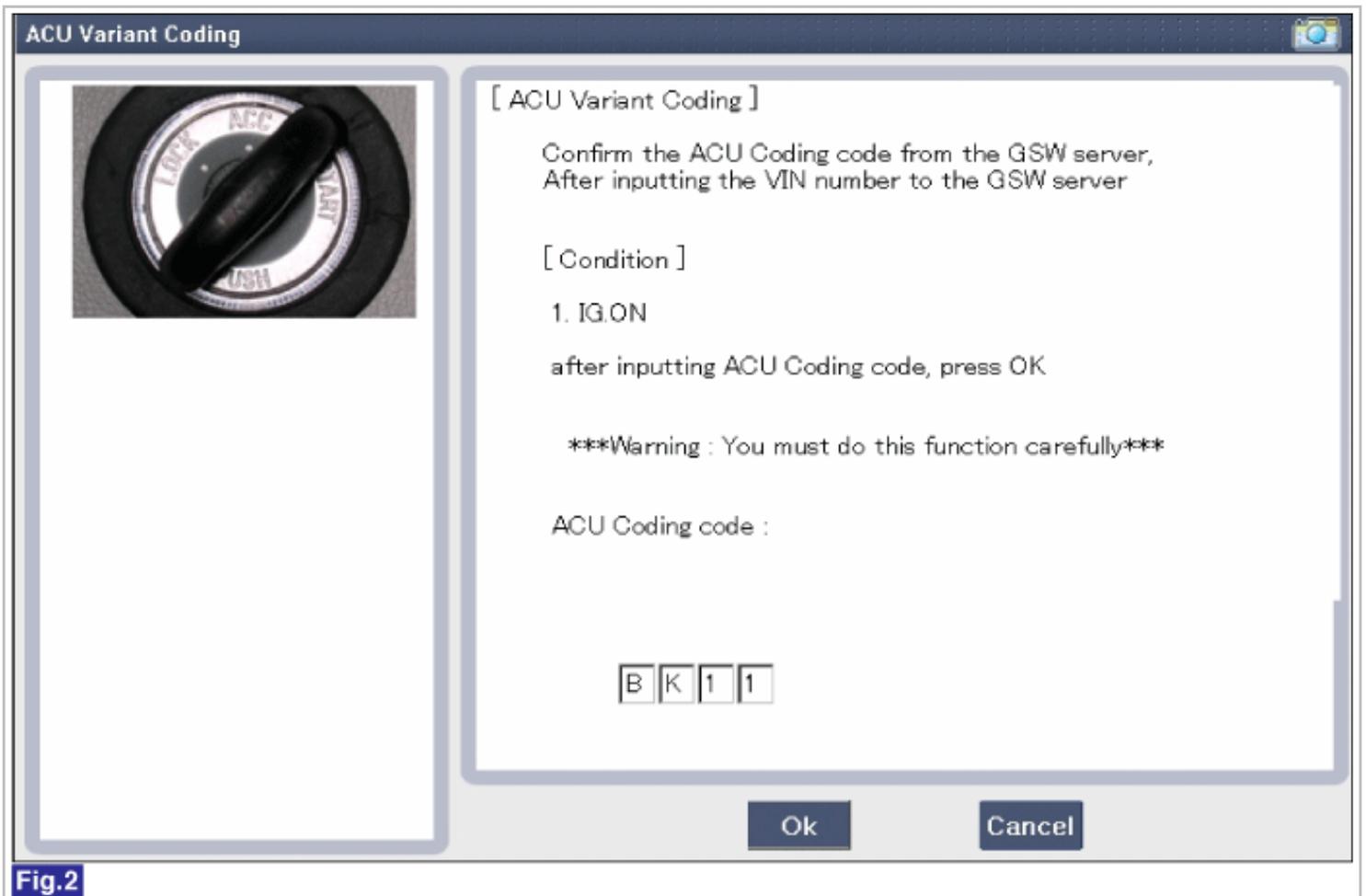


Fig.2

3) Screen of rechecking ACU CODING code's entering



[ACU Variant Coding]

Warning

You must do this function carefully

Confirm the ACU Coding code from the GSW server , After inputting the VIN number to the GSW server

If you want continue press ok or cancel.

Ok

Cancel

Fig.3

4) Variant coding's proceeding screen-1

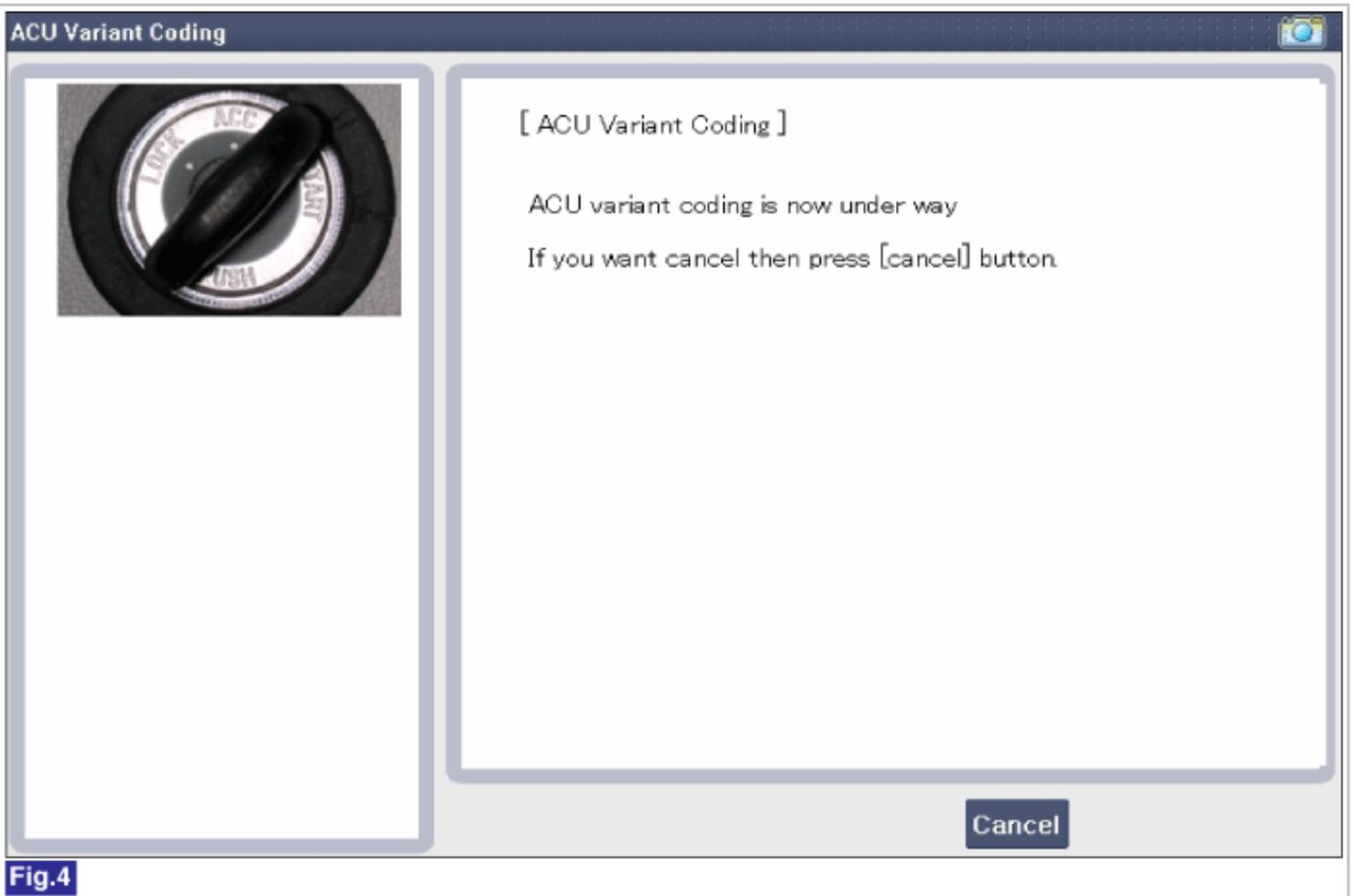


Fig.4

5) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.5

6) Variant coding is completed



*** Variant Coding is complete.***

ACU CODING CODE : BK
ACU Info. : SAB+CAB(Dep/3.8/ESP)

warning

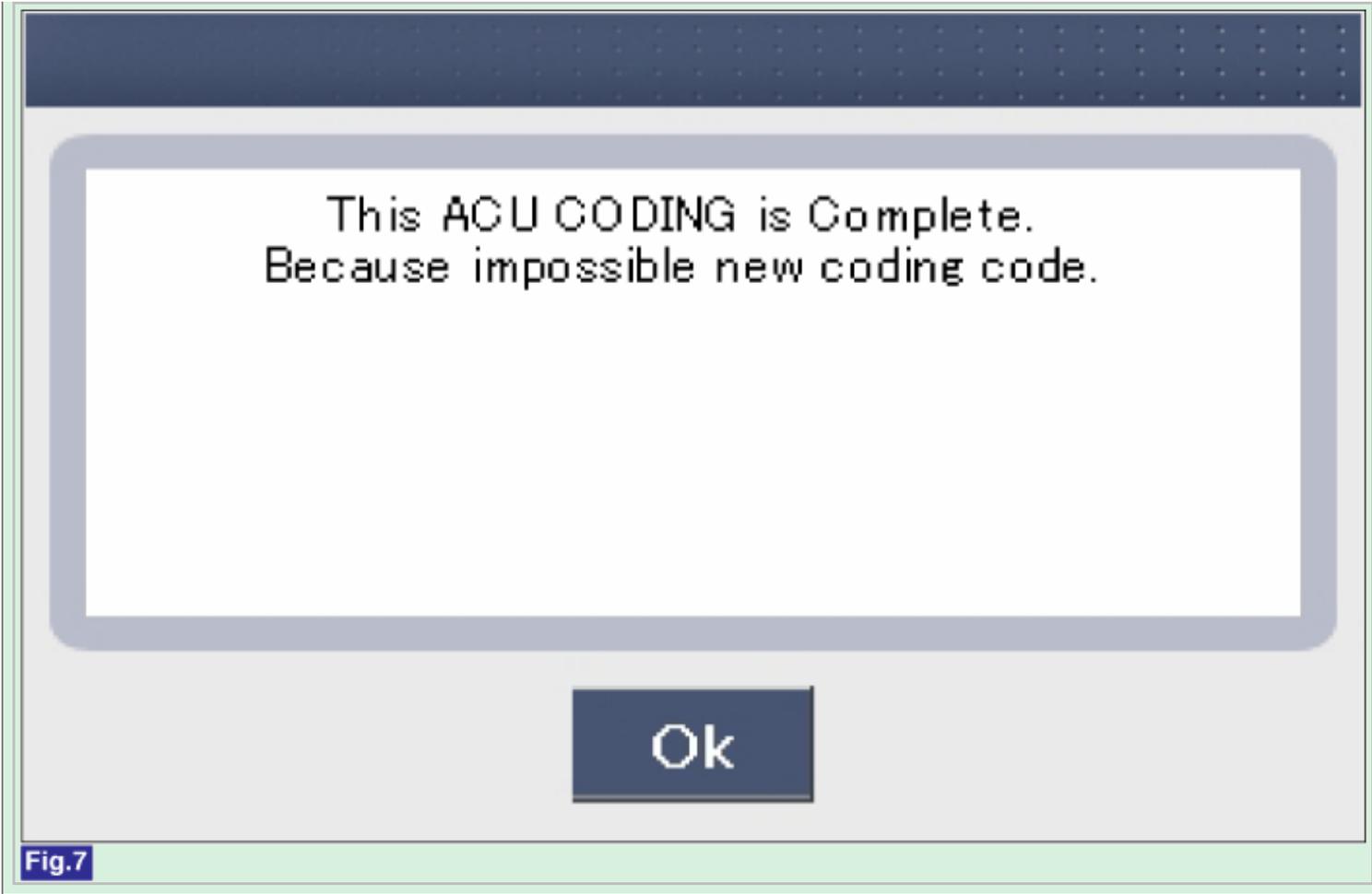
After Variant Coding process, please make it sure that the ACU Information corresponds with the real car information (airbag ignition circuit / engine information / braking system information) before delivery.

Ok

Fig.6

NOTE

- 1) Screen of Retrying the Variant coding after finishing variant coding



This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.7

Restraint > SRSCM > Front Impact Sensor (FIS) > Description and Operation

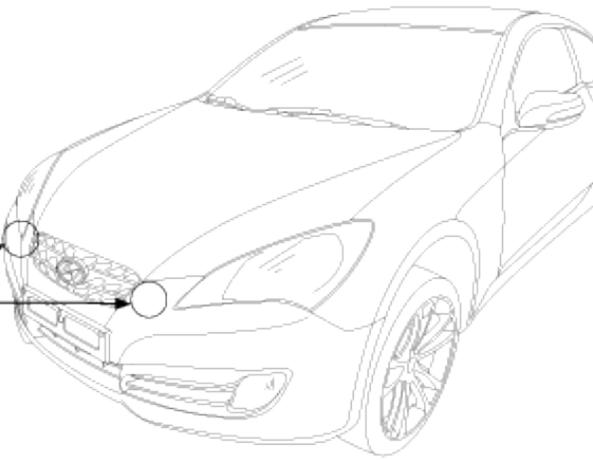
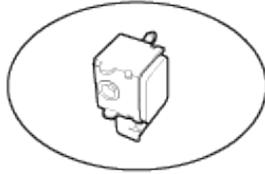
Description

The front impact sensor (FIS) is installed in the Front End Module (FEM). They are remote sensors that detect acceleration due 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.

Restraint > SRSCM > Front Impact Sensor (FIS) > Components and Components Location

Components

Front Impact Sensor (FIS)



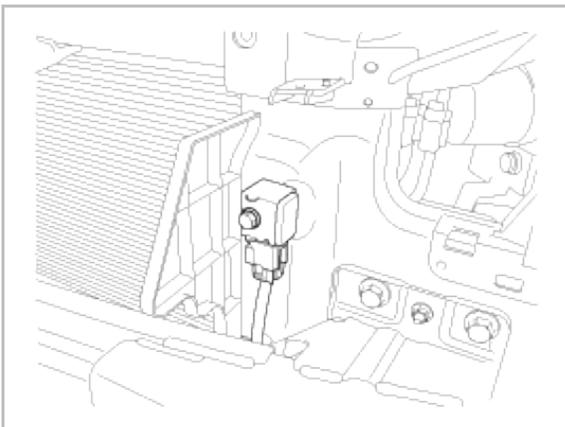
Restraint > SRSCM > Front Impact Sensor (FIS) > Repair procedures

Removal

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 the Body group-Bumper)
3. Disconnect the Front Impact Sensor connector.
4. Remove the Front Impact Sensor mounting nut.



5. Remove the Front Impact Sensor.

Installation

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 nut.

Tightening torque

: 6.8 ~ 8.8 Nm (0.7 ~ 0.9 kgf.m, 5.1 ~ 6.5 lb.ft)

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

Restraint > SRSCM > Side Impact Sensor (SIS) > Description and Operation

Description

Side Impact Sensor (SIS) system consists of two Front-SIS which are installed at each center of the front door module (LH and RH) and two Rear-SIS which are installed at each rear pillar nearby (LH and RH).

Front-Side Impact Sensor (F-SIS) is also called P-SIS because that detects pressure due to collision at its mounting location.

Rear-Side Impact Sensor (R-SIS) is also called A-SIS because that detects acceleration.

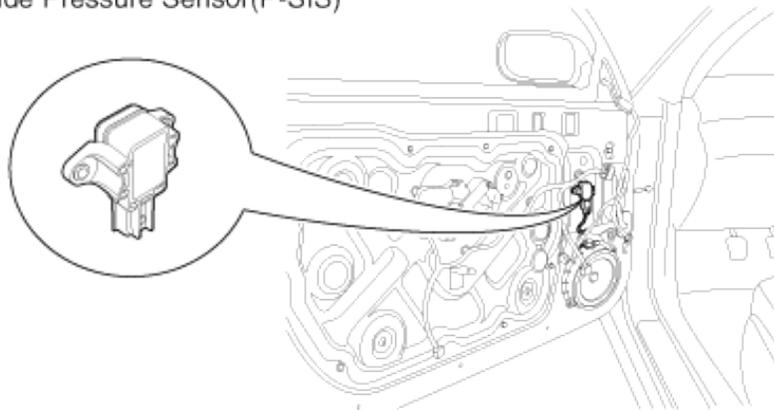
SRSCM decides deployment or not of the airbag and the time of deployment through the collision signal of SIS when the collision occurred.

Restraint > SRSCM > Side Impact Sensor (SIS) > Components and Components Location

Components

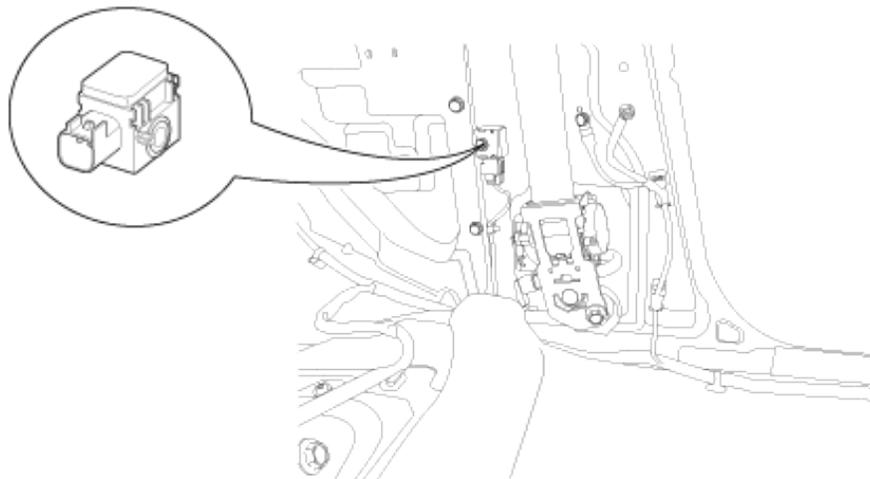
[Front]

Side Pressure Sensor(P-SIS)



[Rear]

Side Impact Sensor (SIS)



Restraint > SRSCM > Side Impact Sensor (SIS) > Repair procedures

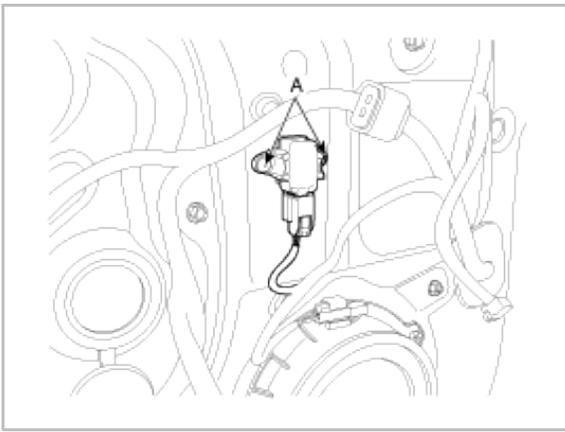
Removal

Side Pressure Sensor

CAUTION

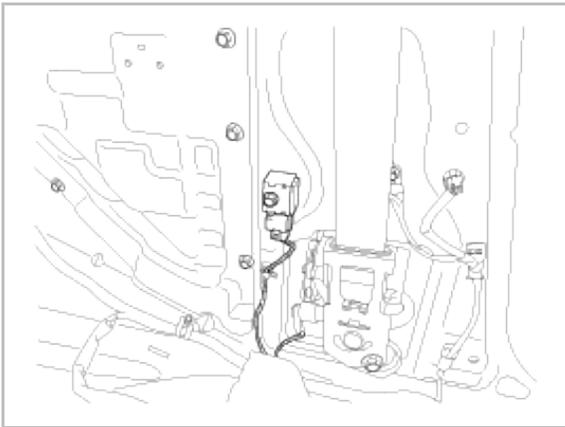
- Removal of the airbag must be performed according to the precautions/procedures described previously.
- Before disconnecting the side impact sensor connector(s), disconnect the side airbag connector (s).
- Do not turn the ignition switch ON and do not connect the battery cable while replacing the side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

1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.
2. Remove the front door trim. (Refer to the Body group- front door)
3. Disconnect the side pressure sensor connector and remove the side pressure sensor after removing 2 rivets (A).



Side Impact Sensor

1. Disconnect the battery negative cable and wait for at least three minutes before beginning work.
2. Remove the rear seat. (Refer to the Body group- Seat)
3. Remove the luggage side trim. (Refer to the Body group- Interior trim)
4. Disconnect the side impact sensor connector.
5. Loosen the side impact sensor mounting bolt and remove the side impact sensor.



Installation

Side Pressure Sensor

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 pressure sensor with 2 rivets then connect the side pressure sensor connector.
2. Install the front door trim. (Refer to the Body group- front door)
3. Reconnect the battery negative cable.
4. After installing the side pressure sensor, confirm proper system operation:
 - A. Turn the ignition switch ON, the SRS indicator light should be turned on for about six seconds and then go off.

Side Impact Sensor

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.

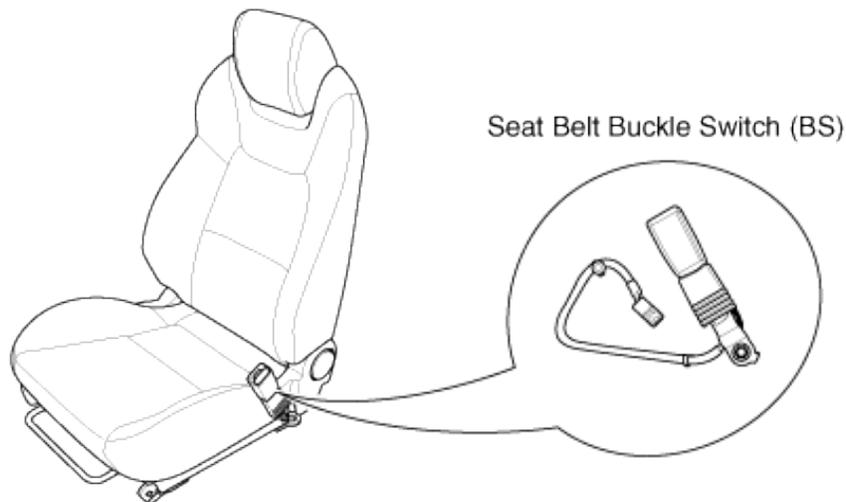
Tightening torque

: 6.8 ~ 8.8 Nm (0.7 ~ 0.9 kgf.m, 5.1 ~ 6.5 lb.ft)

2. Install the luggage side trim. (Refer to the Body group- Interior trim)
3. Install the rear seat . (Refer to the Body group- Seat)
4. Reconnect the battery negative cable.
5. After installing the side impact sensor, confirm proper system operation:
 - A. Turn the ignition switch ON, the SRS indicator light should be turned on for about six seconds and then go off.

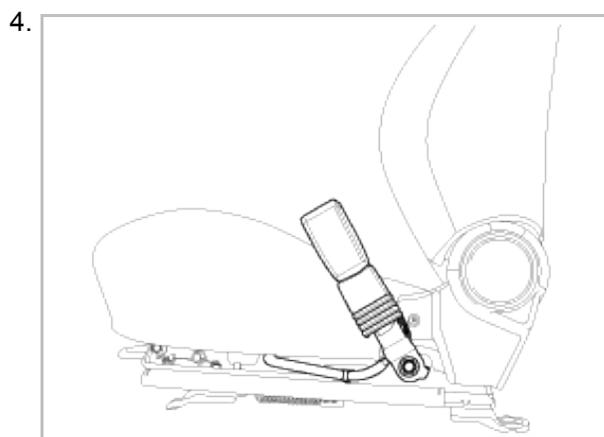
Restraint > SRSCM > Seat Belt Buckle Switch (BS) > Description and Operation**Description**

The SRSCM shall monitor the status of the driver and front passenger seat belt buckle. The SRSCM provides one pin each for the driver and front passenger seat belt buckle status input. The seat belt buckle circuit operates from internal boost voltage supplied by the SRSCM, and uses chassis ground for the signal return. The buckle status shall modify the SRSCM deployment. If the buckle status is unbuckled, the corresponding pretensioner will be deactivated.

Restraint > SRSCM > Seat Belt Buckle Switch (BS) > Components and Components Location**Components****Restraint > SRSCM > Seat Belt Buckle Switch (BS) > Repair procedures****Removal**

1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.

2. Remove the front seat assembly. (Refer to the Body group- Seat)
3. Loosen the seat belt buckle mounting bolt and remove the seat belt buckle switch.



Installation

CAUTION

Be sure to install the harness wires not to be pinched or interfered with other parts.

1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.
2. Remove the ignition key from the vehicle.
3. Install the seat belt buckle switch.

Tightening Torque

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

4. Install the front seat assembly. (Refer to the Body group- Seat)
5. Reconnect the battery negative cable.
6. After installing the Seat Belt Buckle Switch, confirm proper system operation:
 - A. Turn the ignition switch ON; the SRS indicator should be turned on for about six seconds and then go off.

Restraint > SRSCM > Passenger Occupant Detecting Sensor (PODS) > Description and Operation

Description

The system is intended to classify the occupancy status of the front passenger seat in a motor vehicle based upon the measured force on the bottom seat cushion.

The system also communicates to the SRSCM whether to allow or inhibit the deployment of the passenger airbags and/or pretensioner based upon this status.

The System also measured dynamic responses of the occupant. This information is used to identify when a child seat is cinched down tightly with the seat belt, and to also determine if the seat is unoccupied.

However, the dynamic measurements are not intended, nor capable of monitoring the seating position of the occupant, nor can they determine the proximity of the occupant to the inflator modules.

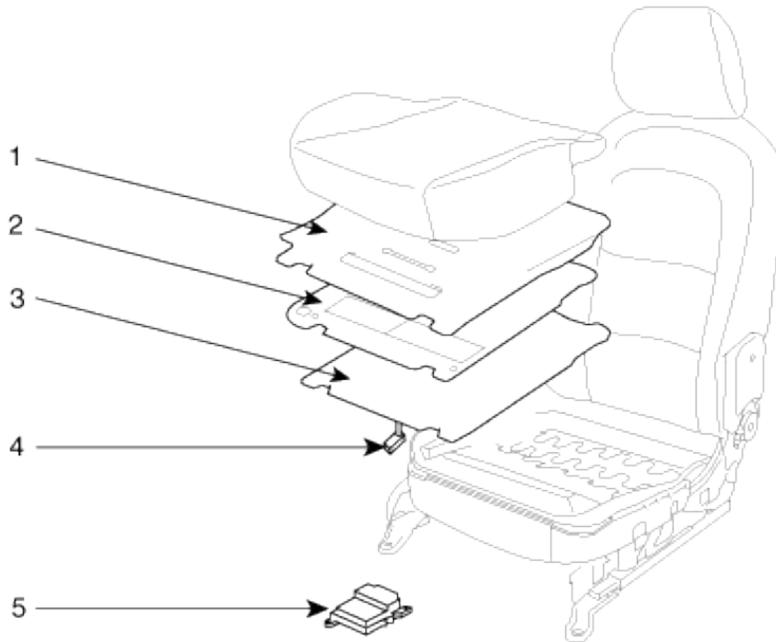
The system should not be confused with an occupant position recognition system, or any other occupant proximity sensor.

The Passive Occupant Detecting System (PODS) utilizes bladder placed between the passenger seat cushion and suspension to measure the occupant's loading force on the vehicle seat. The bladder is connected to pressure sensor and ultimately to an electronic control unit (ECU), both of which are mounted under the seat pan. The quantitative force

determined by the system is compared to a given threshold for determination of passenger airbag suppression.

Restraint > SRSCM > Passenger Occupant Detecting Sensor (PODS) > Components and Components Location

Components



1. Bladder : Sense occupant weight and provide fluid pressure input to Pressure Sensor.
2. Backer Board : Provide stable and smooth reaction surface for Bladder, together with Felt Pad.
3. Felt Pad : Provide stable reaction surface for Bladder, together with Backer Board, and protect Bladder Assembly from the seat frame environment.
4. Pressure Sensor : Sense pressure input from Bladder and convert the pressure input to a voltage signal for ECU.
5. ECU : Utilizing data from the Pressure Sensor, BTS (Belt Tension sensor), and Compensation Tables, determine if PAB (Passenger Airbag) will be suppressed.

Restraint > SRSCM > Passenger Occupant Detecting Sensor (PODS) > Repair procedures

Removal

1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.
2. Remove the front passenger seat assembly. (Refer to the Body group- Seat)
3. Remove the seat cushion as an assembly. (Refer to the Body group- Seat)

Installation

1. Install the PODS equipped seat front assembly. (Refer to the Body group- Seat)
2. Reconnect the battery negative cable.
3. After installing the PODS, confirm proper system operation :

A. Turn the ignition switch ON; the SRS indicator should be turned on for about six seconds and then go off. Telltale lamp will turn on for 4 seconds and be turned off for 4 seconds. After the 8 seconds, it shall remain off if the PODS does not require suppression and the passenger airbag is enabled.

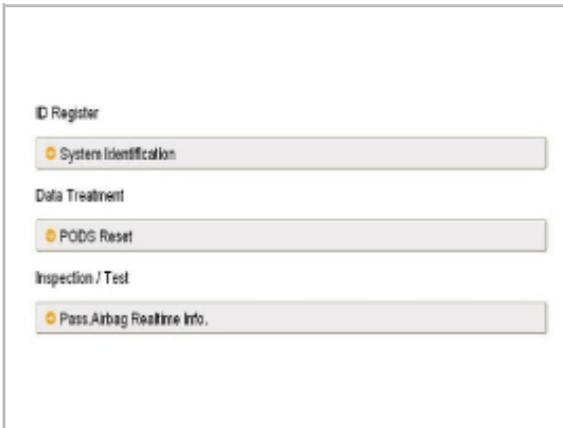
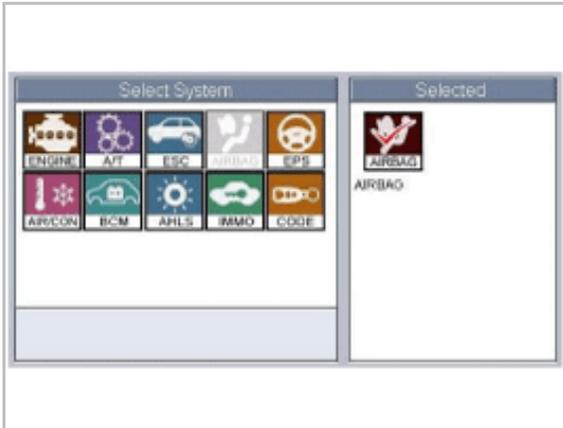
NOTE

Be sure to perform PODS reset with scantool after replcacing PODS equipped seat cushion.

PODS Re-zero procedure

You should perform PODS Re-zero procedure after service or replacement about all part of the passenger seat.

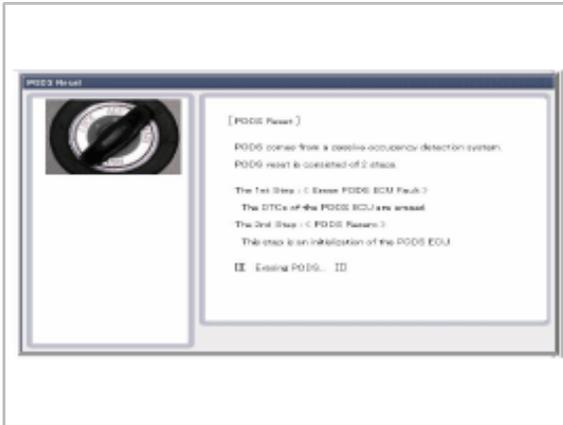
1. Ignition "OFF", connect scantool.
2. Ignition "ON" & Engine "OFF", select Airbag system and "PODS Reset" mode.



3. The scantool will show the two PODS RESET function steps.
 - (1) Erase PODS ECU diagnostic codes.
 - (2) PODS ECU initialization.



4. Press the OK button to erase the PODS related diagnostic codes.



5. Press OK button to initialize the PODS.



CAUTION

This step must be done PODS re-zero, when the front passenger seat is empty.

6. The PODS initialization procedure will be performed.



7. Check PODS situation with selecting " Pass. Airbag Realtime Info" after performing PODS Reset procedure.

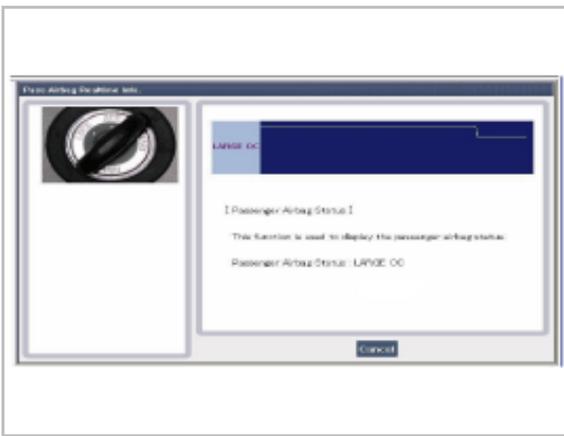


8. Perform inspection with pressing OK button.



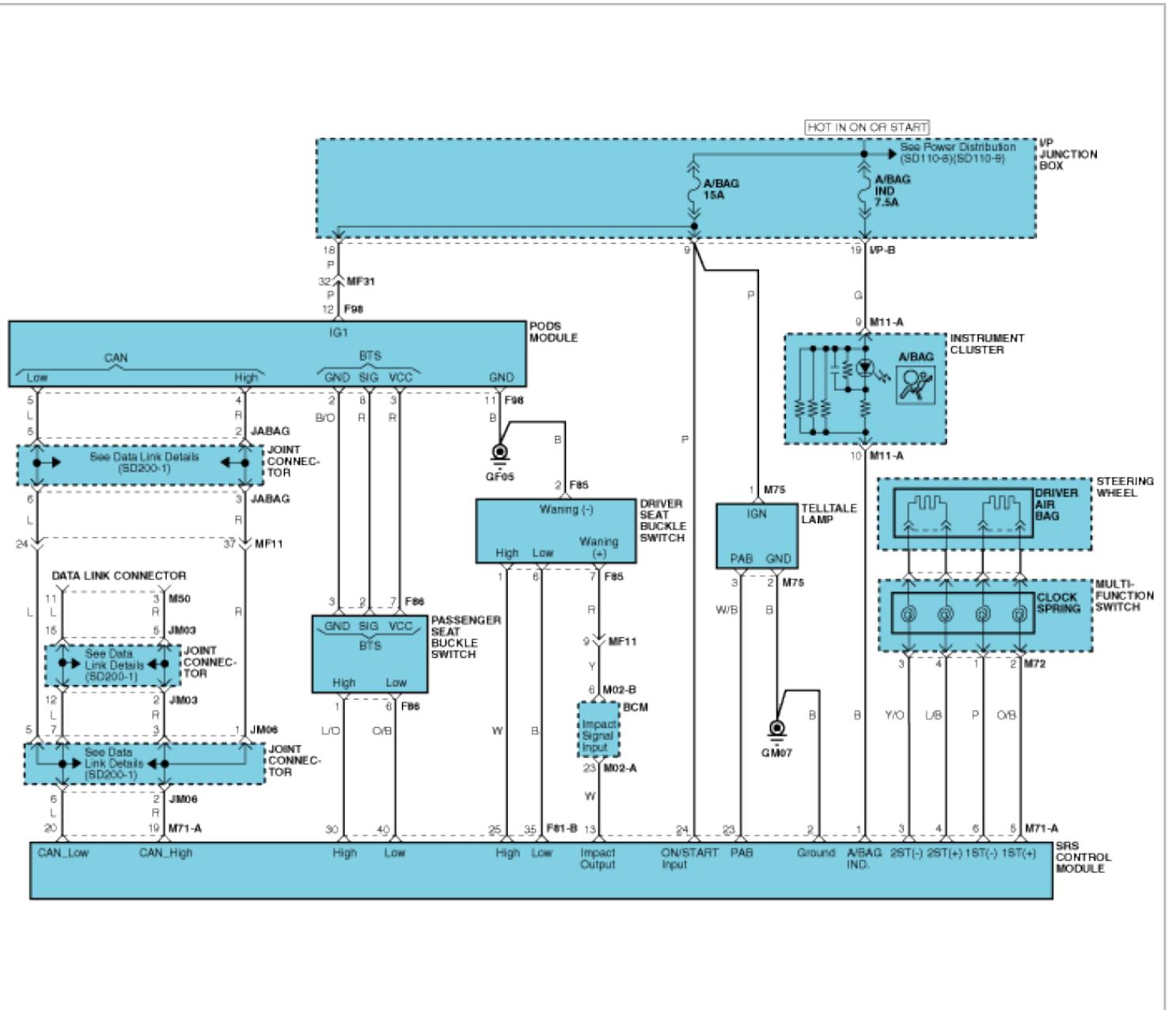
9. Finish the procedure with pressing cancel button if there is no problem after inspecting each status as below.



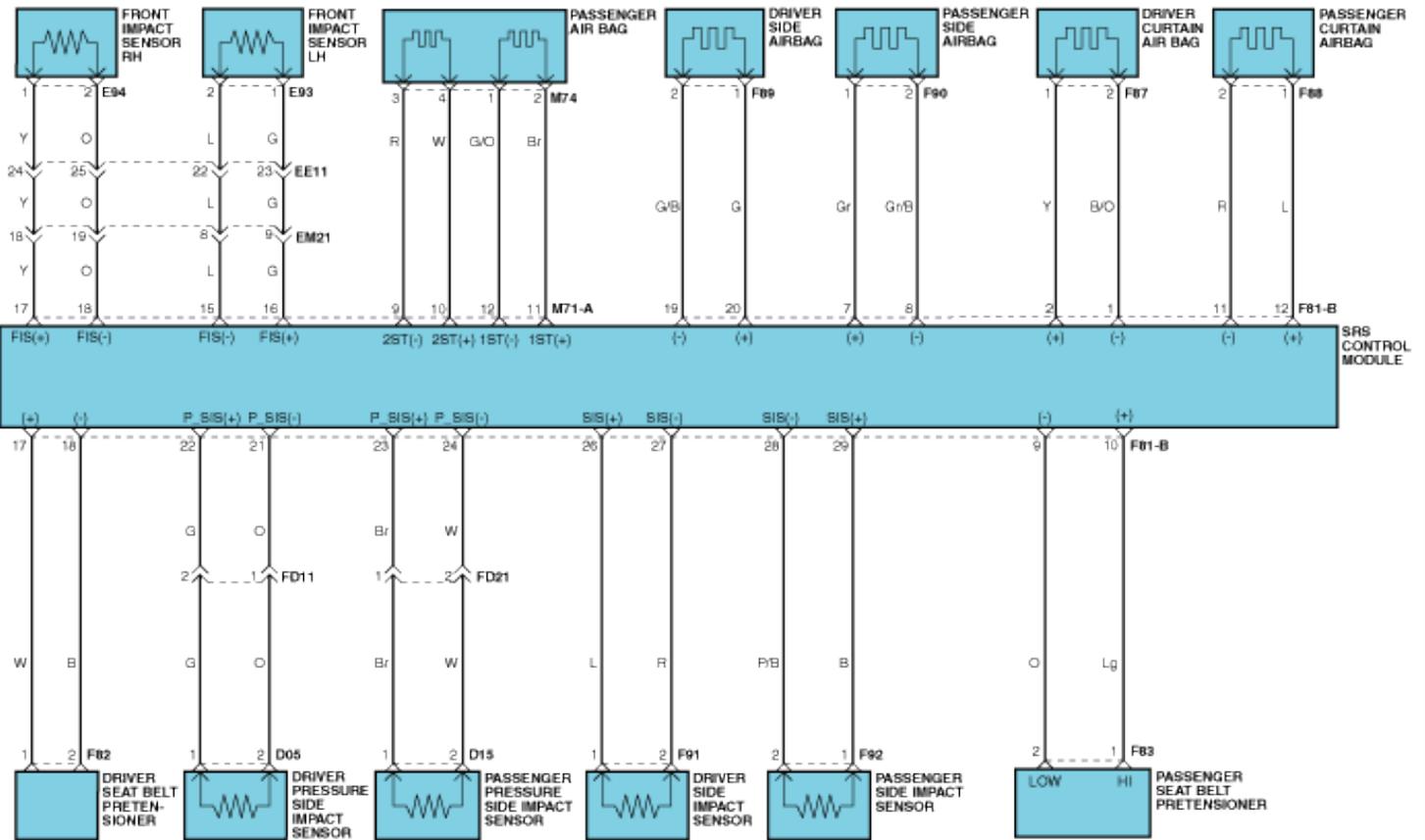


Restraint > SRSCM > Schematic Diagrams

Circuit Diagram (1)



Circuit Diagram (2)



SRSCM Connector Terminal

Harness Connector

6	5	4	3	2	1
12	11	10	9	8	7
18	17	16	15	14	13
24	23	22	21	20	19

CONNECTOR A

10	9	8	7	6	5	4	3	2	1
20	19	18	17	16	15	14	13	12	11
30	29	28	27	26	25	24	23	22	21
40	39	38	37	36	35	34	33	32	31

CONNECTOR B

Shorting bar (□) : located on the upper side of pin 1 and 2 of SRSCM connector A

Note : For short circuit check, shorting bar must be opened. Use a plastic clip as a shorting bar opener for disconnecting shorting bar.

Pin	Function (Connector A)	Pin	Function (Connector B)
1	Airbag Warning Lamp (Shorting bar opener)	1	Curtain Airbag [Driver] Low

2	Power Ground (Shorting bar opener)	2	Curtain Airbag [Driver] High
3	(2nd stage) Driver Airbag Low	3	-
4	(2nd stage) Driver Airbag High	4	-
5	(1st stage) Driver Airbag High	5	-
6	(1st stage) Driver Airbag Low	6	-
7	-	7	Side Airbag [Passenger] High
8	-	8	Side Airbag [Passenger] Low
9	(2nd stage) Passenger Airbag Low	9	Seat Belt Pretensioner [Passenger] Low
10	(2nd stage) Passenger Airbag High	10	Seat Belt Pretensioner [Passenger] High
11	(1st stage) Passenger Airbag High	11	Curtain Airbag [Passenger] Low
12	(1st stage) Passenger Airbag Low	12	Curtain Airbag [Passenger] High
13	Crash Output	13	-
14	-	14	-
15	Front Impact Sensor [Driver] Low	15	-
16	Front Impact Sensor [Driver] High	16	-
17	Front Impact Sensor [Passenger] High	17	Seat Belt Pretensioner [Driver] High
18	Front Impact Sensor [Passenger] Low	18	Seat Belt Pretensioner [Driver] Low
19	CAN High (PODS and OBD)	19	Side Airbag [Driver] Low
20	CAN High (PODS and OBD)	20	Side Airbag [Driver] High
21	-	21	Side Impact Sensor [Driver] Low
22	-	22	Side Impact Sensor [Driver] High
23	Telltale Warning Lamp	23	Side Impact Sensor [Passenger] High
24	Power supply (Ignition)	24	Side Impact Sensor [Passenger] Low
		25	Seat Belt Buckle Switch [Driver] High
		26	Side Impact Sensor [Driver] High
		27	Side Impact Sensor [Driver] Low
		28	Side Impact Sensor [Passenger] Low
		29	Side Impact Sensor [Passenger] High
		30	Seat Belt Buckle Switch [Passenger] High
		31	-
		32	-
		33	-
		34	-
		35	Seat Belt Buckle Switch [Driver] Low
		36	-
		37	-
		38	-
		39	-

Restraint > SRSCM > Troubleshooting**Diagnostic Trouble Code (DTC) Table**

DTC Code	Trouble description	Remark
B1101	Battery voltage high	
B1102	Battery voltage low	
B1326	FIS(Front Impact Sensor) - Driver short to Ground	
B1327	FIS(Front Impact Sensor) - Driver short to Battery	
B1328	FIS(Front Impact Sensor) - Driver defect	
B1329	FIS(Front Impact Sensor) - Driver communication error	
B1330	FIS(Front Impact Sensor) - Driver Wrong ID	
B1331	FIS(Front Impact Sensor) - Passenger short to Ground	
B1332	FIS(Front Impact Sensor) - Passenger short to Battery	
B1333	FIS(Front Impact Sensor) - Passenger defect	
B1334	FIS(Front Impact Sensor) - Passenger communication error	
B1335	FIS(Front Impact Sensor) - Passenger Wrong ID	
B1341	Remote Crash Sensors Cross Coupling	
B1346	Driver airbag resistance too High (1st stage)	
B1347	Driver airbag resistance too Low (1st stage)	
B1348	Driver airbag resistance circuit short to ground (1st stage)	
B1349	Driver airbag resistance circuit short to battery (1st stage)	
B1352	Passenger airbag resistance too High (1st stage)	
B1353	Passenger airbag resistance too Low (1st stage)	
B1354	Passenger airbag resistance circuit short to ground (1st stage)	
B1355	Passenger airbag resistance circuit short to battery (1st stage)	
B1361	Pretensioner front - Driver resistance too high	
B1362	Pretensioner front - Diver resistance too low	
B1363	Pretensioner front - Driver resistance circuit short to ground	
B1364	Pretensioner front - Driver resistance circuit short to battery	
B1367	Pretensioner front - Passenger resistance too high	
B1368	Pretensioner front - Passenger resistance too low	
B1369	Pretensioner front - Passenger resistance circuit short to ground	
B1370	Pretensioner front - Passenger resistance circuit short to battery	
B1378	Side airbag front - Driver resistance too high	
B1379	Side airbag front - Driver resistance too low	
B1380	Side airbag front - Driver resistance circuit short to ground	

B1381	Side airbag front - Driver resistance circuit short to battery	
B1382	Side airbag front - Passenger resistance too high	
B1383	Side airbag front - Passenger resistance too low	
B1384	Side airbag front - Passenger resistance circuit short to ground	
B1385	Side airbag front - Passenger resistance circuit short to battery	
B1395	Firing loops interconnection fault	
B1400	SIS(Side Impact Sensor) front - Driver defect	
B1401	SIS(Side Impact Sensor) front - Driver circuit short to Ground	
B1402	SIS(Side Impact Sensor) front - Driver circuit short to Battery	
B1403	SIS(Side Impact Sensor) front - Passenger defect	
B1404	SIS(Side Impact Sensor) front - Passenger circuit short to Ground	
B1405	SIS(Side Impact Sensor) front - Passenger circuit short to Battery	
B1409	SIS(Side Impact Sensor) front - Driver communication error	
B1410	SIS(Side Impact Sensor) front - Passenger communication error	
B1414	SIS(Side Impact Sensor) front - Driver Wrong ID	
B1415	SIS(Side Impact Sensor) front - Passenger wrong ID	
B1473	Inflatable Curtain airbag - Driver resistance too high	
B1474	Inflatable Curtain airbag - Driver resistance too low	
B1475	Inflatable Curtain airbag - Driver resistance circuit short to ground	
B1476	Inflatable Curtain airbag - Driver resistance circuit short to battery	
B1477	Inflatable Curtain airbag - Passenger resistance too high	
B1478	Inflatable Curtain airbag - Passenger resistance too low	
B1479	Inflatable Curtain airbag - Passenger resistance circuit short to ground	
B1480	Inflatable Curtain airbag - Passenger resistance circuit short to battery	
B1481	2nd Stage Driver airbag resistance too high	
B1482	2nd Stage Driver airbag resistance too low	
B1483	2nd Stage Driver airbag resistance circuit short to ground	
B1484	2nd Stage Driver airbag resistance circuit circuit leakage to battery	
B1485	2nd Stage Passenger airbag resistance too high	
B1486	2nd Stage Passenger airbag resistance too low	
B1487	2nd Stage Passenger airbag resistance circuit short to ground	
B1488	2nd Stage Passenger airbag resistance circuit short to battery	
B1489	PODS(Passenger Occupant Detecting System) ECU defect	
B1490	PODS(Passenger Occupant Detecting System) Sensor(Bladder) defect	
B1493	PODS(Passenger Occupant Detecting System) communication error	
B1494	PODS(Passenger Occupant Detecting System) wrong ID	
B1495	BTS(Belt - Tension Sensor) defect	
B1496	PODS(Passenger Occupant Detecting System) not calibrated	

B1511	Buckle Switch Driver open or short to Battery	
B1512	Buckle Switch Driver short or short to Ground	
B1513	Buckle Switch Passenger open or short to Battery	
B1514	Buckle Switch Passenger short or short to Ground	
B1515	Buckle Switch Driver Defect (Cross Coupling)	
B1516	Buckle Switch Passenger Defect (Cross Coupling)	
B1517	Buckle Switch Driver Instability	
B1518	Buckle Switch Passenger Instability	
B1620	Internal fault - Replace ECU	
B1650	Crash recorded in 1st stage only (Frontal - Replace ECU)	
B1651	Crash recorded in front - Driver side airbag (Replace ECU)	
B1652	Crash recorded in front - Passenger side airbag (Replace ECU)	
B1657	Crash recorded in Belt pretensioner only	
B1658	Belt pretensioner 6 times deployment	
B1670	Crash recorded in full stage (Frontal - Replace ECU)	
B1683	Exceed Maximum Coding Number	
B1684	ACU configuration is different	
B1738	P-SIS front – Driver Wrong ID	
B1739	P-SIS front – Driver Defect	
B1740	P-SIS front – Driver Short to Ground	
B1741	P-SIS front – Driver Short to Battery	
B1742	P-SIS front – Driver Communication Error	
B1744	P-SIS front - Passenger Wrong ID	
B1745	P-SIS front - Passenger Defect	
B1746	P-SIS front - Passenger Short to Ground	
B1747	P-SIS front - Passenger Short to Battery	
B1748	P-SIS front - Passenger Communication Error	
B1762	ACU Coding Error	
B2500	Warning lamp failure	
B2502	Passenger airbag Telltale lamp failure	

Restraint > SRSCM > B1101 Battery Voltage High

General Description

SRSCM (Supplemental Restraints System Control Module) checks input voltage when "IG ON" to make air bag system work properly.

If input voltage is out of normal range, there can be malfunction in system operation. In this case, Check battery and charging system.

DTC Description

The SRSCM sets DTC B1101 and turns warning light on if voltage above threshold value is detected for more than 4 sec. (If voltage within threshold value is detected When the SRSCM returns to normal condition. SRSCM regards DTC as being cleared and turns warning light off).

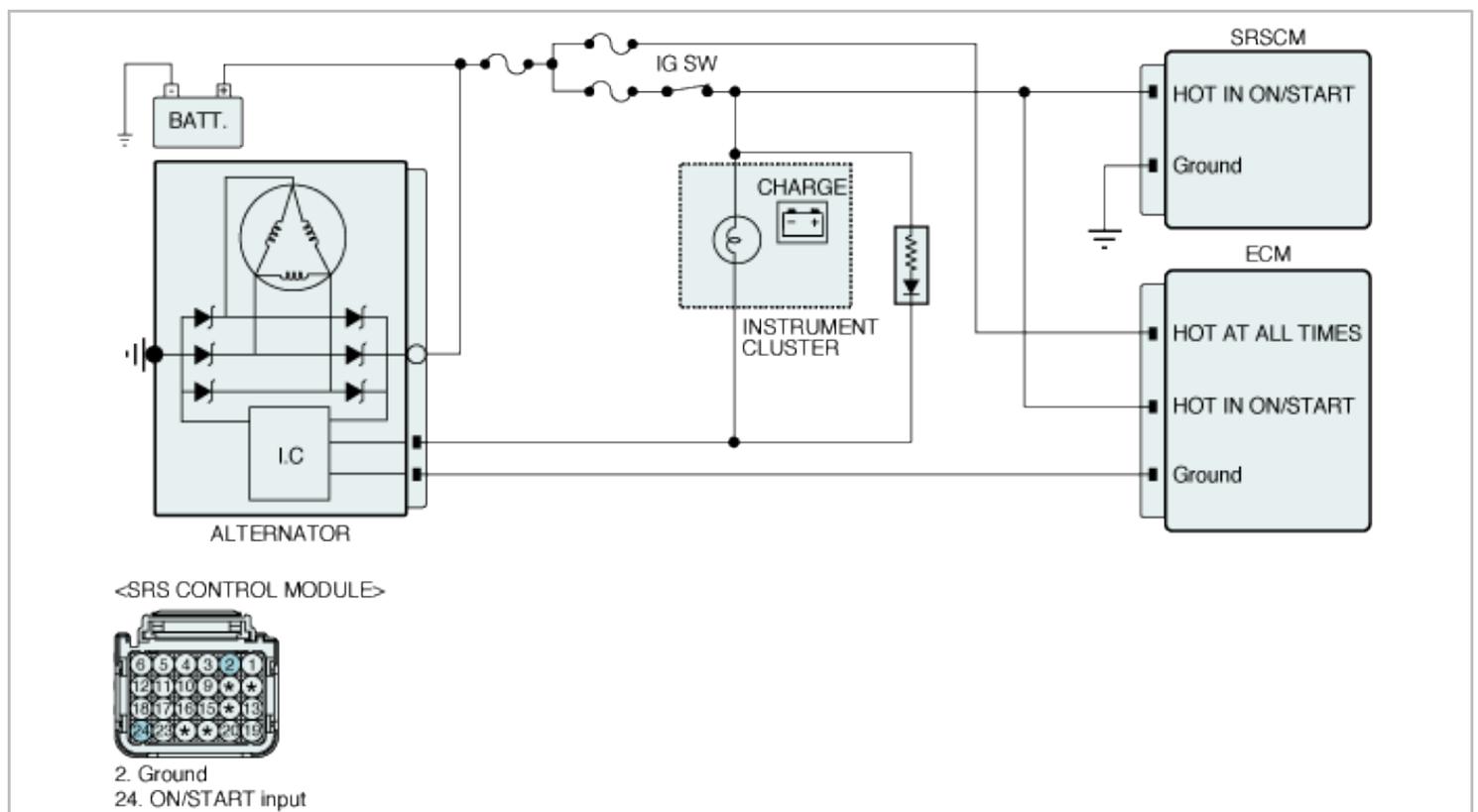
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Poor connection of connected part. • Open/Short circuit in power harness. • Open/Short circuit in ground harness. • Faulty charging system. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• $V_{batt} \geq 17$	
Diagnostic Time	Qualification	• More than 4 sec	
	De-Qualification	• More than 4 sec	

Specification

Test Condition	Voltage
Idle & WOT	Approx. $8.38 \leq V_{batt} \leq 17$

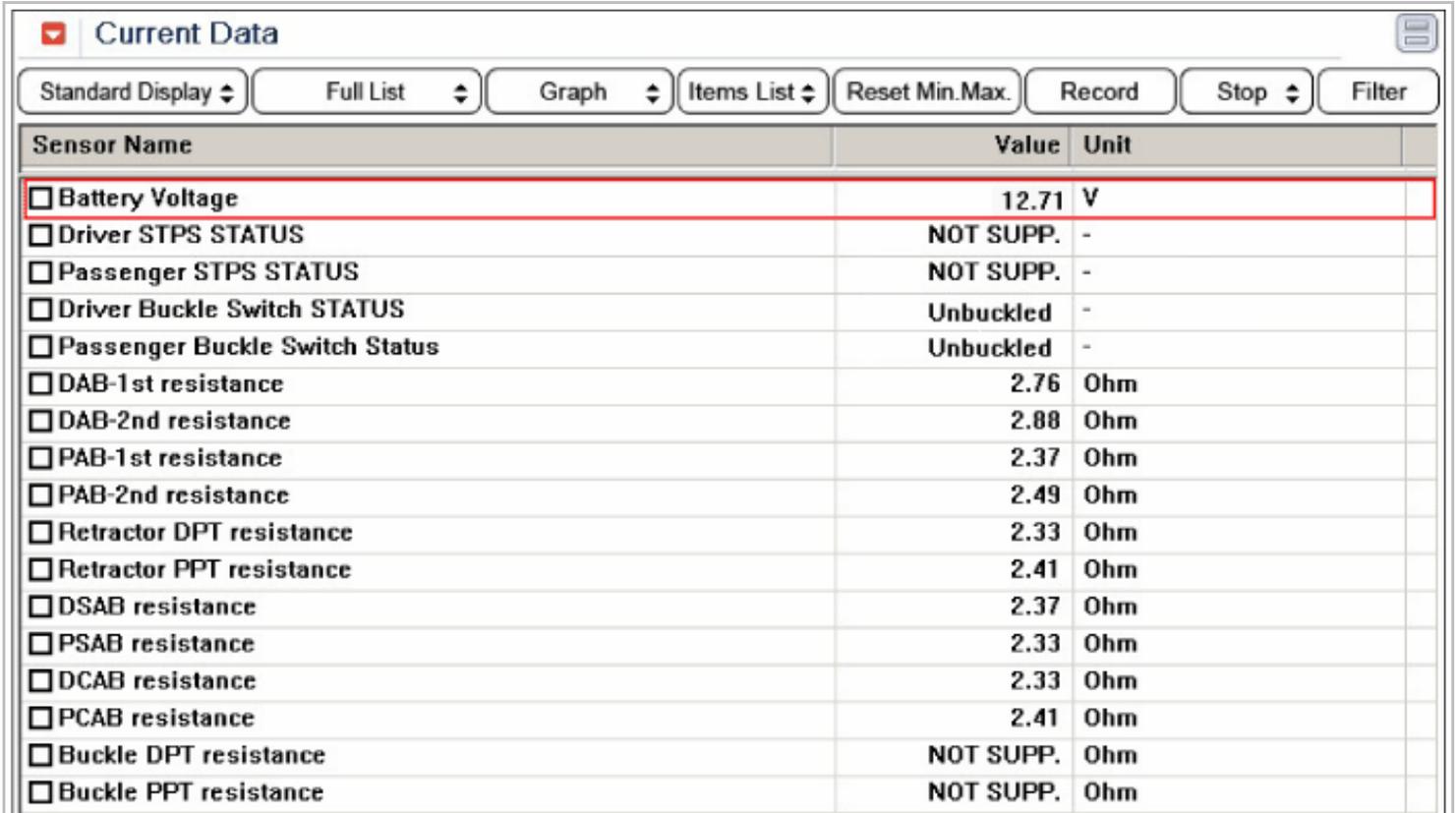
Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Battery Voltage" parameter on the Scantool.

Specification : Approx. $8.38 \leq V_{batt} \leq 17$



Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Charging System Inspection" procedure.

Charging System Inspection

1. Engine "ON", headlight and heatwire "ON".
2. Measure voltage between the battery terminal (+) and (-) maintaining ENG. RPM 2,500RPM (idle) over 2 minutes.

Specification : Approx. $8.38 \leq V_{batt} \leq 17$

3. Is the measured voltage within specifications?

YES	▶ Go to "Power Circuit Inspection" procedure.
NO	▶ Substitute with a known-good alternator and check for proper operation. If the problem is corrected, replace alternator and then go to "Verification of Vehicle Repair" procedure.

Power Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect the SRSCM connector.
4. Connect the battery (-) terminal cable and start engine.
5. Measure voltage between power terminal of the SRSCM harness connector and chassis ground.

Specification : Approx. $8.38 \leq V_{batt} \leq 17$

6. Is the measured voltage within specifications?

YES	▶ Go to "Ground circuit inspection" procedure.
NO	▶ Thoroughly check all connectors (and connections) for looseness, bending, corrosion, contamination, deterioration, and/or damage. Repair as necessary and then go to "Verification of Vehicle Repair" procedure.

Ground Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect the SRSCM connector.
4. Measure resistance between ground terminal of the SRSCM harness connector and chassis ground.

Specification : Approx. 1Ω below.

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
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NO

► Substitute the SRSCM main harness and check for proper operation.
If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES

► Go to the applicable troubleshooting procedure.

NO

► System is performing to specification at this time.

Restraint > SRSCM > B1102 Battery Voltage Low

General Description

SRSCM (Supplemental Restraints System Control Module) checks input voltage when "IG ON" to make air bag system work properly.

If input voltage is out of normal range, there can be malfunction in system operation. In this case, Check battery and charging system.

DTC Description

The SRSCM sets DTC B1102 and turns warning light on if voltage below threshold value is detected for more than 4 sec. (If voltage within threshold value is detected When the SRSCM returns to normal condition. SRSCM regards DTC as being cleared and turns warning light off)..

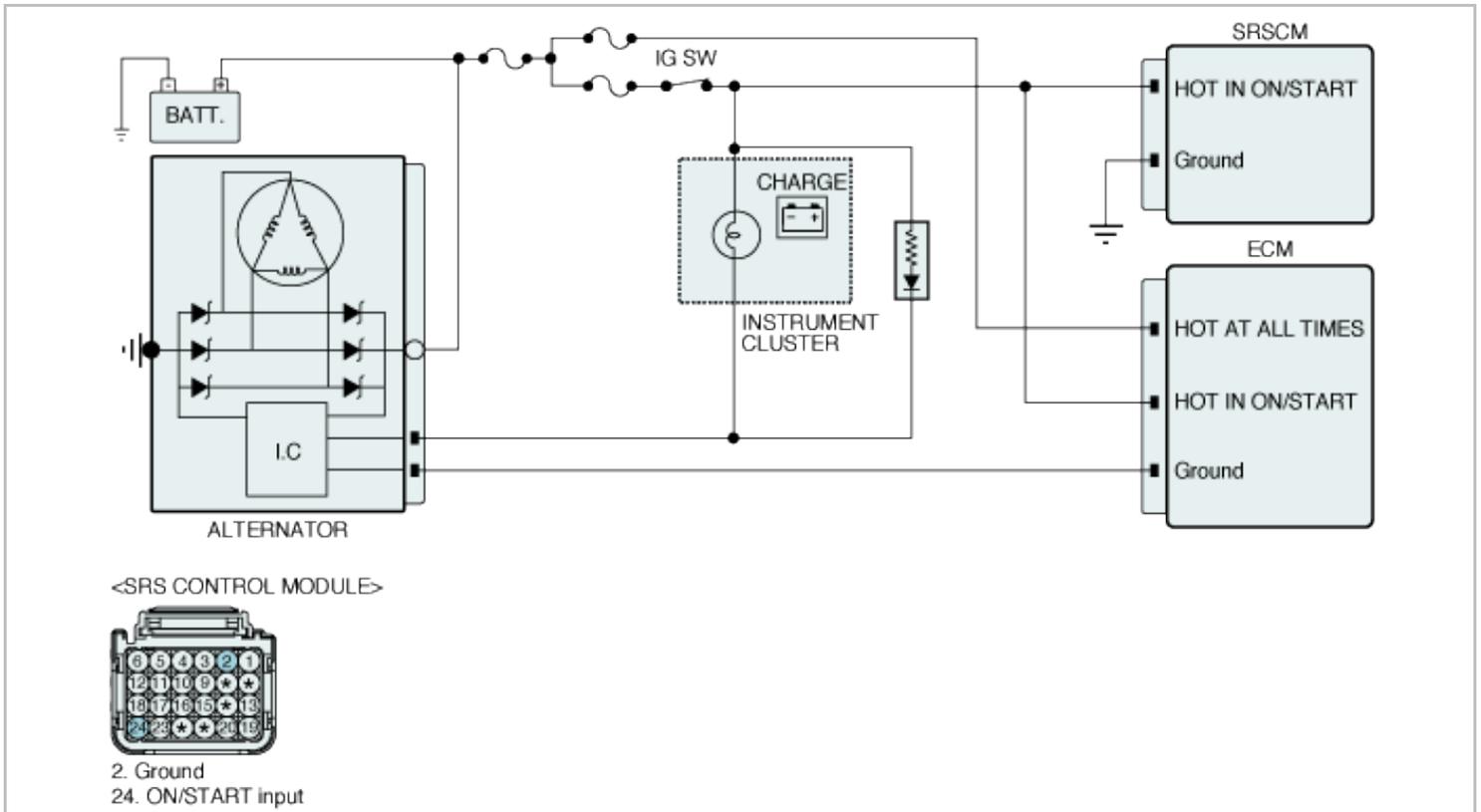
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Poor connection of connected part. • Open/Short circuit in power harness. • Open/Short circuit in ground harness. • Faulty charging system. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• $V_{batt} \leq 8.38$	
Diagnostic Time	Qualification	• More than 4 sec	
	De-Qualification	• More than 4 sec	

Specification

Test Condition	Voltage
Idle & WOT	Approx. $8.38 \leq V_{batt} \leq 17$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON" & Engine "OFF", select "Current Data" mode.
3. Monitor the "Battery Voltage" parameter on the Scantool.

Specification : Approx. $8.38 \leq V_{batt} \leq 17$

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Charging System Inspection" procedure.

Charging System Inspection

- Engine "ON", headlight and heatwire "ON".

2. Measure voltage between the battery terminal (+) and (-) maintaining ENG. RPM 2,500RPM (idle) over 2 minutes.

Specification : Approx. $8.38 \leq V_{batt} \leq 17$

3. Is the measured voltage within specifications?

YES	▶ Go to "Power Circuit Inspection" procedure.
NO	▶ Substitute with a known-good alternator and check for proper operation. If the problem is corrected, replace alternator and then go to "Verification of Vehicle Repair" procedure.

Power Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect the SRSCM connector.
4. Connect the battery (-) terminal cable and start engine.
5. Measure voltage between power terminal of the SRSCM harness connector and chassis ground.

Specification : Approx. $8.38 \leq V_{batt} \leq 17$

6. Is the measured voltage within specifications?

YES	▶ Go to "Ground circuit inspection" procedure.
NO	▶ Thoroughly check all connectors (and connections) for looseness, bending, corrosion, contamination, deterioration, and/or damage. Repair as necessary and then go to "Verification of Vehicle Repair" procedure.

Ground Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect the SRSCM connector.
4. Measure resistance between ground terminal of the SRSCM harness connector and chassis ground.

Specification : Approx. 1Ω below.

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1326 FIS(Front Impact Sensor)-Driver Short to Ground

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collision. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

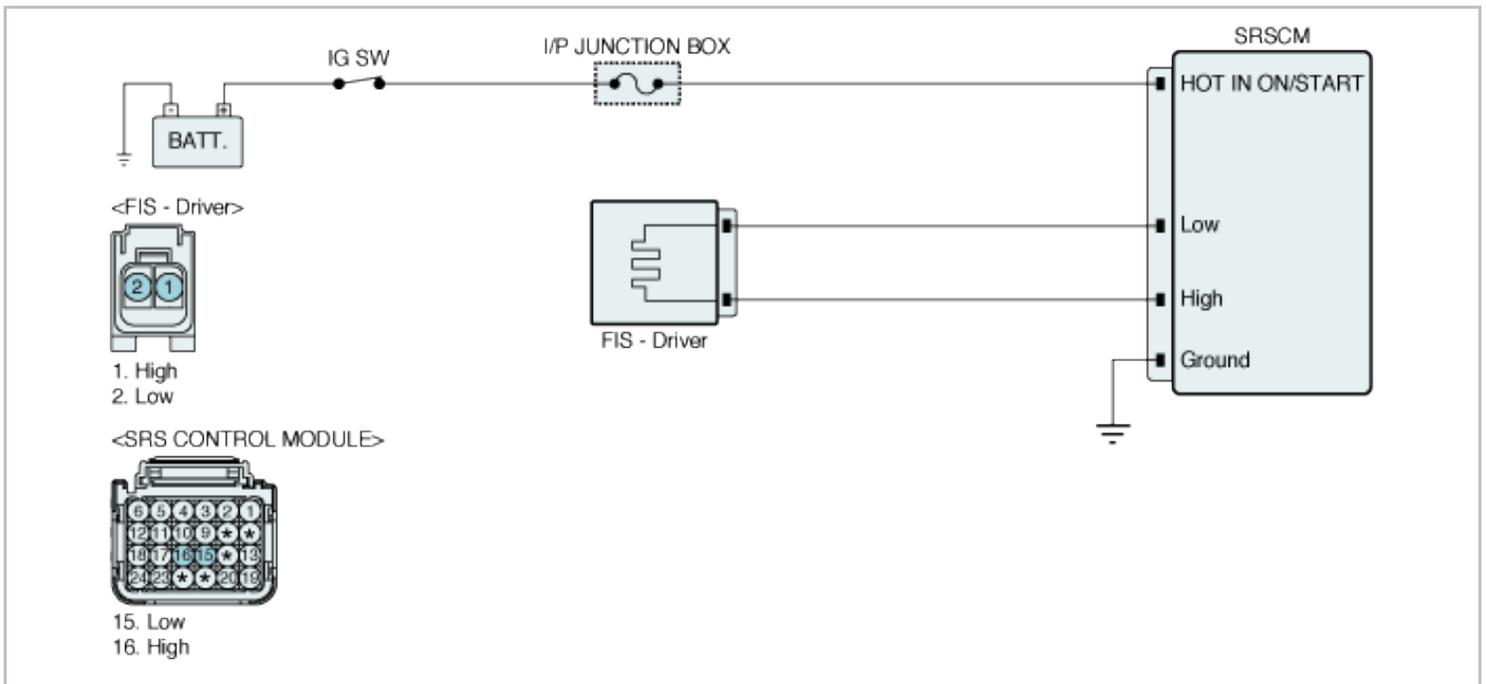
DTC Description

The SRSCM sets DTC B1326 if there is short to ground in DFIS harness.

DTC Detecting Condition

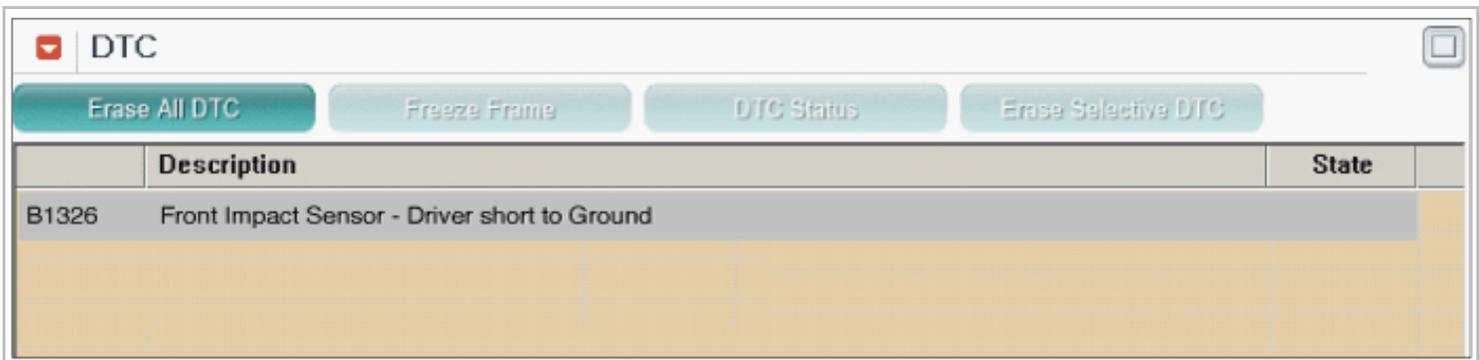
Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Short to ground in harness. • Faulty DFIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DFIS no acceleration data, and line voltage < 3V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2.1s (2 times) • Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):1 time • Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect DFIS connector and SRSCM main harness connector.
4. Measure resistance between terminal "FIS-Driver (+)" or "FIS-Driver (-)" of the DFIS harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DFIS connector .
5. Substitute the DFIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good DFIS, and check for proper operation. If the problem is corrected, replace DFIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.

4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1327 FIS(Front Impact Sensor)-Driver Short to Battery

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collision. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

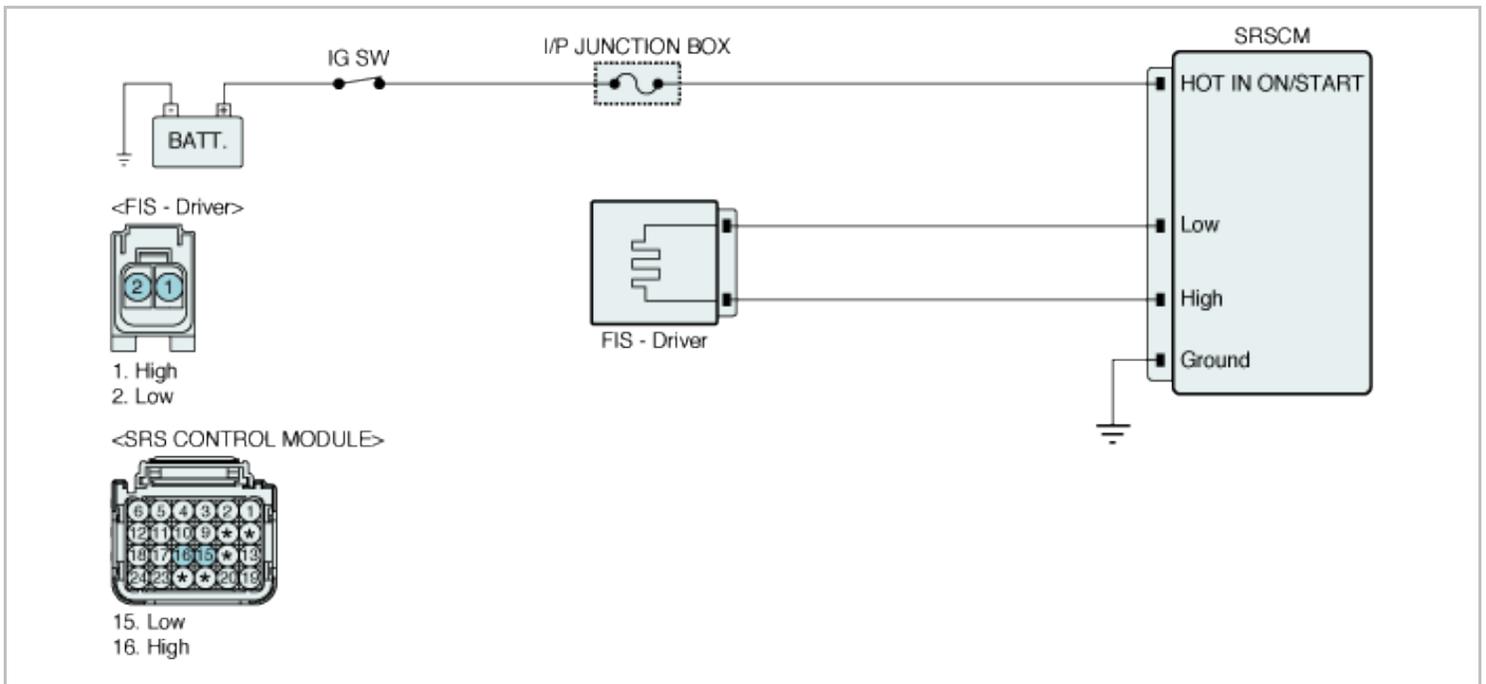
DTC Description

The SRSCM sets DTC B1327 if there is short to power harness in DFIS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Short to power in harness. • Faulty DFIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DFIS no acceleration data, and line voltage >11V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):0.2s (100ms x 2) • Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):1 time • Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect DFIS connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "FIS-Driver (+)" or "FIS-Driver (-)" of the DFIS harness connector and chassis ground.

Specification : 0V

6. Is the measured Voltage within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DFIS connector .
5. Substitute the DFIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good DFIS, and check for proper operation. If the problem is corrected, replace DFIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.

3. Operate the vehicle within DTC Enable conditions in General information.

4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1328 FIS(Front Impact Sensor)-Driver Defect

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collision. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

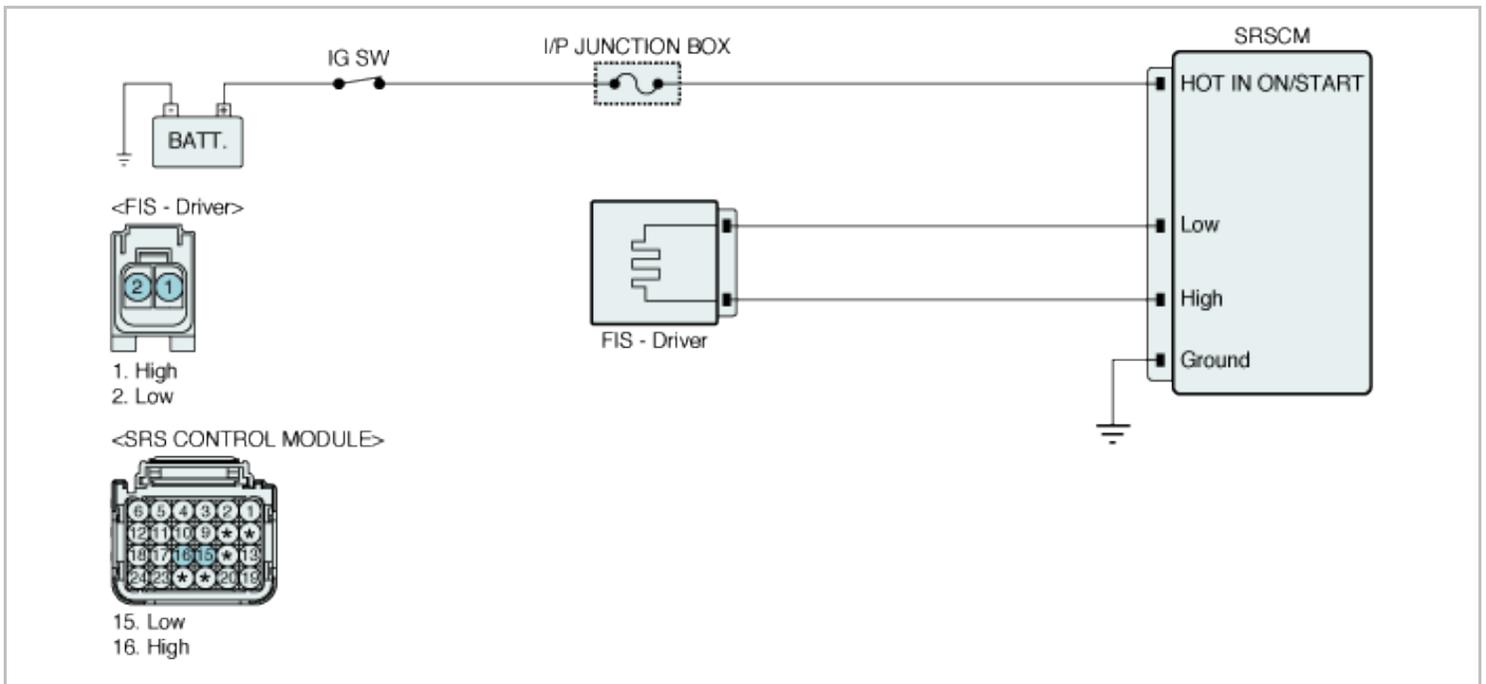
DTC Description

The SRSCM sets DTC B1328 if there is any fault in Driver side front impact sensor.

DTC Detecting Condition

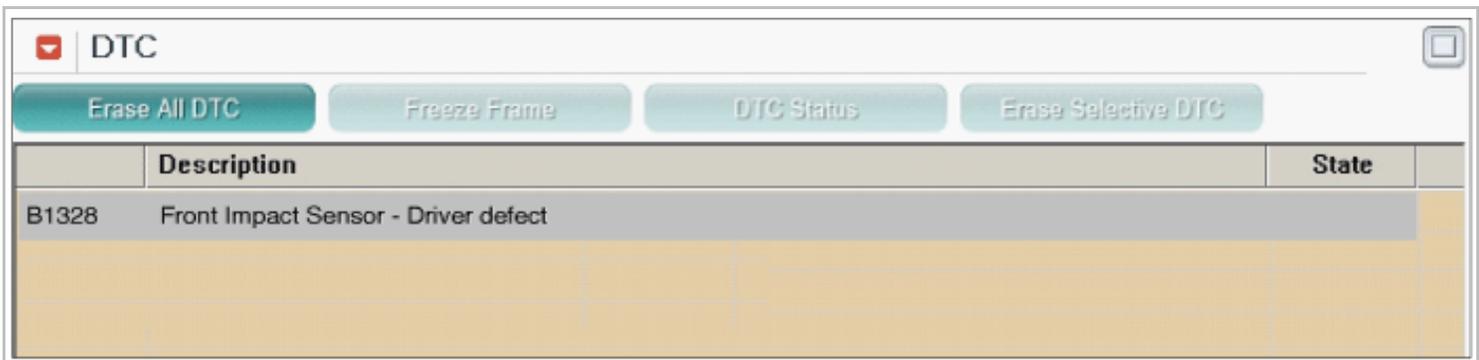
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Poor connection of connected part. • Faulty DFIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		<ul style="list-style-type: none"> • DFIS send defect code • DFIS output is not expected value 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):100 ms (500μs x 20) • Steady:1s (10ms x 100) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):IGN off -> on • Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DFIS connector .
5. Substitute the DFIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedur</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good DFIS, and check for proper operation. If the problem is corrected, replace DFIS and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1329 FIS(Front Impact Sensor)-Driver Communication error

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

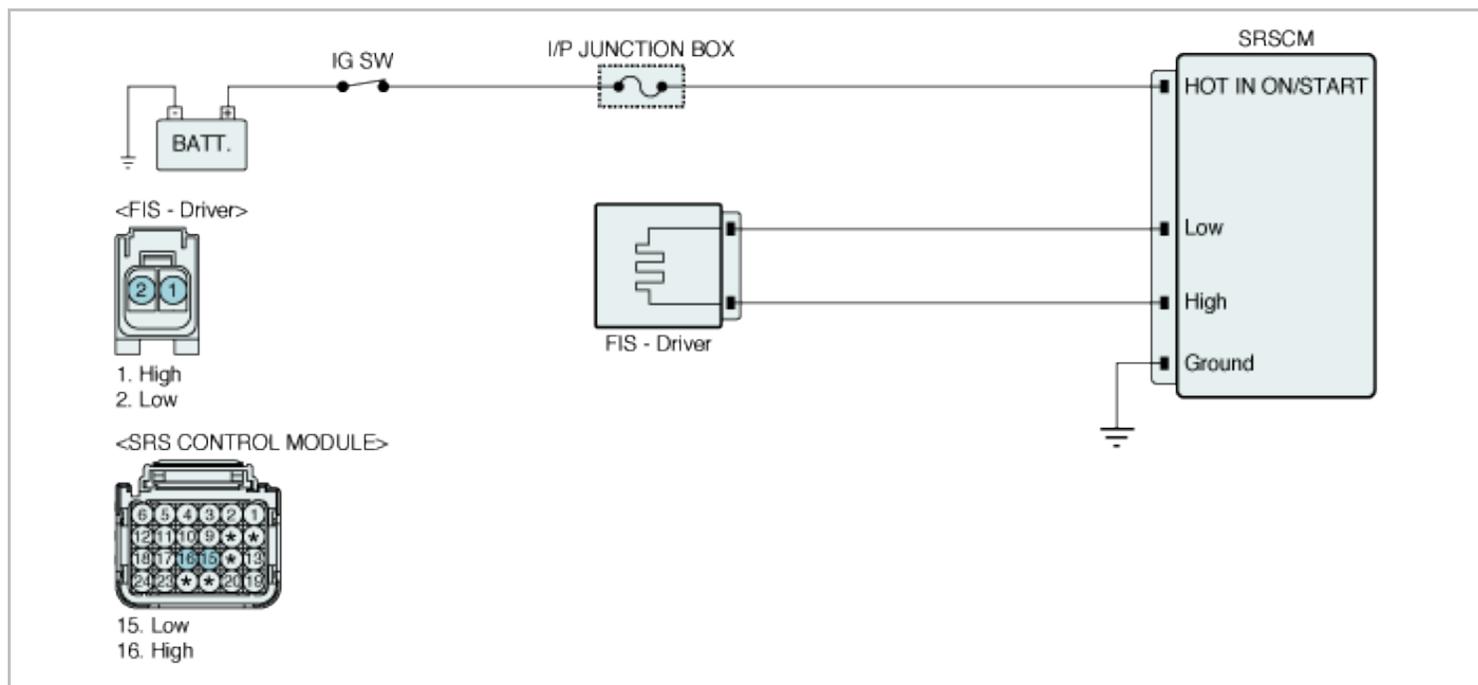
DTC Description

The SRSCM sets DTC B1329 if there is any error in communication between DFIS and SRSCM

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Poor connection of connected part. • Faulty DFIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DFIS no acceleration data, and line voltage is ok (between 3V and 11V)	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2.5 ~ 3.1s (2 times) • Steady:500 μs x 8 + 2.3~2.9s (2 times) 	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC	
<div style="display: flex; justify-content: space-around;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>	
Description	State
B1329 Front Impact Sensor - Driver communication error	

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

- Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
- Ignition "OFF".
- Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
- Disconnect DFIS connector .
- Substitute the DFIS and check for proper operation.
- Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedur</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	▶ Substitute a known-good DFIS, and check for proper operation.

If the problem is corrected, replace DFIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1330 FIS(Front Impact Sensor)-Driver Wrong ID

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collision. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

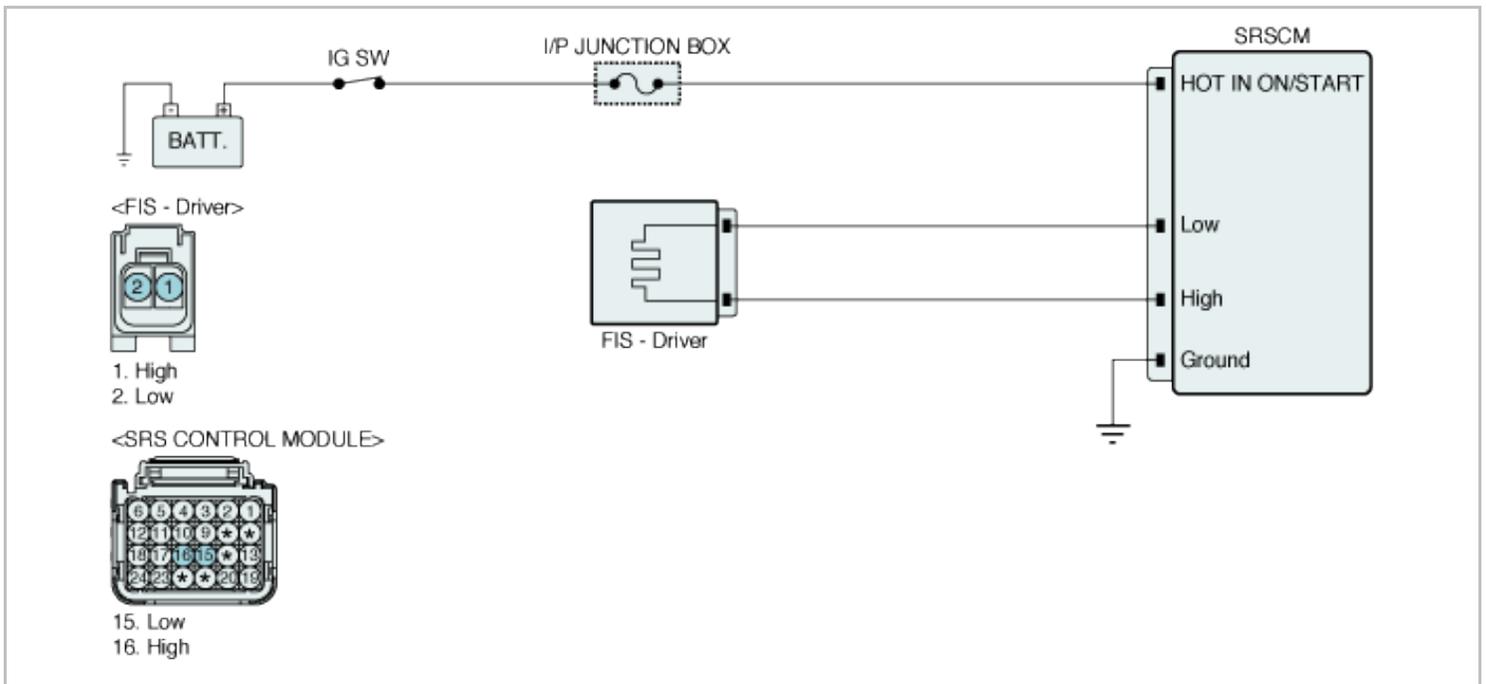
DTC Description

The SRSCM sets DTC B1330 if DFIS with wrong ID is detected

DTC Detecting Condition

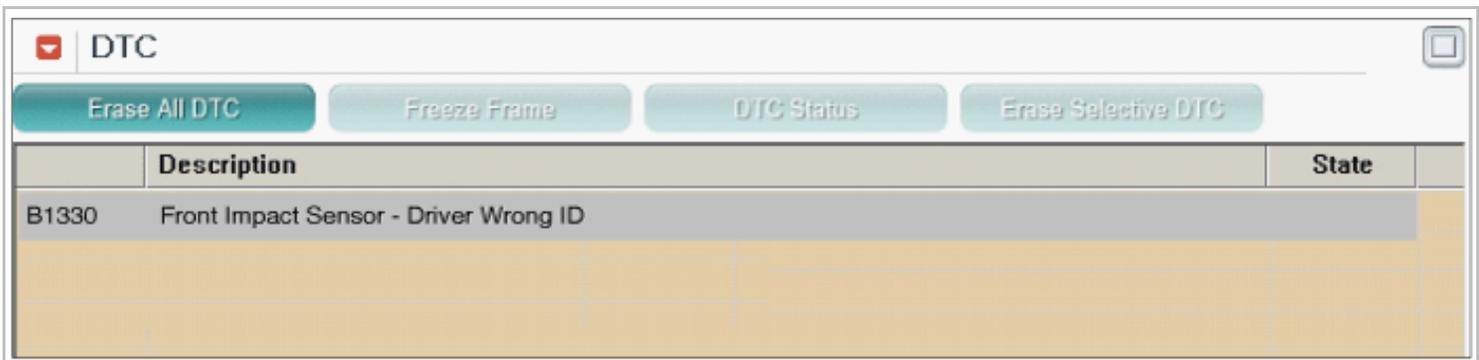
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Faulty DFIS with wrong ID. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DFIS ID is different from programmed in ACU	
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DFIS connector .
5. Substitute the DFIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedur</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good DFIS, and check for proper operation. If the problem is corrected, replace DFIS and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1331 FIS(Front Impact Sensor)-Passenger Short to Ground

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

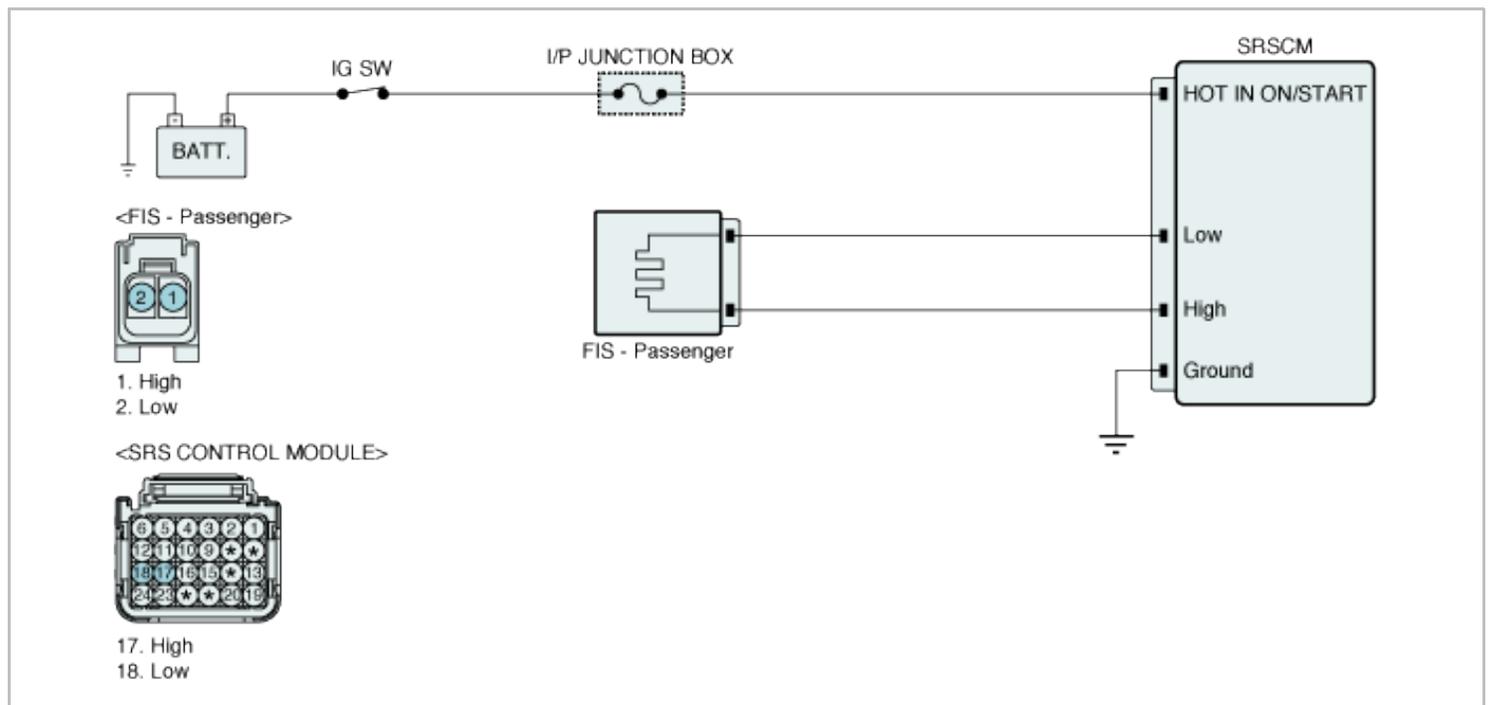
DTC Description

The SRSCM sets DTC B1331 if there is short to ground in PFIS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Short to ground in harness. • Faulty PFIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PFIS no acceleration data, and line voltage < 3V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2.1s (2 times) • Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):1 time • Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC	
<div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>	
Description	State
B1331 Front Impact Sensor - Passenger short to Ground	

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

- Ignition "OFF".
- Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
- Disconnect PFIS connector and SRSCM main harness connector.
- Measure resistance between terminal "FIS-Passenger (+)" or "FIS-Passenger (-)" of the PFIS harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	<p>▶ Substitute the SRSCM main harness and check for proper operation.</p> <p>If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PFIS connector .
5. Substitute the PFIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedur
NO	▶ Substitute a known-good PFIS, and check for proper operation. If the problem is corrected, replace PFIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1332 FIS(Front Impact Sensor)-Passenger Short to Battery

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

DTC Description

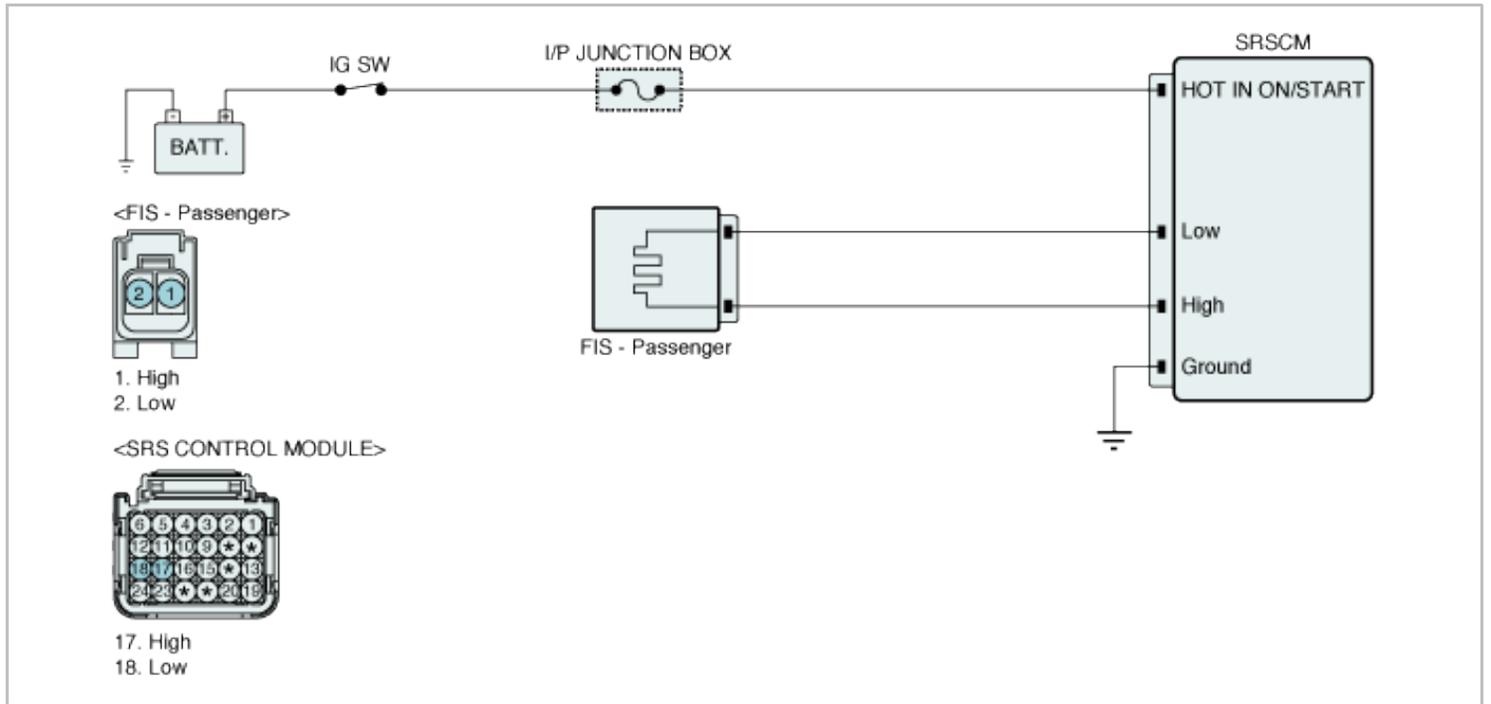
The SRSCM sets DTC B1332 if there is short to power harness in PFIS harness.

DTC Detecting Condition

Item	Detecting Condition	Possible cause
DTC Strategy	• Check voltage	• Short to power in harness
Enable Conditions	• Ignition "ON"	
Threshold Value	• PFIS no acceleration data, and line voltage	

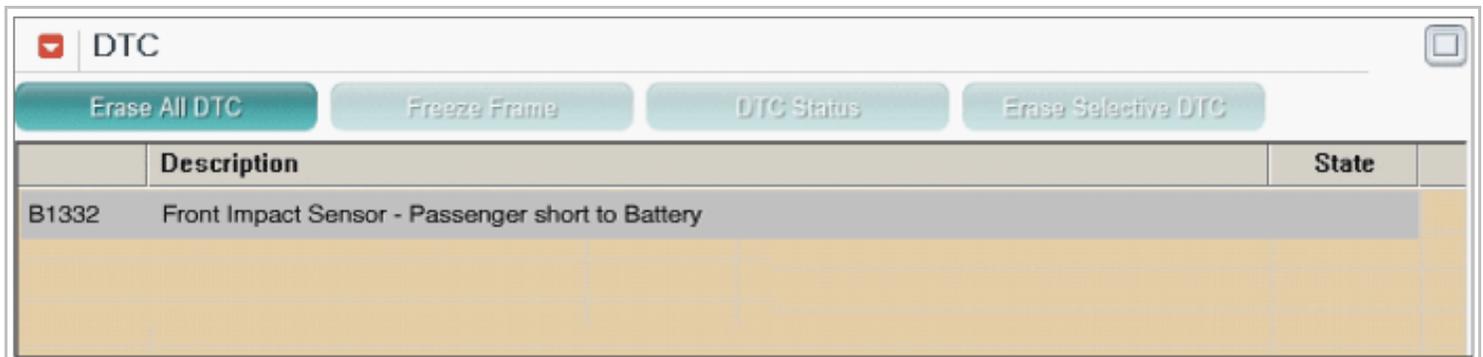
Threshold value		>11V	Short to power in harness. <ul style="list-style-type: none"> Faulty PFIS. Faulty SRSCM.
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):0.2s (100ms x 2) Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):1 time Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent

caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.
Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect PFIS connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "FIS-Passenger (+)" or "FIS-Passenger (-)" of the PFIS harness connector and chassis ground.

Specification : 0V

6. Is the measured Voltage within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PFIS connector .
5. Substitute the PFIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair"
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	procedur
NO	▶ Substitute a known-good PFIS, and check for proper operation. If the problem is corrected, replace PFIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1333 FIS(Front Impact Sensor)-Passenger Defect

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

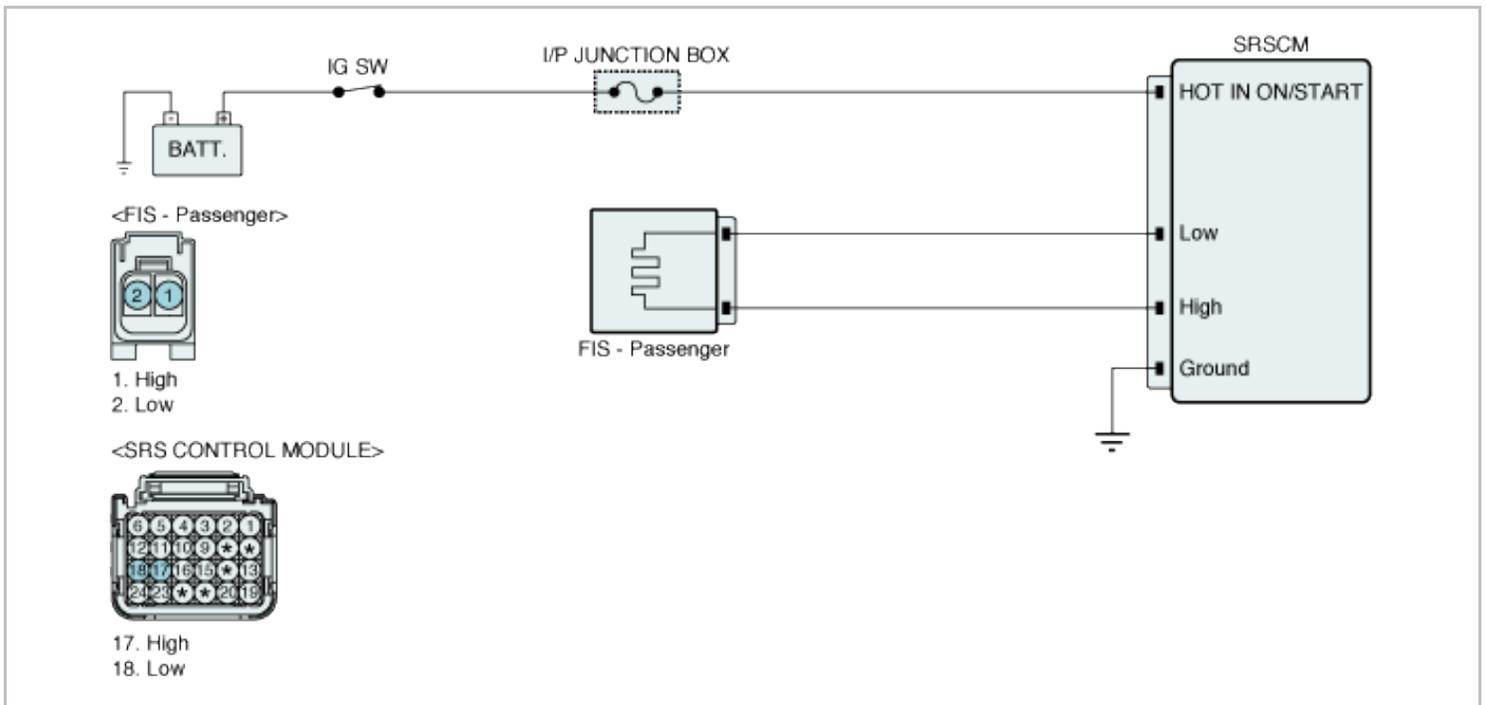
DTC Description

The SRSCM sets DTC B1333 if there is any fault in Passenger side front impact sensor

DTC Detecting Condition

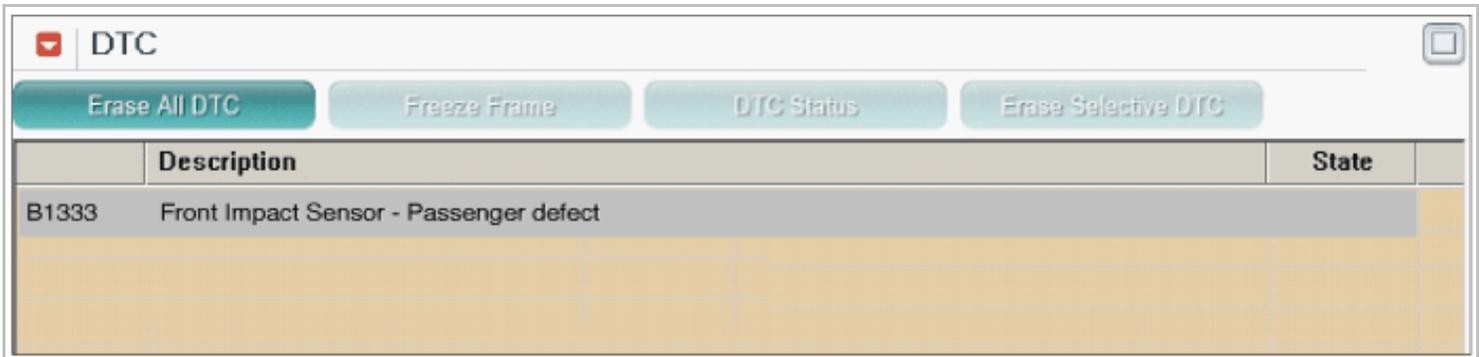
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Poor connection of connected part. • Faulty PFIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		<ul style="list-style-type: none"> • PFIS send defect code • PFIS output is not expected value 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):100 ms (500µs x 20) • Steady:1s (10ms x 100) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):IGN off -> on • Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PFIS connector .
5. Substitute the PFIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedur</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good PFIS, and check for proper operation. If the problem is corrected, replace PFIS and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1334 FIS(Front Impact Sensor)-Passenger Communication error

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

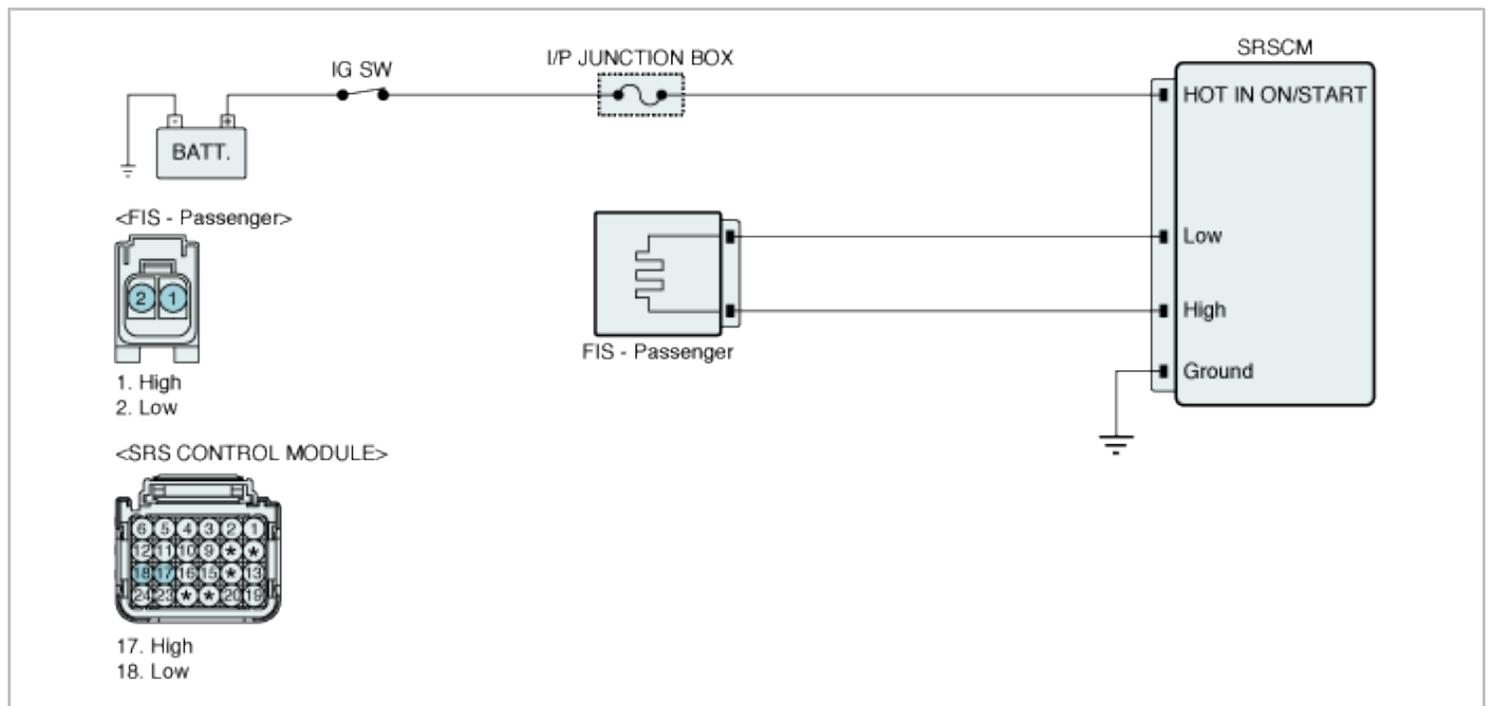
DTC Description

The SRSCM sets DTC B1334 if there is any error in communication between PFIS and SRSCM

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Poor connection of connected part. • Faulty PFIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PFIS no acceleration data, and line voltage is ok (between 3V and 11V)	
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC	
<div style="display: flex; justify-content: space-around;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>	
Description	State
B1334 Front Impact Sensor - Passenger communication error	

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

- Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
- Ignition "OFF".
- Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
- Disconnect PFIS connector .
- Substitute the PFIS and check for proper operation.
- Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedur ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good PFIS, and check for proper operation.

If the problem is corrected, replace PFIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1335 FIS(Front Impact Sensor)-Passenger Wrong ID

General Description

Front Impact Sensor(FIS)located at both sides of the front of engine room detects head-on collision. When FIS delivers and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag. and if both FIS and safing sensor detects collision simultaneously, SRSCM operates front air bag.

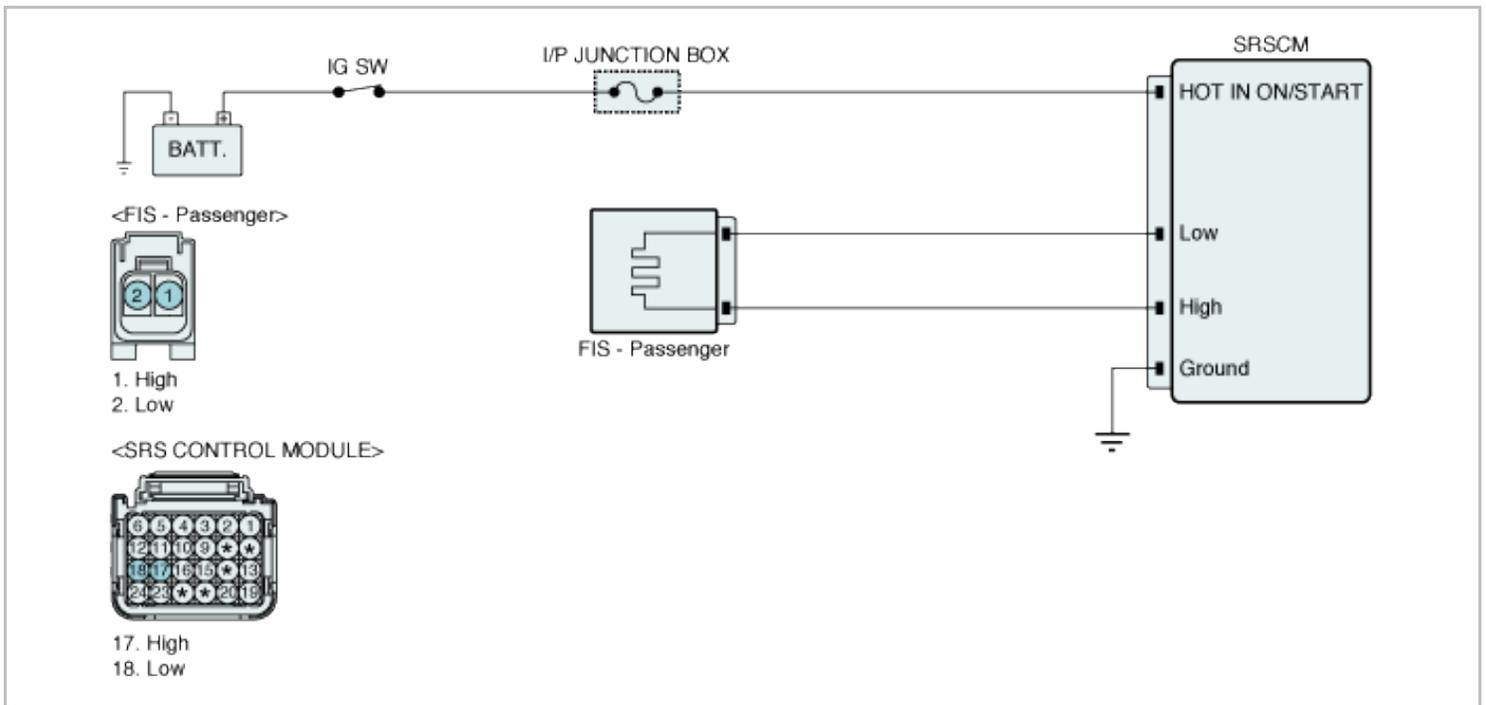
DTC Description

The SRSCM sets DTC B1335 if PFIS with wrong ID is detected.

DTC Detecting Condition

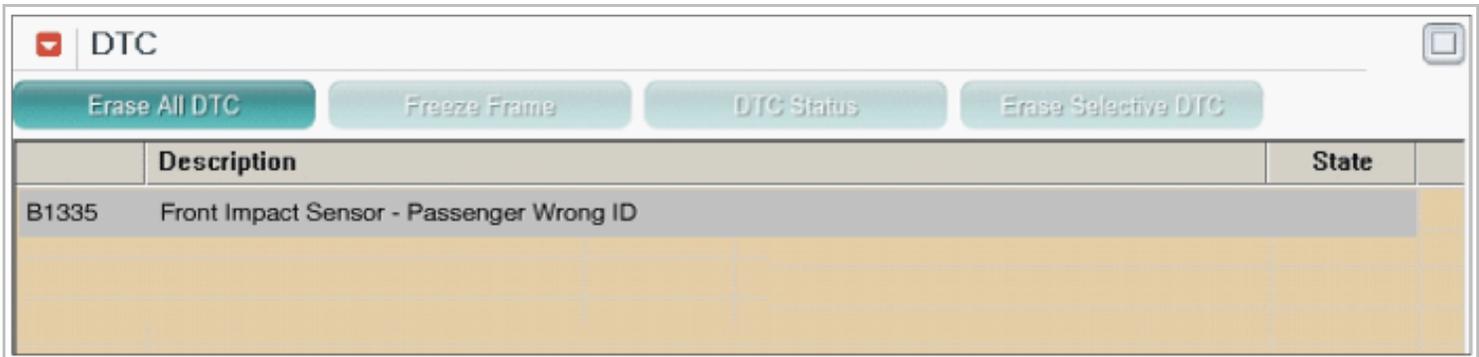
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Faulty PFIS with wrong ID. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PFIS ID is different from programmed in ACU	
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PFIS connector .
5. Substitute the PFIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedur</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good PFIS, and check for proper operation. If the problem is corrected, replace PFIS and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1341 Remote Crash Sensors Cross Coupling

General Description

The airbag system checks a short between sensors in order to operate an impact sensor. Among the impact sensors, such as Front Impact Sensor(FIS), Pressure-Side Impact Sensor(P-SIS), and Side Impact Sensor(SIS), if there is a short among them, DTC code would be set.

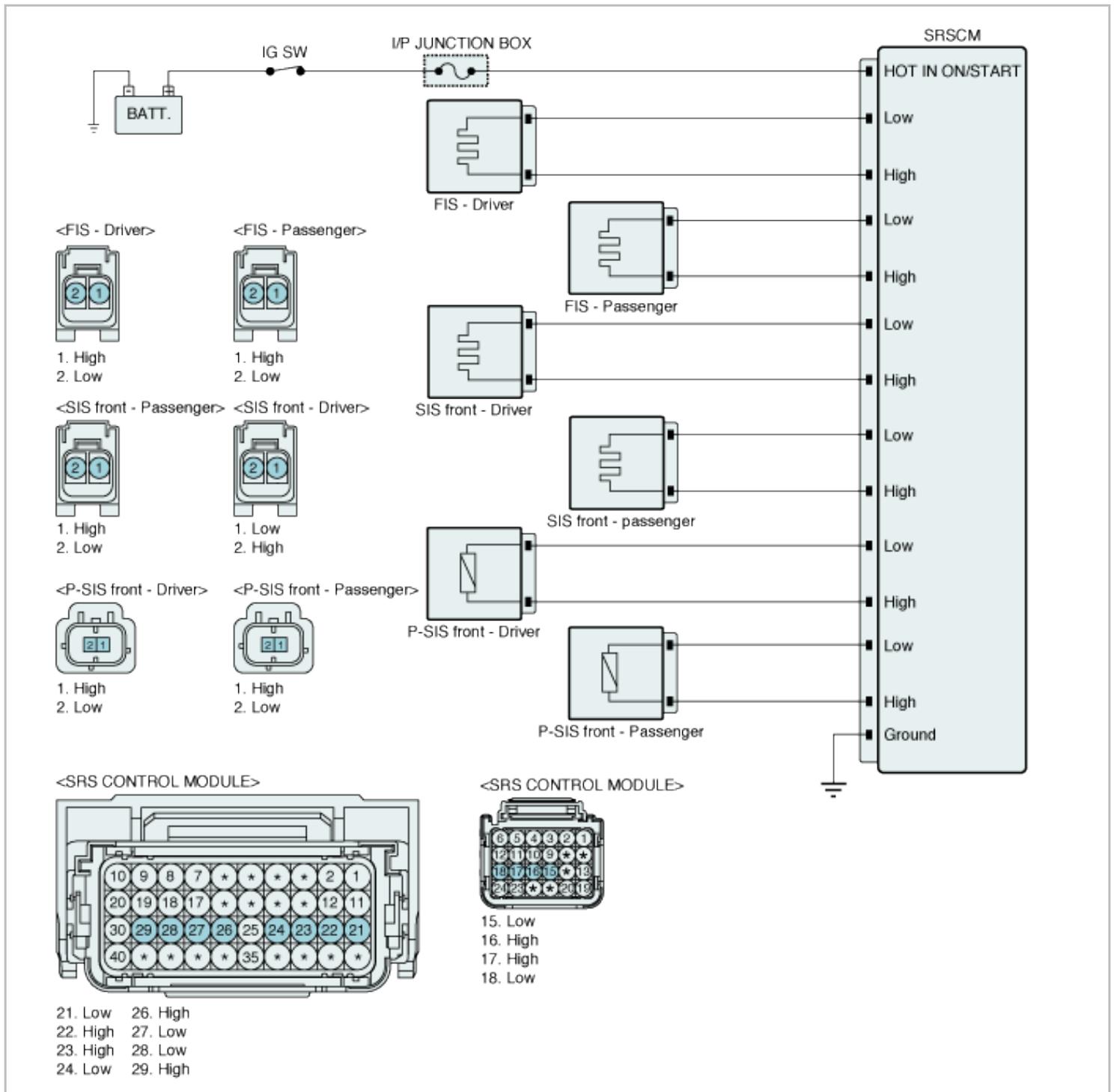
DTC Description

If there is a short between each impact sensor's circuit, this DTC would be set. For example, if there is a short between front impact sensor's circuit and side impact sensor's circuit, this DTC would be set and recorded in the ACU. At this time, the ACU makes warning lamp turn on to let a driver know.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Monitor the current of PWM type	• Short between impact sensor's circuits • Impact sensor's circuit and connection • SRSCM circuit and connection • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Short between impact sensor's circuits	
Diagnostic Time	Qualification	• More than one time	
	De-Qualification	• More than one time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC		
Erase All DTC	Freeze Frame	DTC Status
Erase Selective DTC		
Description	State	
B1341 Remote Crash Sensors Cross Coupling		

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

- Measure resistance of FIS, SIS and P-SIS
 - Ignition "OFF".
 - Disconnect (-) cable from battery and wait for more than 1 minute.
 - Disconnect FIS, SIS and P-SIS connector and then disconnect SRSCM connector.
 - Measure resistance among circuits of FIS, SIS and P-SIS.

Specification : $\infty \Omega$

(5) Is the measured resistance within specifications?

YES	▶ Check for short between ignition circuits of FIS, SIS, P-SIS. If the condition of harness and component is OK, this fault is caused by SRSCM internal error so replace a known-good SRSCM and then go to "Verification of vehicle Repair" procedure.
NO	▶ Repair or replace it and then go to "Verification of vehicle repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1346 Driver Airbag Resistance too High (1st stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and two inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1346 if the measured resistance value of DAB circuit is more than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

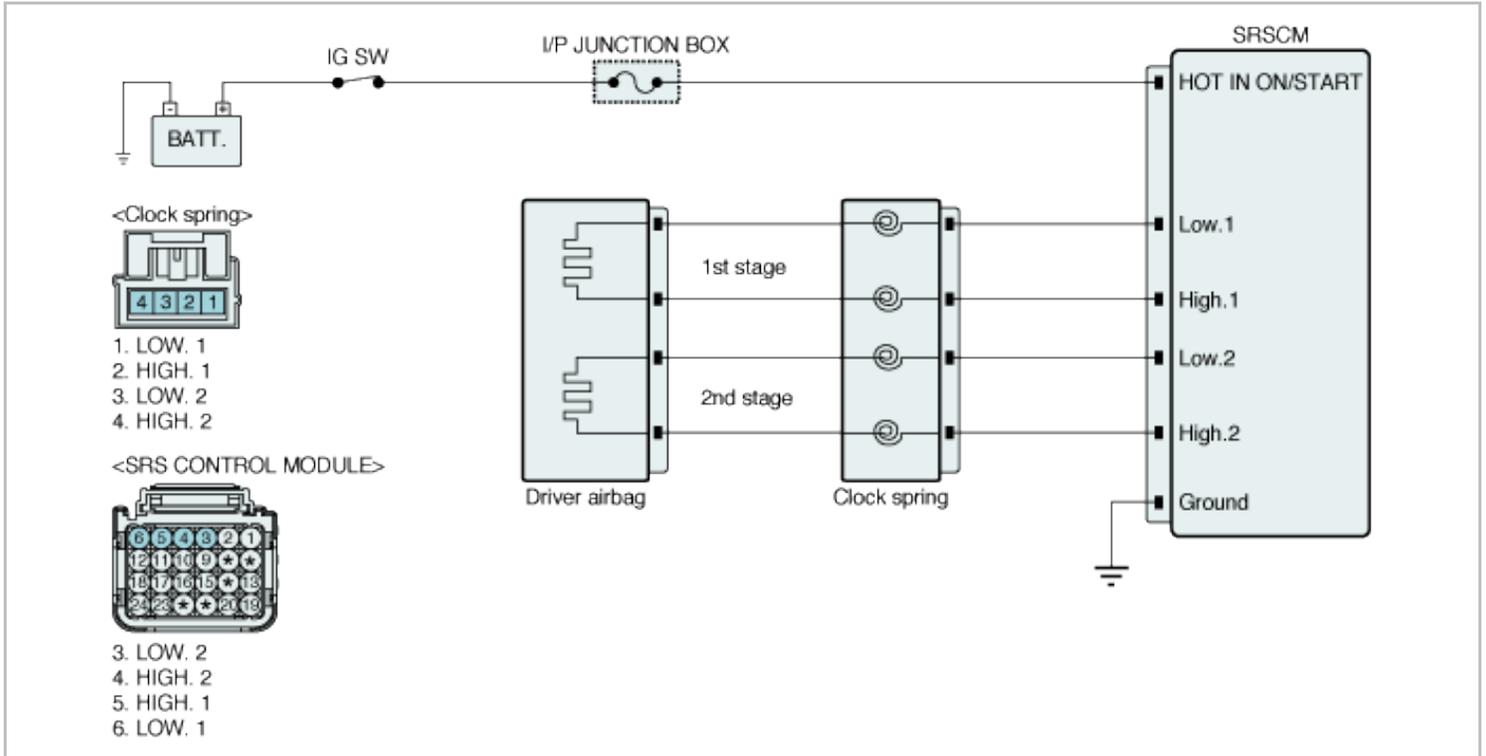
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DAB. • Faulty Clock spring. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DAB 1st stage Squib resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
----------------	------------

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(1st stage) resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Driver airbag(1st stage)} < 6.6\Omega$

Reference :

In a case of an open in the Driver airbag(1st stage) circuit : FAIL

In a case of a short to battery in the Driver airbag(1st stage) circuit: FAIL

In a case of a short to ground in the Driver airbag(1st stage) circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF" .
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" and "High.1" of the Clock Spring harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation. If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" and "High.1" of the DAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1347 Driver Airbag Resistance too Low (1st stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and two inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1347 if the measured resistance value of DAB circuit is less than the threshold value(1.0 Ω)

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

DTC Detecting Condition

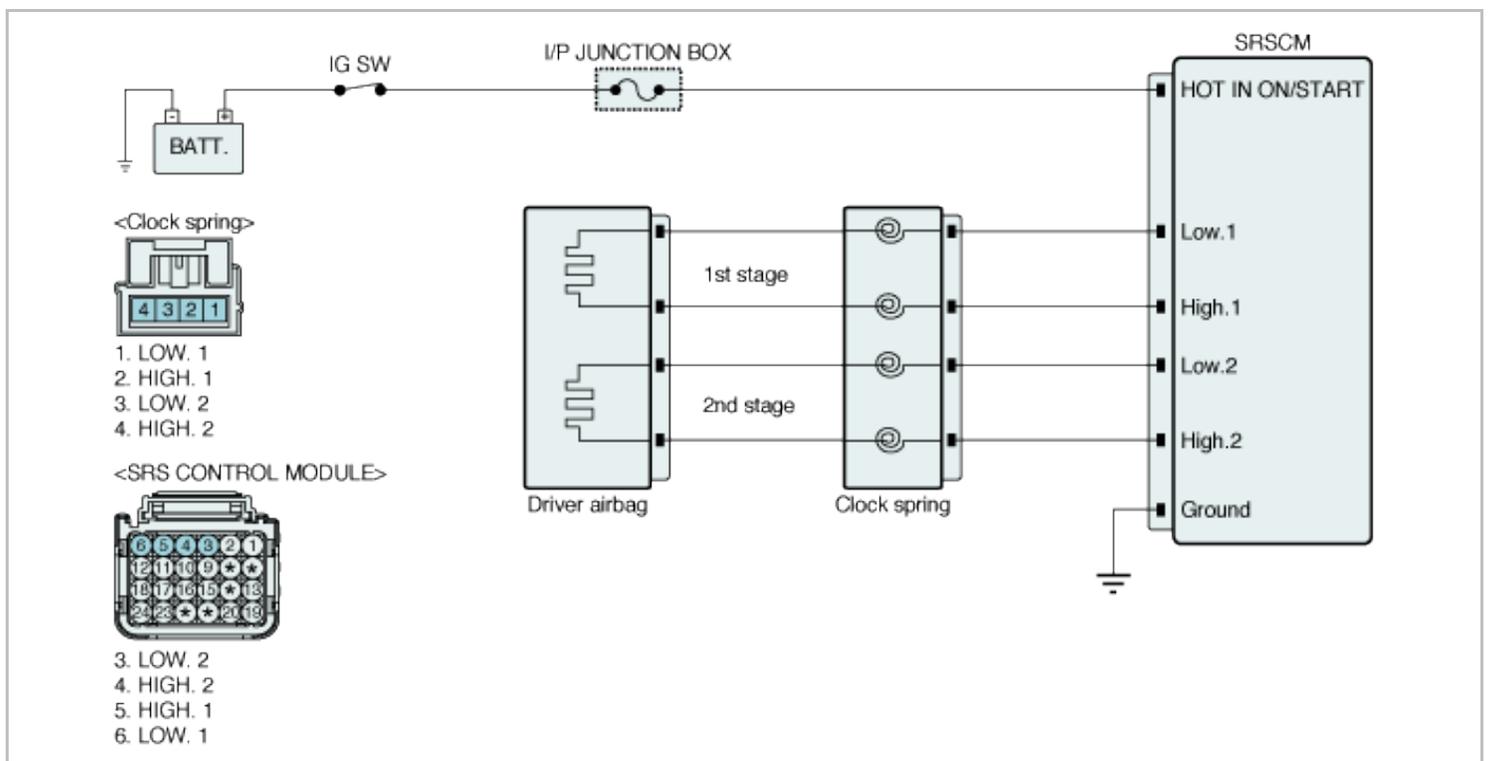
Item	Detecting Condition	Possible cause
DTC Strategy	• Check Resistance	• Poor connection of connected

Enable Conditions		<ul style="list-style-type: none"> Ignition "ON" 	part. <ul style="list-style-type: none"> Poor connection between shorting bar and release pin. Faulty DAB. Faulty Clock spring. Faulty SRSCM.
Threshold Value		<ul style="list-style-type: none"> DAB 1st stage Squib resistance $\leq 0.9\Omega$ 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> More than 2.5s (250ms x 10) 	
	De-Qualification	<ul style="list-style-type: none"> More than 5s 	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(1st stage) resistance" parameter on the Scantool.

Specification : $0.9\Omega < \text{Resistance of Driver airbag(1st stage)} < 6.6\Omega$

Reference :

In a case of an open in the Driver airbag(1st stage) circuit : FAIL

In a case of a short to battery in the Driver airbag(1st stage) circuit: FAIL

In a case of a short to ground in the Driver airbag(1st stage) circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Go to "W/Harness Inspection" procedure.</p>

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	<p>▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Go to "Squib Circuit Inspection" procedure.</p>

Squib Circuit Inspection

- Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF" .
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" and "High.1" of the Clock Spring harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation. If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" and "High.1" of the DAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1348 Driver Airbag resistance circuit short to Ground (1st stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and two inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1348 if there is a short to ground in DAB harness

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while

DTC Detecting Condition

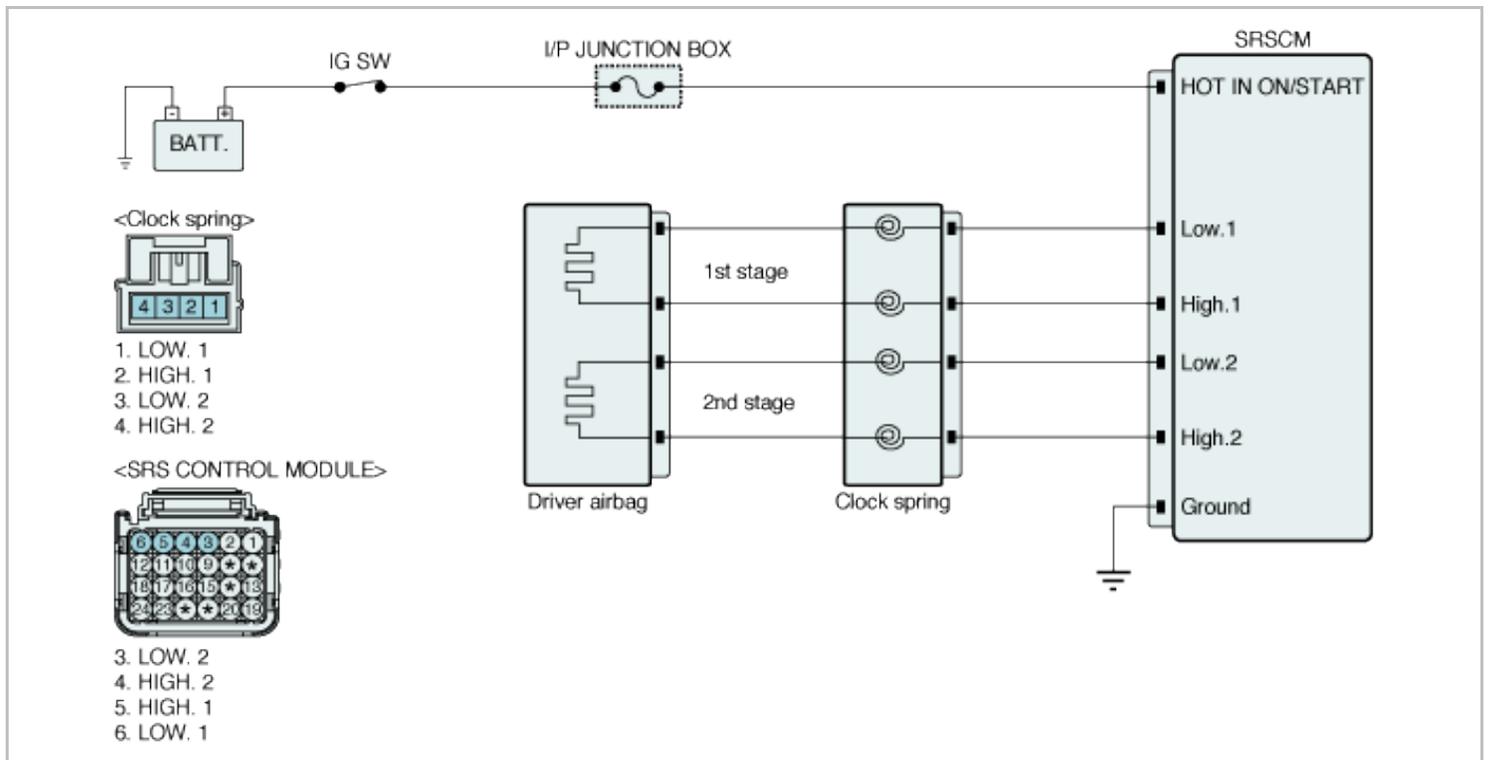
Item	Detecting Condition	Possible cause
DTC Strategy	• Check Voltage	• Short to ground in DAB

Enable Conditions		• Ignition "ON"	harness. • Poor connection of connected part. • Faulty DAB. • Faulty Clock spring. • Faulty SRSCM.
Threshold Value		• DAB 1st stage Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(1st stage) resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Driver airbag(1st stage)} < 6.6\Omega$

Reference :

In a case of an open in the Driver airbag(1st stage) circuit : FAIL

In a case of a short to battery in the Driver airbag(1st stage) circuit: FAIL

In a case of a short to ground in the Driver airbag(1st stage) circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Go to "W/Harness Inspection" procedure.</p>

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".
2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adaptor (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF" .
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" or "High.1" of the clock spring harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation. If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" or "High.1" of the DAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1349 Driver Airbag resistance circuit short to Battery (1st stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and two inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1349 if there is a short to power in DAB harness

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

DTC Detecting Condition

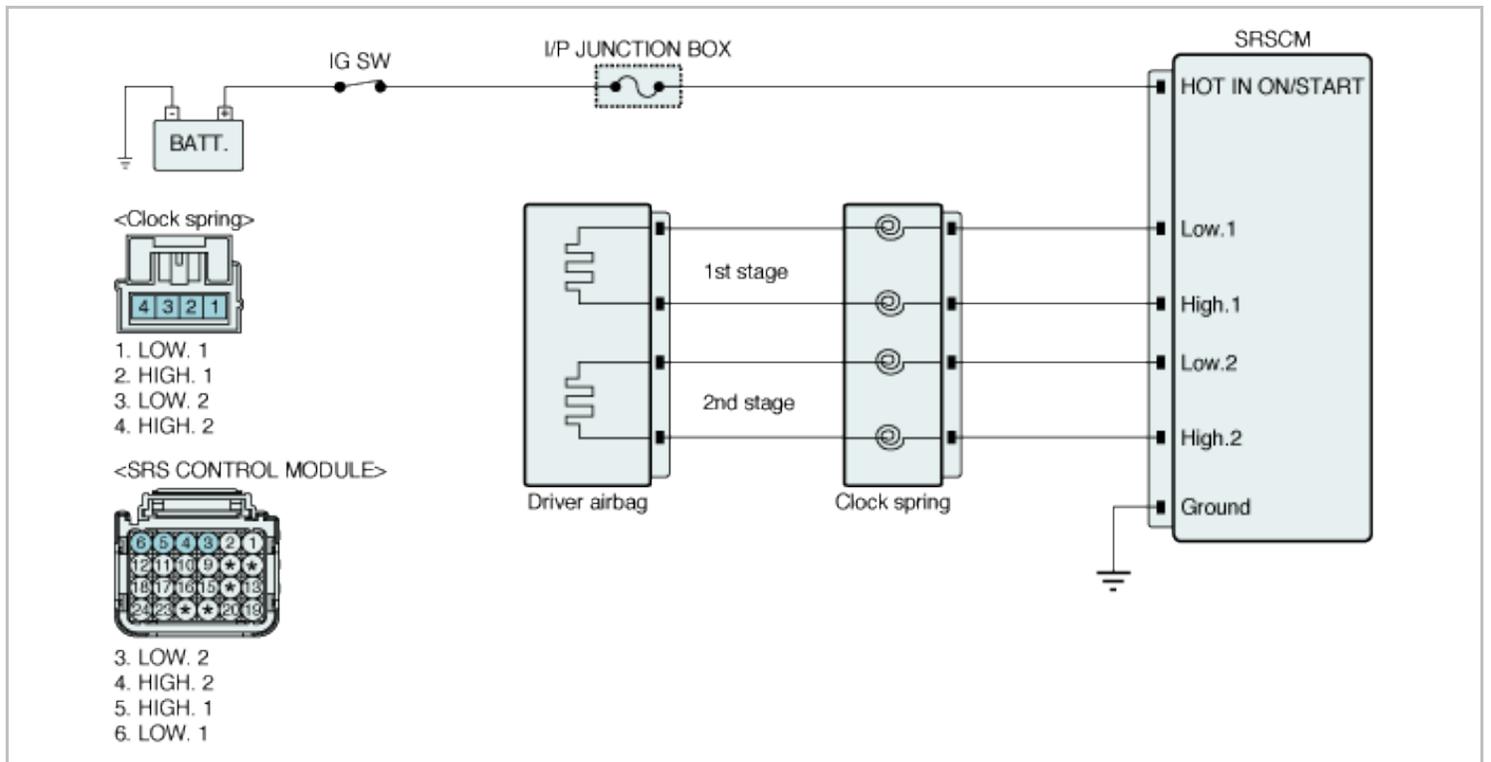
Item	Detecting Condition	Possible cause
------	---------------------	----------------

DTC Strategy		• Check Voltage	<ul style="list-style-type: none"> • Short to power in DAB harness. • Poor connection of connected part. • Faulty DAB. • Faulty Clock spring. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DAB 1st stage Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(1st stage) resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Driver airbag(1st stage)} < 6.6\Omega$

Reference :

In a case of an open in the Driver airbag(1st stage) circuit : FAIL

In a case of a short to battery in the Driver airbag(1st stage) circuit: FAIL
 In a case of a short to ground in the Driver airbag(1st stage) circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
 Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".
2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF" .
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure Voltage between terminal "Low.1" or "High.1" of the clock spring harness connector and chassis ground.

Specification : 0V

6. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation. If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF" and wait at least one minutes.
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the main harness.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or

more.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy.

5. Measure voltage between terminal "Low.1" or "High.1" of the DAB harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1352 Passenger Airbag Resistance too High (1st Stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by fillied up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1352 if the measured resistance value of PAB circuit is more than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while

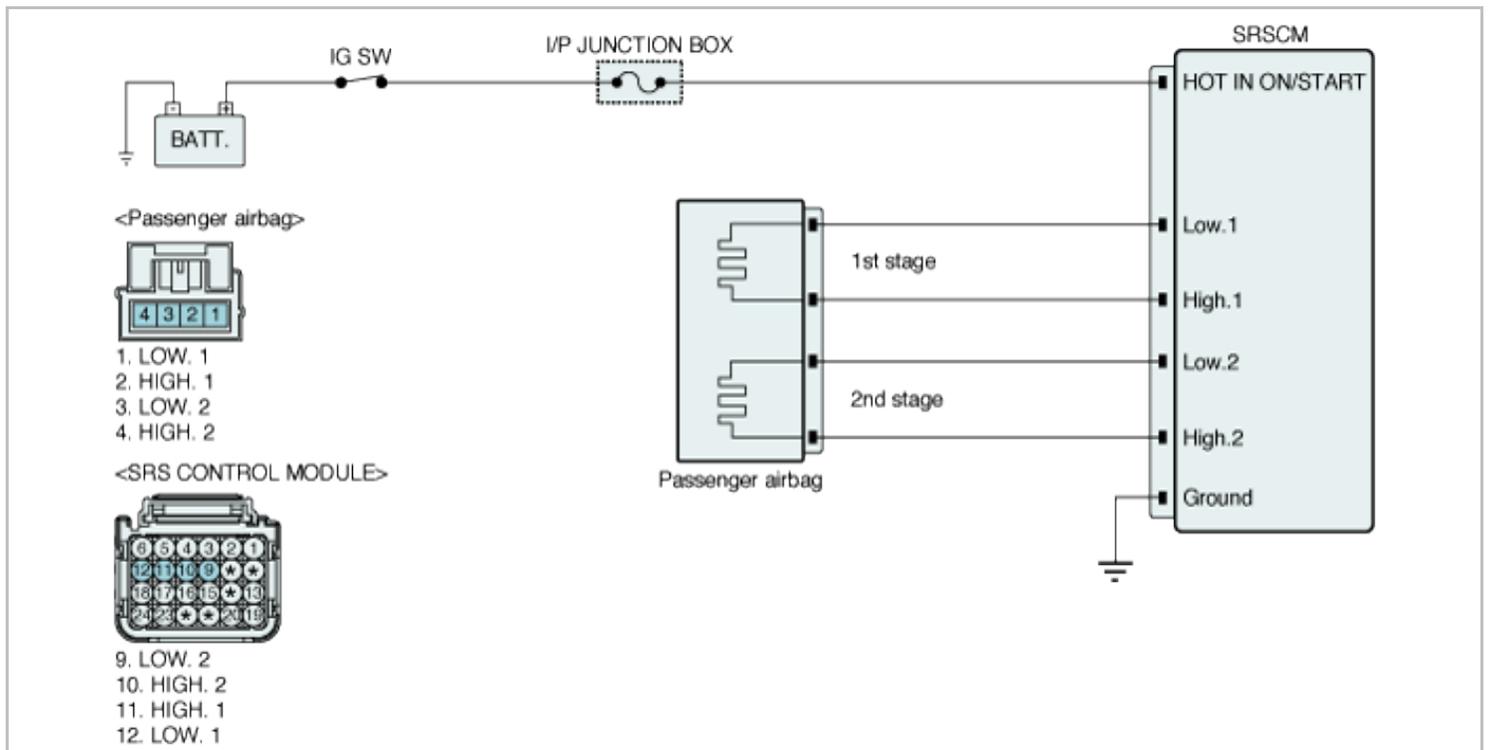
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 1st stage Squib resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(1st stage) resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Passenger airbag(1st stage)} < 6.6\Omega$

Reference :

In a case of an open in the Passenger airbag(1st stage) circuit : FAIL

In a case of a short to battery in the Passenger airbag(1st stage) circuit: FAIL

In a case of a short to ground in the Passenger airbag(1st stage) circuit : FAIL

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	<ul style="list-style-type: none"> ▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".
2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" and "High.1" of the PAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1353 Passenger Airbag Resistance too Low (1st stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by fillied up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1353 if the measured resistance value of PAB circuit is less than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

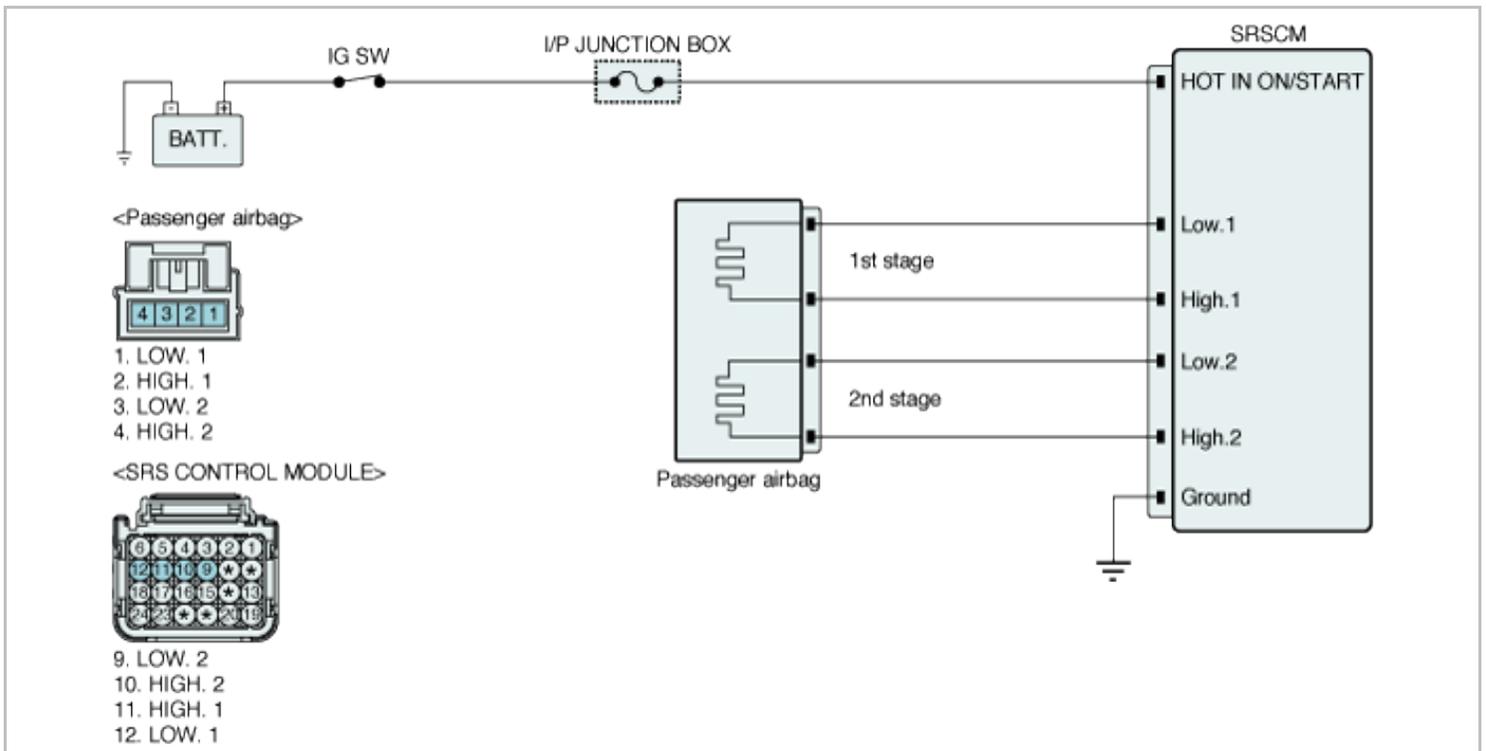
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 1st stage Squib resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(1st stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Passenger airbag(1st stage) < 6.6Ω

Reference :

In a case of an open in the Passenger airbag(1st stage) circuit : FAIL
 In a case of a short to battery in the Passenger airbag(1st stage) circuit: FAIL
 In a case of a short to ground in the Passenger airbag(1st stage) circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adaptor (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" and "High.1" of the PAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1354 Passenger Airbag Resistance Circuit Short to Ground (1st Stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1354 if there is a short to ground in PAB harness

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

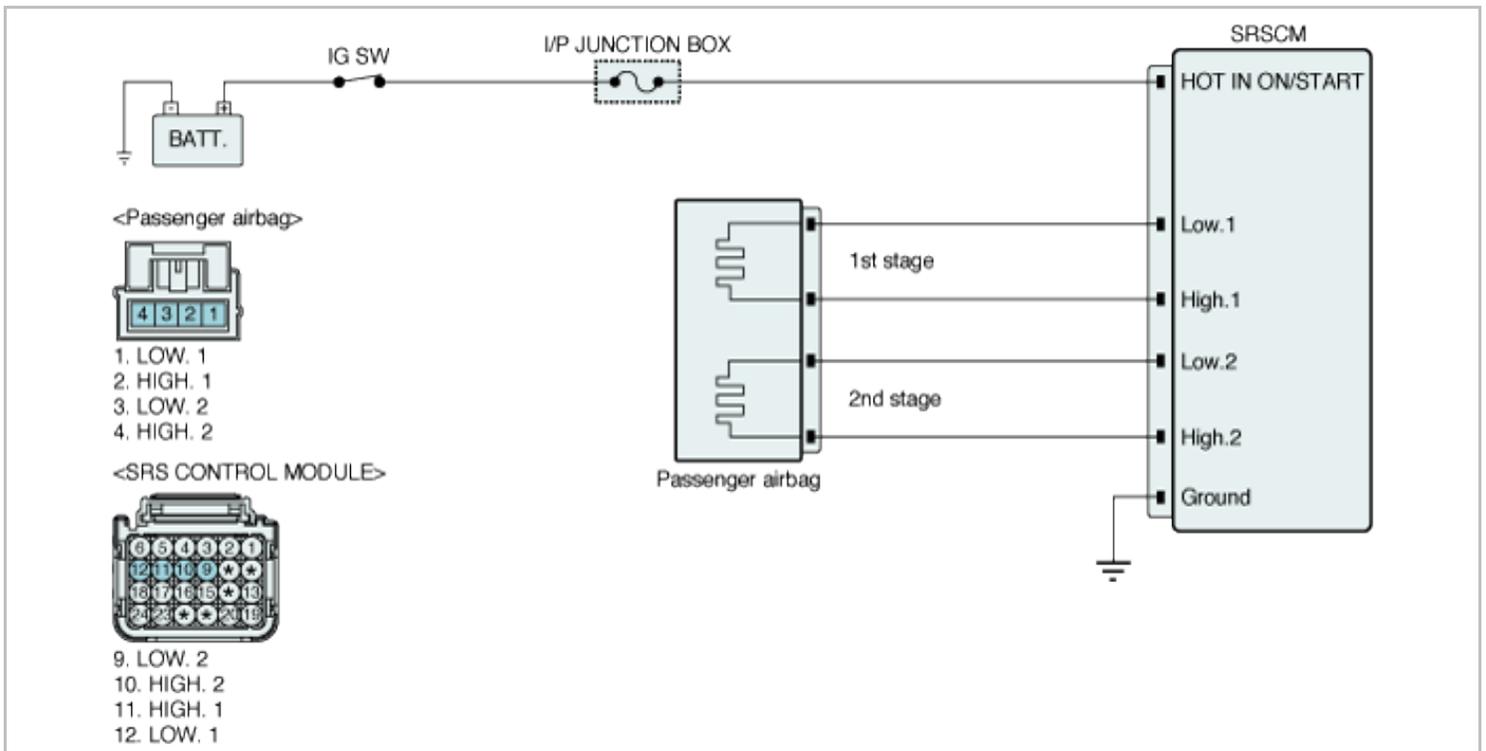
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	<ul style="list-style-type: none"> • Short to ground in PAB harness. • Poor connection of connected part. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 1st stage Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(1st stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Passenger airbag(1st stage) < 6.6Ω

Reference :

In a case of an open in the Passenger airbag(1st stage) circuit : FAIL
 In a case of a short to battery in the Passenger airbag(1st stage) circuit: FAIL
 In a case of a short to ground in the Passenger airbag(1st stage) circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.1" or "High.1" of the PAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1355 Passenger Airbag Resistance Circuit Short to Battery (1st Stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by fillied up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1355 if there is a short to power in PAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

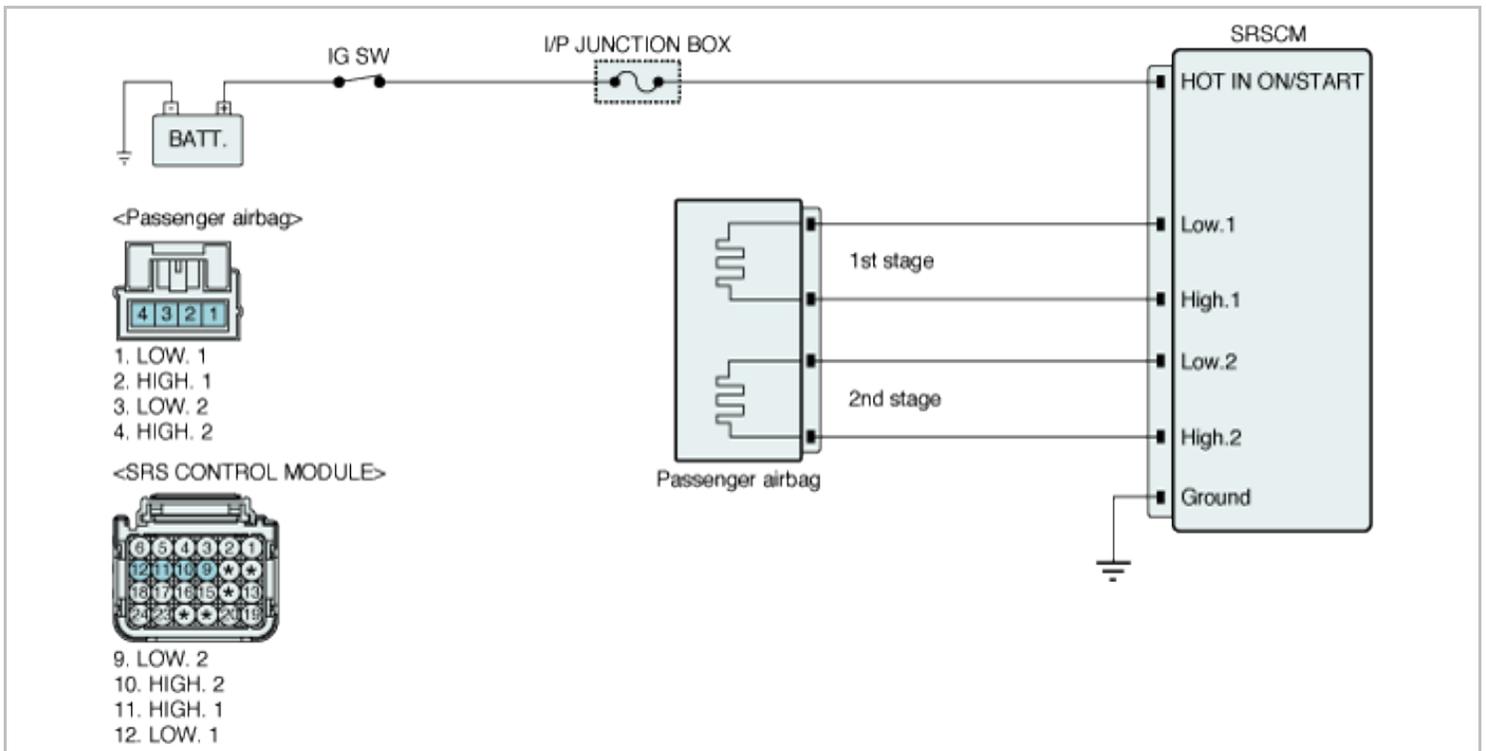
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	<ul style="list-style-type: none"> • Short to power in PAB harness. • Poor connection of connected part. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 1st stage Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(1st stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Passenger airbag(1st stage) < 6.6Ω

Reference :

In a case of an open in the Passenger airbag(1st stage) circuit : FAIL
 In a case of a short to battery in the Passenger airbag(1st stage) circuit: FAIL
 In a case of a short to ground in the Passenger airbag(1st stage) circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Measure voltage between terminal "Low.1" or "High.1" of the PAB harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.

3. Operate the vehicle within DTC Enable conditions in General information.

4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1361 Pretensioner Front-Driver Resistance too High

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT deploy.

DTC Description

The SRSCM sets DTC B1361 if the measured resistance value of DBPT circuit is more than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

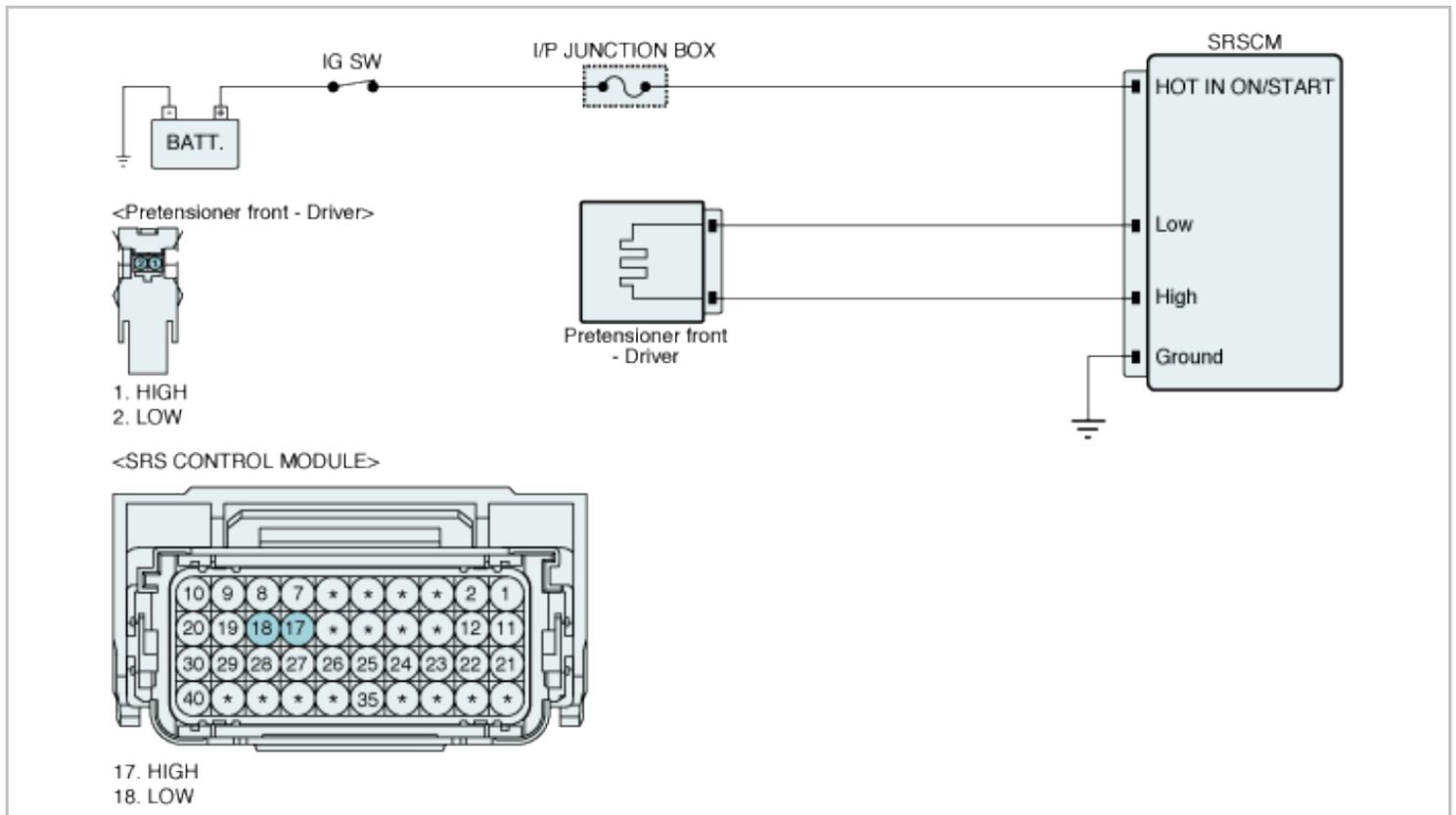
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DBPT resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Driver < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Driver circuit : FAIL

In a case of a short to battery in the Pretensioner front-Driver circuit: FAIL

In a case of a short to ground in the Pretensioner front-Driver circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DBPT assembly, and check for proper operation. If the problem is corrected, replace DBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DBPT connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the DBPT harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1362 Pretensioner Front-Driver Resistance too Low

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT depoy.

DTC Description

The SRSCM sets DTC B1362 if the measured resistance value of DBPT circuit is less than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

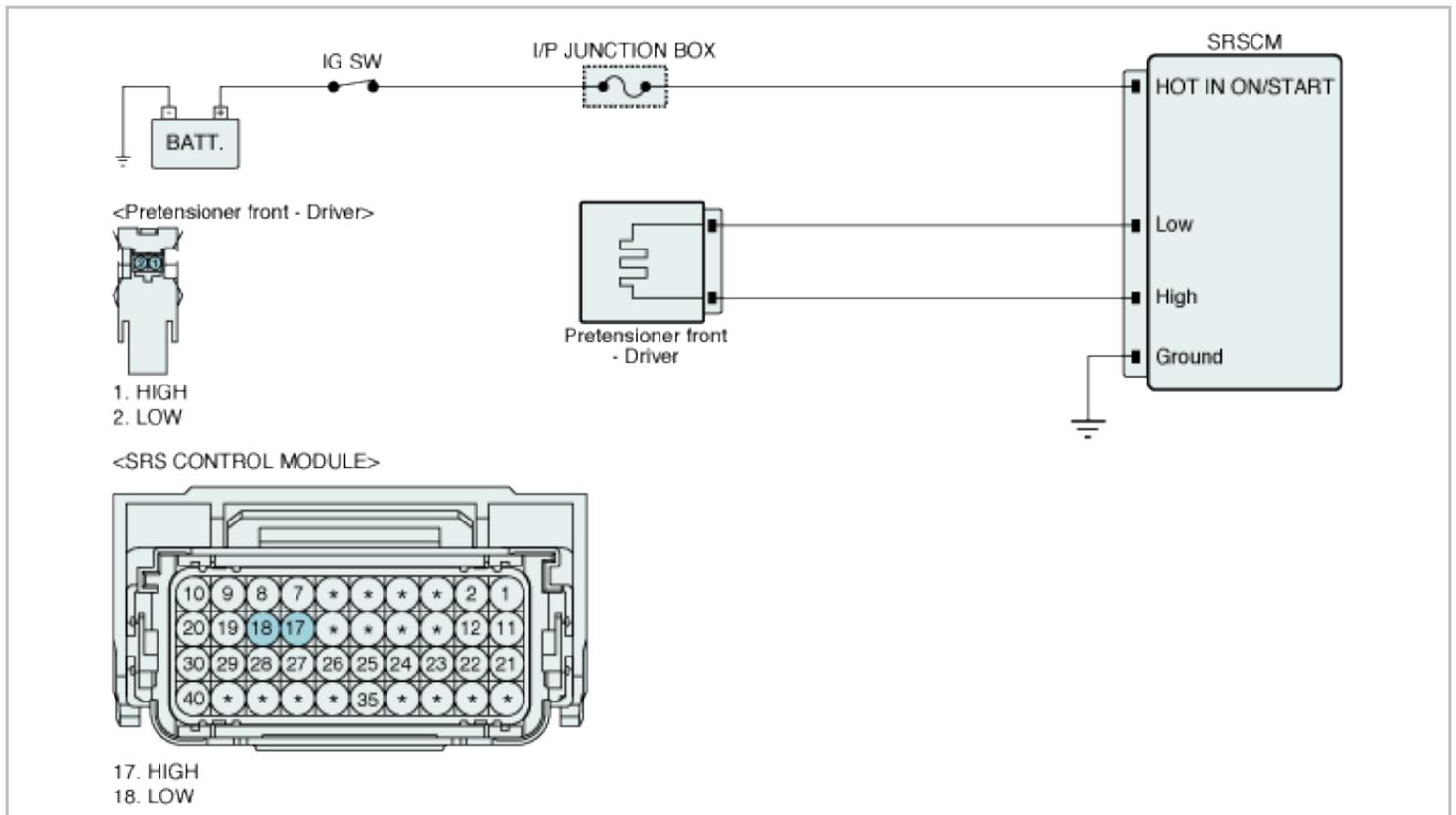
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	• Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DBPT resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq$ Squib resistance $\leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Driver < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Driver circuit : FAIL

In a case of a short to battery in the Pretensioner front-Driver circuit: FAIL

In a case of a short to ground in the Pretensioner front-Driver circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DBPT assembly, and check for proper operation. If the problem is corrected, replace DBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DBPT connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the DBPT harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1363 Pretensioner front-Driver resistance circuit short to Ground

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT depoy.

DTC Description

The SRSCM sets DTC B1363 if there is a short to ground in DBPT harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

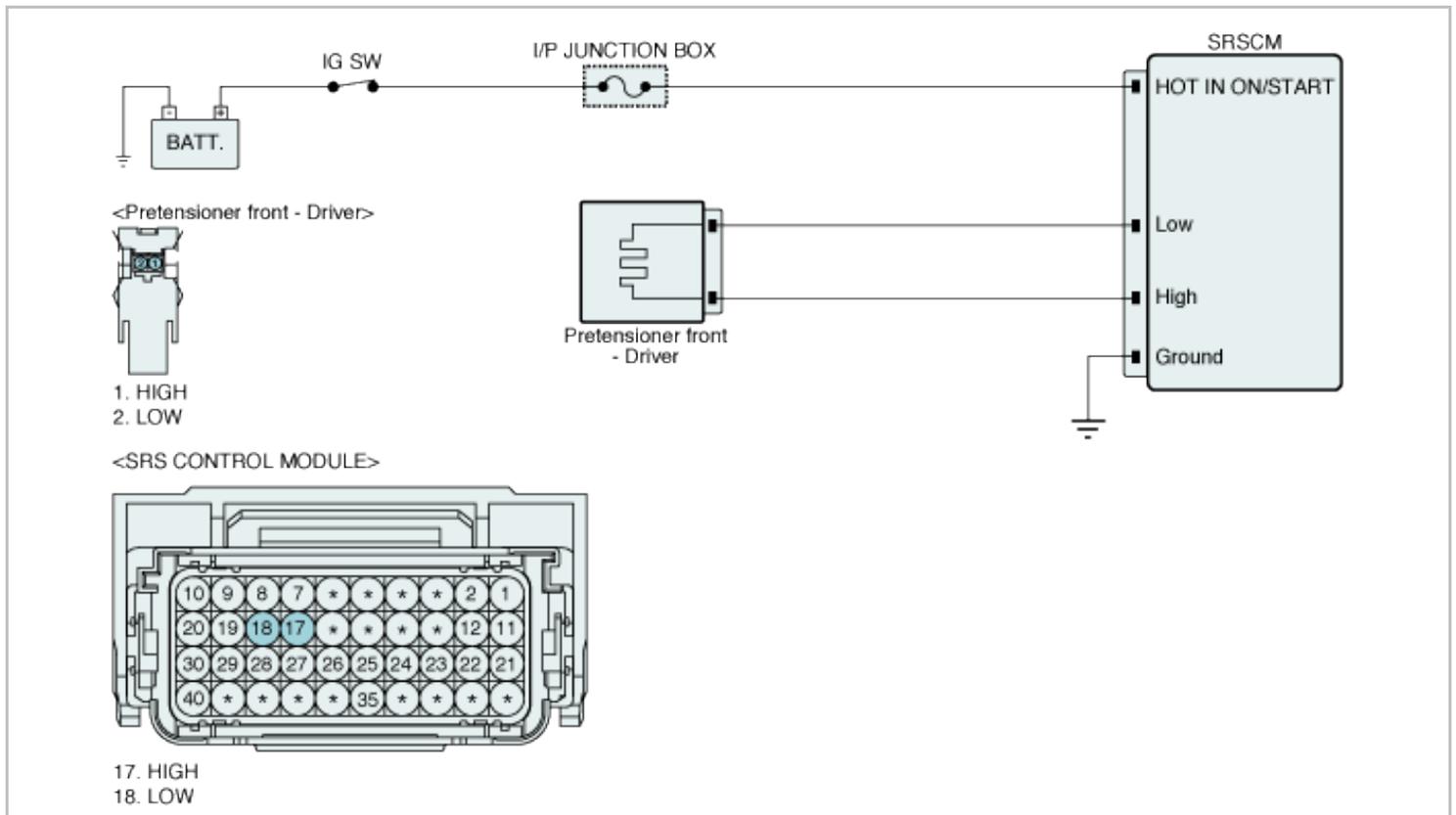
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	• Short to ground in DBPT harness. • Poor connection of connected part. • Faulty DBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DBPT Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Driver < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Driver circuit : FAIL

In a case of a short to battery in the Pretensioner front-Driver circuit: FAIL

In a case of a short to ground in the Pretensioner front-Driver circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DBPT assembly, and check for proper operation. If the problem is corrected, replace DBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DBPT connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the DBPT harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT depoy.

DTC Description

The SRSCM sets DTC B1364 if there is a short to power in DBPT harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

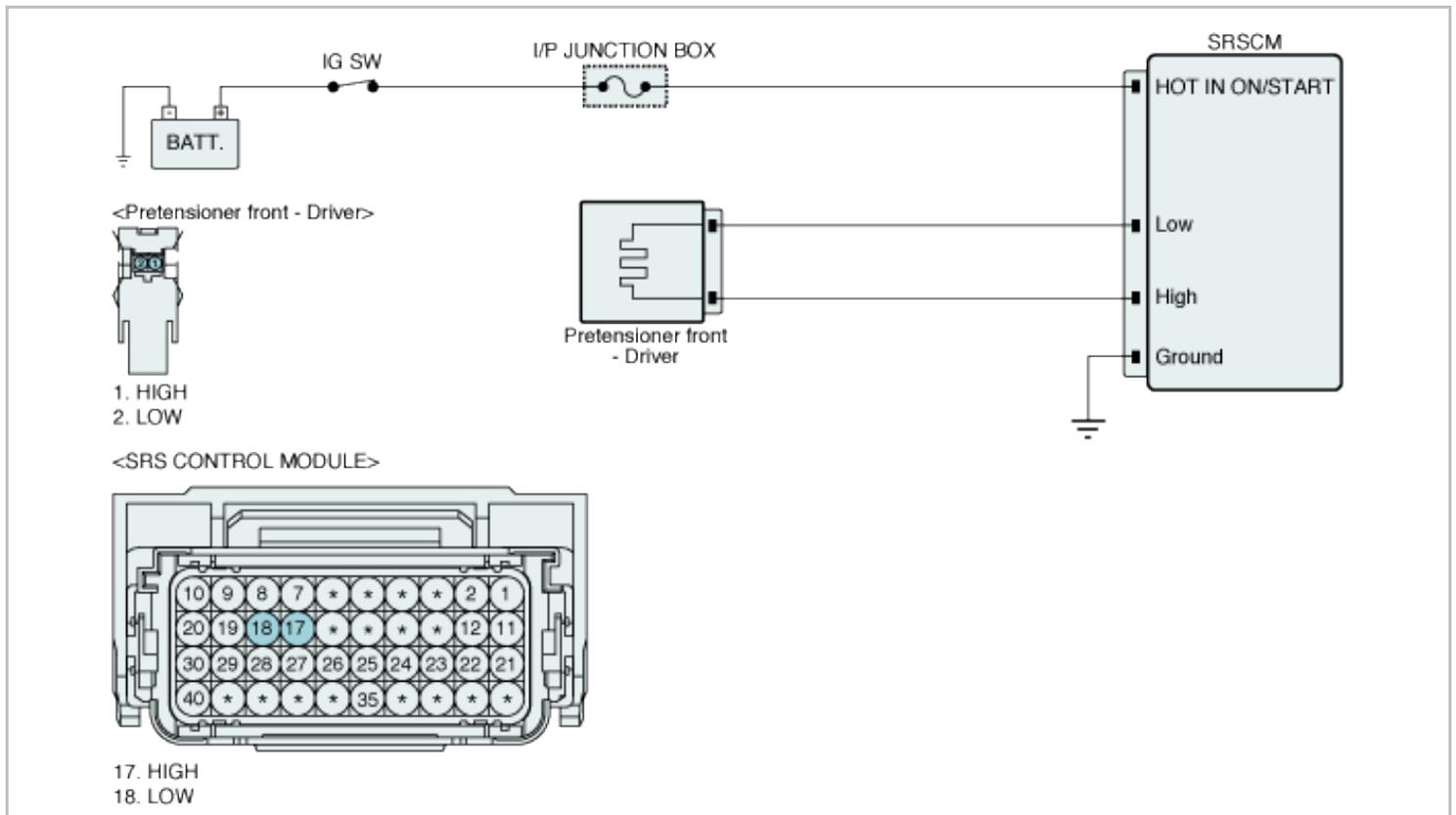
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	<ul style="list-style-type: none"> • Short to power in DBPT harness. • Poor connection of connected part. • Faulty DBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DBPT Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Driver < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Driver circuit : FAIL
 In a case of a short to battery in the Pretensioner front-Driver circuit: FAIL
 In a case of a short to ground in the Pretensioner front-Driver circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DBPT assembly, and check for proper operation. If the problem is corrected, replace DBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DBPT connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the DBPT harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1367 Pretensioner Front-Passenger Resistance too High

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT depoy.

DTC Description

The SRSCM sets DTC B1367 if the measured resistance value of PBPT circuit is more than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

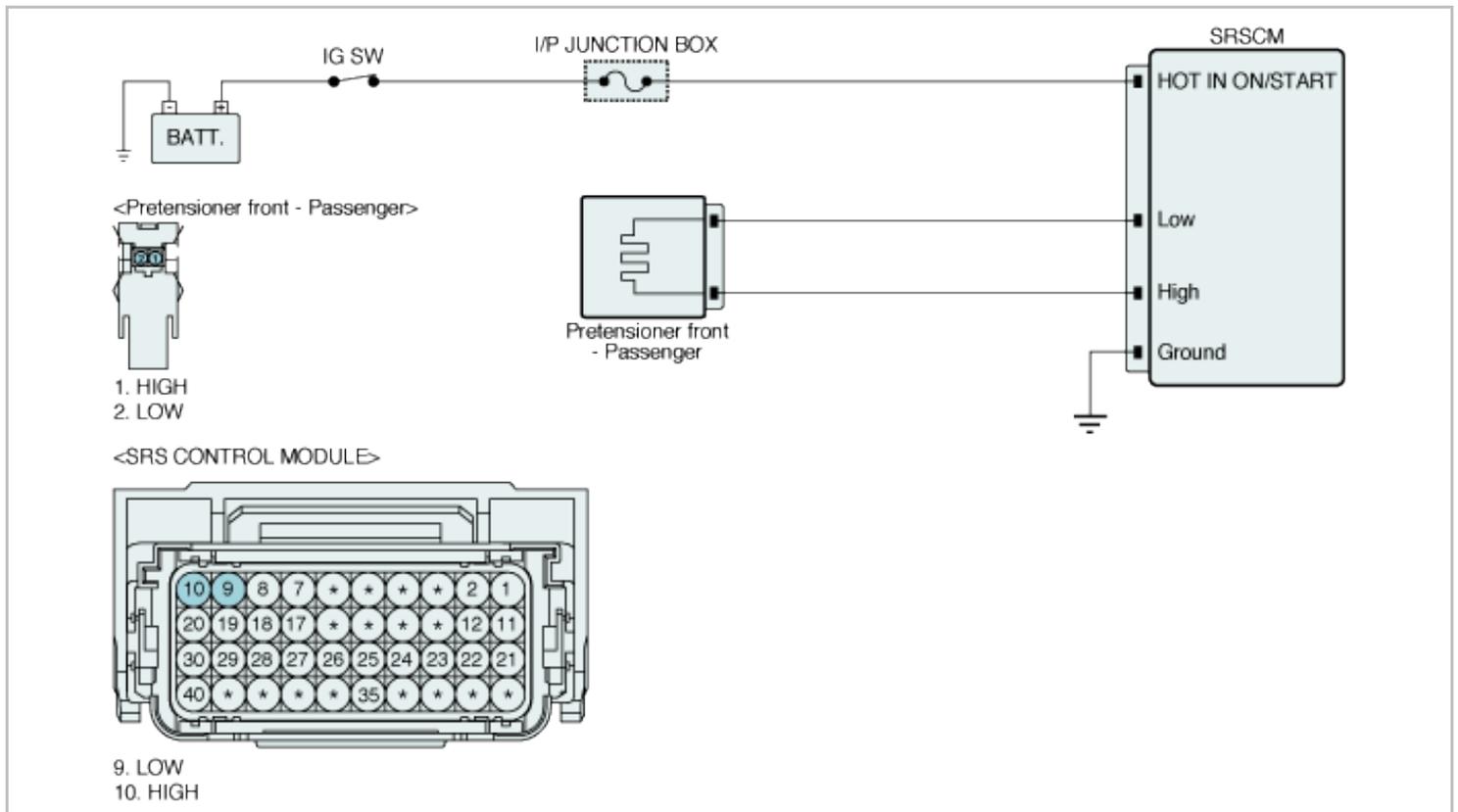
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	• Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PBPT resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Passenger resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Passenger < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Passenger circuit : FAIL

In a case of a short to battery in the Pretensioner front-Passenger circuit: FAIL

In a case of a short to ground in the Pretensioner front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PBPT assembly, and check for proper operation. If the problem is corrected, replace PBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PBPT connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the PBPT harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT depoy.

DTC Description

The SRSCM sets DTC B1368 if the measured resistance value of PBPT circuit is less than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

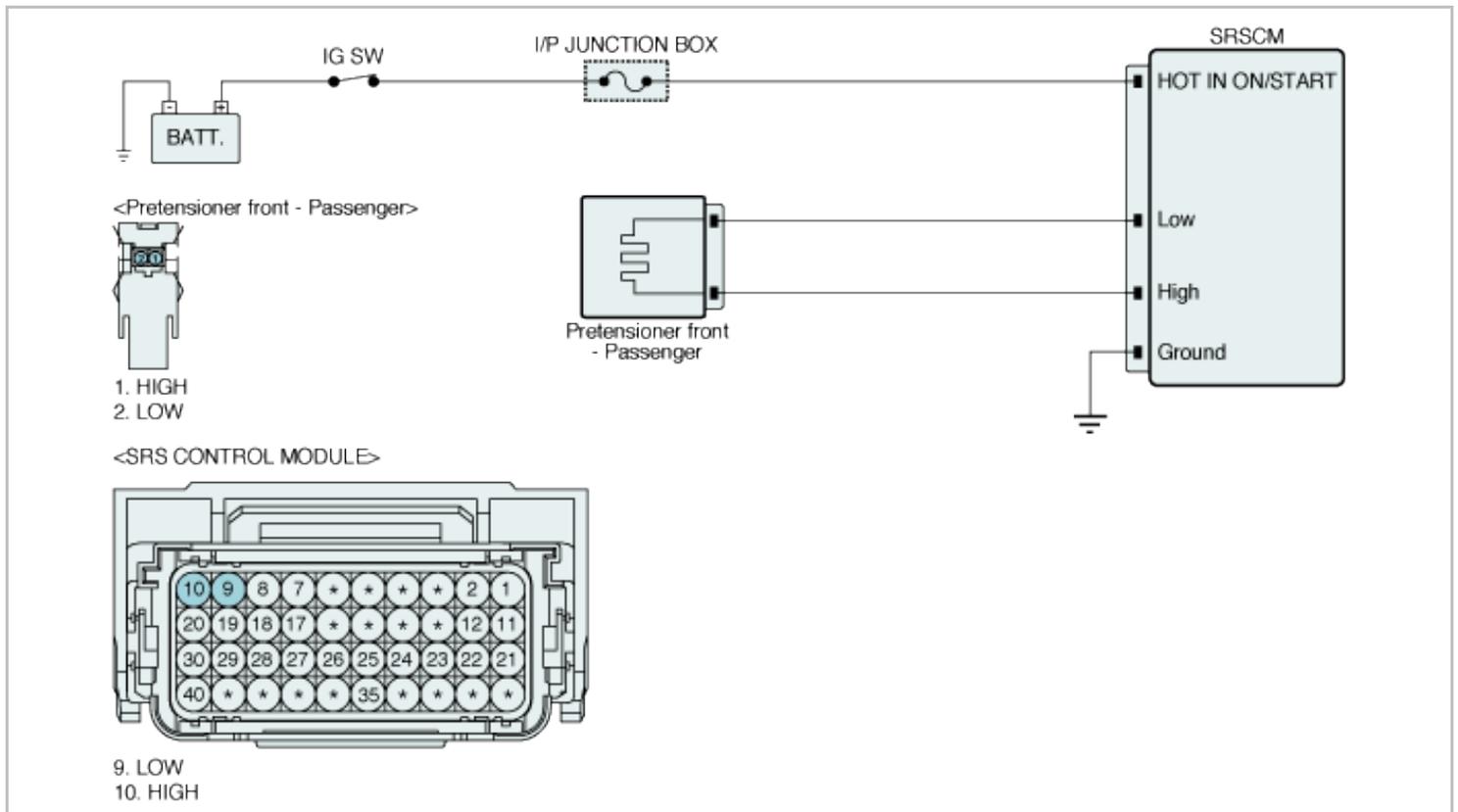
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PBPT resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq$ Squib resistance $\leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Passenger resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Passenger < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Passenger circuit : FAIL

In a case of a short to battery in the Pretensioner front-Passenger circuit: FAIL

In a case of a short to ground in the Pretensioner front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PBPT assembly, and check for proper operation. If the problem is corrected, replace PBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PBPT connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the PBPT harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1369 Pretensioner Front-Passenger Resistance Circuit Short to Ground

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT deploy.

DTC Description

The SRSCM sets DTC B1369 if there is a short to ground in PBPT harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

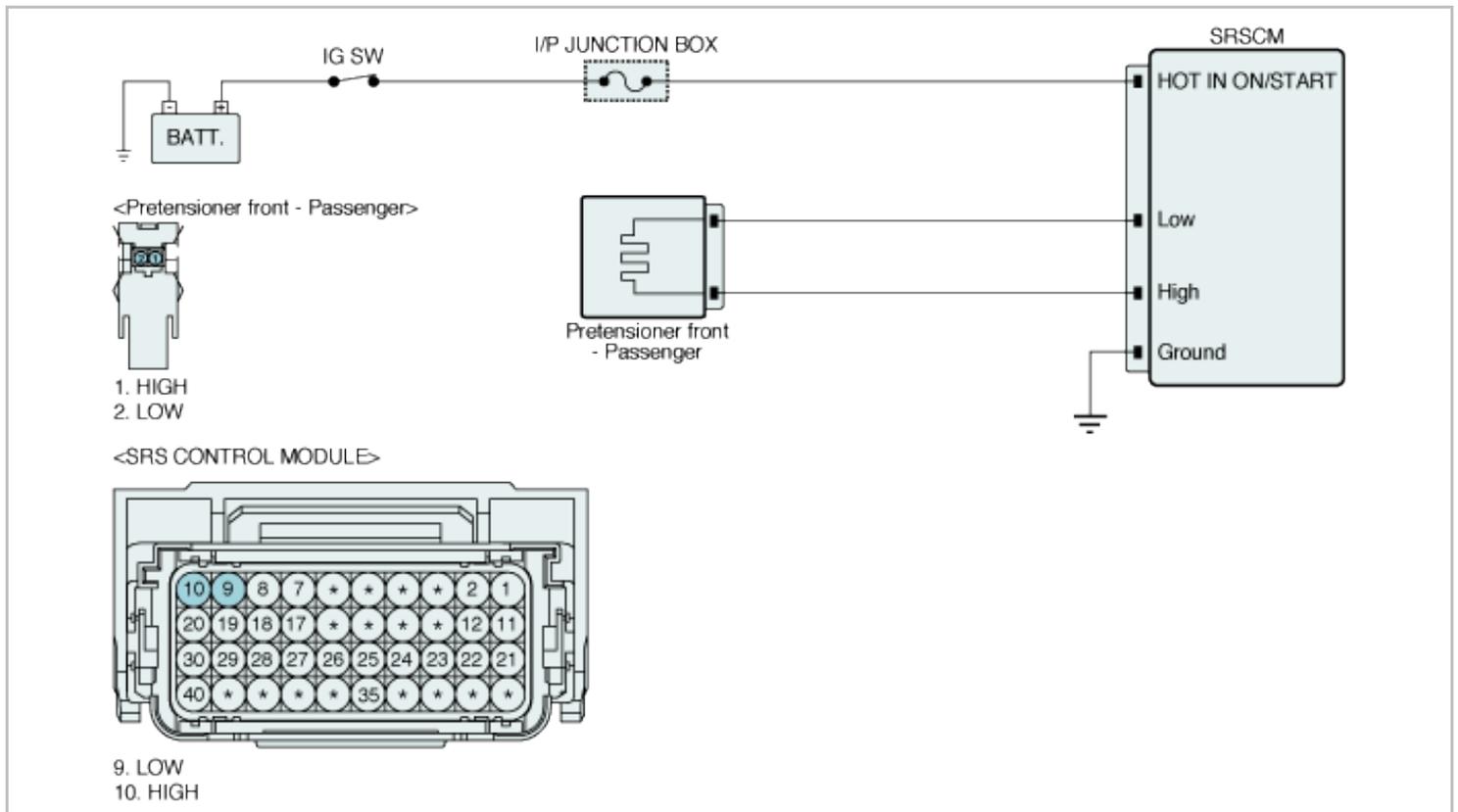
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to ground in PBPT harness. • Poor connection of connected part. • Faulty PBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PBPT Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Passenger resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Passenger < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Passenger circuit : FAIL

In a case of a short to battery in the Pretensioner front-Passenger circuit: FAIL

In a case of a short to ground in the Pretensioner front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PBPT assembly, and check for proper operation. If the problem is corrected, replace PBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PBPT connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the PBPT harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1370 Pretensioner Front-Passenger Resistance Circuit Short to Battery

General Description

Seat Belt Pretensioner(hereinafter referred to BPT) is located at both side of center pillar.

BPT tightens seat belt before air bag deploys to protect passenger from bumping against crush pad, steering wheel and front window.

In BPT, there are a ignition circuit and cylinder for rewinding belt.

Cylinder has piston that can rewind seat belt in it.

Gas chamber generates expansive force of gases to push piston in cylinder.

CAUTION

Never measure resistance of BPT directly, Current of measuring device may cause unexpected BPT deploy.

DTC Description

The SRSCM sets DTC B1370 if there is a short to power in PBPT harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

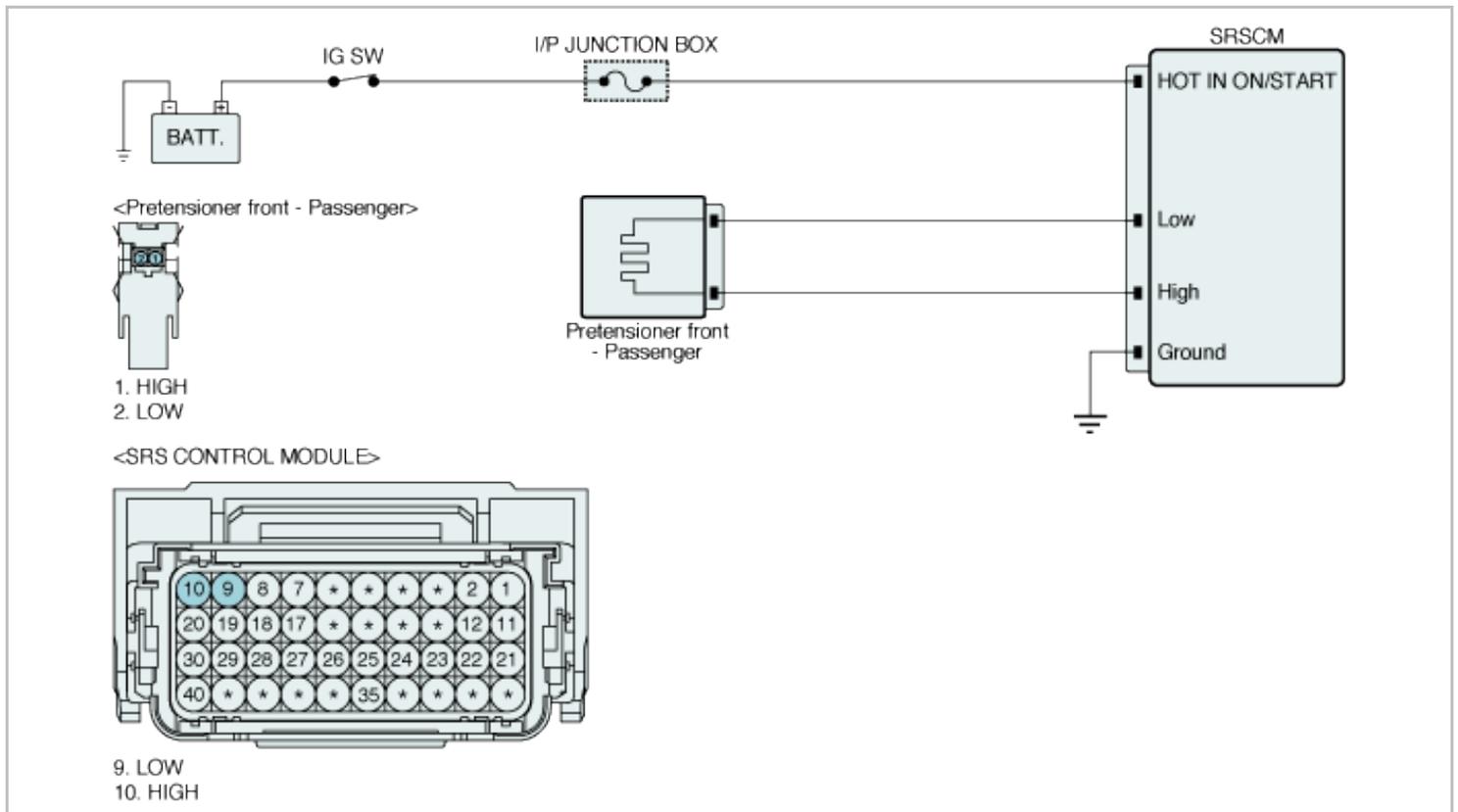
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to ground in PBPT harness. • Poor connection of connected part. • Faulty PBPT. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PBPT Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Pretensioner front-Passenger resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Pretensioner front-Passenger < 6.6Ω

Reference :

In a case of an open in the Pretensioner front-Passenger circuit : FAIL

In a case of a short to battery in the Pretensioner front-Passenger circuit: FAIL

In a case of a short to ground in the Pretensioner front-Passenger circuit : FAIL

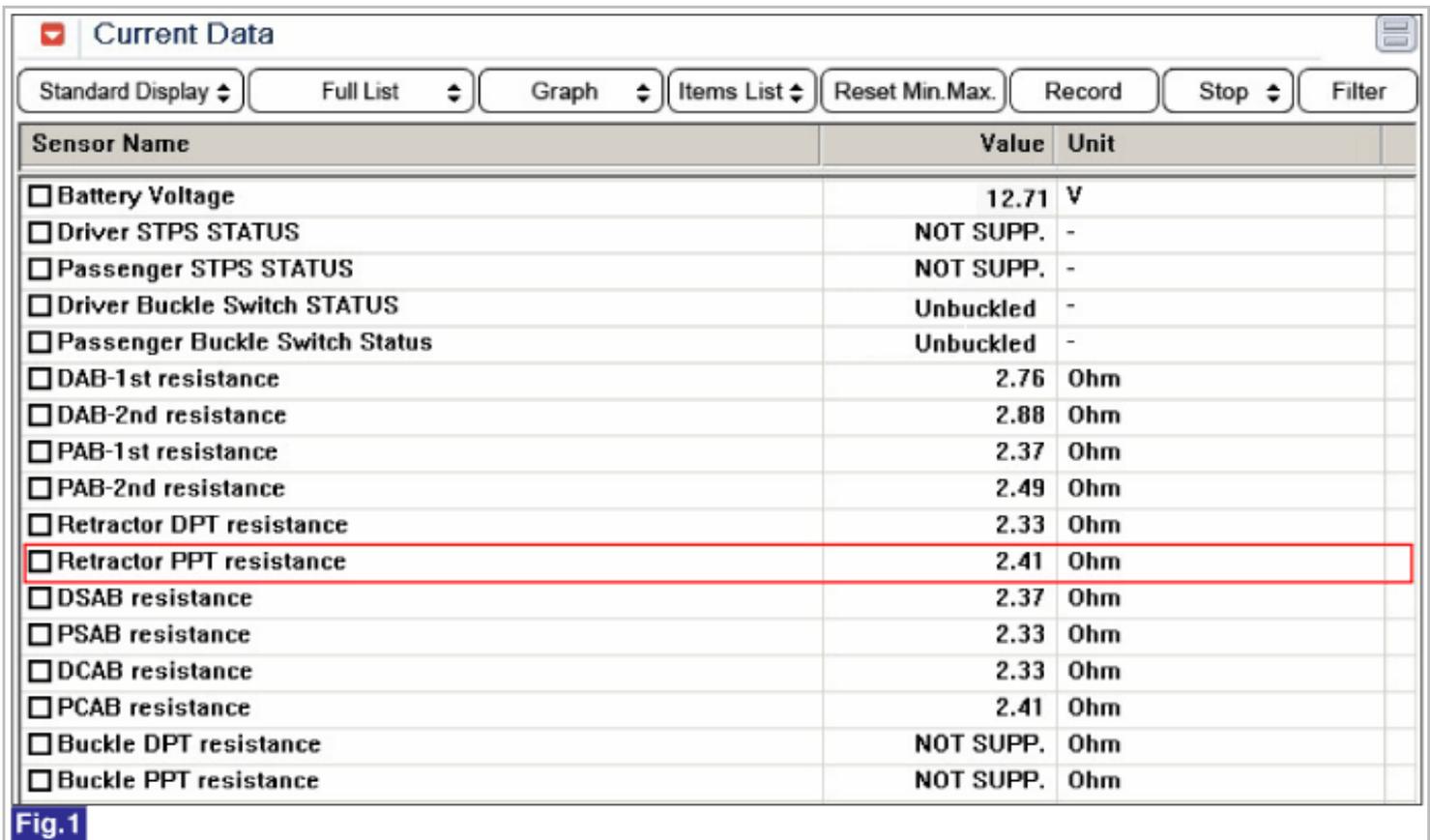


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PBPT module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PBPT or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PBPT assembly, and check for proper operation. If the problem is corrected, replace PBPT and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PBPT connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the PBPT harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1378 Side Airbag Front-Driver Resistance too High

General Description

Side Airbag (hereinafter referred to as SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB consists of air bag and inflator.

Air bag reduces impact of collision by filling up with gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deployment.

DTC Description

The SRSCM sets DTC B1378 if the measured resistance value of DSAB circuit is more than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

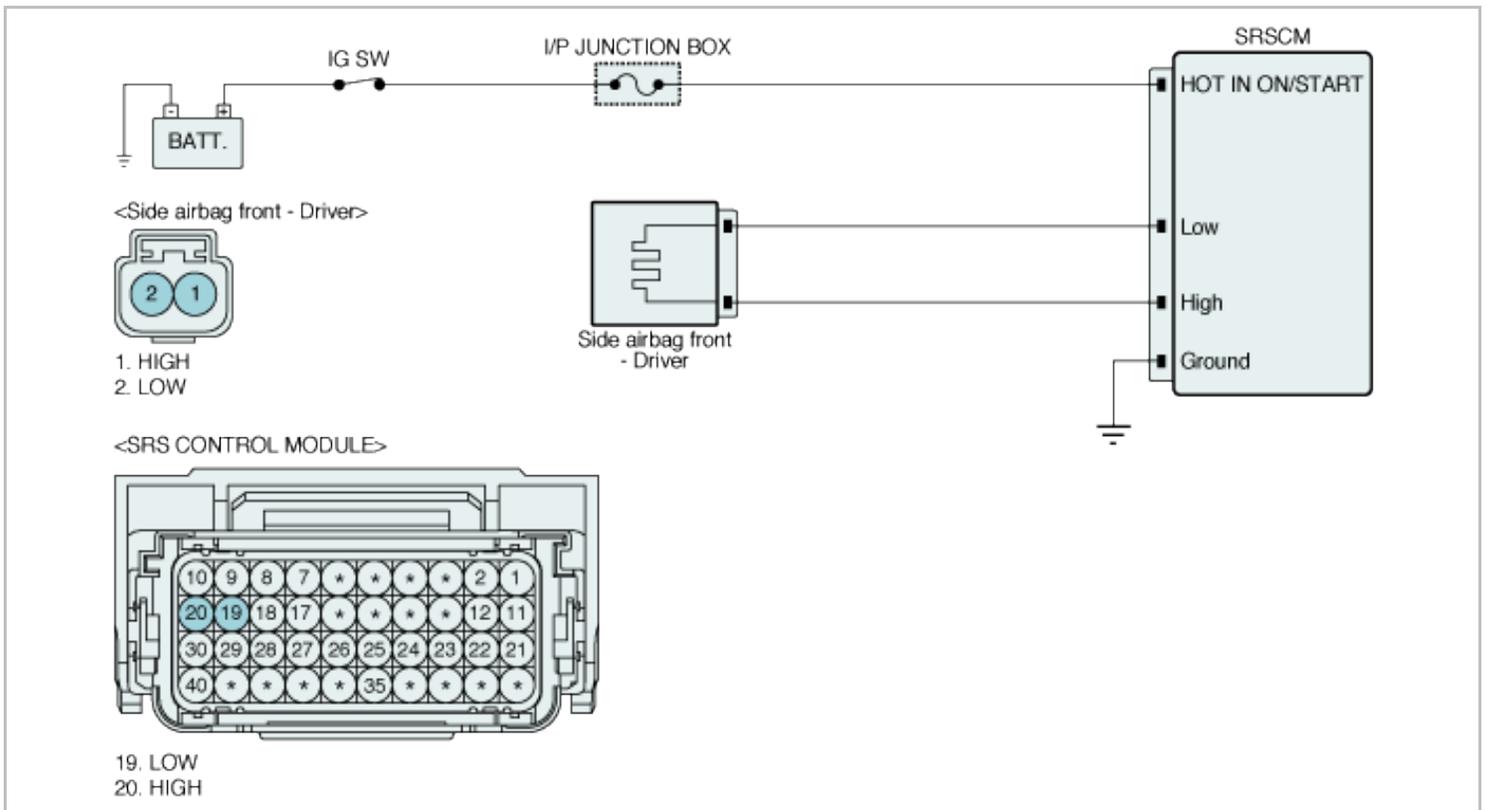
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	• Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DSAB resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Driver resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Side airbag front-Driver} < 6.6\Omega$

Reference :

In a case of an open in the Side airbag front-Driver circuit : FAIL

In a case of a short to battery in the Side airbag front-Driver circuit: FAIL

In a case of a short to ground in the Side airbag front-Driver circuit : FAIL

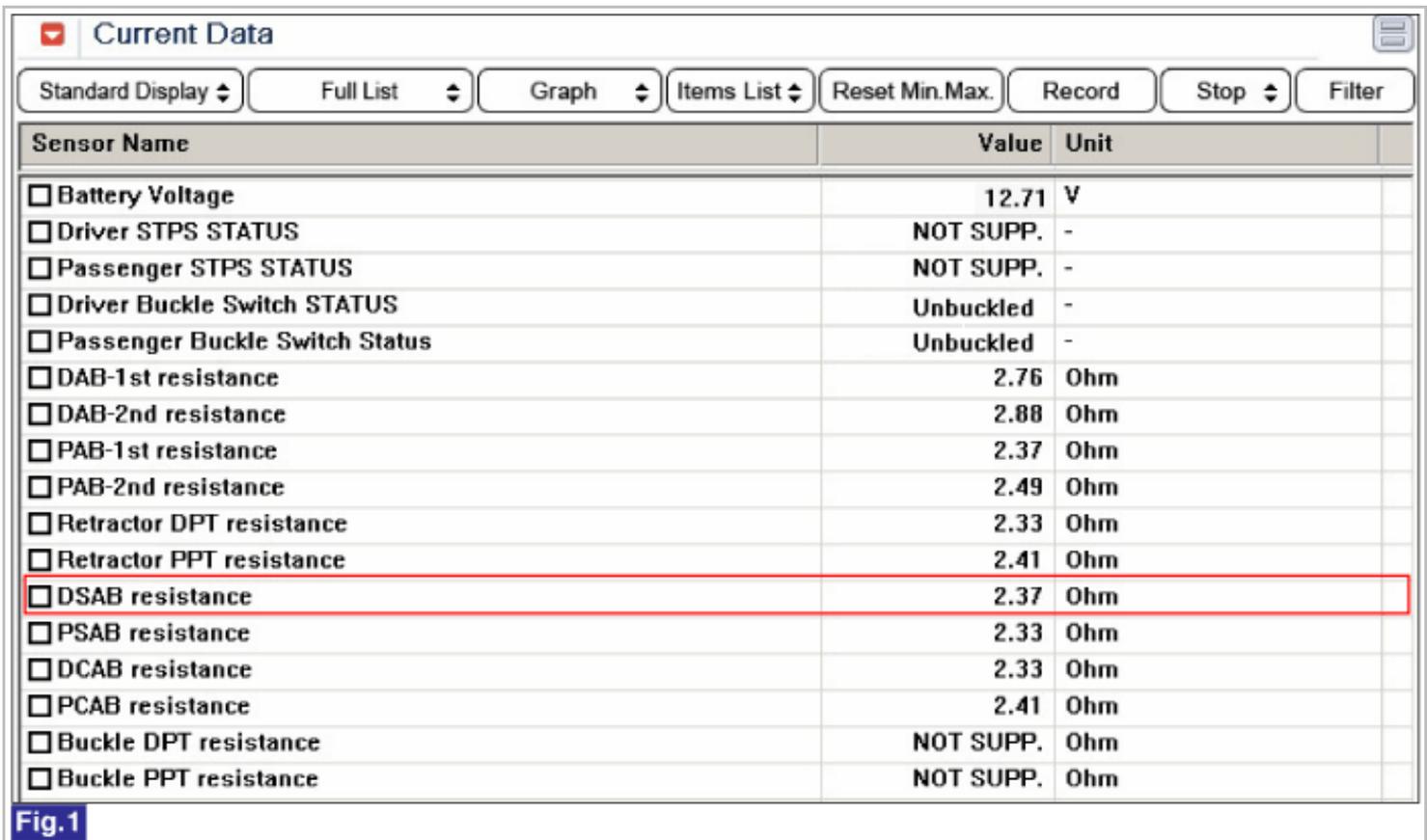


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DSAB assembly, and check for proper operation. If the problem is corrected, replace DSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DSAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the DSAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Side Airbag (hereinafter referred to SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB is consist of air bag and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1379 if the measured resistance value of DSAB circuit is less than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

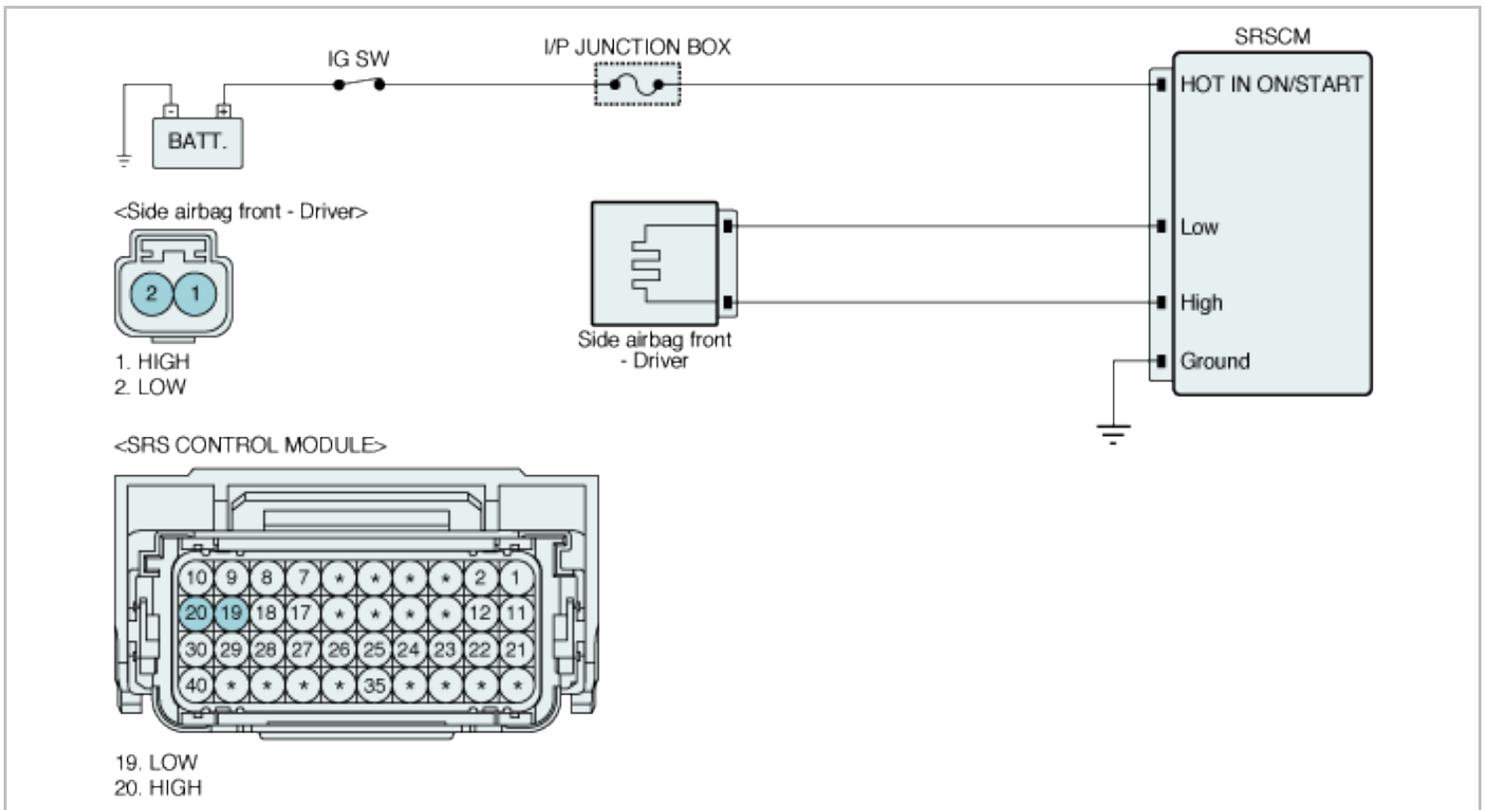
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DSAB resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq$ Squib resistance $\leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Driver resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Side airbag front-Driver} < 6.6\Omega$

Reference :

In a case of an open in the Side airbag front-Driver circuit : FAIL

In a case of a short to battery in the Side airbag front-Driver circuit: FAIL

In a case of a short to ground in the Side airbag front-Driver circuit : FAIL

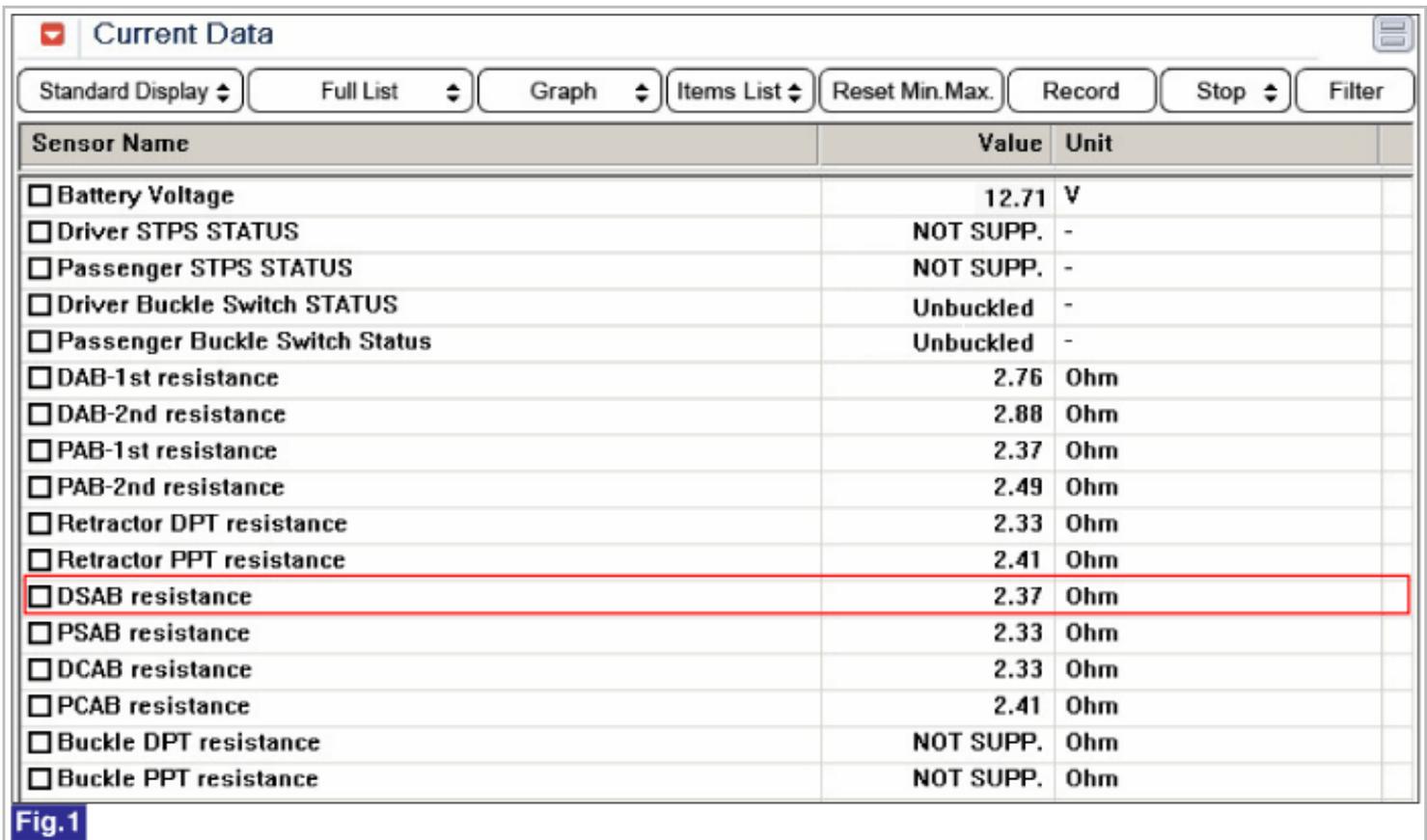


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DSAB assembly, and check for proper operation. If the problem is corrected, replace DSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DSAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the DSAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1380 Side Airbag Front-Driver Resistance Circuit Short to Ground

General Description

Side Airbag (hereinafter referred to SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB is consist of air bag and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1380 if there is a short to ground in DSAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

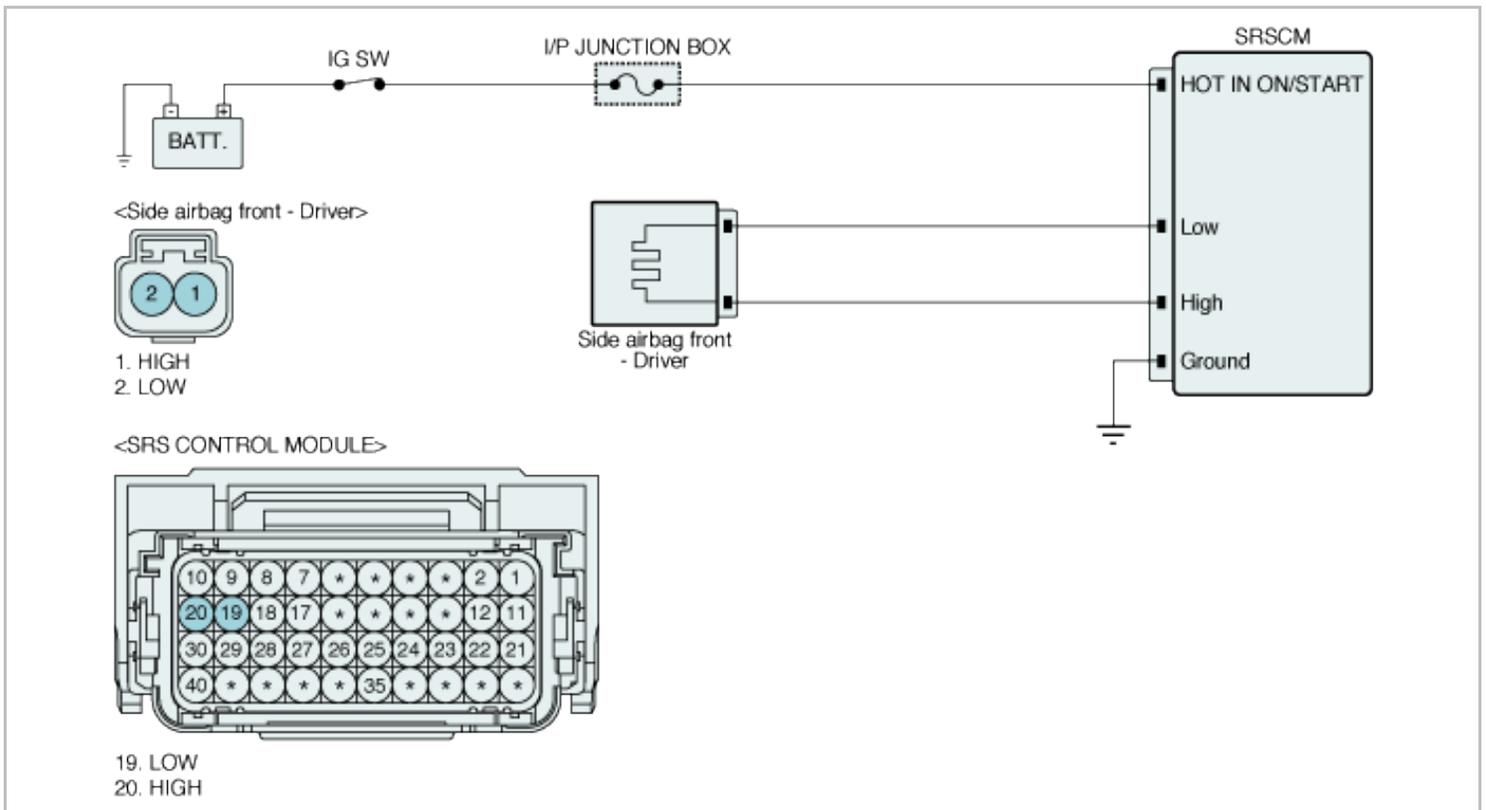
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to ground in DSAB harness. • Poor connection of connected part. • Faulty DSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DSAB Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Driver resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Side airbag front-Driver} < 6.6\Omega$

Reference :

In a case of an open in the Side airbag front-Driver circuit : FAIL

In a case of a short to battery in the Side airbag front-Driver circuit: FAIL

In a case of a short to ground in the Side airbag front-Driver circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

- Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DSAB assembly, and check for proper operation. If the problem is corrected, replace DSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DSAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the DSAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1381 Side Airbag Front-Driver Resistance Circuit Short to Battery

General Description

Side Airbag (hereinafter referred to as SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB consists of air bag and inflator.

Air bag reduces impact of collision by filling up with gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deployment.

DTC Description

The SRSCM sets DTC B1381 if there is a short to power in DSAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

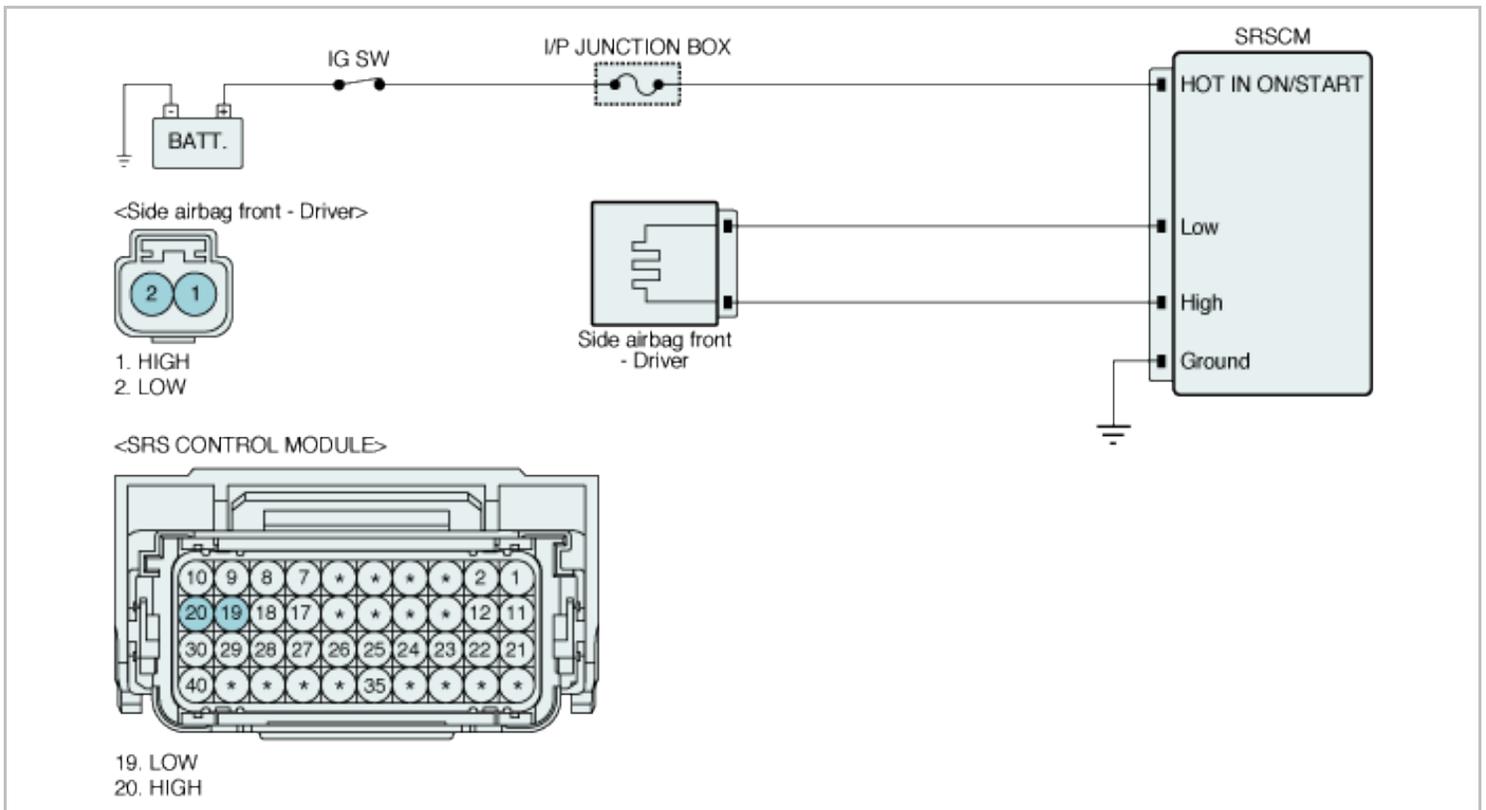
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to power in DSAB harness. • Poor connection of connected part. • Faulty DSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DSAB Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Driver resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Side airbag front-Driver} < 6.6\Omega$

Reference :

In a case of an open in the Side airbag front-Driver circuit : FAIL

In a case of a short to battery in the Side airbag front-Driver circuit: FAIL

In a case of a short to ground in the Side airbag front-Driver circuit : FAIL

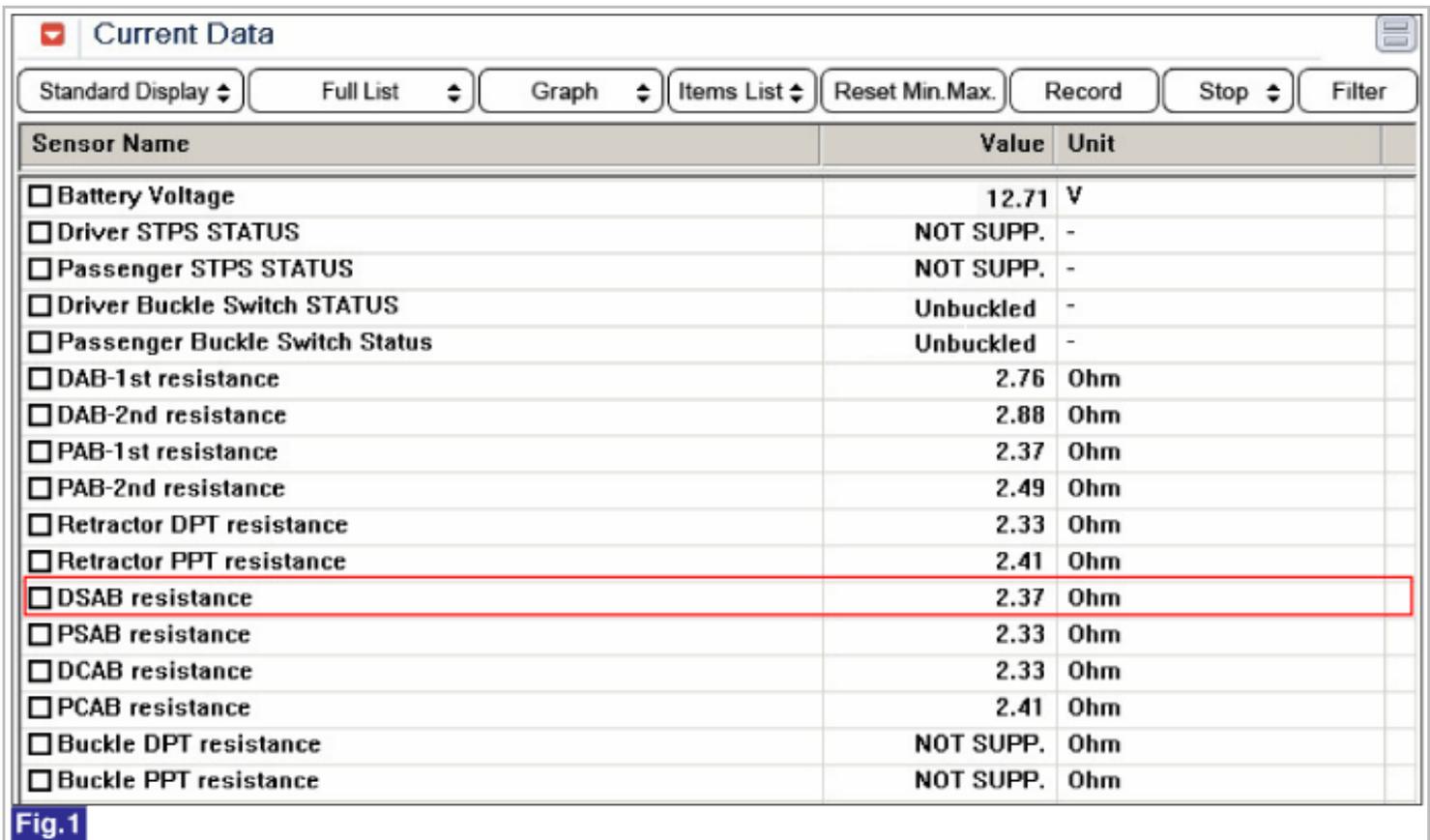


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DSAB assembly, and check for proper operation. If the problem is corrected, replace DSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DSAB connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the DSAB harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1382 Side Airbag Front-Passenger Resistance too High

General Description

Side Airbag (hereinafter referred to SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB is consist of air bag and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1382 if the measured resistance value of PSAB circuit is more than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

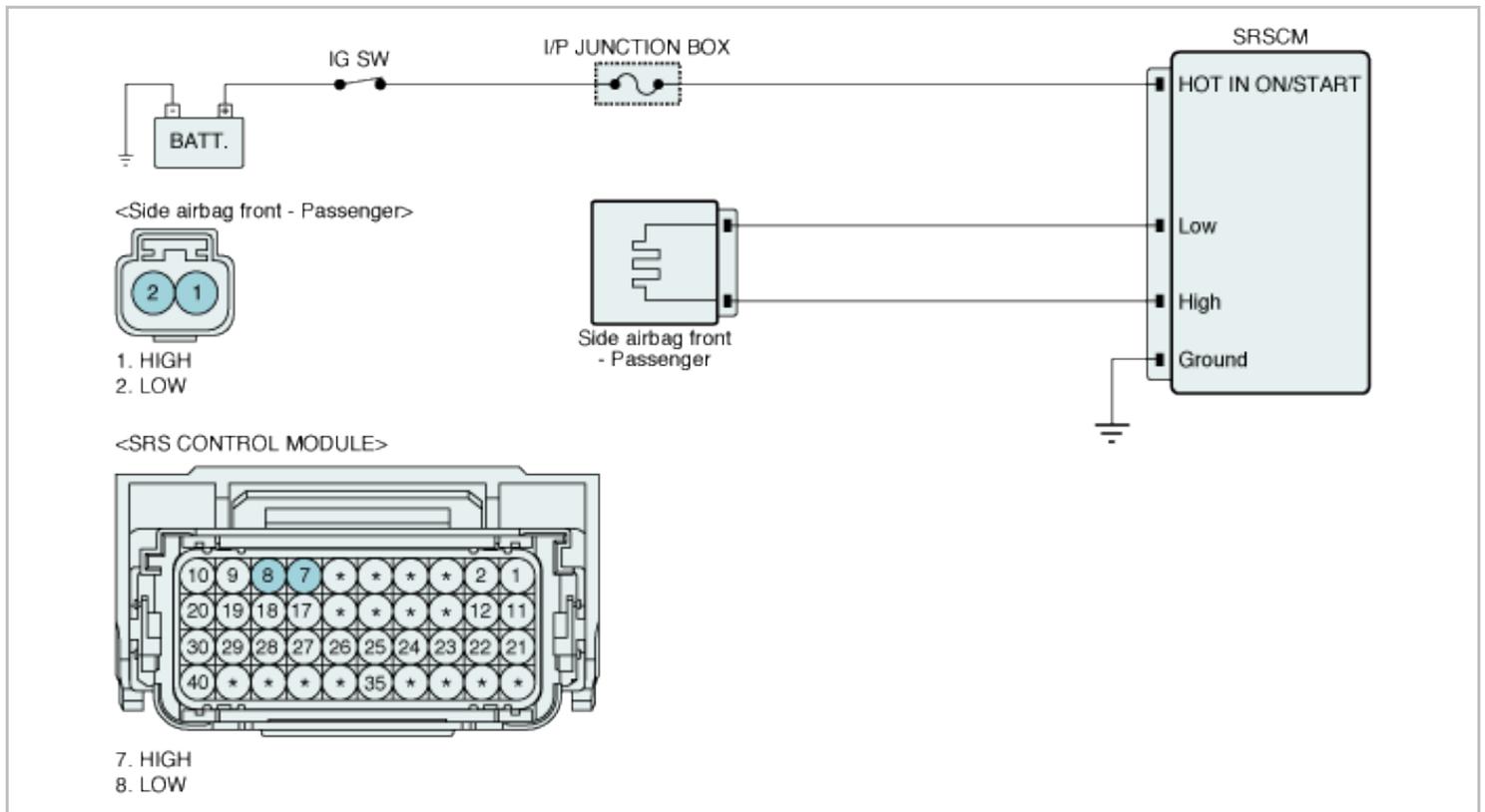
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	• Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSAB resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$1.4\Omega \leq \text{Squib resistance} \leq 6.4\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Passenger resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of Side airbag front-Passenger} < 6.6\Omega$

Reference :

In a case of an open in the Side airbag front-Passenger circuit : FAIL
 In a case of a short to battery in the Side airbag front-Passenger circuit: FAIL
 In a case of a short to ground in the Side airbag front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

- Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PSAB assembly, and check for proper operation. If the problem is corrected, replace PSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PSAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the PSAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Side Airbag (hereinafter referred to SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB is consist of air bag and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1383 if the measured resistance value of PSAB circuit is less than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

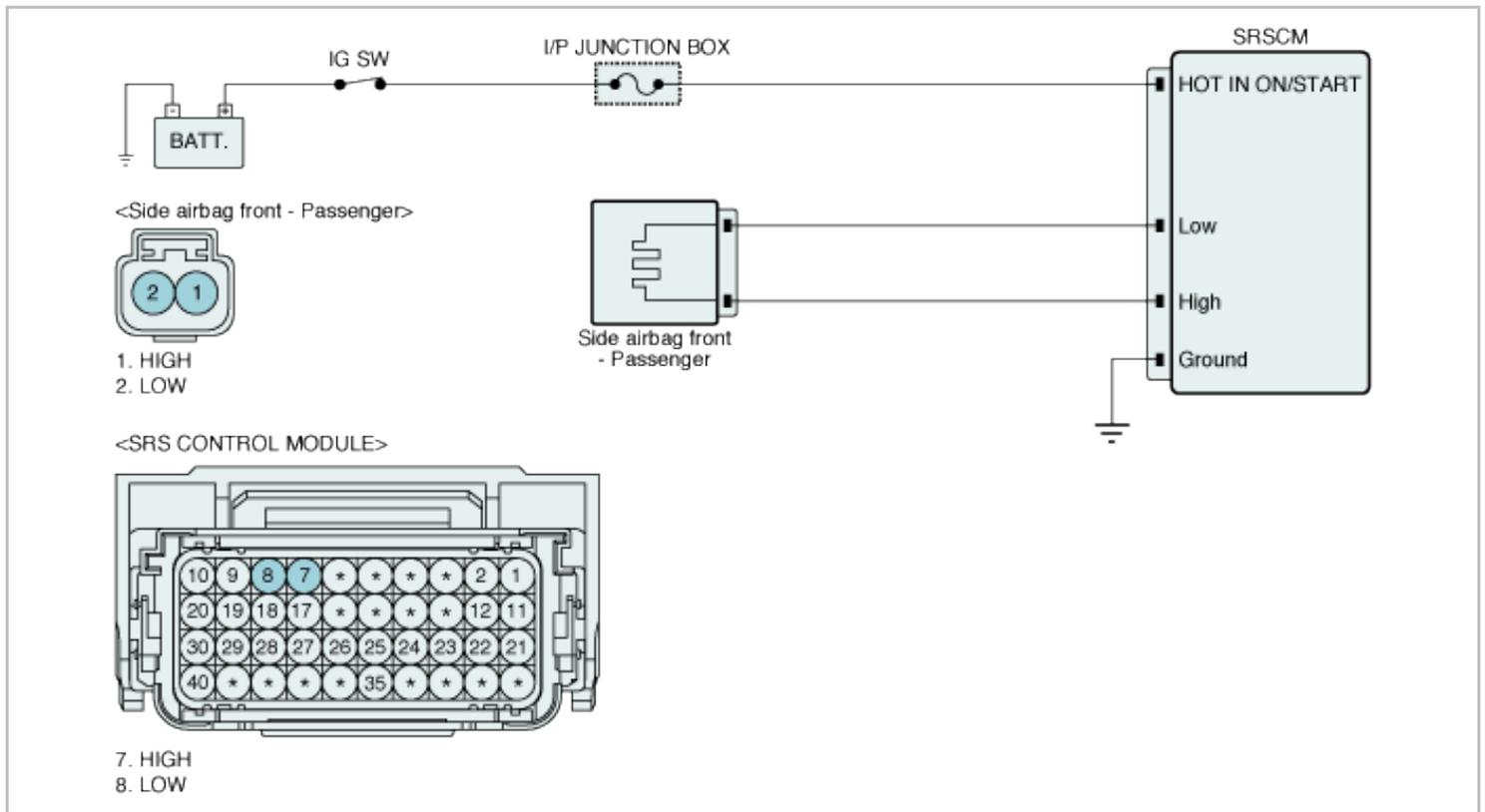
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSAB resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq$ Squib resistance $\leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Passenger resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Side airbag front-Passenger < 6.6Ω

Reference :

In a case of an open in the Side airbag front-Passenger circuit : FAIL
 In a case of a short to battery in the Side airbag front-Passenger circuit: FAIL
 In a case of a short to ground in the Side airbag front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

- Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PSAB assembly, and check for proper operation. If the problem is corrected, replace PSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PSAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the PSAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1384 Side Airbag Front-Passenger Resistance Circuit Short to Ground

General Description

Side Airbag (hereinafter referred to SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB is consist of air bag and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1384 if there is a short to ground in PSAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

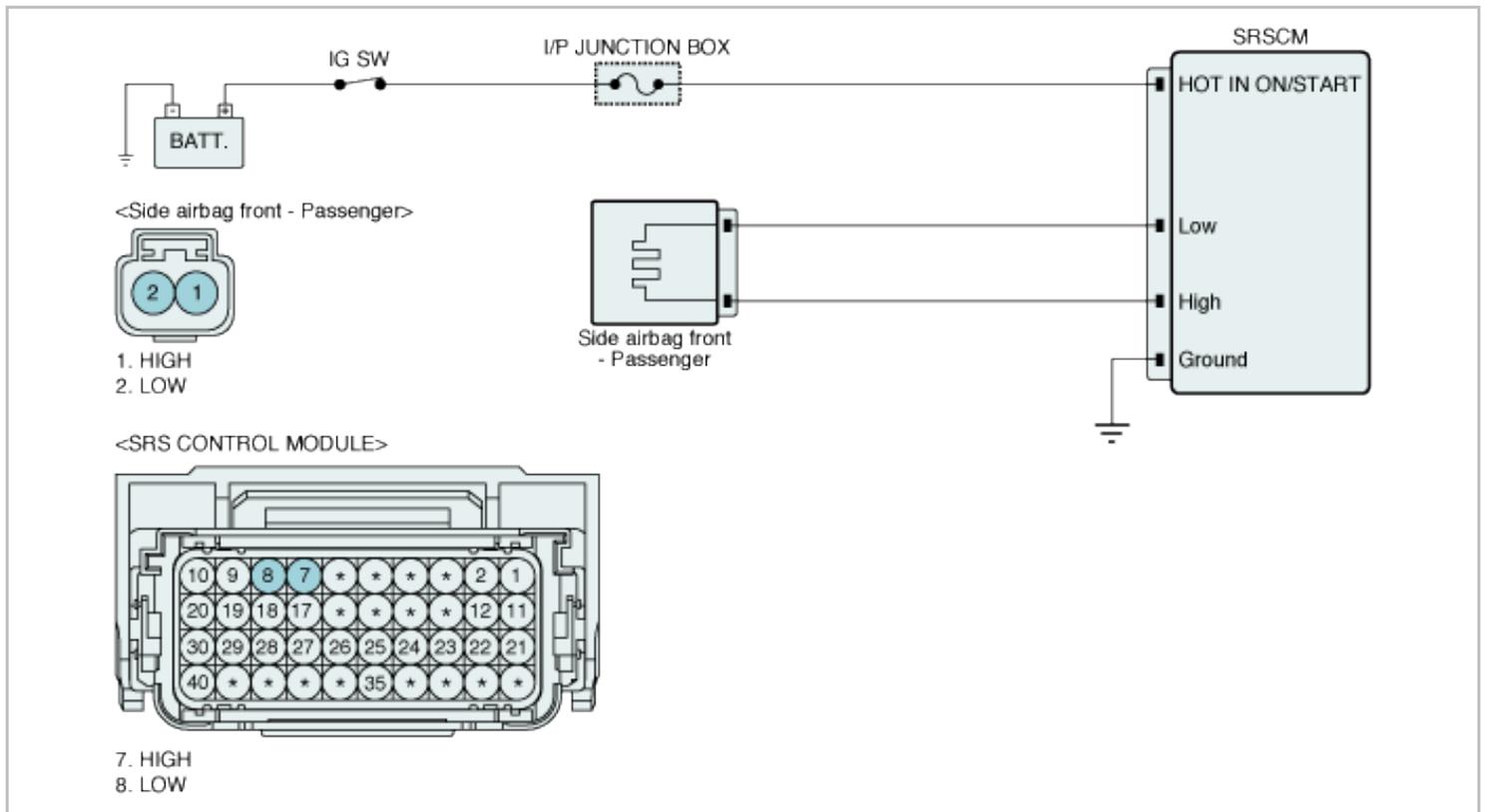
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to ground in PSAB harness. • Poor connection of connected part. • Faulty PSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSAB Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Passenger resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Side airbag front-Passenger < 6.6Ω

Reference :

In a case of an open in the Side airbag front-Passenger circuit : FAIL
 In a case of a short to battery in the Side airbag front-Passenger circuit: FAIL
 In a case of a short to ground in the Side airbag front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PSAB assembly, and check for proper operation. If the problem is corrected, replace PSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PSAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the PSAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1385 Side Airbag Front-Passenger Resistance Circuit Short to Battery

General Description

Side Airbag (hereinafter referred to SAB) located in driver and passenger seat protects passenger's head and shoulder. SAB is consist of air bag and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of SAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1385 if there is a short to power in PSAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

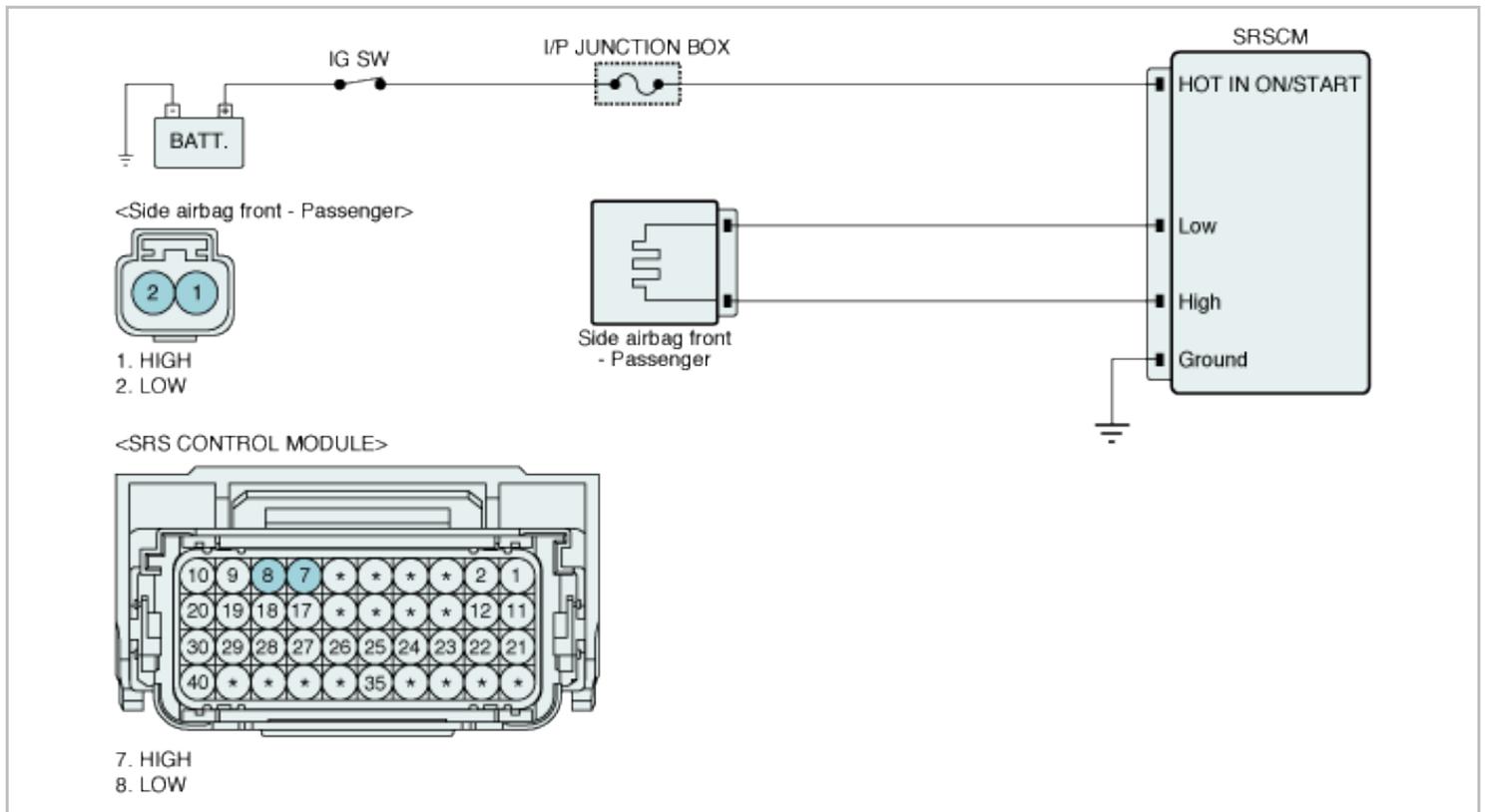
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to power in PSAB harness. • Poor connection of connected part. • Faulty PSAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSAB Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Side airbag front-Passenger resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of Side airbag front-Passenger < 6.6Ω

Reference :

In a case of an open in the Side airbag front-Passenger circuit : FAIL
 In a case of a short to battery in the Side airbag front-Passenger circuit: FAIL
 In a case of a short to ground in the Side airbag front-Passenger circuit : FAIL

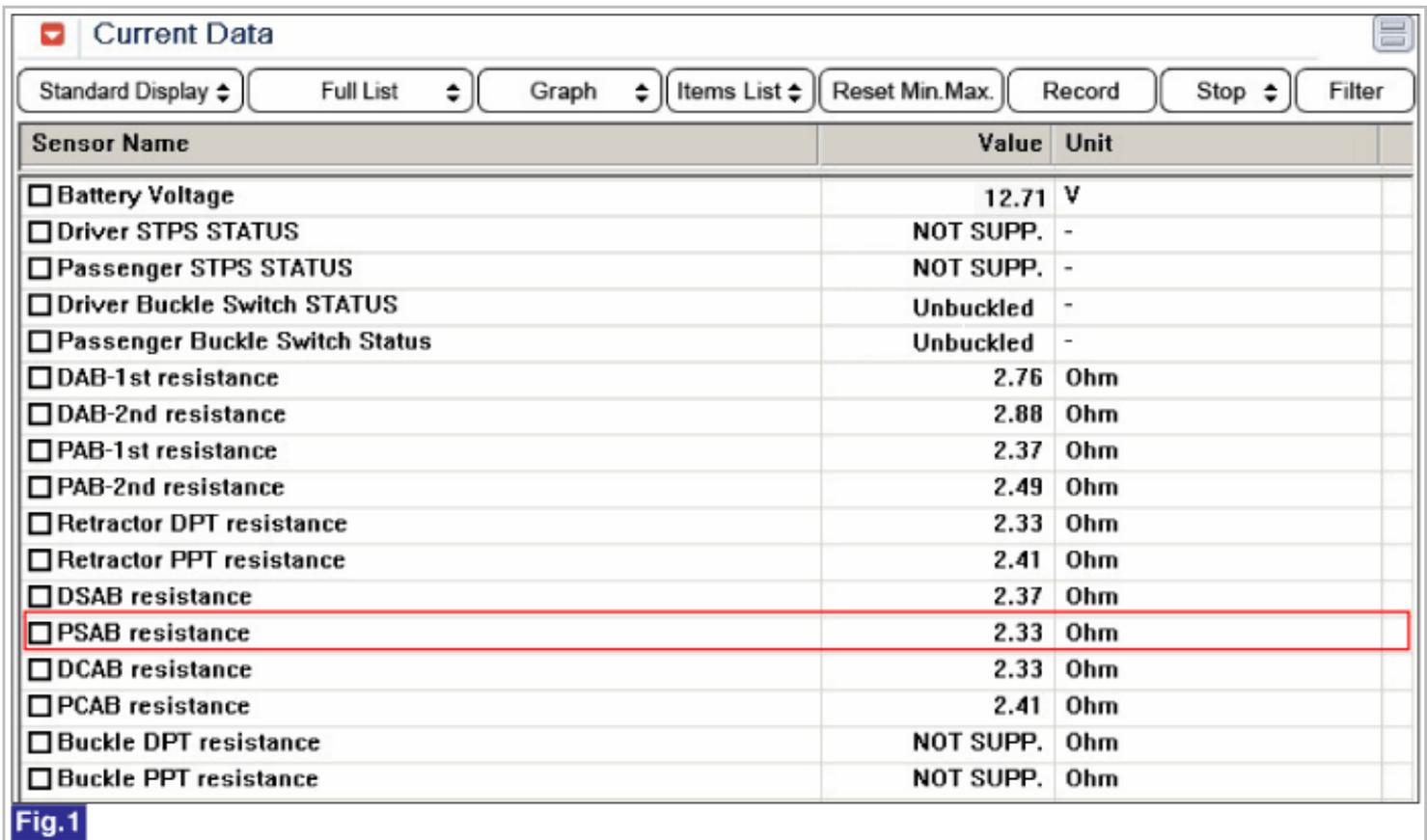


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PSAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-3F000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PSAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PSAB assembly, and check for proper operation. If the problem is corrected, replace PSAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PSAB connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the PSAB harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1395 Firing Loops Interconnection Fault

General Description

Every air bag module has its firing circuit that ignites powder to deploy air bag according to signal of SRSCM. SRSCM checks every air bag module when ignition "ON". Once any fault is detected, it is erased only by scantool.

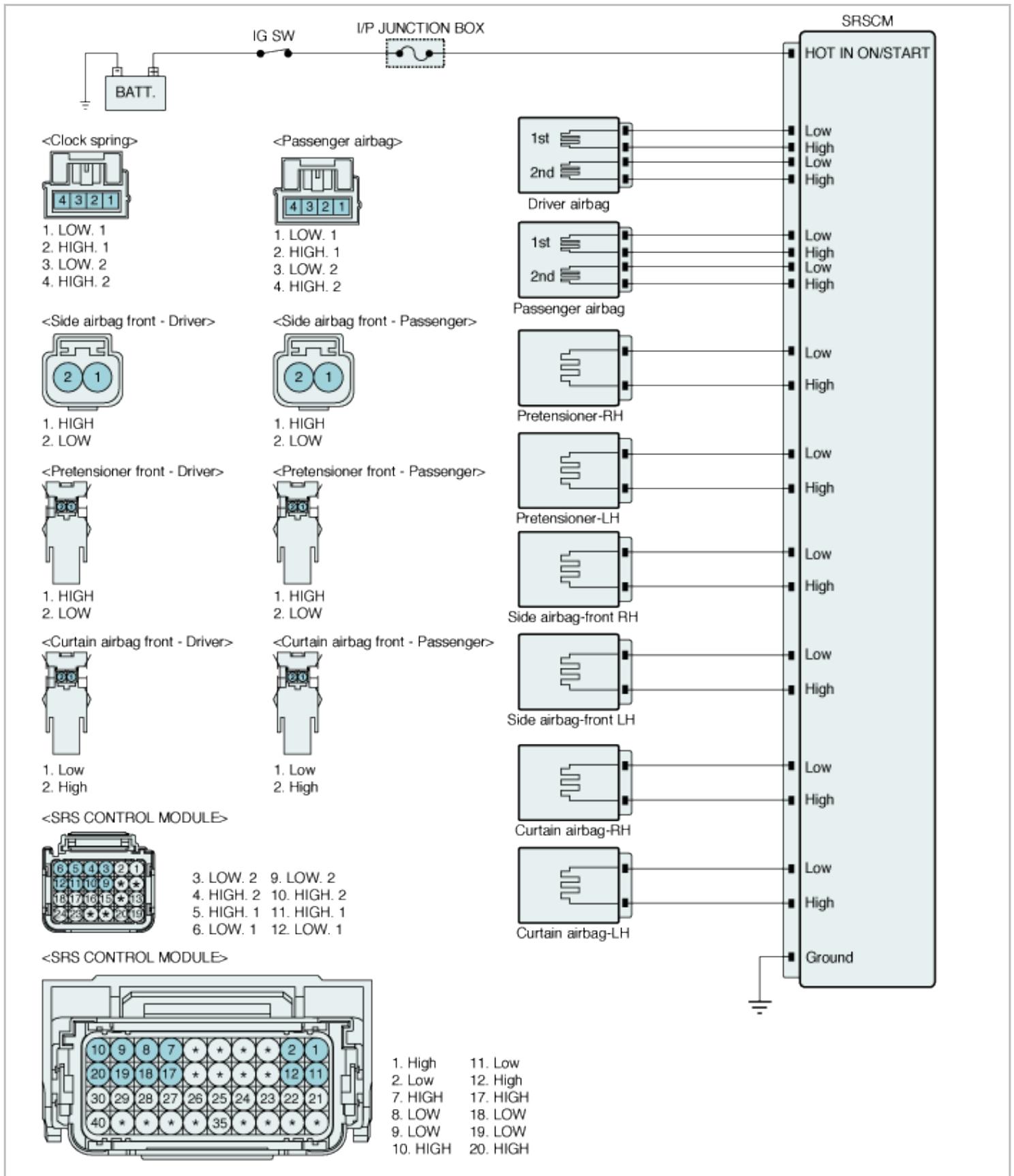
DTC Description

The SRSCM sets DTC B1395 if there's any short circuit in harness of every firing circuit to one another.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check current(PWM type)	• Short circuit in squib harness. • SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Squib lines are cross coupled • Make other line sink, and one line < 0.6V, then this line is crosscoupled.	
Diagnostic Time	Qualification	• More than 2ms x 3	
	De-Qualification	• NA	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.

3. Monitor the "All airbag resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of all airbag < 6.6Ω

Reference :

In a case of an open in the all airbag circuit : FAIL

In a case of a short to battery in the all airbag circuit : FAIL

In a case of a short to ground in the all airbag circuit : FAIL

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Check for short between ignition circuits of DAB,PAB,BPT,CAB,SAB. If the condition of harness and component is OK, this fault is caused by SRSCM internal error so replace a known-good SRSCM and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.

2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1400 SIS(Side Impact Sensor) Front-Driver defect

General Description

Side Impact Sensor(SIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag.

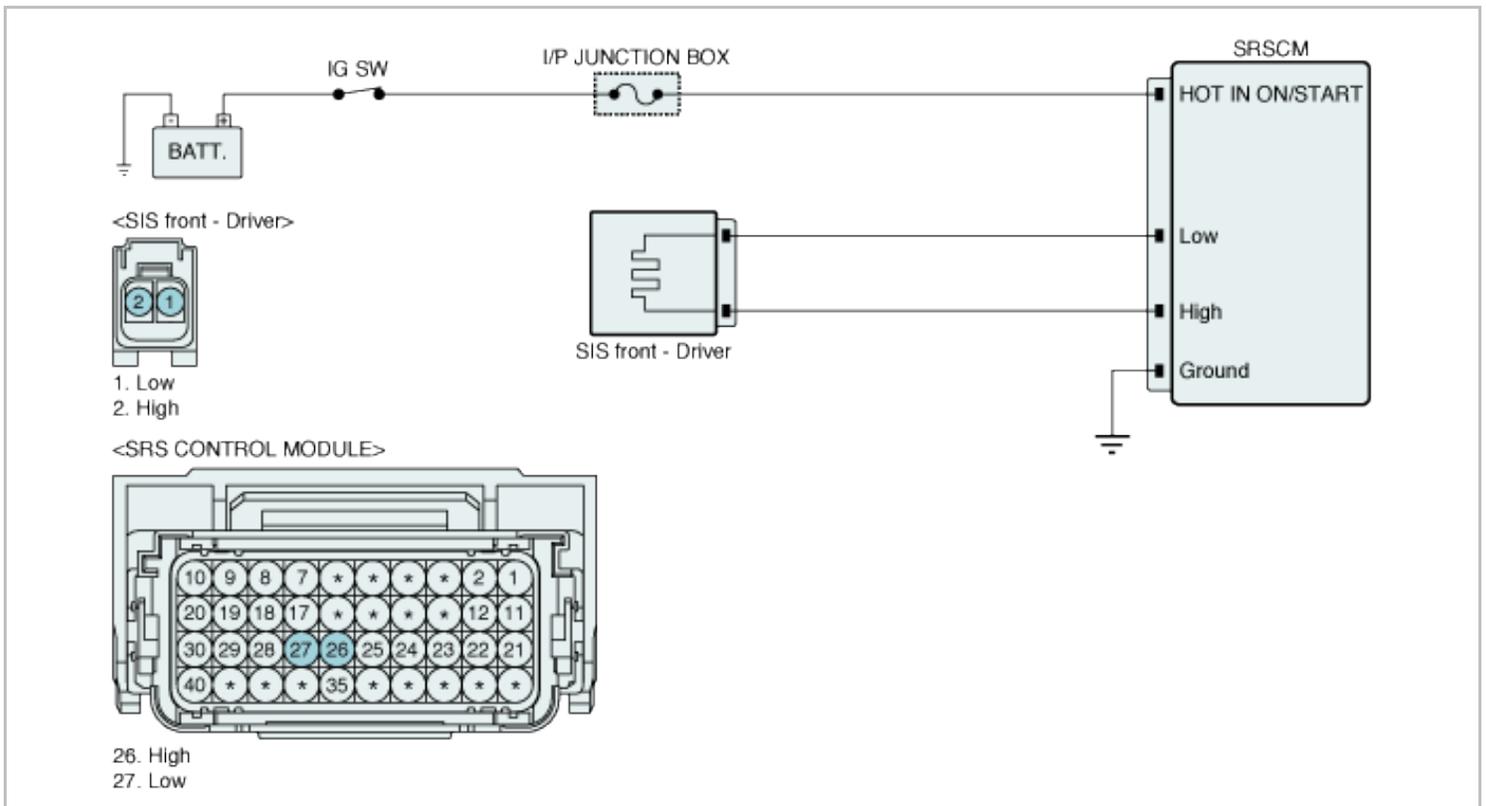
DTC Description

The SRSCM sets DTC B1400 if there is any fault in DSIS circuit.

DTC Detecting Condition

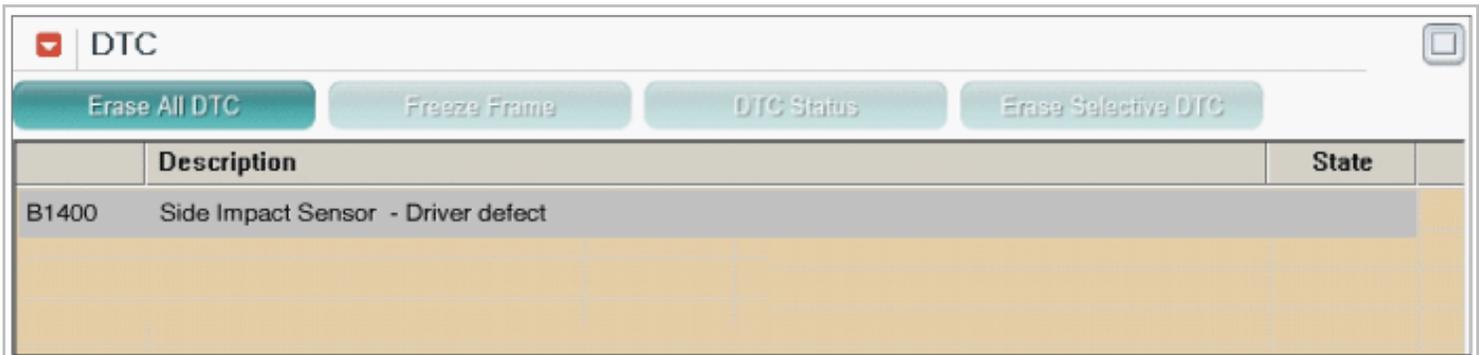
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> Faulty DSIS circuit. Faulty DSIS. Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		<ul style="list-style-type: none"> DSIS send defect code DSIS output is not expected value 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):100 ms (500μs x 20) Steady:1s (10ms x 100) 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):IGN off -> on Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DSIS connector .
5. Substitute the DSIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good DSIS, and check for proper operation. If the problem is corrected, replace DSIS and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1401 SIS(Side Impact Sensor)Front-Driver Circuit Short to Ground

General Description

Front Side Impact Sensor(FSIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag and curtain air bag.

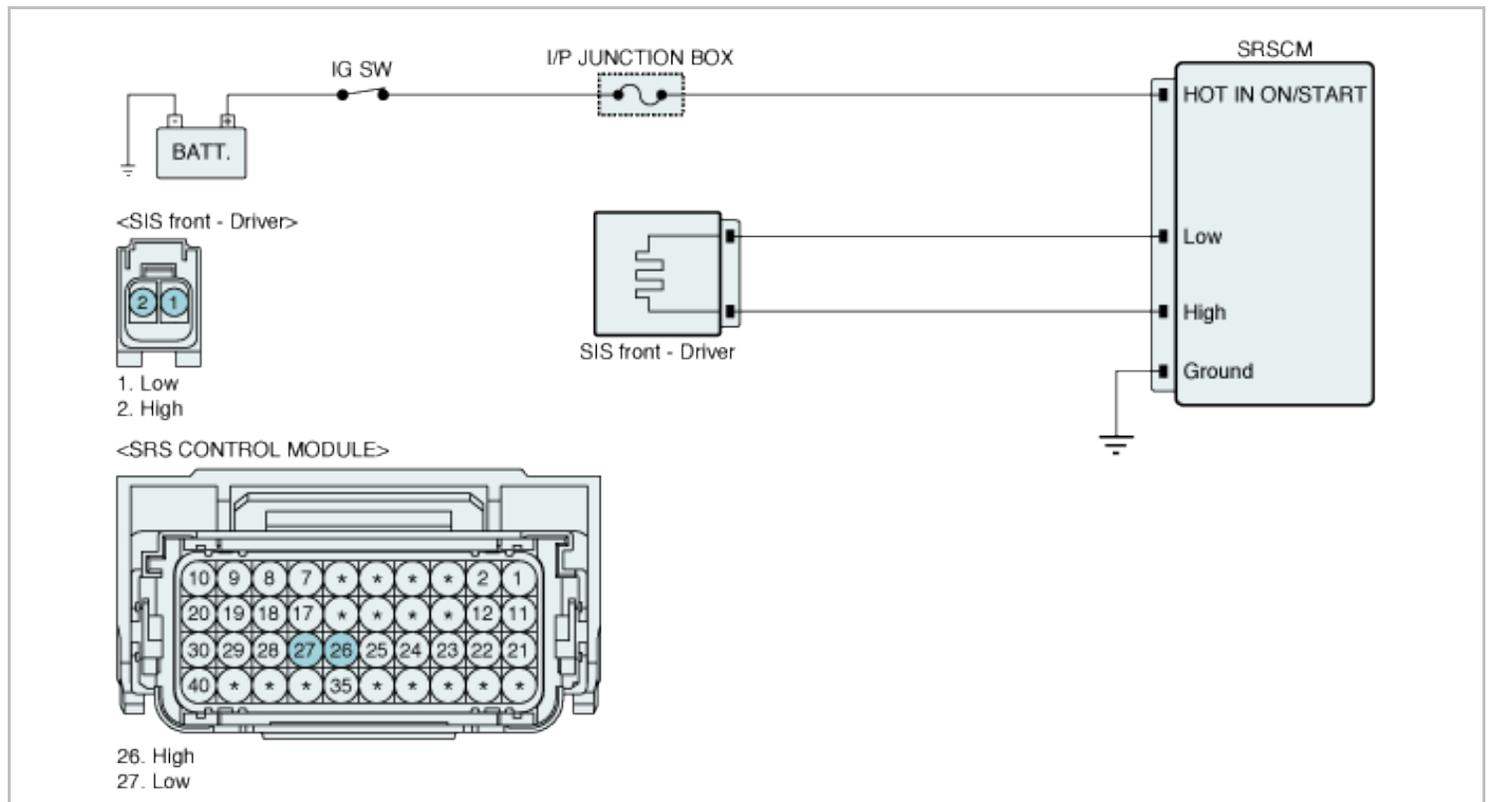
DTC Description

The SRSCM sets DTC B1401 if there is a short to ground in DSIS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		<ul style="list-style-type: none"> Check voltage 	<ul style="list-style-type: none"> Short to ground in DSIS harness. Faulty DSIS. Faulty SRSCM.
Enable Conditions		<ul style="list-style-type: none"> Ignition "ON" 	
Threshold Value		<ul style="list-style-type: none"> DSIS no acceleration data, and line voltage < 3V 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):2.1s (2 times) Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):1 time Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.

2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect DSIS connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the DSIS harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DSIS connector .
5. Substitute the DSIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good DSIS, and check for proper operation. If the problem is corrected, replace DSIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1402 SIS(Side Impact Sensor)Front-Driver Circuit Short to Battery

General Description

Front Side Impact Sensor(FSIS) is located in both side of center pillar detects broad collision.

When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag and curtain air bag.

DTC Description

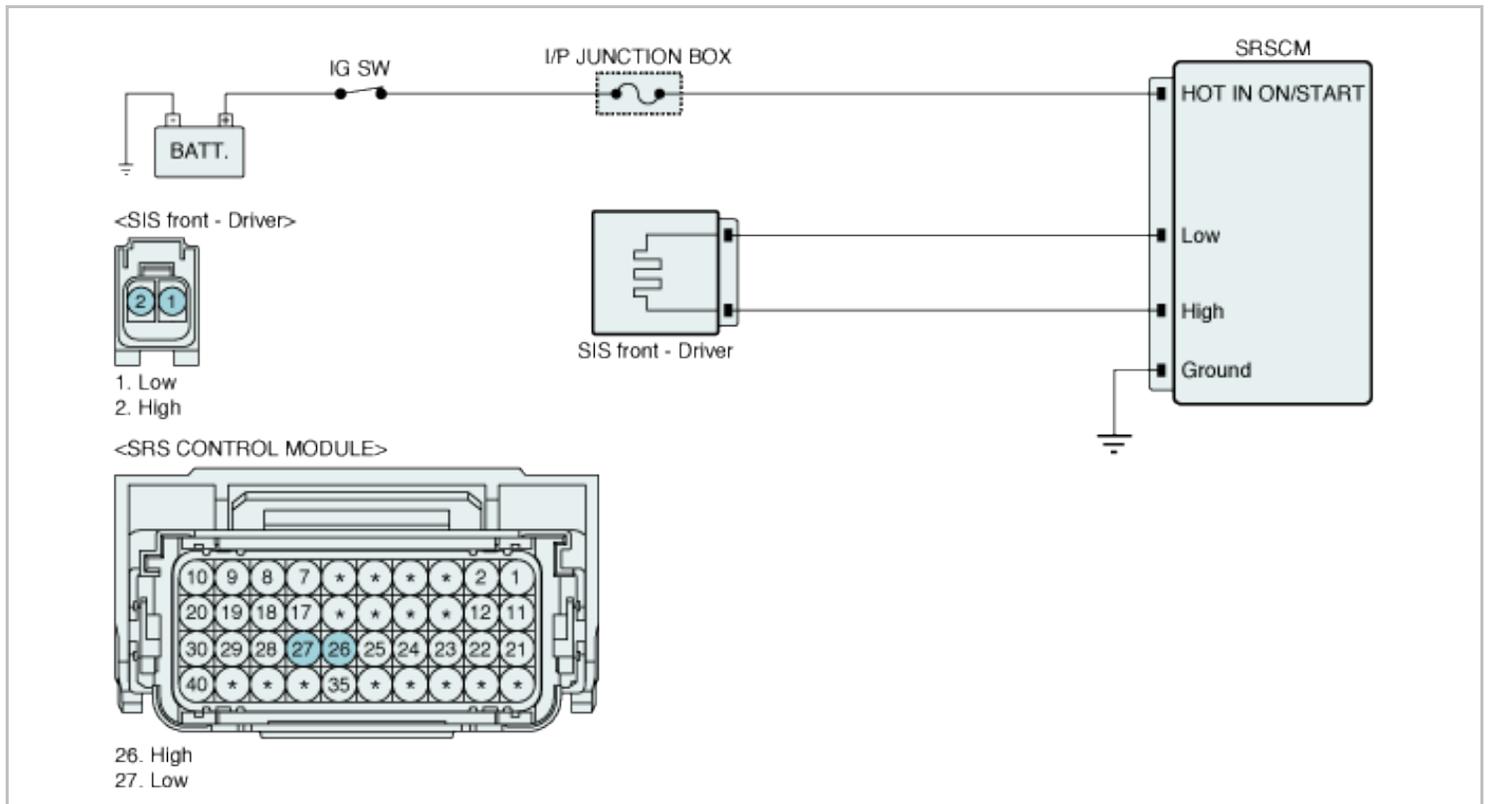
The SRSCM sets DTC B1402 if there is short to power harness in DSIS harness.

DTC Detecting Condition

Item	Detecting Condition	Possible cause
DTC Strategy	• Check voltage	

Enable Conditions		• Ignition "ON"	<ul style="list-style-type: none"> • Short to power in DSIS harness. • Faulty DSIS. • Faulty SRSCM.
Threshold Value		• DSIS no acceleration data, and line voltage >11V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):0.2s (100ms x 2) • Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):1 time • Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC		
Erase All DTC		
Freeze Frame		
DTC Status		
Erase Selective DTC		
Description	State	
B1402 Side Impact Sensor - Driver circuit short to Battery		

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect DSIS connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the DSIS harness connector and chassis ground.

Specification : 0V

6. Is the measured Voltage within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DSIS connector .
5. Substitute the DSIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good DSIS, and check for proper operation. If the problem is corrected, replace DSIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1403 SIS(Side Impact Sensor)Front-Passenger Defect

General Description

Side Impact Sensor(SIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag.

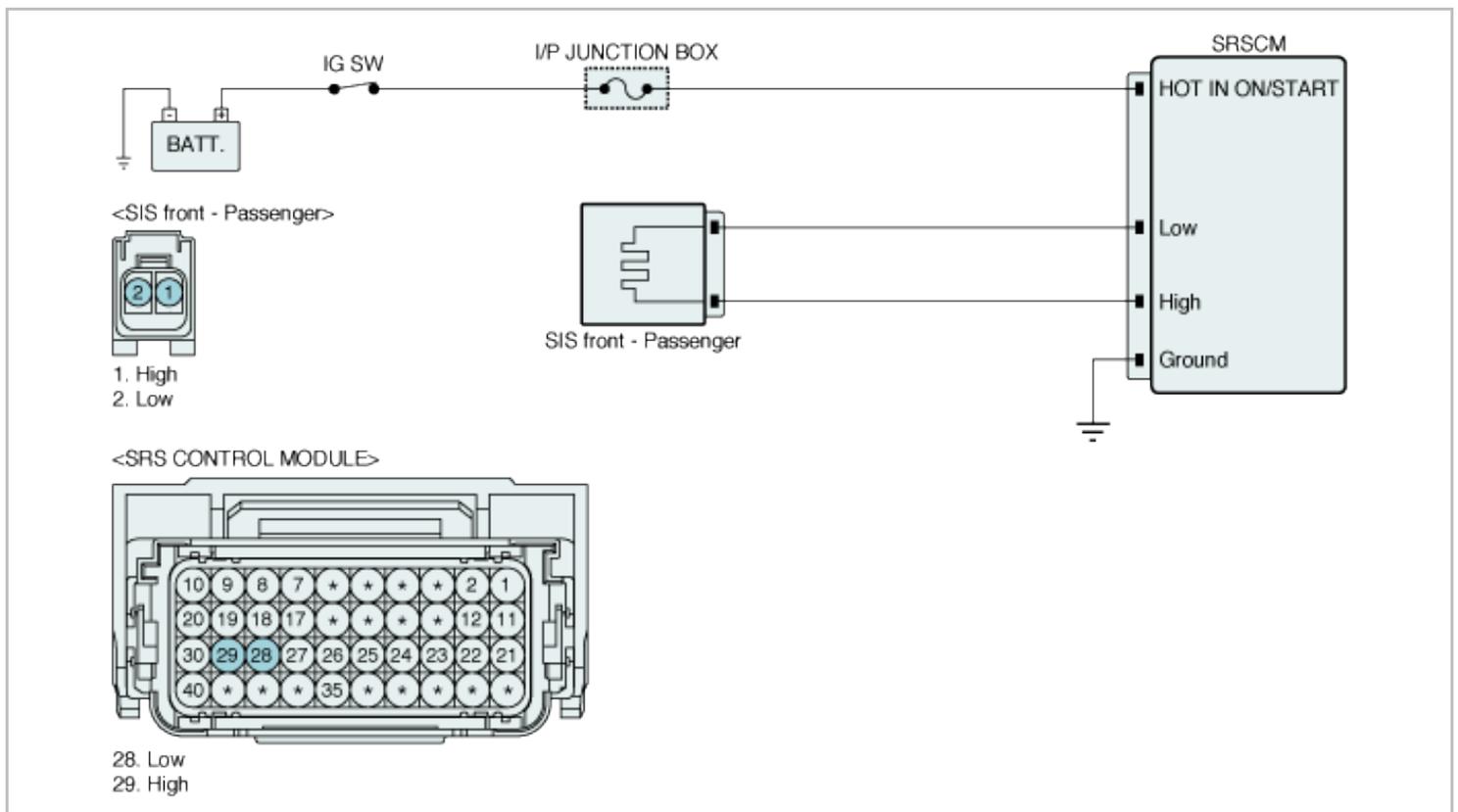
DTC Description

The SRSCM sets DTC B1403 if there is any fault in PSIS circuit.

DTC Detecting Condition

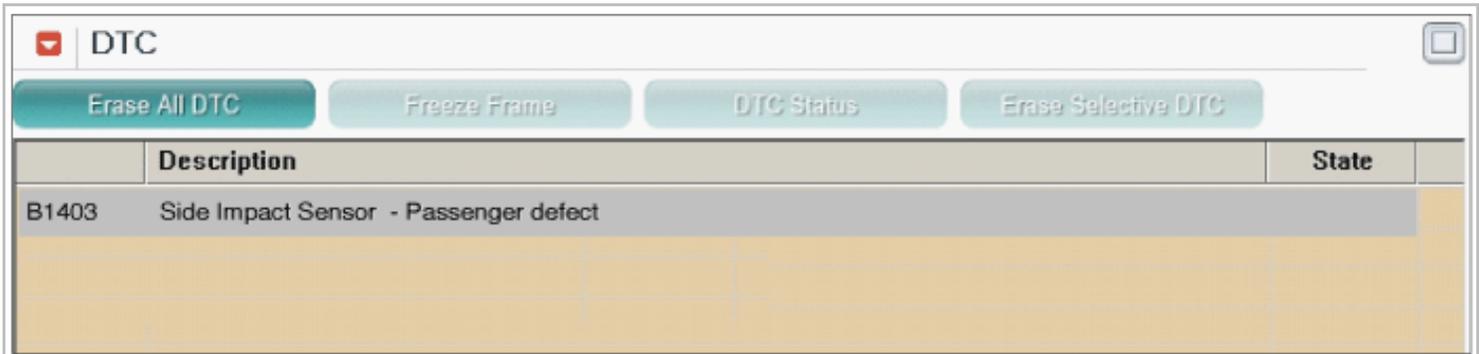
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> Faulty PSIS circuit. Faulty PSIS. Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		<ul style="list-style-type: none"> PSIS send defect code PSIS output is not expected value 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):100 ms (500μs x 20) Steady:1s (10ms x 100) 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):IGN off -> on Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PSIS connector .
5. Substitute the PSIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good PSIS, and check for proper operation. If the problem is corrected, replace PSIS and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1404 SIS(Side Impact Sensor)Front-Passenger Circuit Short to Ground

General Description

Front Side Impact Sensor(FSIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collision. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag and curtain air bag.

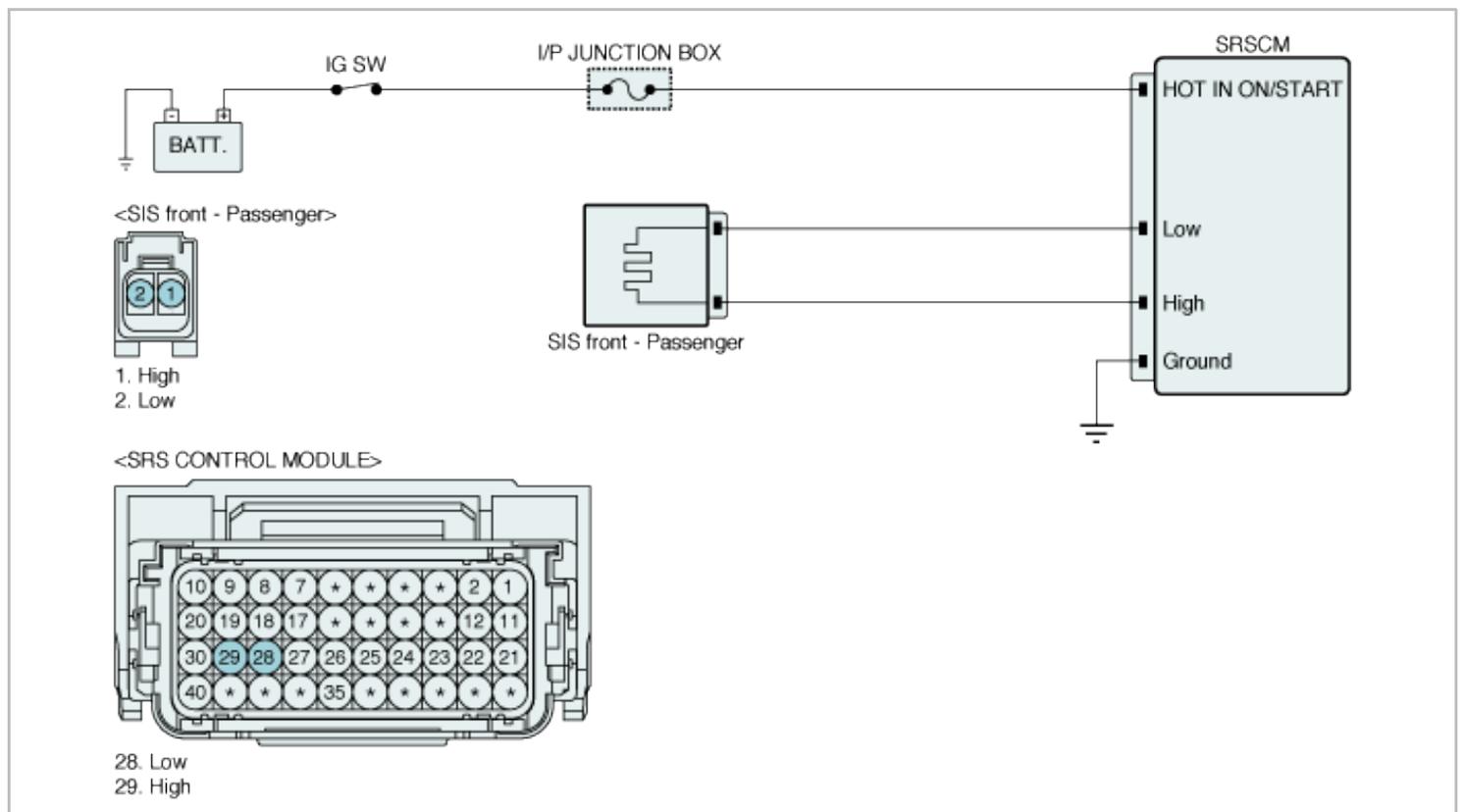
DTC Description

The SRSCM sets DTC B1404 if there is a short to ground in PSIS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Short to ground in PSIS harness. • Faulty PSIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSIS no acceleration data, and line voltage < 3V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2.1s (2 times) • Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):1 time • Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.

2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect PSIS connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the PSIS harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PSIS connector .
5. Substitute the PSIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good PSIS, and check for proper operation. If the problem is corrected, replace PSIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1405 SIS(Side Impact Sensor)Front-Passenger Circuit Short to Battery

General Description

Front Side Impact Sensor(FSIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag and curtain air bag.

DTC Description

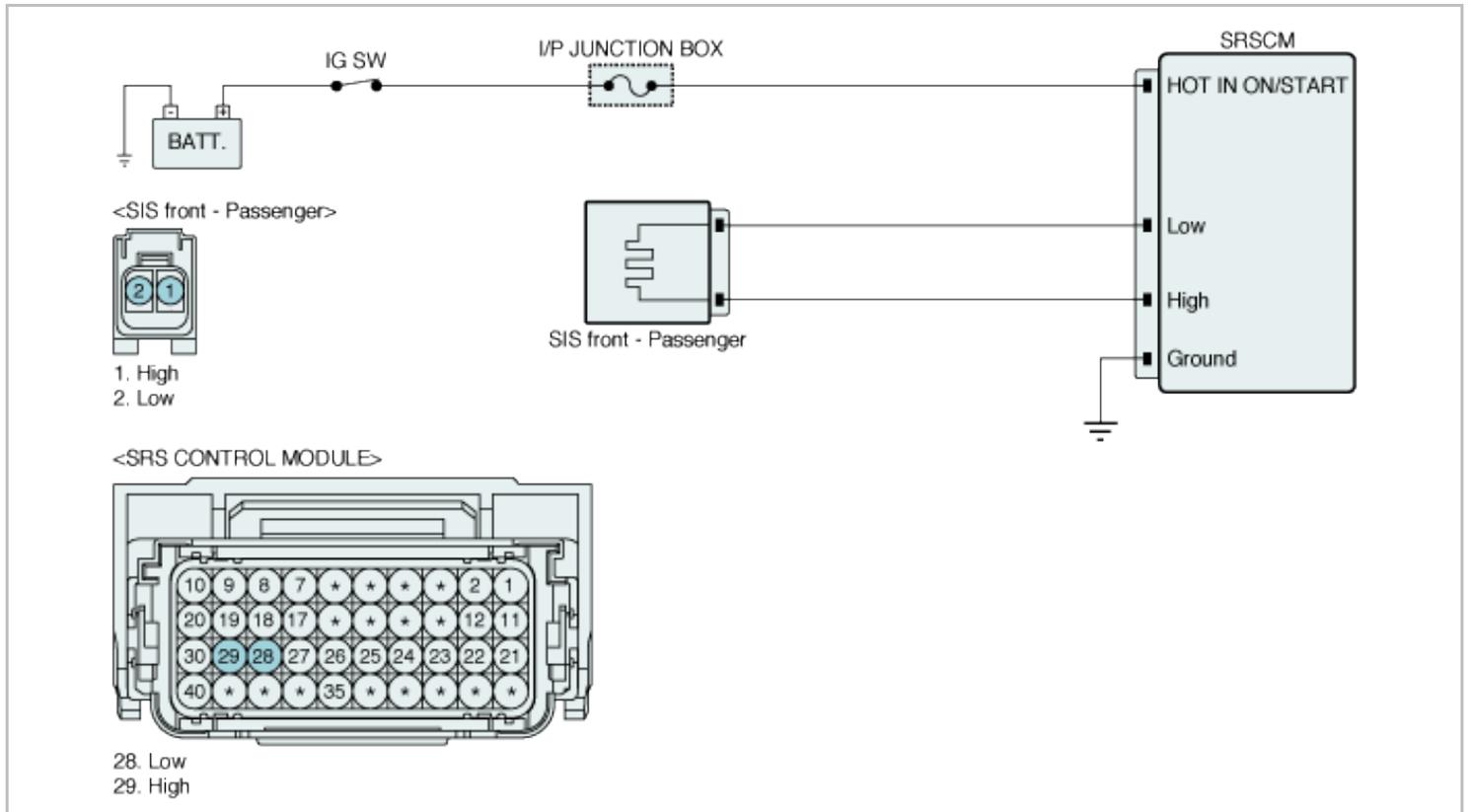
The SRSCM sets DTC B1405 if there is short to power harness in PSIS harness.

DTC Detecting Condition

Item	Detecting Condition	Possible cause
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DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Short to power in PSIS harness. • Faulty PSIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSIS no acceleration data, and line voltage >11V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):0.2s (100ms x 2) • Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):1 time • Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC	
<div style="display: flex; justify-content: space-around;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>	
Description	State
B1405 Side Impact Sensor - Passenger circuit short to Battery	

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

- Ignition "OFF".
- Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
- Disconnect PSIS connector and SRSCM main harness connector.
- Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
- Measure voltage between terminal "Low" or "High" of the PSIS harness connector and chassis ground.

Specification : 0V

6. Is the measured Voltage within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PSIS connector .
5. Substitute the PSIS and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good PSIS, and check for proper operation. If the problem is corrected, replace PSIS and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1409 SIS(Side Impact Sensor) Front-Driver Communication Error

General Description

Side Impact Sensor(SIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag.

DTC Description

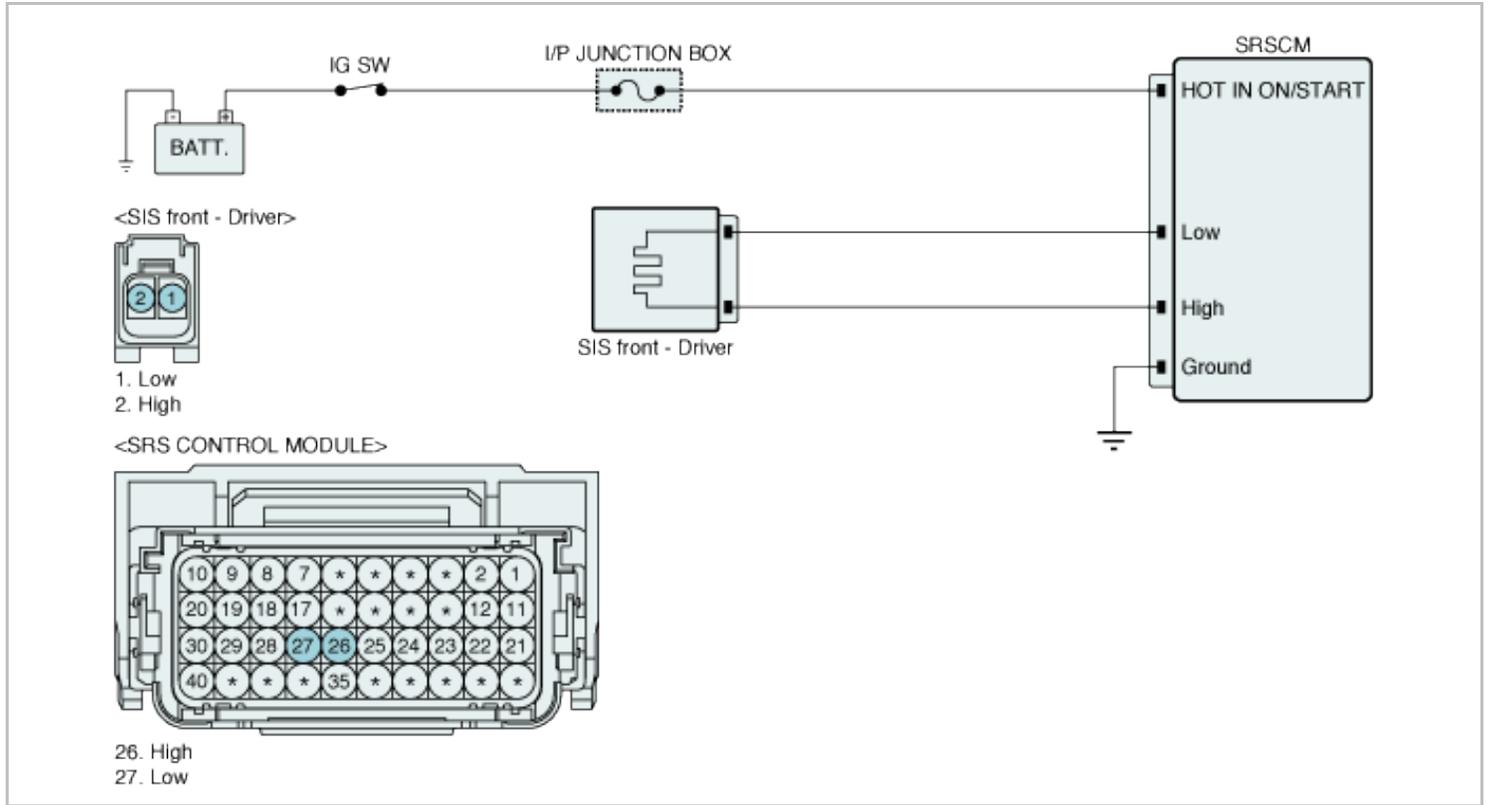
The SRSCM sets DTC B1409 if there is any error in communication between DSIS and SRSCM.

DTC Detecting Condition

Item	Detecting Condition	Possible cause
DTC Strategy	• Check Data	<ul style="list-style-type: none"> • Faulty DSIS circuit. • Faulty DSIS
Enable Conditions	• Ignition "ON"	
Threshold Value	• DSIS no acceleration data, and line voltage is	

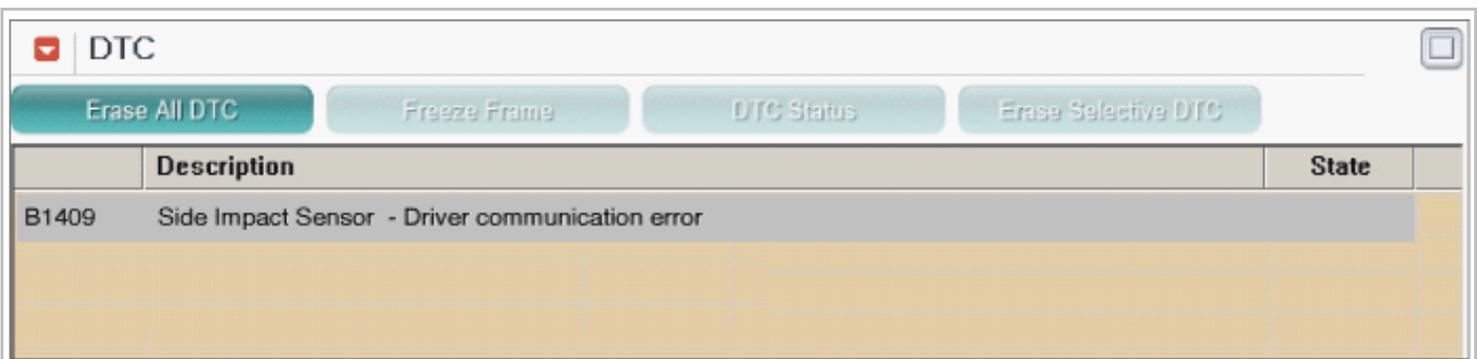
Threshold value		ok (between 3V and 11V)	Faulty DSC. • Faulty SRSCM.
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent

caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.
 Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
 ► Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
 Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage..
3. Has a problem been found?

YES	► Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	► Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect DSIS connector .
5. Substitute the DSIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>► Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>► Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>► Substitute a known-good DSIS, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	► Go to the applicable troubleshooting procedure.
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NO

▶ System is performing to specification at this time.

Restraint > SRSCM > B1410 SIS(Side Impact Sensor) Front-Passenger Communication Error**General Description**

Side Impact Sensor(SIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag.

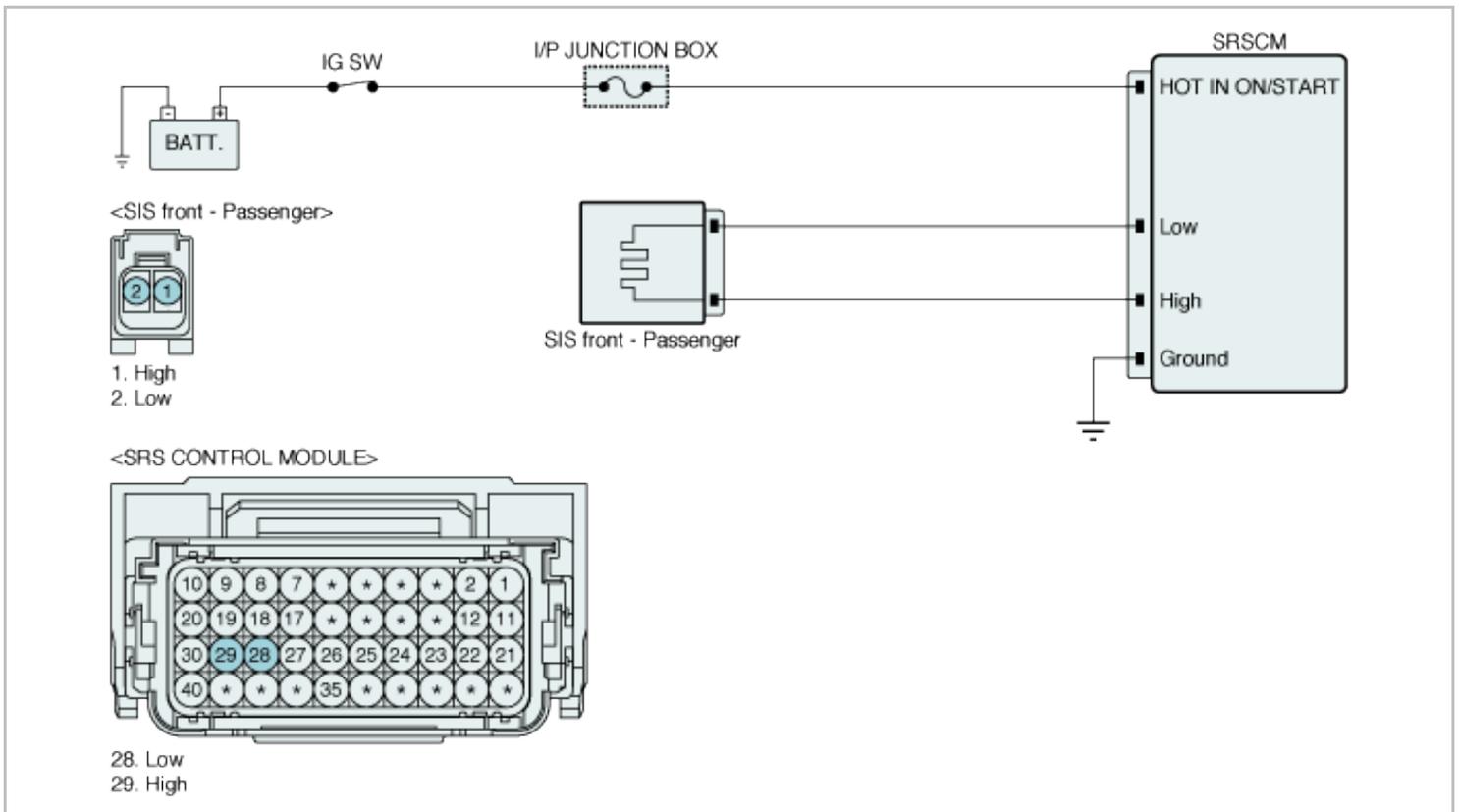
DTC Description

The SRSCM sets DTC B1410 if there is any error in communication between PSIS and SRSCM.

DTC Detecting Condition

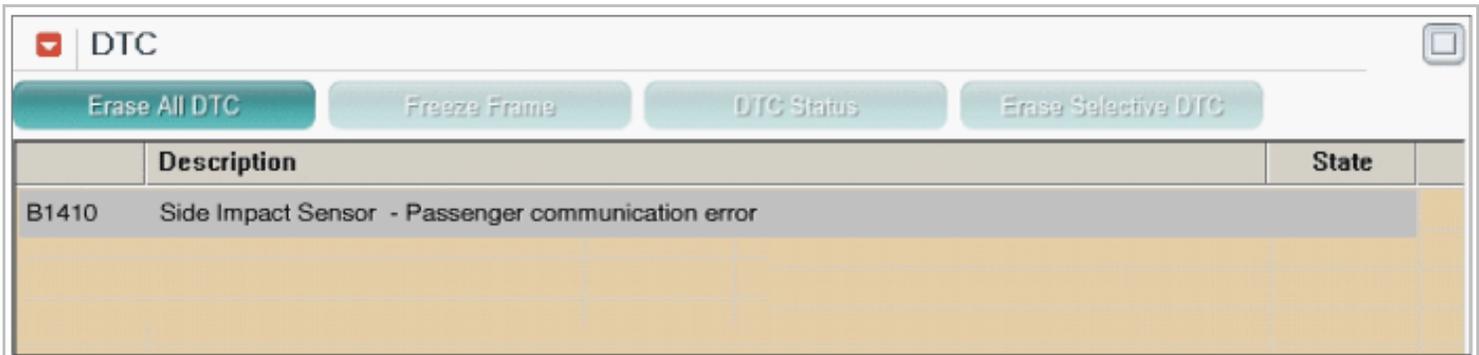
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Faulty PSIS circuit. • Faulty PSIS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSIS no acceleration data, and line voltage is ok (between 3V and 11V)	
Diagnostic Time	Qualification	• Ini(Start Up):2.5 ~ 3.1s (2 times) • Steady:500 μs x 8 + 2.3~2.9s (2 times)	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.
NO	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage..
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PSIS connector .
5. Substitute the PSIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good PSIS, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1414 SIS(Side Impact Sensor) Front-Driver Wrong ID

General Description

Front Side Impact Sensor(FSIS) is located in both side of center pillar detects broad collision. When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collusion. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag and curtain air bag.

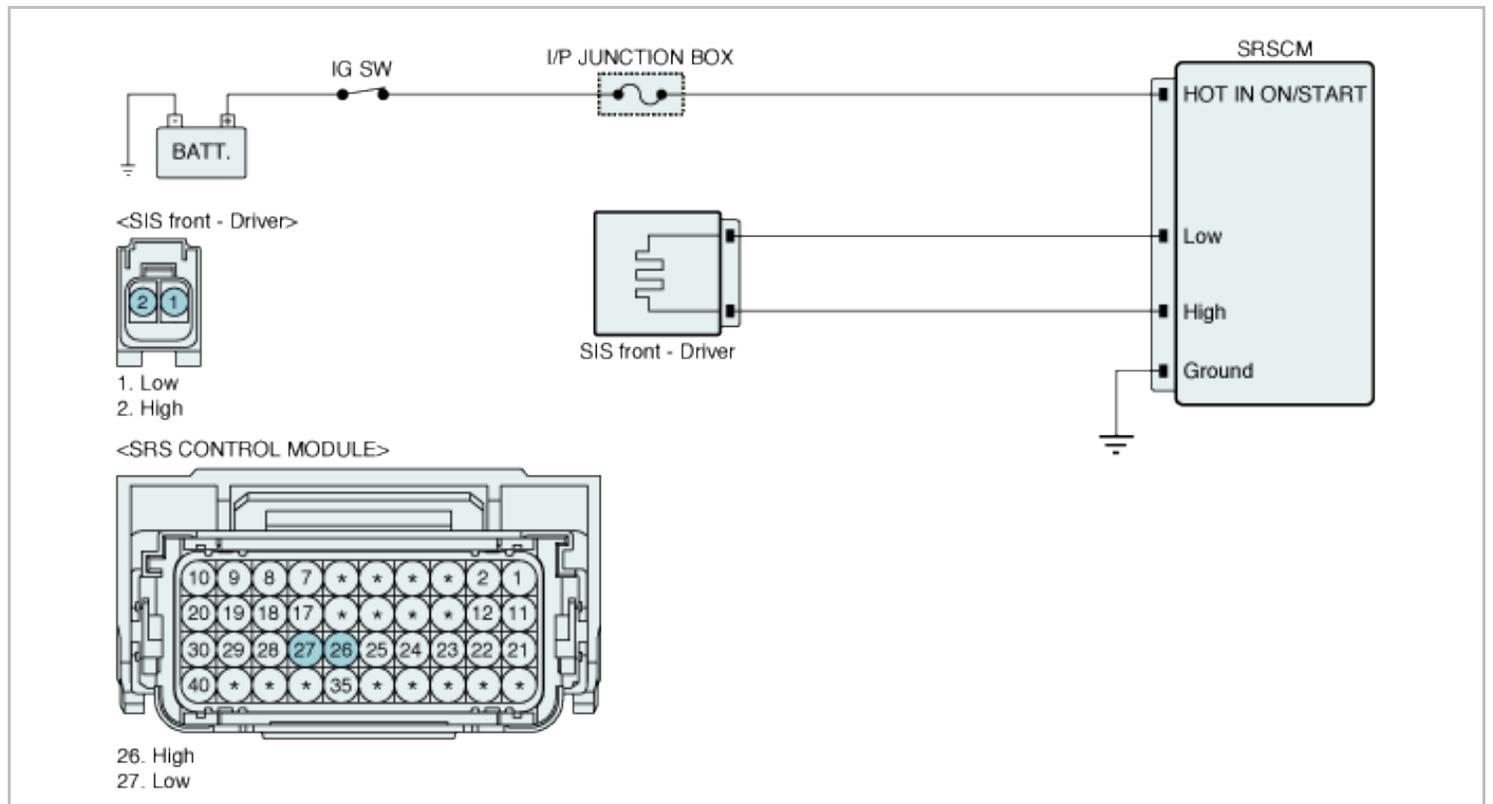
DTC Description

The SRSCM sets DTC B1414 if DSIS with wrong ID is detected.

DTC Detecting Condition

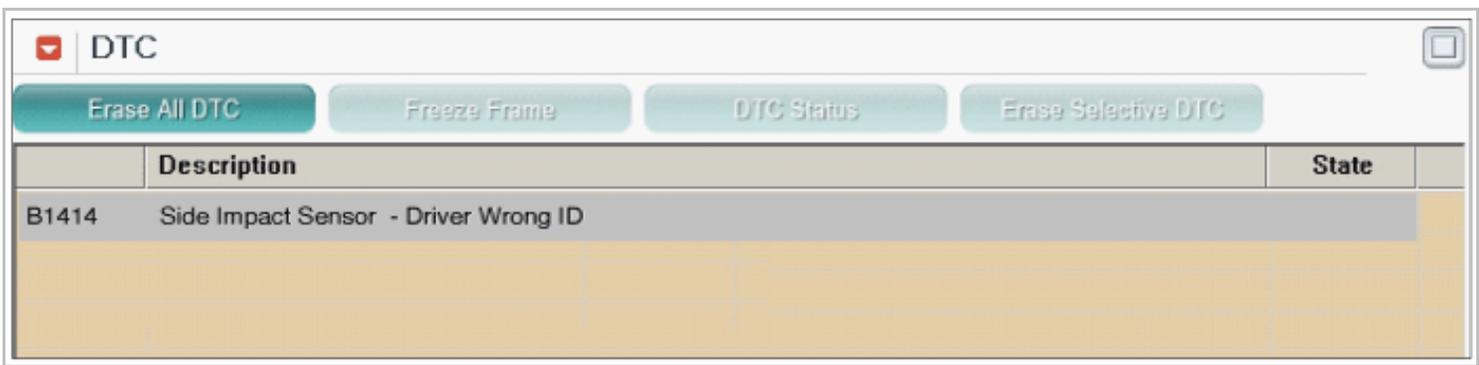
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	• DSIS with wrong ID. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DSIS ID is different from programmed in ACU	
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

- Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
- Ignition "OFF".
- Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
- Disconnect DSIS connector .
- Substitute the DSIS and check for proper operation.
- Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good DSIS, and check for proper operation.

If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1415 SIS(Side Impact Sensor) Front-Passenger Wrong ID

General Description

Front Side Impact Sensor(FSIS) is located in both side of center pillar detects broad collision.

When SIS delivers collision signal to SRSCM, SRSCM checks if safing sensor located in SRSCM detects collision. and if both SIS and safing sensor detects collision simultaneously, SRSCM operates side air bag and curtain air bag.

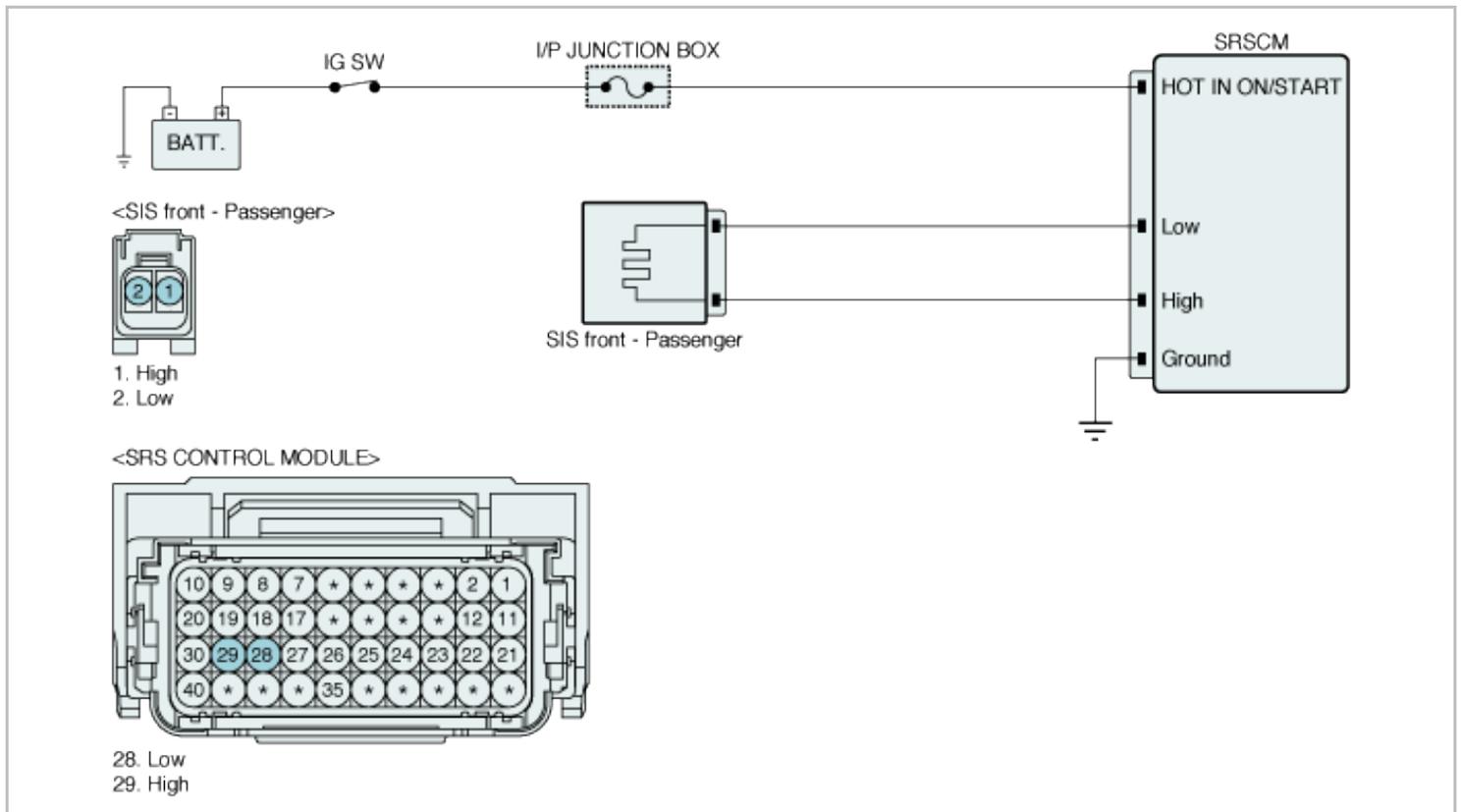
DTC Description

The SRSCM sets DTC B1415 if PSIS with wrong ID is detected.

DTC Detecting Condition

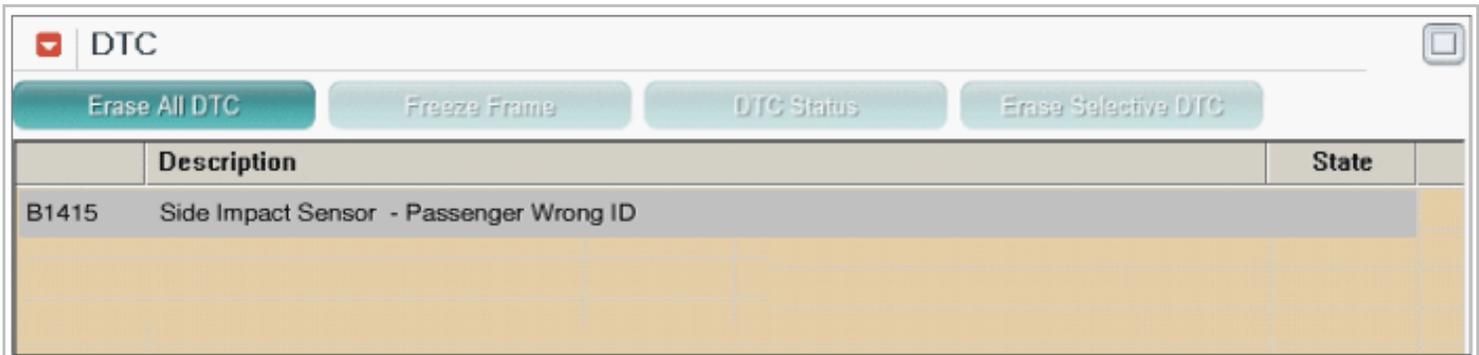
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	• PSIS with wrong ID. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PSIS ID is different from programmed in ACU	
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PSIS connector .
5. Substitute the PSIS and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good PSIS, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1473 Inflatable Curtain Airbag Front-Driver Resistance too High

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1473 if the measured resistance value of DCAB circuit is more than the threshold value. *In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

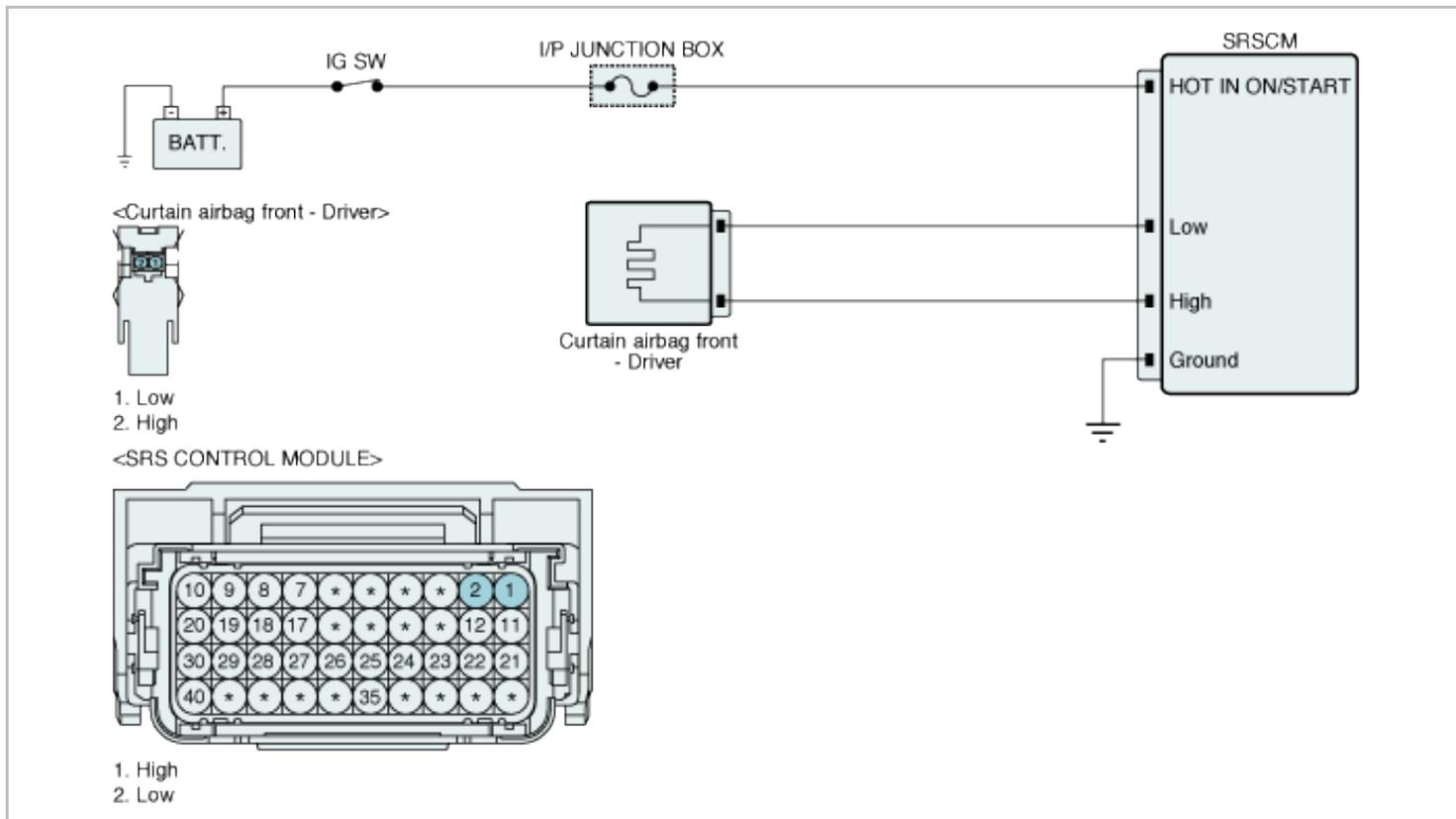
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DCAB resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of curtain airbag front-Driver < 6.6Ω

Reference :

In a case of an open in the curtain airbag front-Driver circuit : FAIL

In a case of a short to battery in the curtain airbag front-Driver circuit: FAIL

In a case of a short to ground in the curtain airbag front-Driver circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DCAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the DCAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1474 if the measured resistance value of DCAB circuit is less than the threshold value. *In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

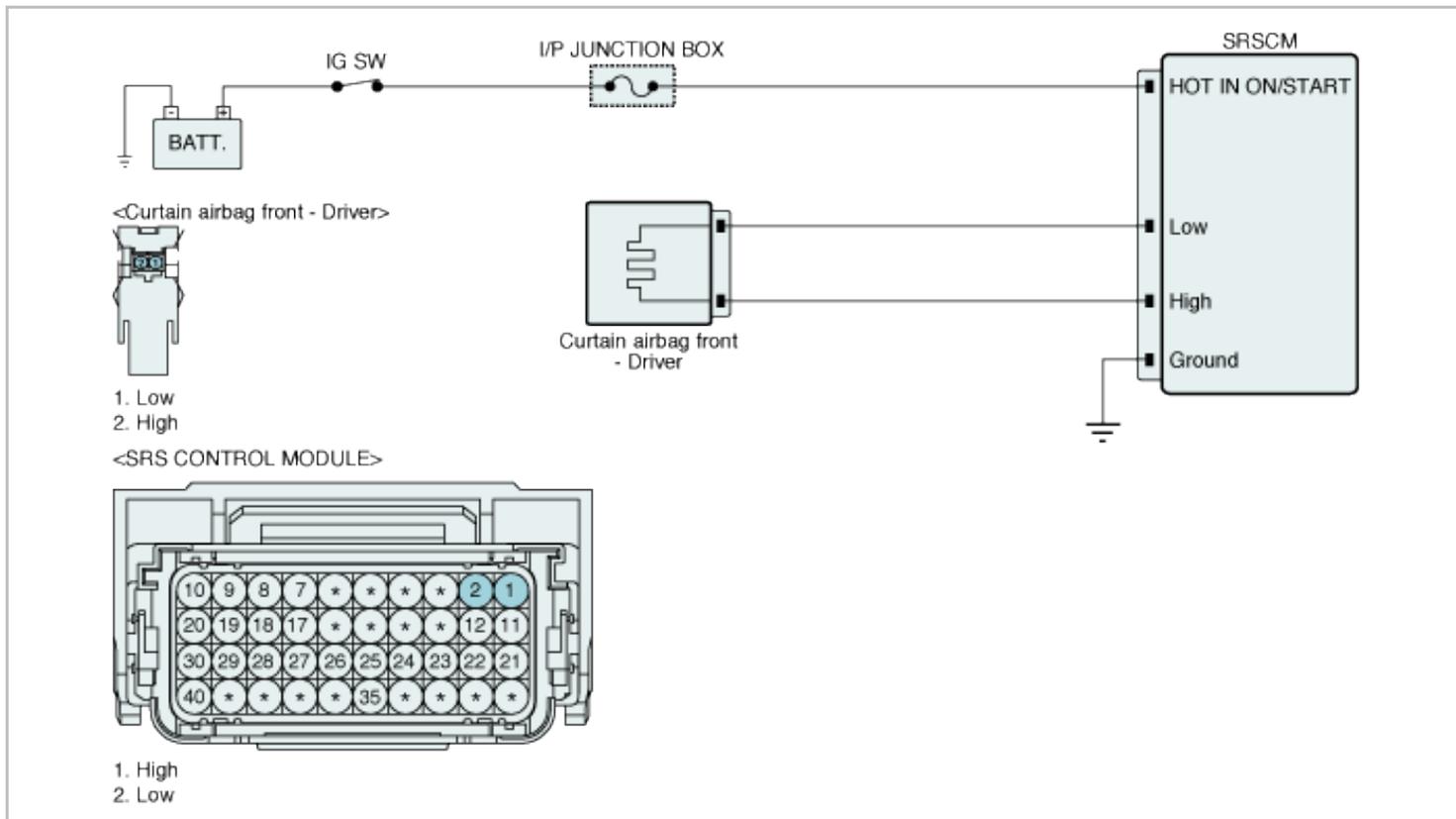
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DCAB resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of curtain airbag front-Driver < 6.6Ω

Reference :

In a case of an open in the curtain airbag front-Driver circuit : FAIL

In a case of a short to battery in the curtain airbag front-Driver circuit: FAIL

In a case of a short to ground in the curtain airbag front-Driver circuit : FAIL

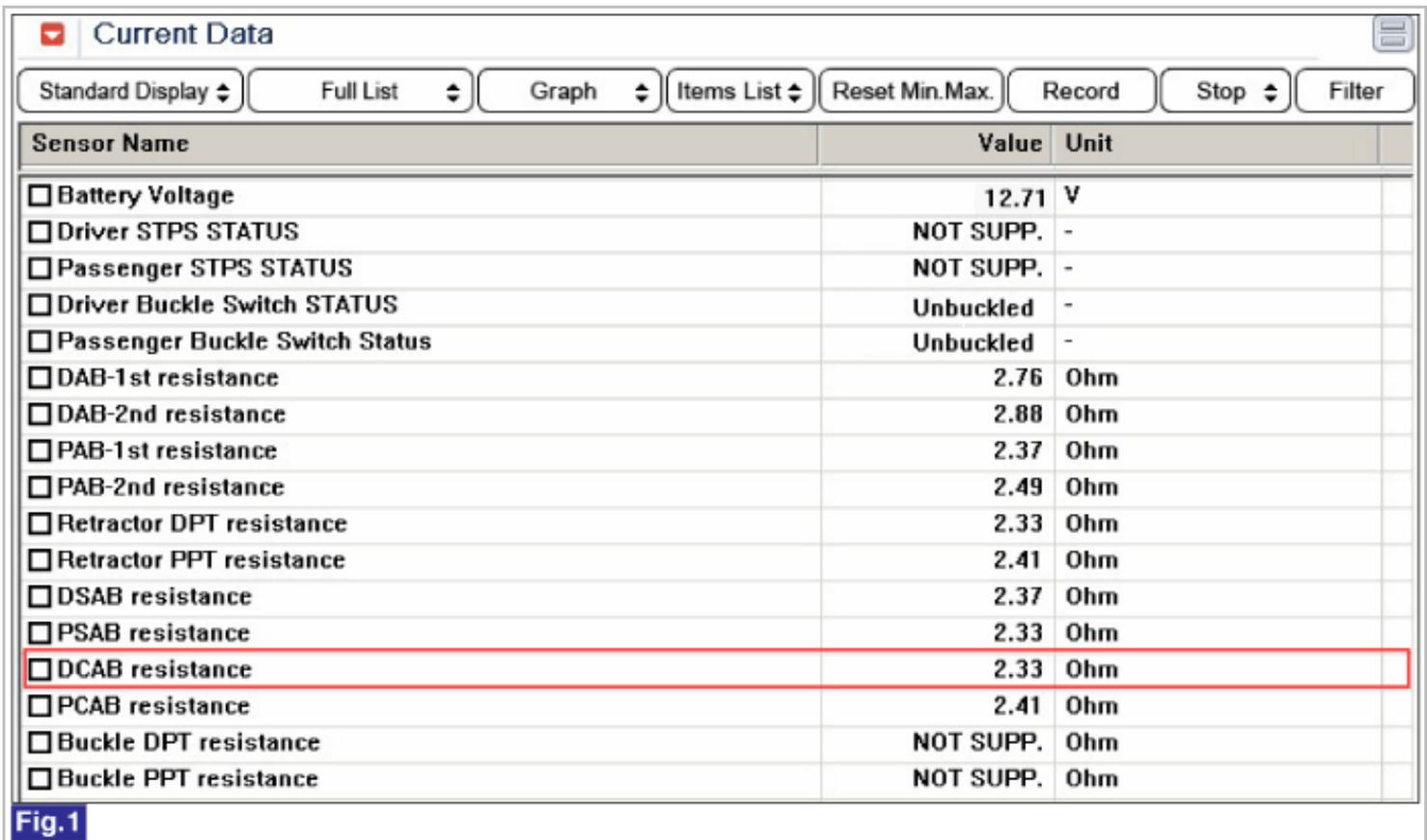


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DCAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the DCAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1475 Inflatable Curtain Airbag Front-Driver Resistance Circuit Short to Ground

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1475 if there is a short to ground in DCAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

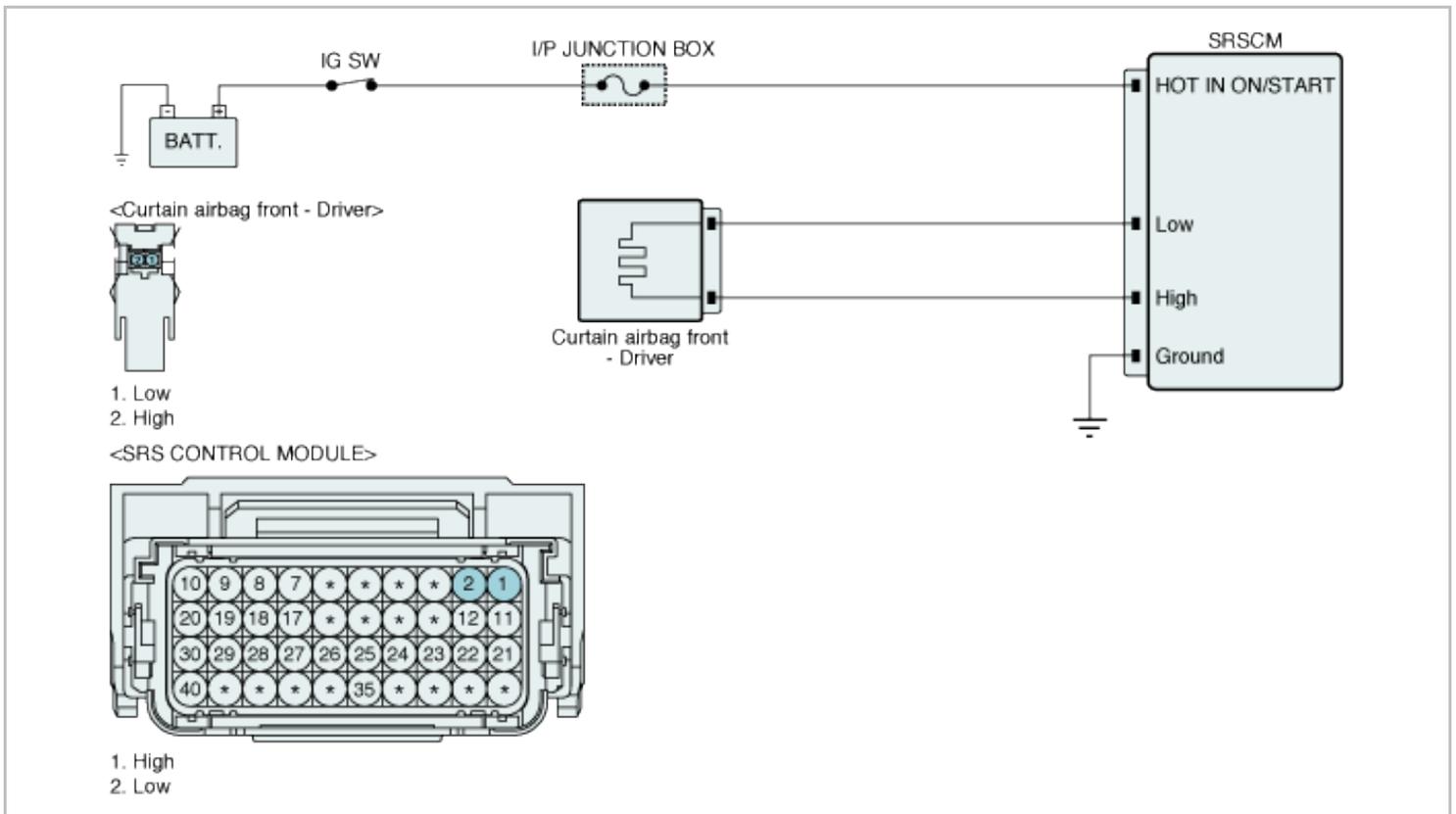
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to ground in DCAB harness. • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DCAB Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of curtain airbag front-Driver < 6.6Ω

Reference :

In a case of an open in the curtain airbag front-Driver circuit : FAIL

In a case of a short to battery in the curtain airbag front-Driver circuit: FAIL

In a case of a short to ground in the curtain airbag front-Driver circuit : FAIL

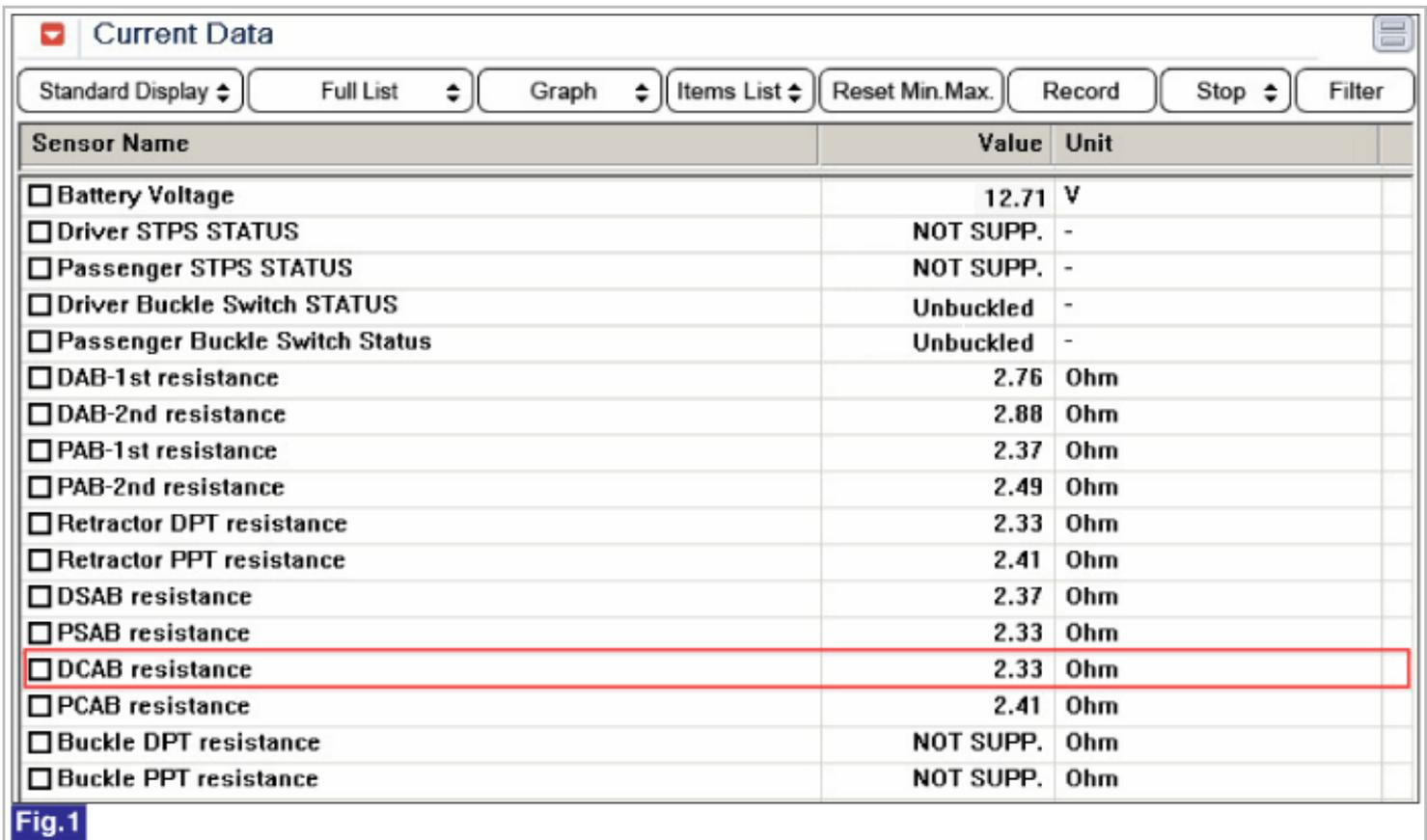


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF"

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DCAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the DCAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1476 Inflatable Curtain Airbag Front-Driver Resistance Circuit Short to Battery

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1476 if there is a short to power in DCAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

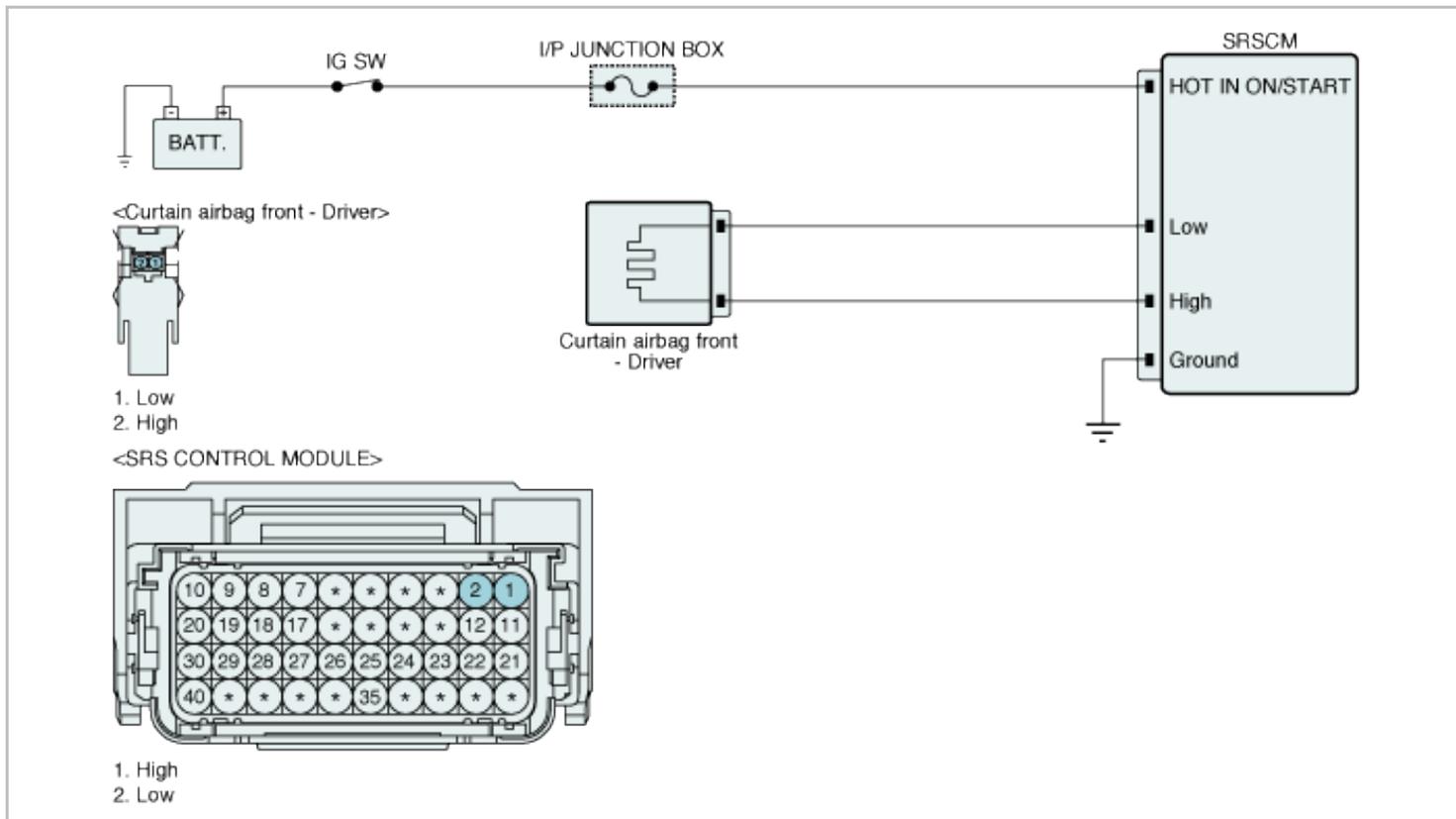
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to power in DCAB harness. • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DCAB Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Driver resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of curtain airbag front-Driver < 6.6Ω

Reference :

In a case of an open in the curtain airbag front-Driver circuit : FAIL

In a case of a short to battery in the curtain airbag front-Driver circuit: FAIL

In a case of a short to ground in the curtain airbag front-Driver circuit : FAIL

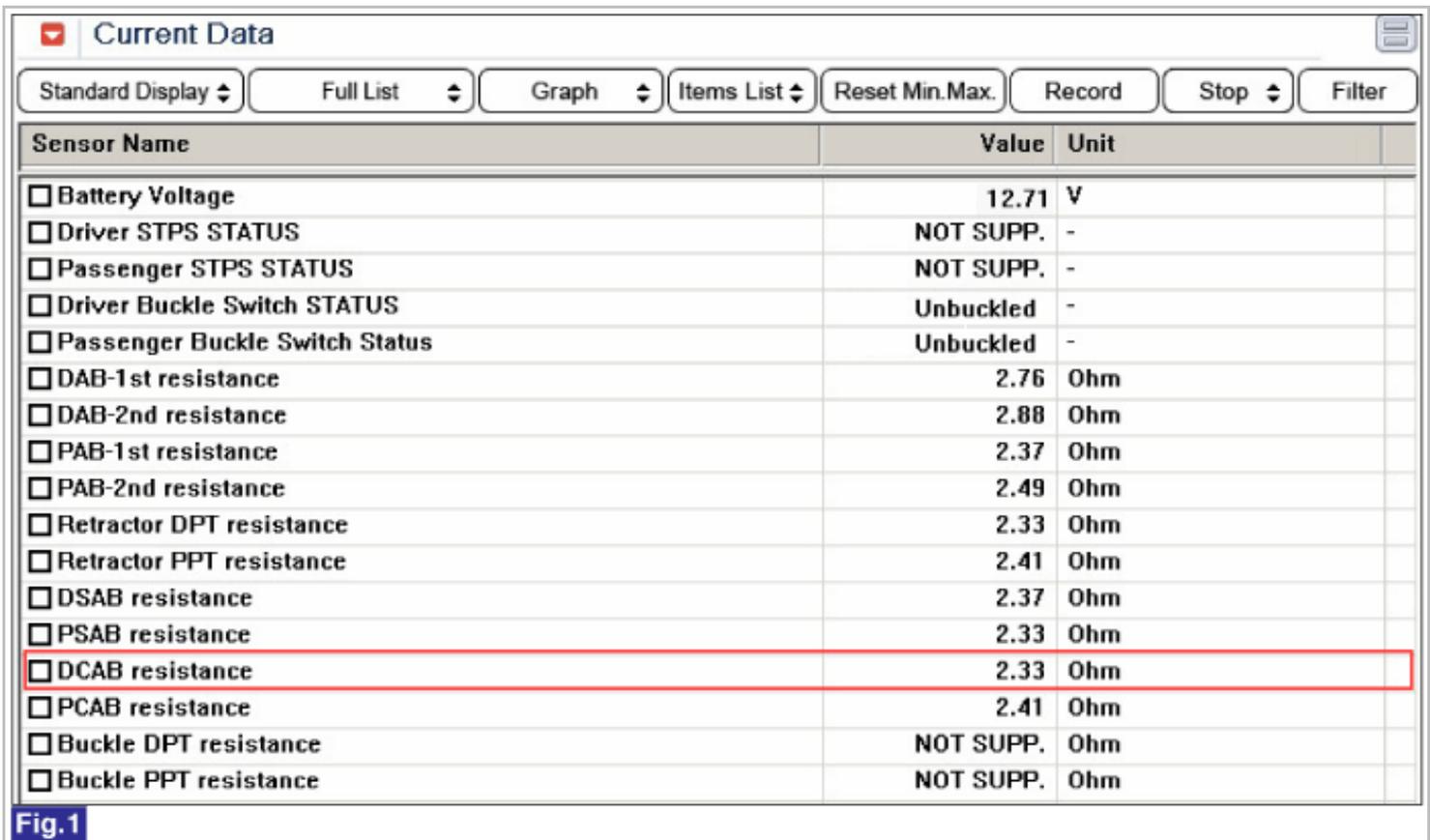


Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect DCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect DCAB connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the DCAB harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1477 Inflatable Curtain Airbag Front-Passenger Resistance too High

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1477 if the measured resistance value of PCAB circuit is more than the threshold value. *In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

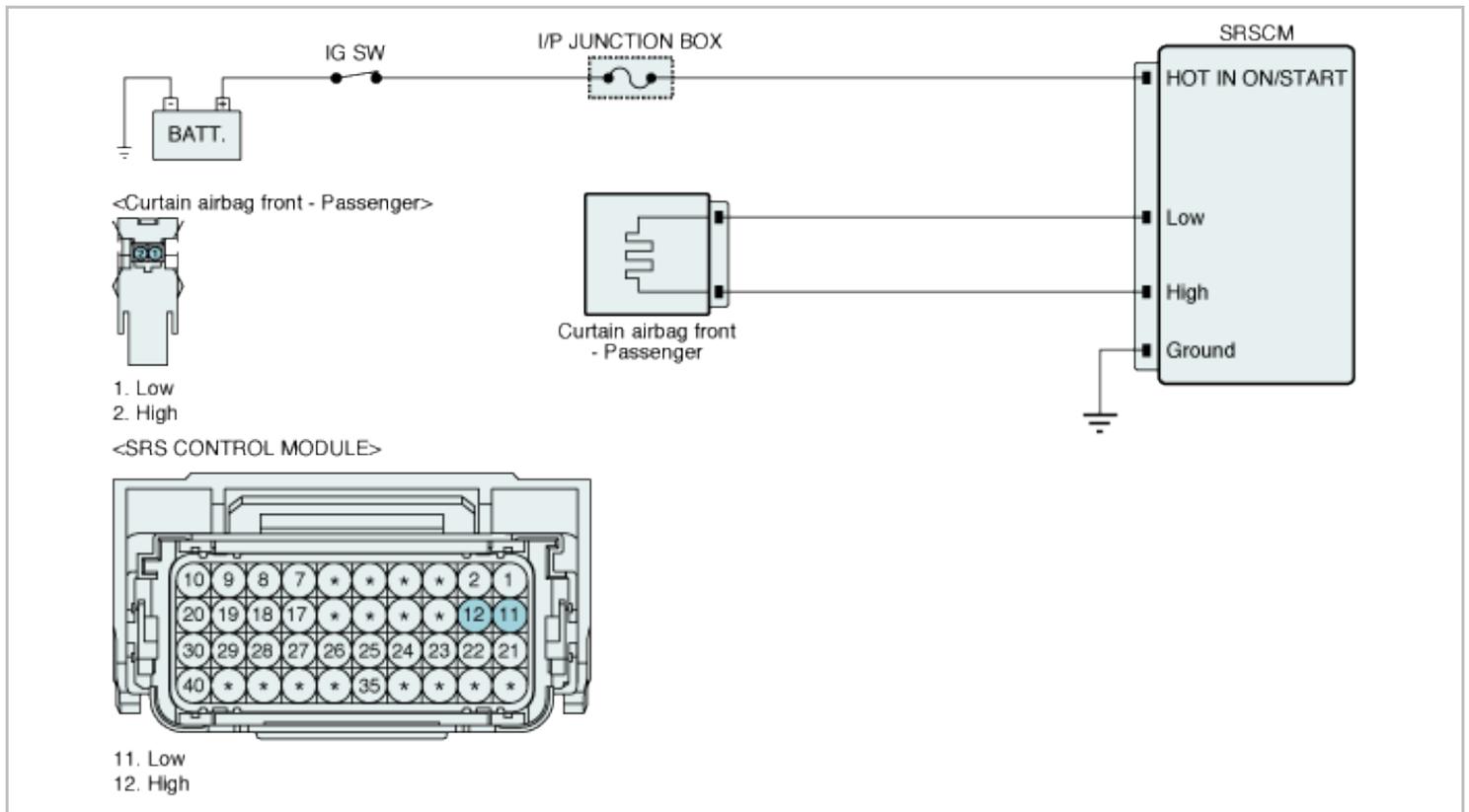
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	• Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PCAB resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Passenger resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of curtain airbag front-Passenger} < 6.6\Omega$

Reference :

- In a case of an open in the curtain airbag front-Passenger circuit : FAIL
- In a case of a short to battery in the curtain airbag front-Passenger circuit: FAIL
- In a case of a short to ground in the curtain airbag front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PCAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the PCAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1478 if the measured resistance value of PCAB circuit is less than the threshold value. *In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

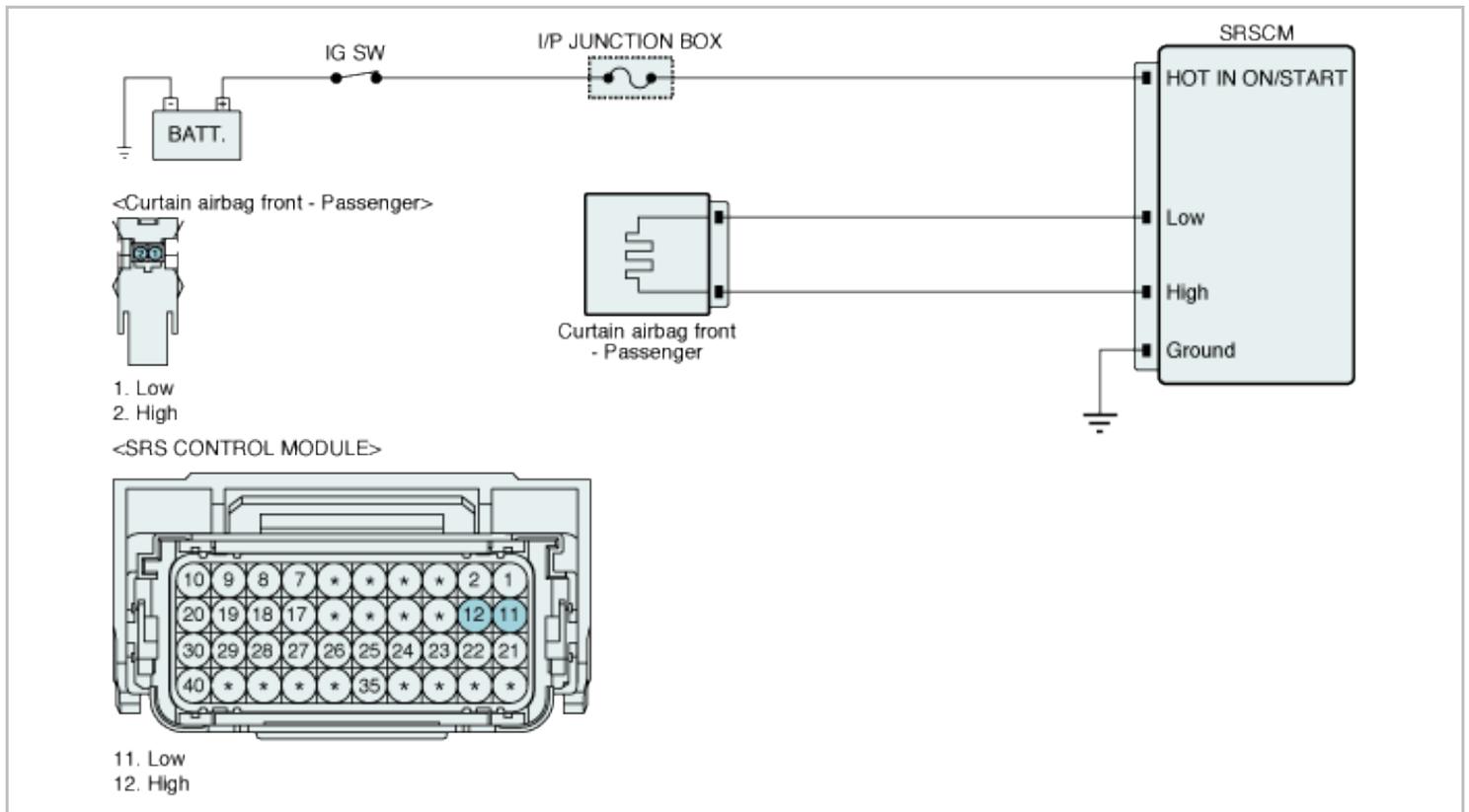
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PCAB resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Passenger resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of curtain airbag front-Passenger} < 6.6\Omega$

Reference :

- In a case of an open in the curtain airbag front-Passenger circuit : FAIL
 In a case of a short to battery in the curtain airbag front-Passenger circuit: FAIL
 In a case of a short to ground in the curtain airbag front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

- Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PCAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" and "High" of the PCAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1479 Inflatable Curtain Airbag Front-Passenger Resistance Circuit Short to Ground

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1479 if there is a short to ground in PCAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

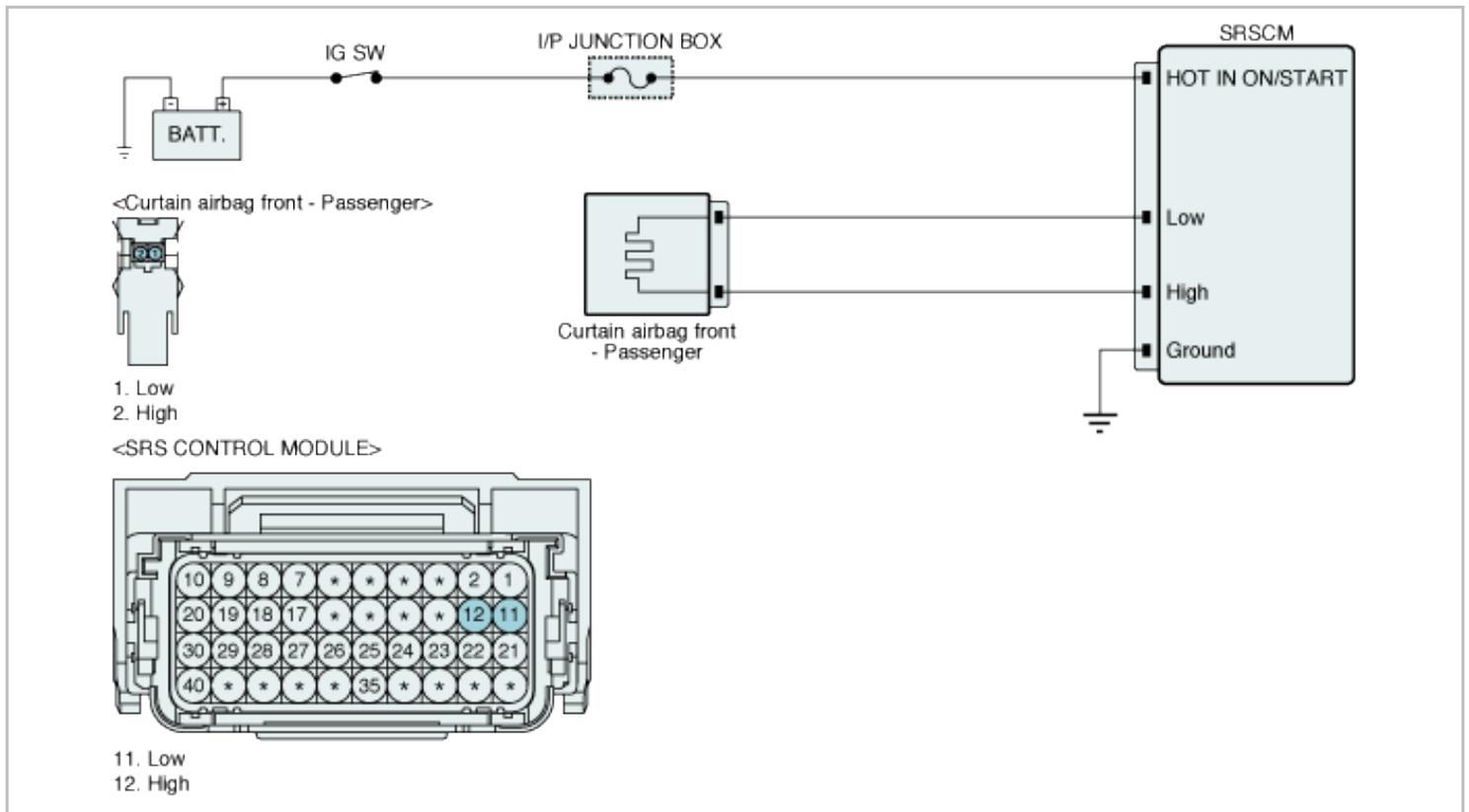
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to ground in PCAB harness. • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PCAB Squib line Voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Passenger resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of curtain airbag front-Passenger} < 6.6\Omega$

Reference :

- In a case of an open in the curtain airbag front-Passenger circuit : FAIL
- In a case of a short to battery in the curtain airbag front-Passenger circuit: FAIL
- In a case of a short to ground in the curtain airbag front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PCAB connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the PCAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1480 Inflatable Curtain Airbag Front-Passenger Resistance Circuit Short to Battery

General Description

Curtain Airbag (hereinafter referred to CAB) is located at driver and passenger side of headliner. It protects passenger's head and shoulder from fragments of glass or something sharpen caused by overturn. CAB is consist of air bag and inflator. Air bag reduces impact of collision by filled up gas. Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of CAB directly, Current of measuring device may cause unexpected air bag deploy.

DTC Description

The SRSCM sets DTC B1480 if there is a short to power in PCAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

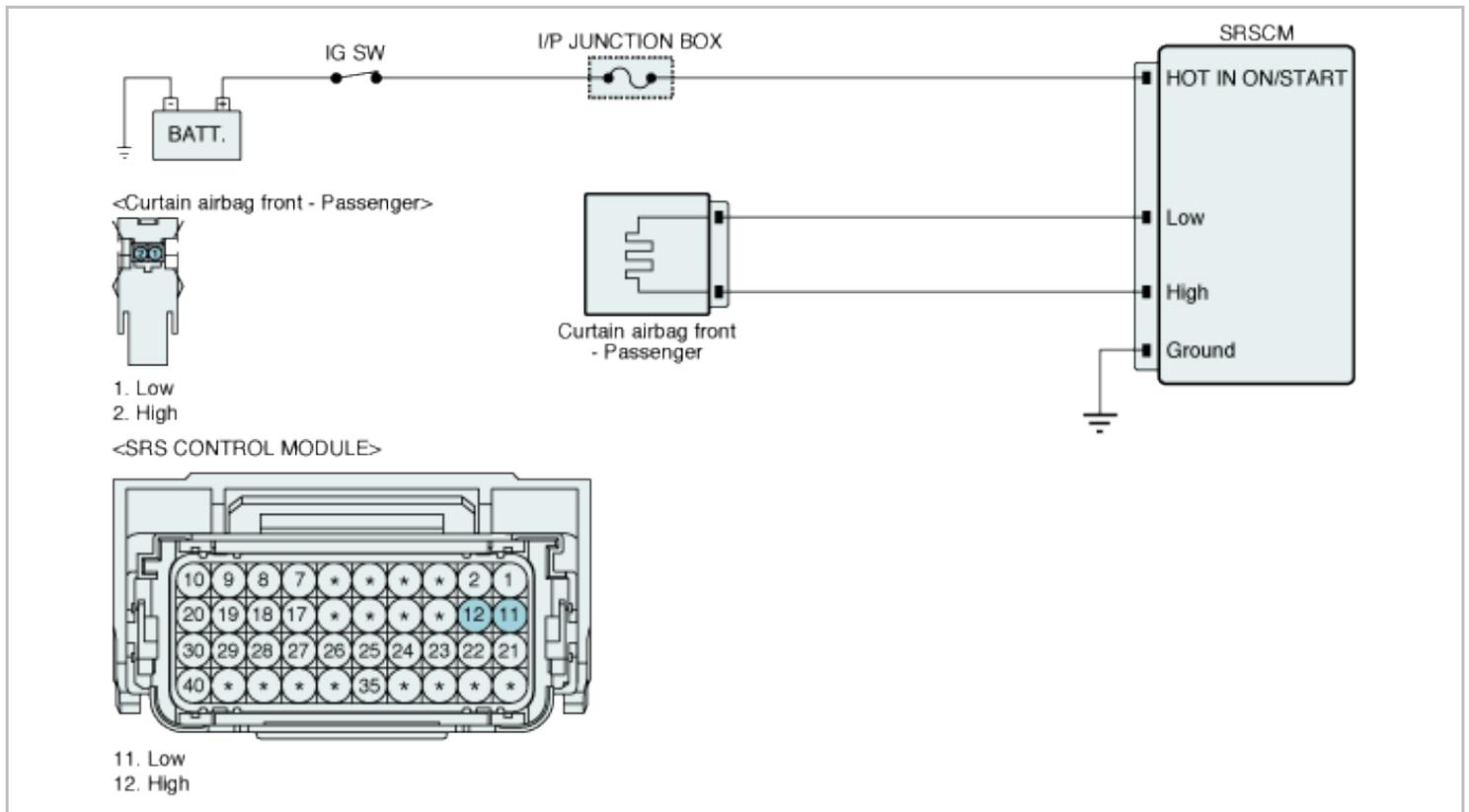
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Voltage	• Short to power in PCAB harness. • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PCAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PCAB Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Curtain airbag front-Passenger resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of curtain airbag front-Passenger} < 6.6\Omega$

Reference :

- In a case of an open in the curtain airbag front-Passenger circuit : FAIL
- In a case of a short to battery in the curtain airbag front-Passenger circuit: FAIL
- In a case of a short to ground in the curtain airbag front-Passenger circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Disconnect PCAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to main harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PCAB or 2Ω resistor.

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good DCAB assembly, and check for proper operation. If the problem is corrected, replace DCAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PCAB connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the PCAB harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1481 Driver Airbag Resistance too High(2nd stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.

It can protect driver with less impact of gas expansion force, that can reduce driver's injury

Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1481 if the measured resistance value of DAB circuit is more than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

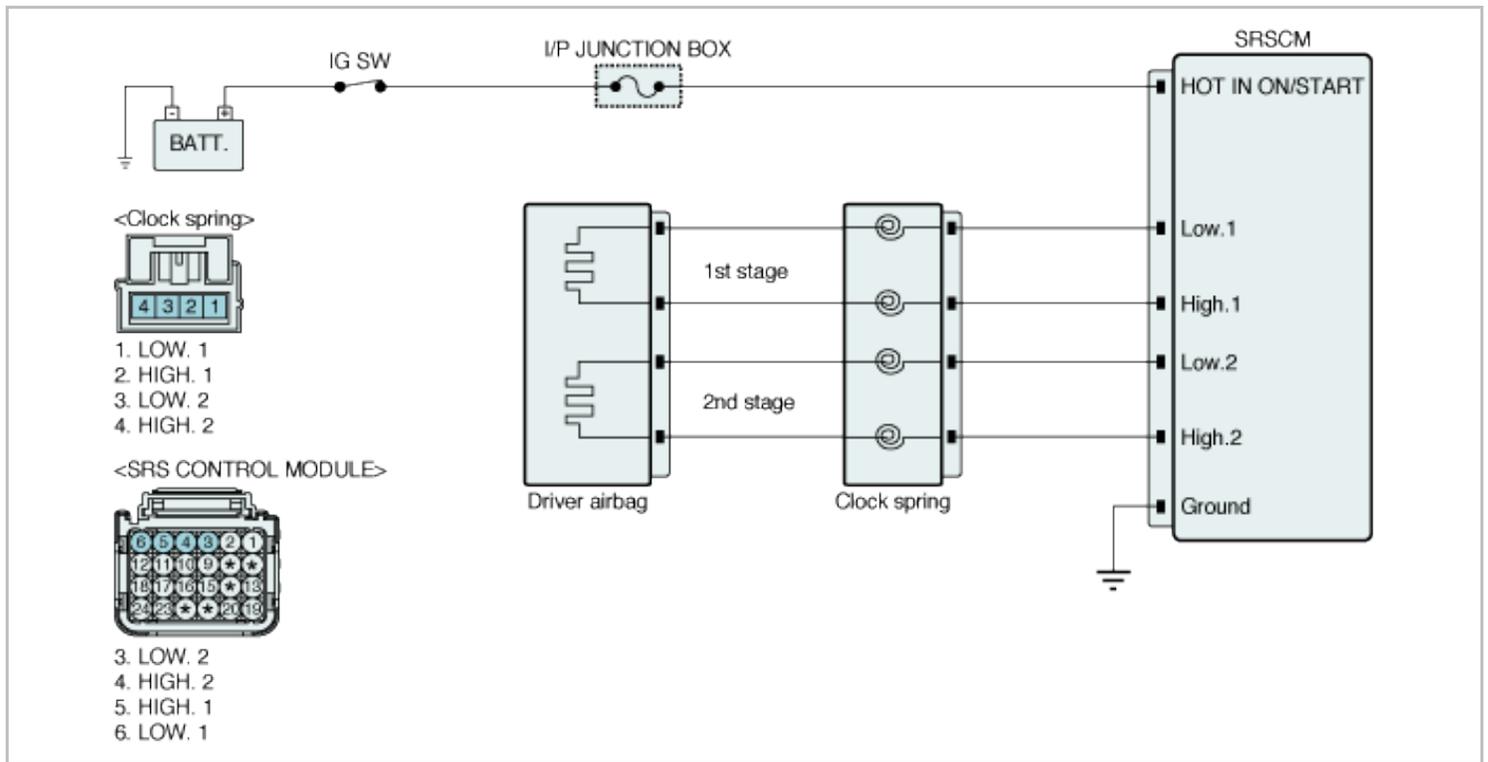
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	• Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DAB. • Faulty Clock spring. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DAB 2nd stage resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of 2nd stage Driver airbag < 6.6Ω

Reference :

In a case of an open in the 2nd stage Driver airbag circuit : FAIL

In a case of a short to battery in the 2nd stage Driver airbag circuit: FAIL

In a case of a short to ground in the 2nd stage Driver airbag circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF" .
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" and "High.2" of the Clock Spring harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation. If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" and "High.2" of the DAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1482 Driver Airbag Resistance too Low(2nd stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.

It can protect driver with less impact of gas expention force, that can reduce driver's injury

Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1482 if the measured resistance value of DAB circuit is less than the threshold value(1.0Ω)

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

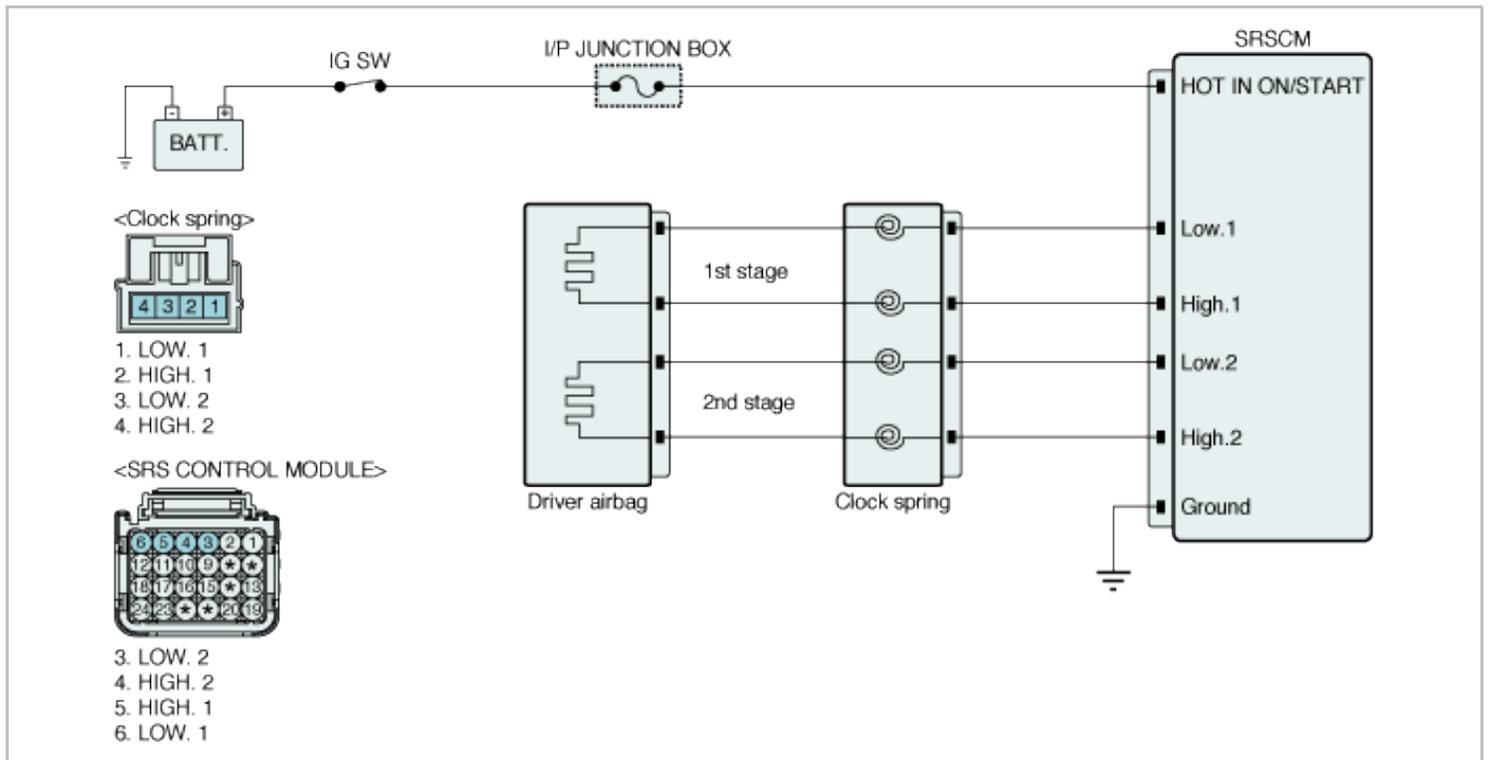
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty DAB. • Faulty Clock spring. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DAB 2nd stage resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of 2nd stage Driver airbag} < 6.6\Omega$

Reference :

In a case of an open in the 2nd stage Driver airbag circuit : FAIL

In a case of a short to battery in the 2nd stage Driver airbag circuit: FAIL

In a case of a short to ground in the 2nd stage Driver airbag circuit : FAIL

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	<ul style="list-style-type: none"> ▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".
2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" and "High.2" of the Clock Spring harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation. If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" and "High.2" of the DAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1483 Driver Airbag Resistance Circuit Short to Ground(2nd stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.

It can protect driver with less impact of gas expention force, that can reduce driver's injury

Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1483 if there is a short to ground in DAB harness

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while

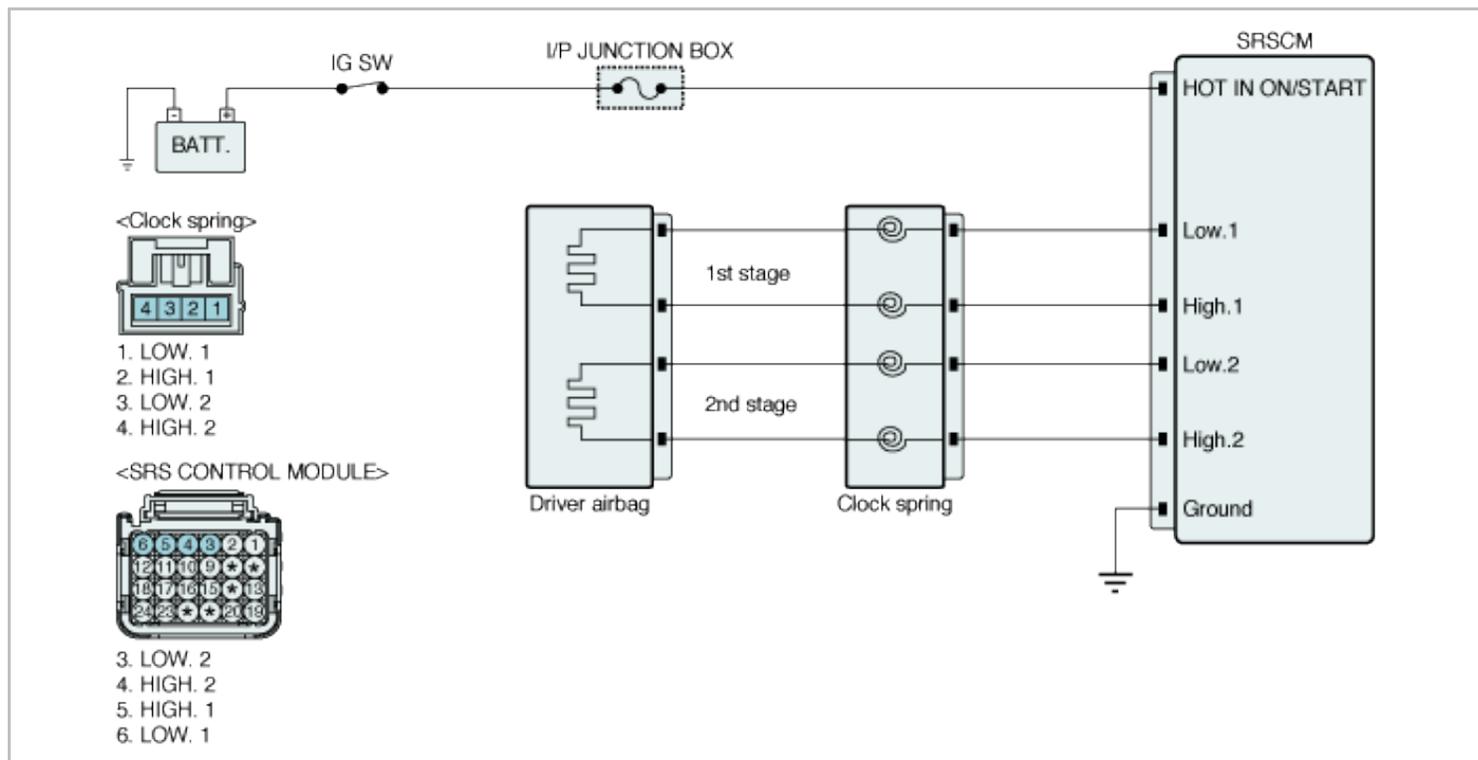
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Short to ground in DAB harness. • Poor connection of connected part. • Faulty DAB. • Faulty Clock spring. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DAB 2nd stage Squib line voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of 2nd stage Driver airbag < 6.6Ω

Reference :

In a case of an open in the 2nd stage Driver airbag circuit : FAIL

In a case of a short to battery in the 2nd stage Driver airbag circuit: FAIL

In a case of a short to ground in the 2nd stage Driver airbag circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF"
2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adaptor (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF" .
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" or "High.2"of the clock spring harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation. If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".

2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" or "High.2"of the DAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1484 Driver Airbag Resistance Circuit Short to Battery(2nd stage)

General Description

Driver Air bag module (hereinafter referred to DAB) located at center of steering wheel protects driver by reducing impact of collision.

DAB is consist of air bag, pat cover and inflator.

There are power,circuit for ignition, gas generator and diffuser screen in inflator.

Air bag reduces impact of collision by filled up gas.

In collision, pat cover splits and through this crack, air bag emerges and deploys.

Inflator generates gas that expands air bag.

Clock spring is located between steering wheel and column. It connects SCSRM to DAB.

CAUTION

Never measure resistance of DAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.

It can protect driver with less impact of gas expention force, that can reduce driver's injury

Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1484 if there is a short to power in DAB harness

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

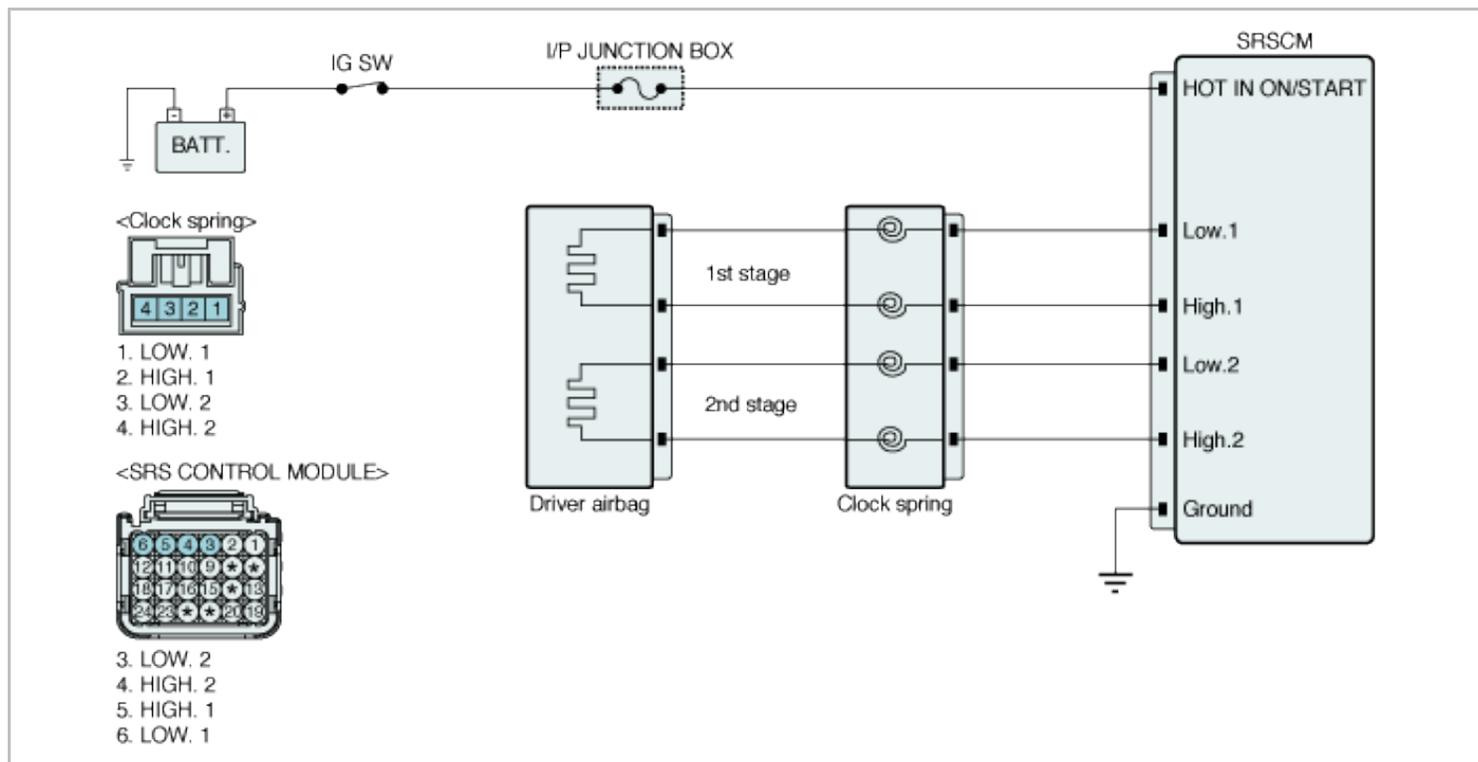
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Short to power in DAB harness. • Poor connection of connected part. • Faulty DAB. • Faulty Clock spring. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• DAB 2nd stage Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	$0.9V \leq \text{Squib line Voltage} \leq 2.9V$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

0.9Ω< Resistance of 2nd stage Driver airbag < 6.6Ω

Reference :

In a case of an open in the 2nd stage Driver airbag circuit : FAIL

In a case of a short to battery in the 2nd stage Driver airbag circuit: FAIL

In a case of a short to ground in the 2nd stage Driver airbag circuit : FAIL

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.

Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.

3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.

3. Remove the DAB module and connect the dummy (0957A-38200) and dummy adaptor (0957A-2G000) to DAB connector of the clock spring harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good DAB or 2Ω resistor.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.

5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.

6. Is DTC present problem ?

YES	▶ Go to "Clock Spring Circuit Inspection" procedure.
NO	▶ Substitute a known-good DAB assembly, and check for proper operation. If the problem is corrected, replace DAB and then go to "Verification of Vehicle Repair" procedure.

Clock Spring Circuit Inspection

1. Ignition "OFF" .

2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.

3. Remove DAB module and disconnect SRSCM connector of the clock spring harness.

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".

5. Measure Voltage between terminal "Low.2" or "High.2" of the clock spring harness connector and chassis ground.

Specification : 0V

6. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the Clock spring and check for proper operation.

If the problem is corrected, replace Clock spring and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF" and wait at least one minutes.
2. Remove DAB module and disconnect SRSCM connector of the main harness.
3. Ignition "ON" & Engine "OFF".

WARNING

Lay Removed DAB facing upward for unexpected air bag deploy .

4. Measure voltage between terminal "Low.2" or "High.2" of the DAB harness connector and chassis ground.

Specification : approx. 0V

5. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1485 Passenger Airbag Resistance too High(2nd stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by filled up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.
It can protect driver with less impact of gas expansion force, that can reduce driver's injury
Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1485 if the measured resistance value of PAB circuit is more than the threshold value.
*In this case, SRSCM checks if there's any fault in circuit by sending current for a while

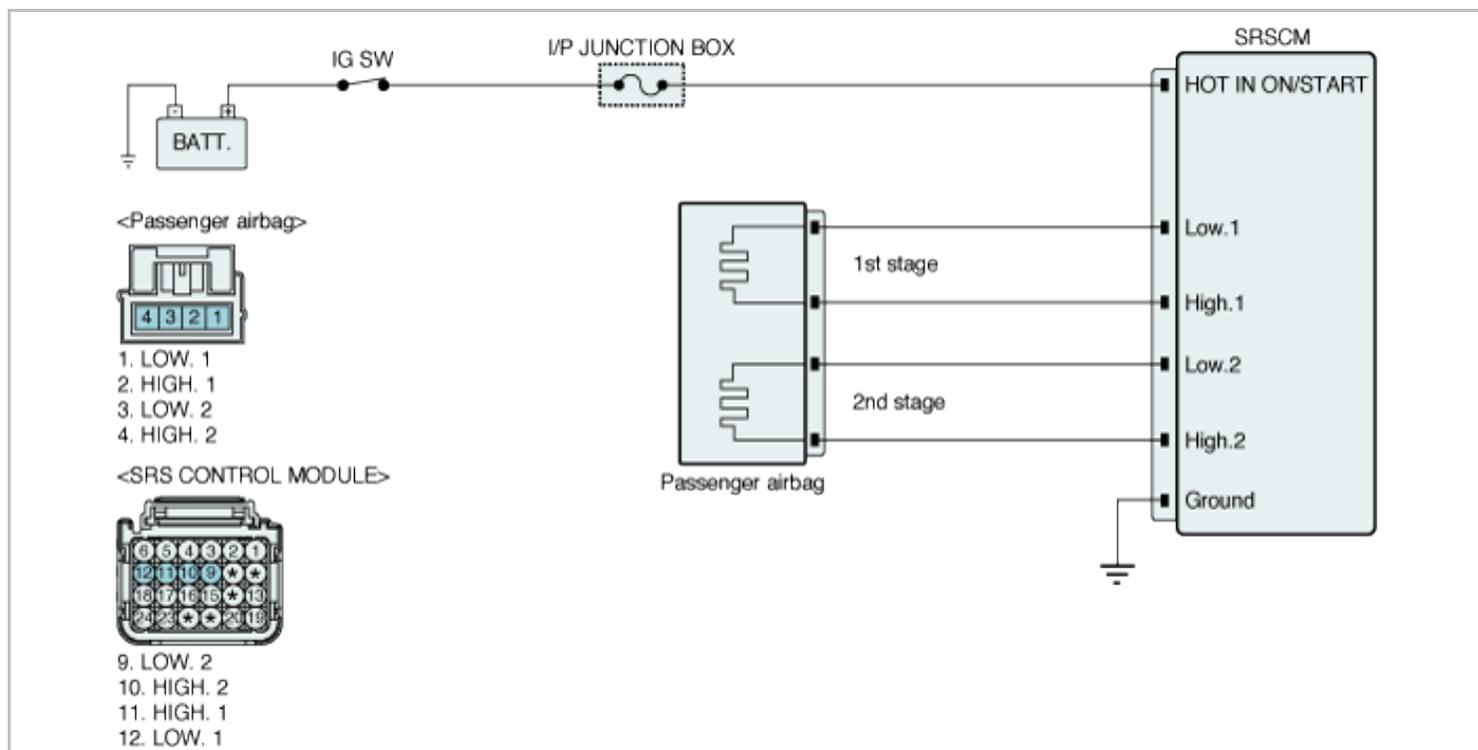
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 2nd stage resistance $\geq 6.6\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of 2nd stage Passenger airbag < 6.6Ω

Reference :

In a case of an open in the 2nd stage Passenger airbag circuit : FAIL

In a case of a short to battery in the 2nd stage Passenger airbag circuit: FAIL

In a case of a short to ground in the 2nd stage Passenger airbag circuit : FAIL

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".
2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adaptor (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" and "High.2" of the PAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair"
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	procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1486 Passenger Airbag Resistance too Low(2nd stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by fillied up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.

It can protect driver with less impact of gas expention force, that can reduce driver's injury

Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1353 if the measured resistance value of PAB circuit is less than the threshold value.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

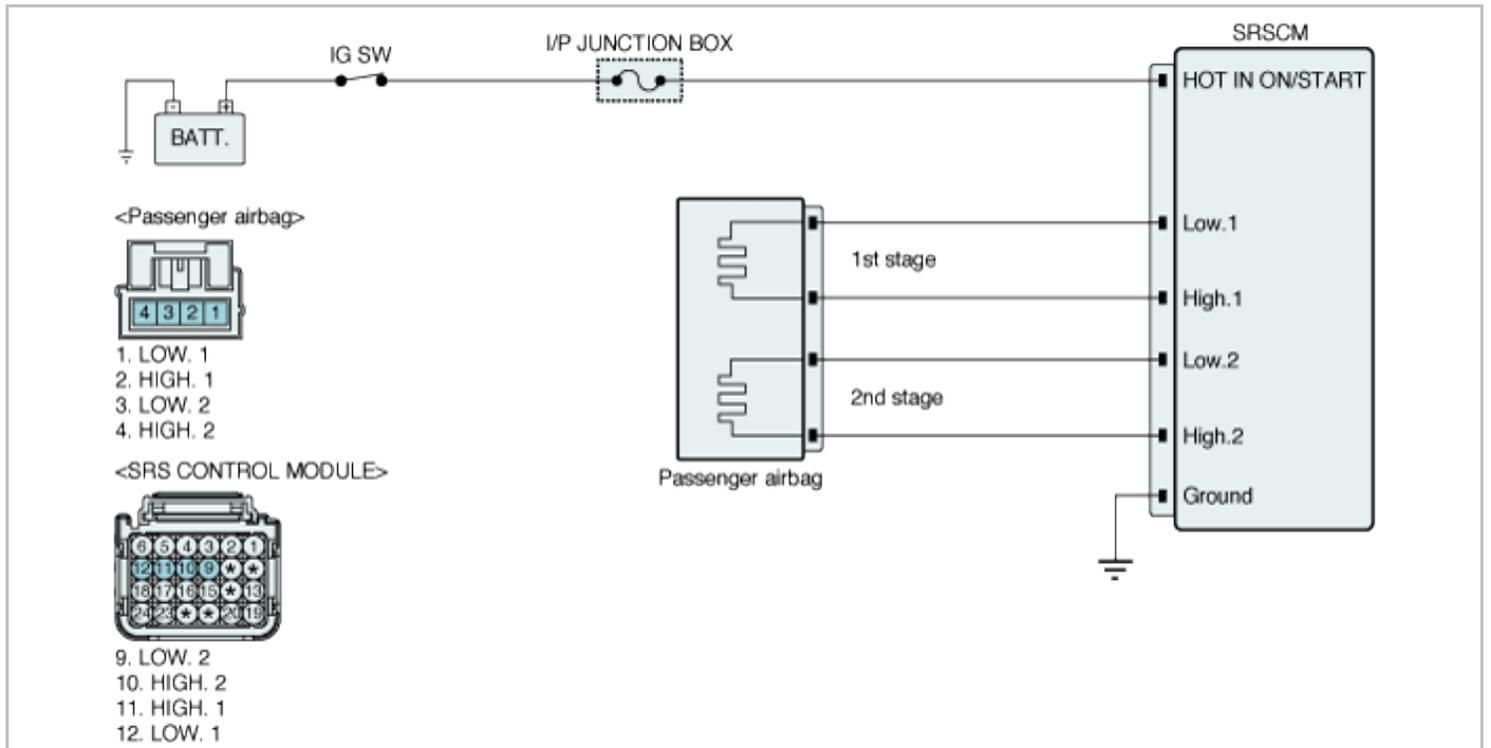
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Poor connection of connected part. • Poor connection between shorting bar and release pin. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 2nd stage resistance $\leq 0.9\Omega$	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Resistance
Ignition ON	$0.9\Omega \leq \text{Squib resistance} \leq 6.6\Omega$

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

$0.9\Omega < \text{Resistance of 2nd stage Passenger airbag} < 6.6\Omega$

Reference :

- In a case of an open in the 2nd stage Passenger airbag circuit : FAIL
 In a case of a short to battery in the 2nd stage Passenger airbag circuit: FAIL
 In a case of a short to ground in the 2nd stage Passenger airbag circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" and "High.2" of the PAB harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1487 Passenger Airbag Resistance Circuit Short to Ground(2nd stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by fillied up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.

It can protect driver with less impact of gas expention force, that can reduce driver's injury

Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1354 if there is a short to ground in PAB harness

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

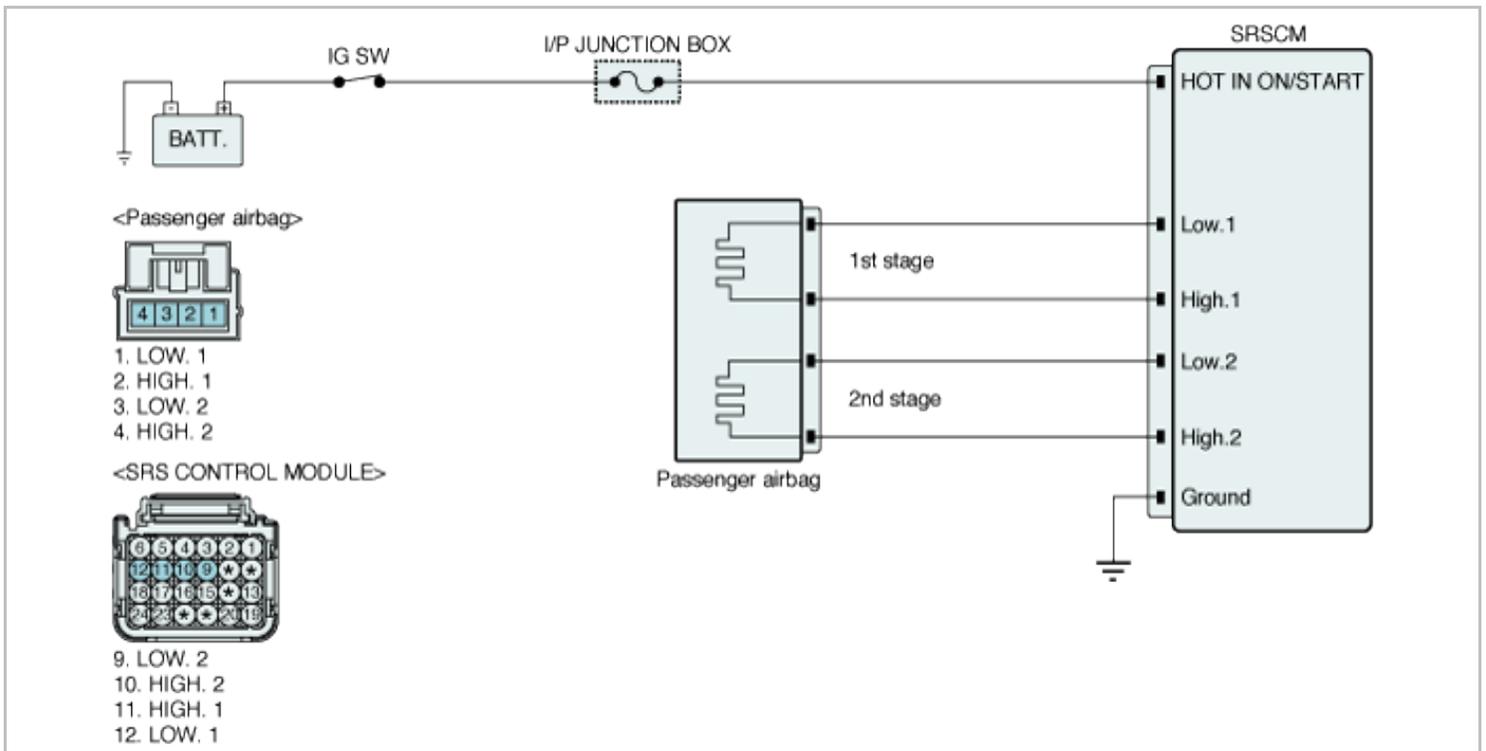
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Short to ground in PAB harness. • Poor connection of connected part. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 2nd stage Squib line voltage is < 0.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	0.9V ≤ Squib line Voltage ≤ 2.9V

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of 2nd stage Passenger airbag < 6.6Ω

Reference :

In a case of an open in the 2nd stage Passenger airbag circuit : FAIL
 In a case of a short to battery in the 2nd stage Passenger airbag circuit: FAIL
 In a case of a short to ground in the 2nd stage Passenger airbag circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adapter (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Measure resistance between terminal "Low.2" or "High.2" of the PAB harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1488 Passenger Airbag Resistance Circuit Short to Battery(2nd stage)

General Description

Passenger Air bag module (hereinafter referred to PAB) located at passenger side crush pad protects passenger by reducing impact of collision.

PAB is consist of air bag, pat cover and inflator.

Air bag reduces impact of collision by fillied up gas.

Inflator keeps gas and uses it to deploy air bag on collision.

CAUTION

Never measure resistance of PAB directly, Current of measuring device may cause unexpected air bag deploy.

Dual output type airbag deploys two bags in sequence within specified time difference.

It can protect driver with less impact of gas expention force, that can reduce driver's injury

Constituent is the same as single output type airbag.

DTC Description

The SRSCM sets DTC B1488 if there is a short to power in PAB harness.

*In this case, SRSCM checks if there's any fault in circuit by sending current for a while.

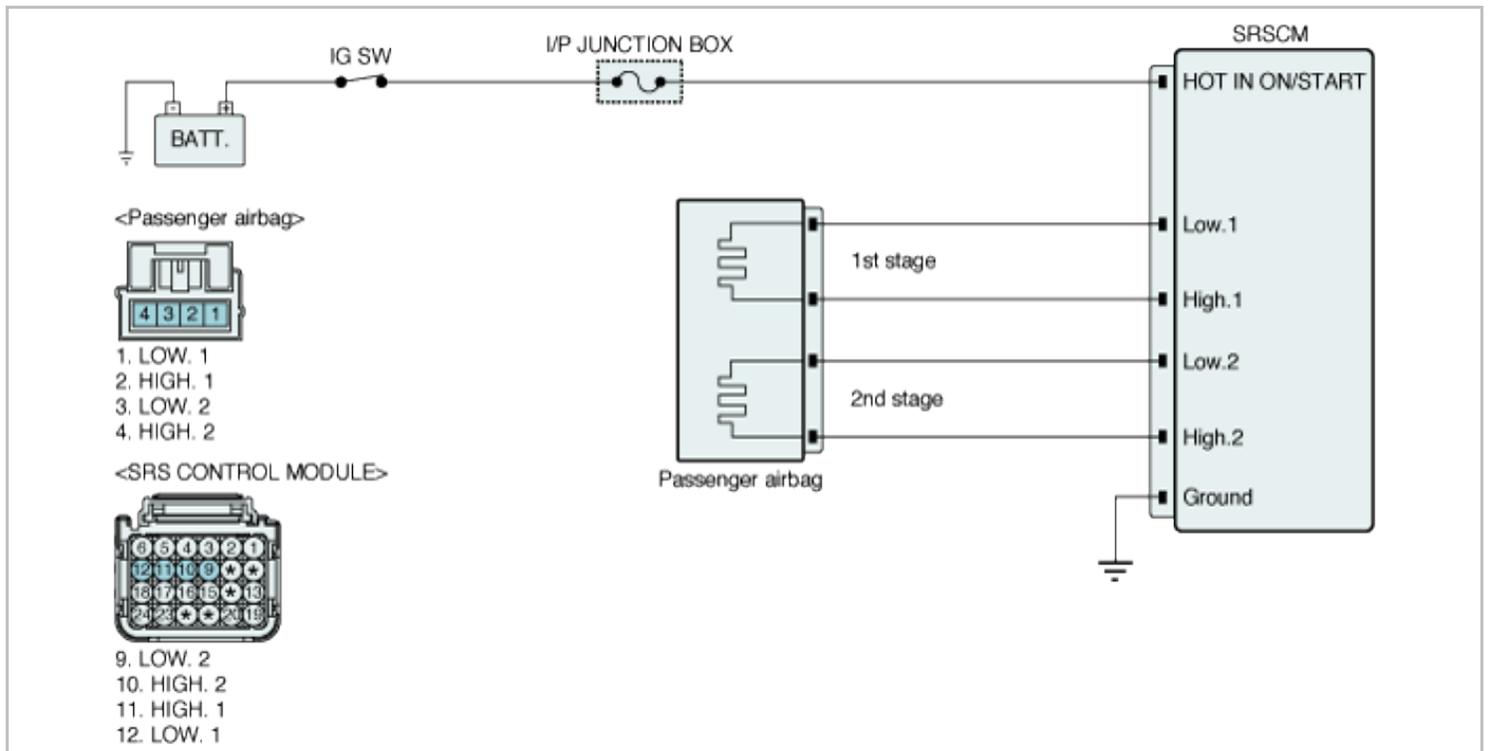
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Resistance	<ul style="list-style-type: none"> • Short to power in PAB harness. • Poor connection of connected part. • Faulty PAB. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• PAB 2nd stage Squib line voltage is > 2.9V	
Diagnostic Time	Qualification	• More than 2.5s (250ms x 10)	
	De-Qualification	• More than 5s	

Specification

Test Condition	Voltage
Ignition ON	0.9V ≤ Squib line Voltage ≤ 2.9V

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger airbag(2nd stage) resistance" parameter on the Scantool.

Specification :

0.9Ω < Resistance of 2nd stage Passenger airbag < 6.6Ω

Reference :

In a case of an open in the 2nd stage Passenger airbag circuit : FAIL
 In a case of a short to battery in the 2nd stage Passenger airbag circuit: FAIL
 In a case of a short to ground in the 2nd stage Passenger airbag circuit : FAIL

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Normal Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Squib Circuit Inspection" procedure.

Squib Circuit Inspection

1. Ignition "OFF".

2. Disconnect (-) terminal cable from battery and wait for 1 minutes or more.
3. Remove the PAB module and connect the dummy (0957A-38200) and dummy adaptor (0957A-2E100) to PAB harness connector.

NOTE

If dummy and dummy adaptor are not able to be prepared, use a known-good PAB or 2Ω resistor.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect (-) terminal cable to battery and Ignition "ON" & Engine "OFF" and wait for 30 seconds or more.
5. Connect scantool to Data Link Connector(DLC) and clear DTC with scantool and diagnose again.
6. Is DTC present problem ?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute a known-good PAB assembly, and check for proper operation. If the problem is corrected, replace PAB and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect PAB connector and SRSCM main harness connector.

WARNING

Lay Removed PAB facing upward for unexpected air bag deploy .

4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low.2" or "High.2" of the PAB harness connector and chassis ground.

Specification : approx. 0V

6. Is the measured voltage within specifications?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.

4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1489 PODS(Passenger Occupant Detecting System) ECU Defect

General Description

The system is intended to classify the occupancy status of the front passenger seat in a motor vehicle based upon the measured force on the bottom seat cushion.

The system also communicates to the SRSCM whether to allow or inhibit the deployment of the passenger airbags and/or pretensioner based upon this status.

The System also measured dynamic responses of the occupant.

This information is used to identify when a child seat is cinched down tightly with the seat belt, and to also determine if the seat is unoccupied.

However, the dynamic measurements are not intended, nor capable of monitoring the seating position of the occupant, nor can they determine the proximity of the occupant to the inflator modules.

The system should not be confused with an occupant position recognition system, or any other occupant proximity sensor.

The Passenger Occupant Detecting System (PODS) utilizes bladder placed between the passenger seat cushion and suspension to measure the occupant's loading force on the vehicle seat.

The bladder is connected to pressure sensor and ultimately to an electronic control unit (ECU), both of which are mounted under the seat pan.

The quantitative force determined by the system is compared to a given threshold for determination of passenger airbag suppression.

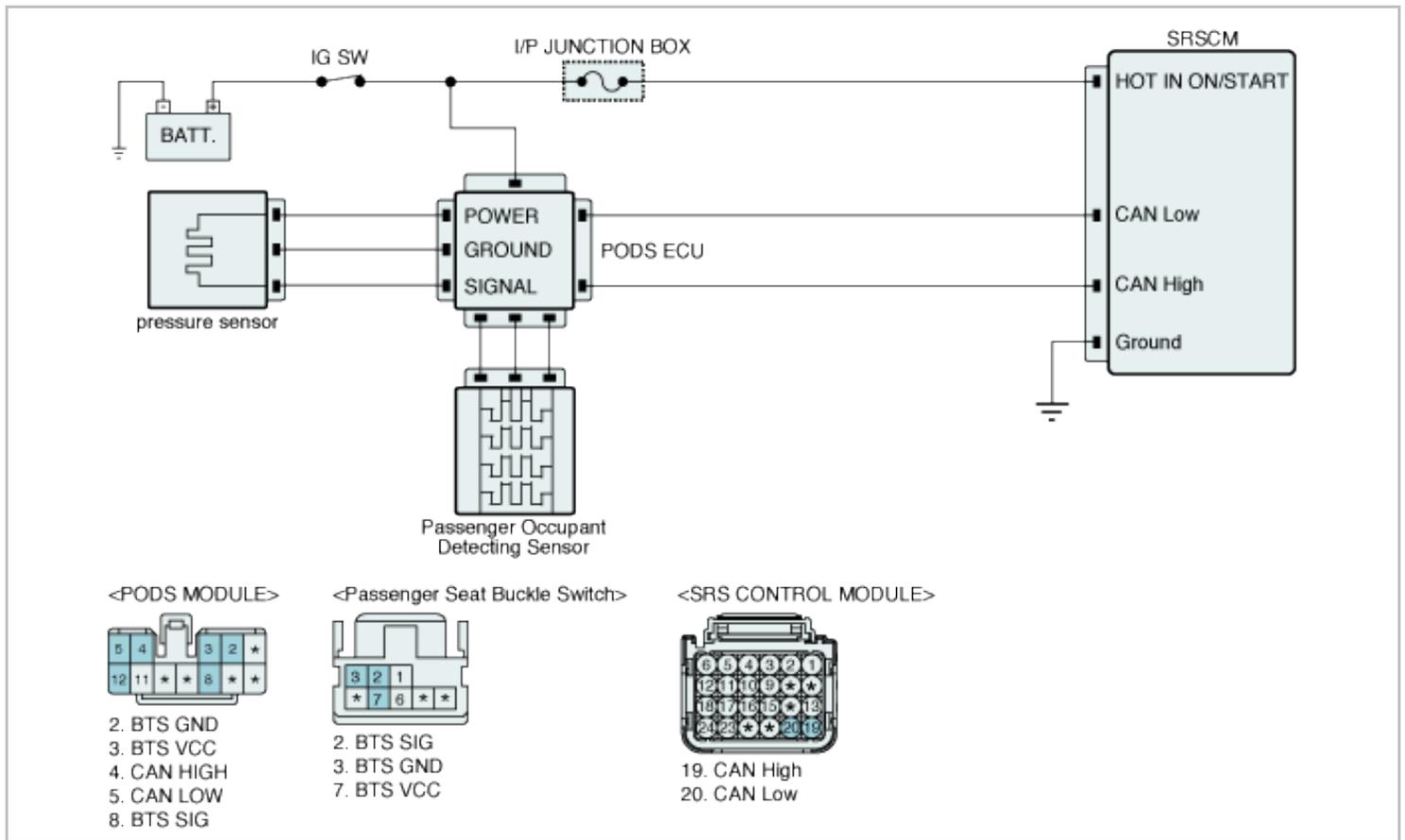
DTC Description

The SRSCM sets above Diagnosis trouble code if it detects that the Passenger OC system ECU unit is defected.

DTC Detecting Condition

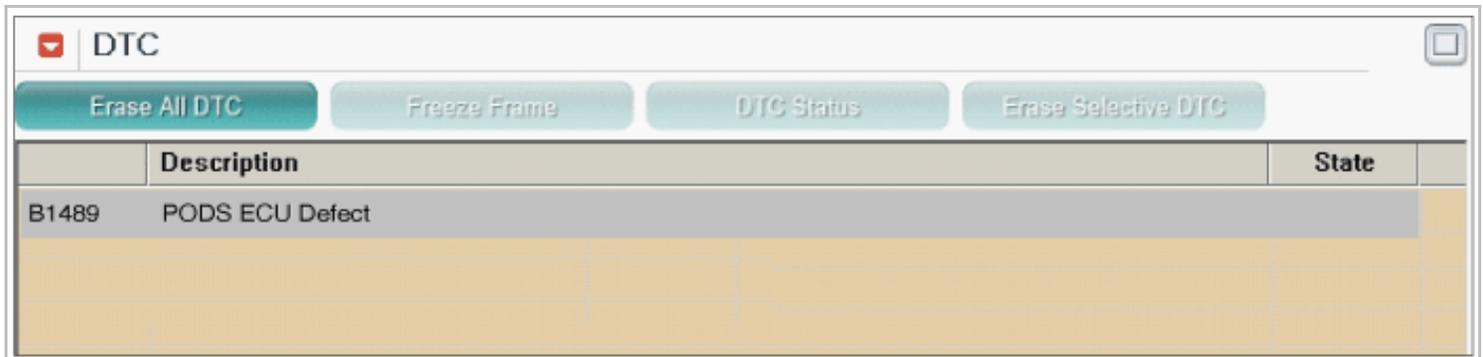
Item		Detecting Condition	Possible cause
DTC Strategy		• CAN communication	<ul style="list-style-type: none"> • Poor connection of connected part. • Faulty OC ECU. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• ACU get PODS ECU Failure message via CAN communication	
Diagnostic Time	Qualification	• More than 2.2 sec	
	De-Qualification	• More than 4.4sec	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PODS ECU connector .
5. Substitute the PODS ECU and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good PODS ECU, and check for proper operation. If the problem is corrected, replace Pressure Sensor and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Initialize PODS using scantool when replacing PODS ECU.
2. Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode
3. Using a scan tool, clear the DTCs
4. Operate the vehicle within DTC Enable conditions in General information.
5. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Sensor(Bladder) Defect

General Description

The system is intended to classify the occupancy status of the front passenger seat in a motor vehicle based upon the measured force on the bottom seat cushion.

The system also communicates to the SRSCM whether to allow or inhibit the deployment of the passenger airbags and/or pretensioner based upon this status.

The System also measured dynamic responses of the occupant.

This information is used to identify when a child seat is cinched down tightly with the seat belt, and to also determine if the seat is unoccupied.

However, the dynamic measurements are not intended, nor capable of monitoring the seating position of the occupant, nor can they determine the proximity of the occupant to the inflator modules.

The system should not be confused with an occupant position recognition system, or any other occupant proximity sensor.

The Passenger Occupant Detecting System (PODS) utilizes bladder placed between the passenger seat cushion and suspension to measure the occupant's loading force on the vehicle seat.

The bladder is connected to pressure sensor and ultimately to an electronic control unit (ECU), both of which are mounted under the seat pan.

The quantitative force determined by the system is compared to a given threshold for determination of passenger airbag suppression.

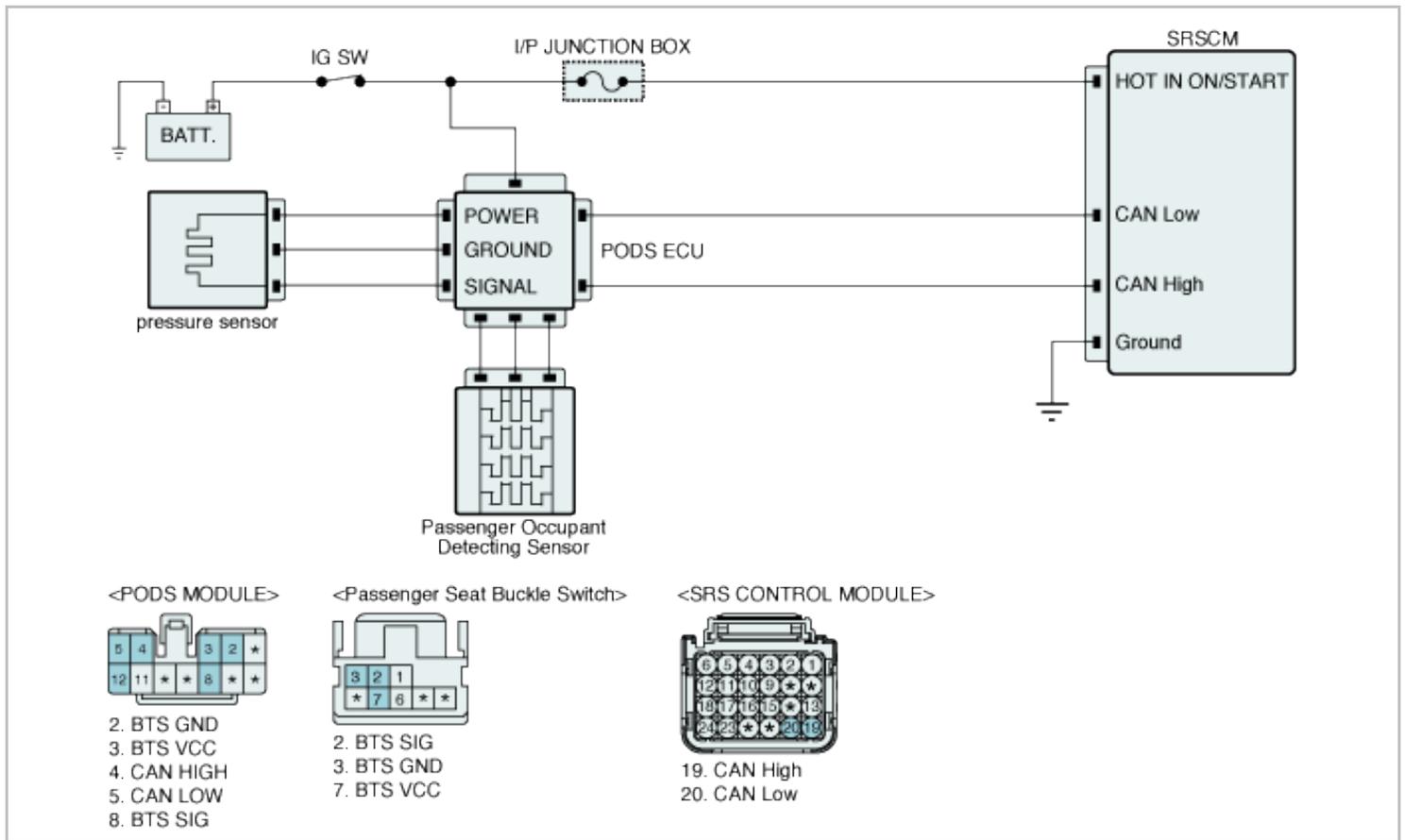
DTC Description

The SRSCM sets DTC B1490 if there is any fault in OC circuit.

DTC Detecting Condition

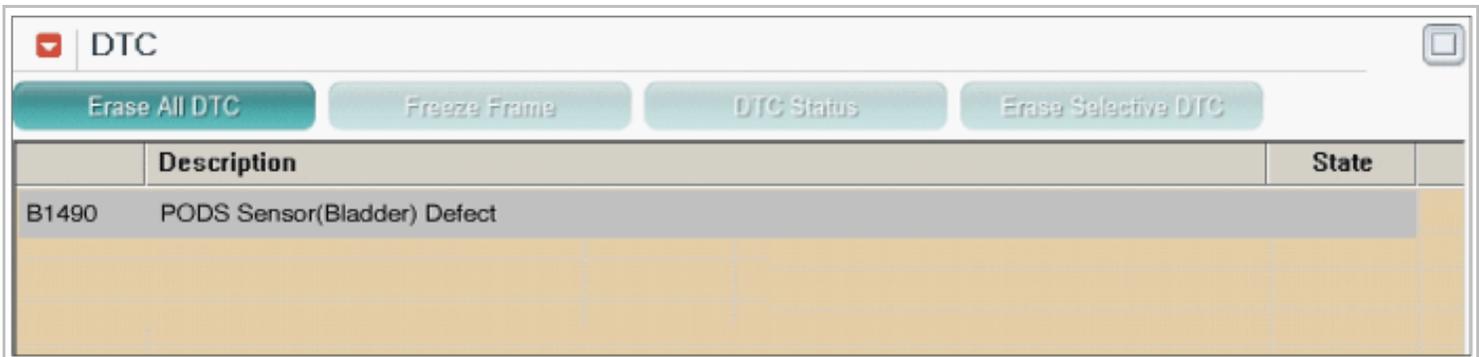
Item		Detecting Condition	Possible cause
DTC Strategy		• CAN communication	• Poor connection of connected part. • Faulty OC Passenger Sensor Mat. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• ACU get PODS Sensor Failure message via CAN communication	
Diagnostic Time	Qualification	• More than 2.2 sec	
	De-Qualification	• More than 4.4sec	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PODS ECU connector .
5. Substitute the PODS ECU and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good PODS ECU, and check for proper operation. If the problem is corrected, replace Pressure Sensor and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Initialize PODS using scantool when replacing PODS ECU.
2. Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode
3. Using a scan tool, clear the DTCs
4. Operate the vehicle within DTC Enable conditions in General information.
5. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Communication error

General Description

The system is intended to classify the occupancy status of the front passenger seat in a motor vehicle based upon the measured force on the bottom seat cushion.

The system also communicates to the SRSCM whether to allow or inhibit the deployment of the passenger airbags and/or pretensioner based upon this status.

The System also measured dynamic responses of the occupant.

This information is used to identify when a child seat is cinched down tightly with the seat belt, and to also determine if the seat is unoccupied.

However, the dynamic measurements are not intended, nor capable of monitoring the seating position of the occupant, nor can they determine the proximity of the occupant to the inflator modules.

The system should not be confused with an occupant position recognition system, or any other occupant proximity sensor.

The Passenger Occupant Detecting System (PODS) utilizes bladder placed between the passenger seat cushion and suspension to measure the occupant's loading force on the vehicle seat.

The bladder is connected to pressure sensor and ultimately to an electronic control unit (ECU), both of which are mounted under the seat pan.

The quantitative force determined by the system is compared to a given threshold for determination of passenger airbag suppression.

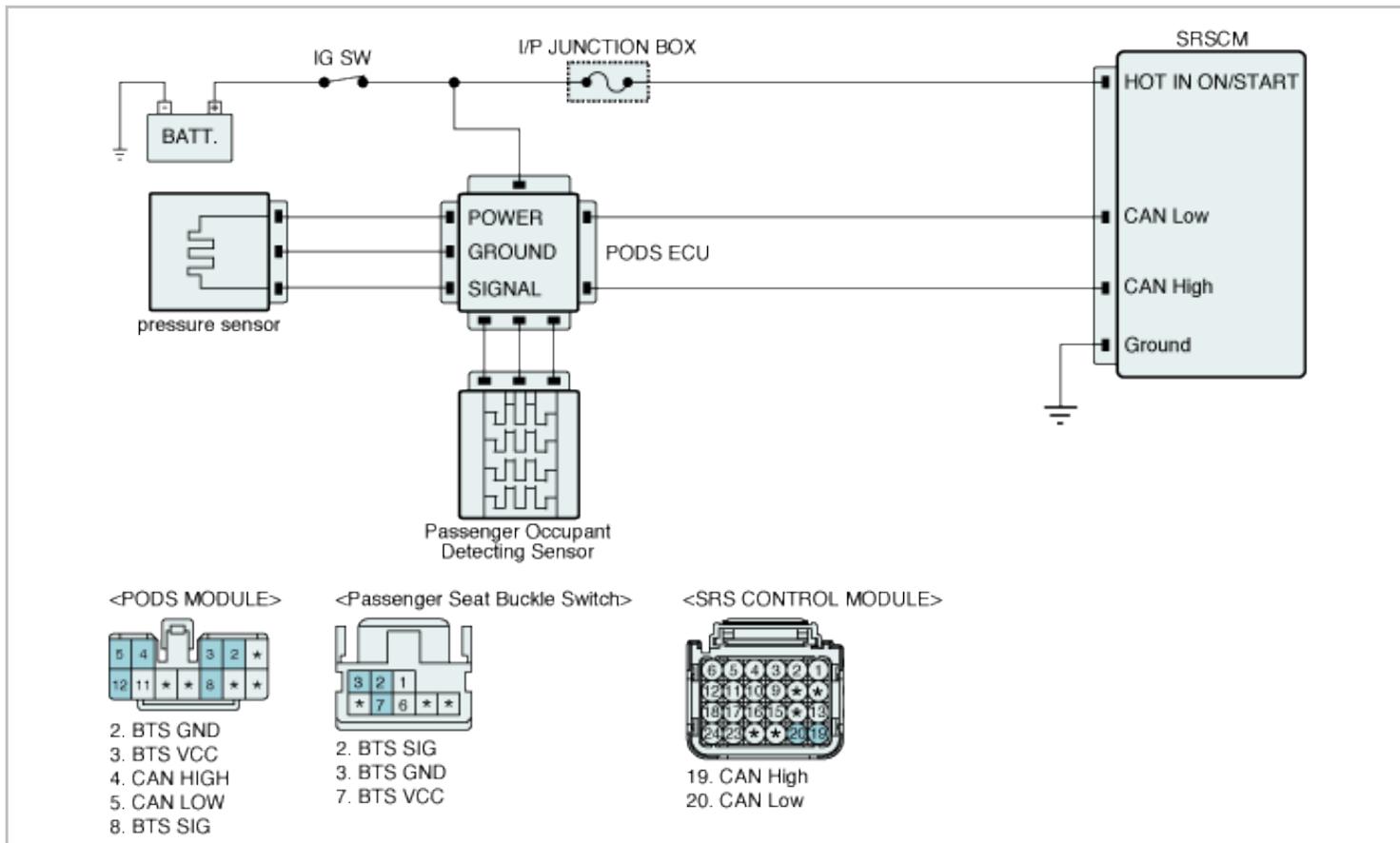
DTC Description

The SRSCM sets DTC B1493 if there is any error in communication between OC Passenger Sensor and SRSCM.

DTC Detecting Condition

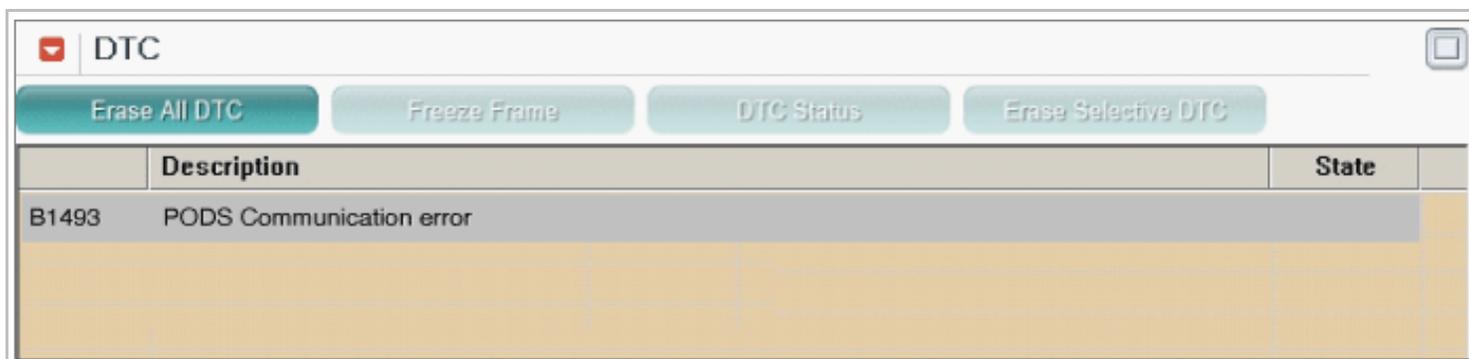
Item		Detecting Condition	Possible cause
DTC Strategy		• CAN communication	• Poor connection of connected part. • Faulty OC ECU. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• No Communication with PODS	
Diagnostic Time	Qualification	• More than 5.5 sec	
	De-Qualification	• More than 5.5 sec	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PODS ECU connector .
5. Substitute the PODS ECU and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good PODS ECU, and check for proper operation. If the problem is corrected, replace Pressure Sensor and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Initialize PODS using scantool when replacing PODS ECU.
2. Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode
3. Using a scan tool, clear the DTCs
4. Operate the vehicle within DTC Enable conditions in General information.
5. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

The system is intended to classify the occupancy status of the front passenger seat in a motor vehicle based upon the measured force on the bottom seat cushion.

The system also communicates to the SRSCM whether to allow or inhibit the deployment of the passenger airbags and/or pretensioner based upon this status.

The System also measured dynamic responses of the occupant.

This information is used to identify when a child seat is cinched down tightly with the seat belt, and to also determine if the seat is unoccupied.

However, the dynamic measurements are not intended, nor capable of monitoring the seating position of the occupant, nor can they determine the proximity of the occupant to the inflator modules.

The system should not be confused with an occupant position recognition system, or any other occupant proximity sensor.

The Passenger Occupant Detecting System (PODS) utilizes bladder placed between the passenger seat cushion and suspension to measure the occupant's loading force on the vehicle seat.

The bladder is connected to pressure sensor and ultimately to an electronic control unit (ECU), both of which are mounted under the seat pan.

The quantitative force determined by the system is compared to a given threshold for determination of passenger airbag suppression.

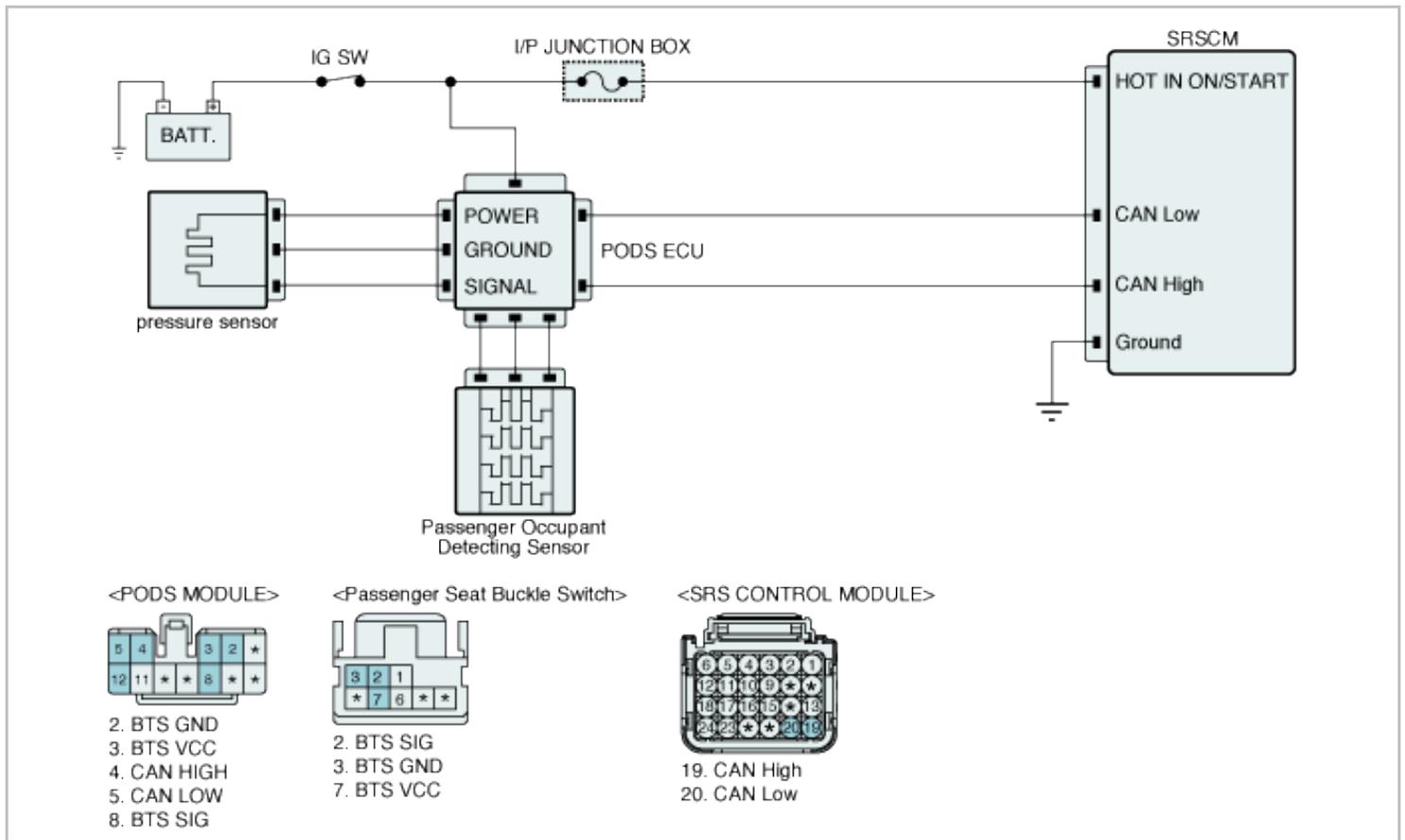
DTC Description

The SRSCM sets DTC B1494 if OC Passenger Sensor with wrong ID is detected

DTC Detecting Condition

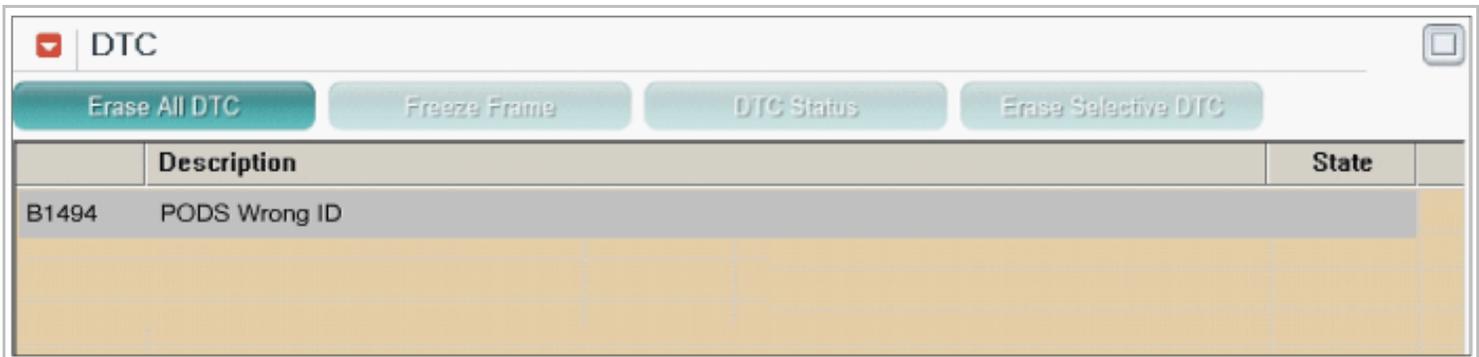
Item		Detecting Condition	Possible cause
DTC Strategy		• CAN communication	• PODS Sensor (Bladder) wrong ID. • Faulty OC ECU. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• SRSCM get ODS Wrong ID message via CAN communication	
Diagnostic Time	Qualification	• More than 2.2 sec	
	De-Qualification	• No in same IGN Cycle	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PODS ECU connector .
5. Substitute the PODS ECU and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good PODS ECU, and check for proper operation. If the problem is corrected, replace Pressure Sensor and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Initialize PODS using scantool when replacing PODS ECU.
2. Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode
3. Using a scan tool, clear the DTCs
4. Operate the vehicle within DTC Enable conditions in General information.
5. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Sensing seat belt tension, belt tension sensor sends signals to PODS ECU.

Sensing the intensity of pressure from pressure sensor and tension from belt tensioner, PODS ECU decide a passenger as an adult or a child.

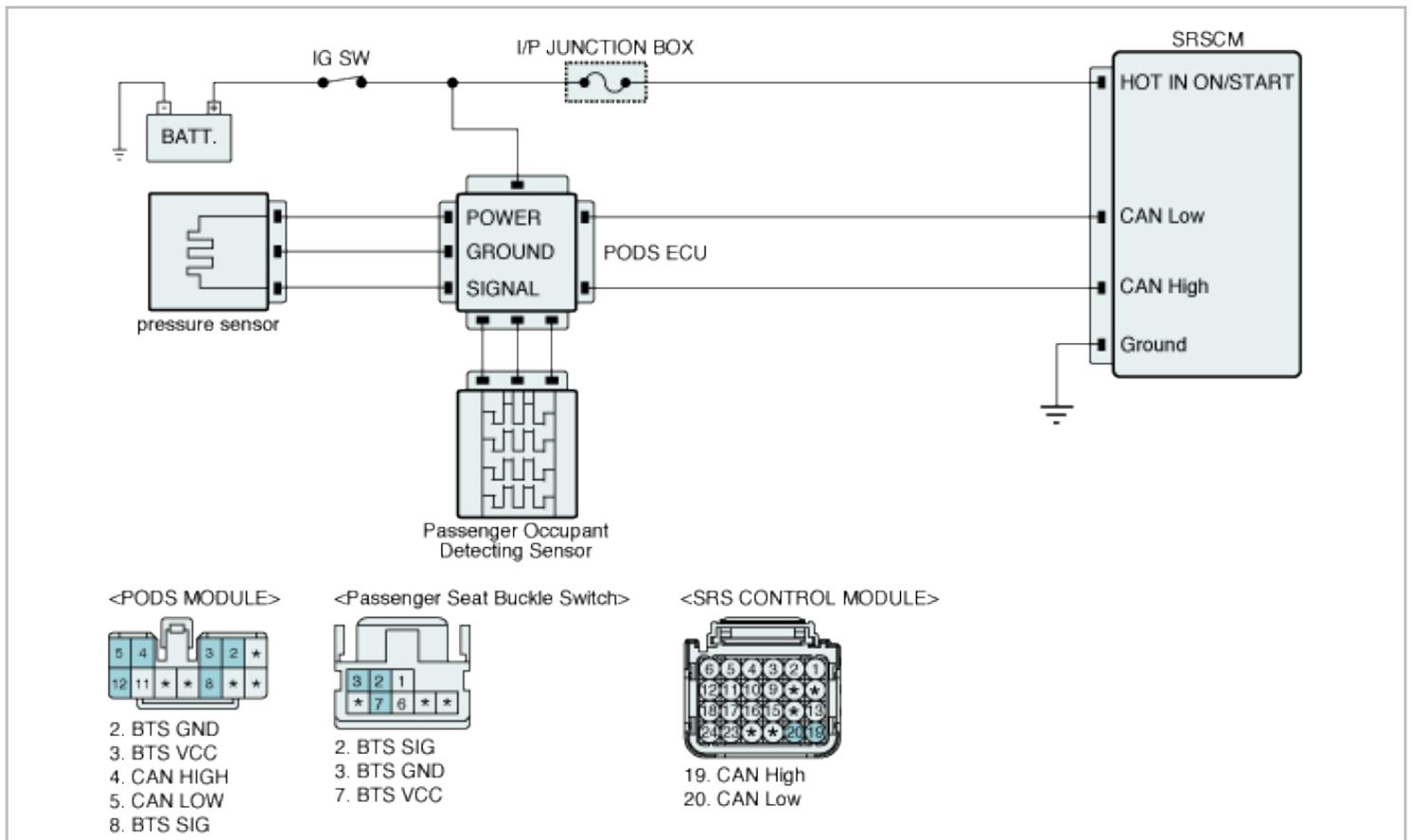
DTC Description

DTC B1495 is recorded when a malfunction is detected in the Belt-Tension Sensor.

DTC Detecting Condition

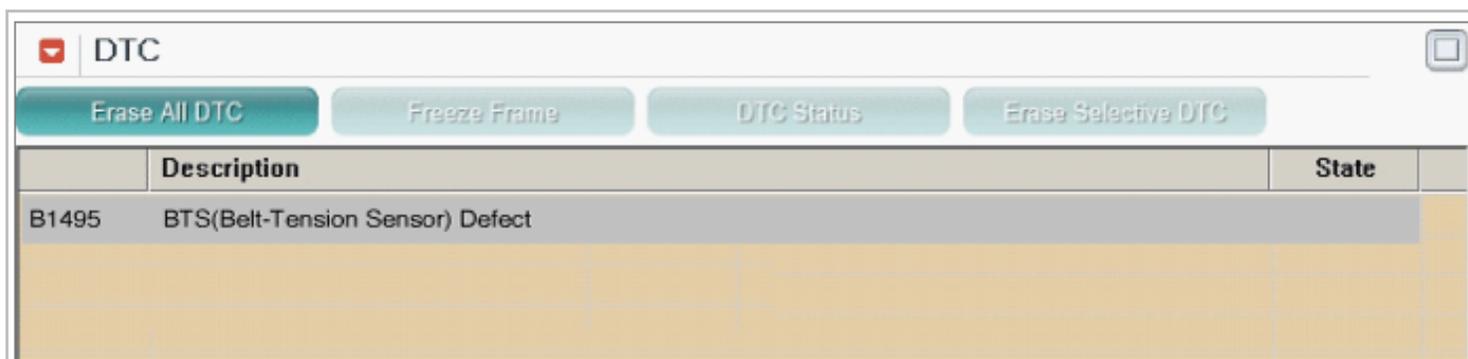
Item		Detecting Condition	Possible cause
DTC Strategy		• Belt-Tension Sensor failure.	<ul style="list-style-type: none"> • Belt-Tension Sensor failure. • PODS ECU failure. • SRSCM Faulty.
Enable Conditions		• Ignition "ON"	
Threshold Value		• SRSCM get ODS BTS Failure message via CAN communication	
Diagnostic Time	Qualification	• More than 2.2 sec	
	De-Qualification	• More than 4.4 sec	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Intermittent failure, system is OK at this moment. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Fault is intermittent caused by poor contact in the connector/wiring harness or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Power Circuit Inspection" procedure.

Power Circuit Inspection

1. Engine "OFF"
2. Disconnect Belt tension sensor connector.
3. Ignition "ON" & Engine "OFF".
4. Measure voltage between terminal 1 of the Belt tension sensor connector and chassis ground.

Specification : Approx. 5.02V

5. Is the measured voltage within specification?

YES	▶ Go to "Ground Circuit Inspection" procedure.
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NO	<ul style="list-style-type: none"> ▶ After repairing open in power circuit or short circuit of belt tension sensor, go to "Verification vehicle Repair" procedure ▶ Substitute a known-good Belt tension sensor, and check for proper operation. <p>If the problem is corrected, replace the Belt tension sensor and then go to "Verification of Vehicle Repair" procedure.</p>
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Ground Circuit Inspection

1. Engine "OFF"
2. Disconnect Belt tension sensor connector.
3. Measure resistance between terminal 2 of the Belt tension sensor connector and chassis ground.

Specification : 0 Ω

4. Is the measured resistance within specification?

YES	▶ Go to "Signal Circuit Inspection" procedure.
NO	<ul style="list-style-type: none"> ▶ After repairing open in ground circuit or short circuit of belt tension sensor, go to "Verification vehicle Repair" procedure . ▶ Substitute a known-good Belt tension sensor, and check for proper operation. <p>If the problem is corrected, replace the Belt tension sensor and then go to "Verification of Vehicle Repair" procedure.</p>

Signal Circuit Inspection

1. Connect Belt tension sensor connector & PODS ECU.
2. Ignition "ON" & Engine "OFF".
3. When mounting seat belt , check belt tension signals for change for various belt tension.
4. Measure voltage between terminal 3 of the Belt tension sensor connector and chassis ground.

Specification : approx. 0.98V (Min) ~ 3.963V (Max)

5. Is the measured voltage within specification?

YES	▶ Check Belt tension sensor for contamination, deterioration, or damage. Substitute with a known-good Belt tension sensor and check for proper operation. If the problem is corrected, replace Belt tension sensor and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Substitute a known-good Belt tension sensor, and check for proper operation. <p>If the problem is corrected, replace the Belt tension sensor and then go to "Verification of Vehicle Repair" procedure.</p> <ul style="list-style-type: none"> ▶ Substitute a known-good PODS ECU, and check for proper operation. <p>If the problem is corrected, replace the PODS ECU and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Initialize PODS using scantool when replacing PODS ECU.
2. Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode

3. Using a scan tool, clear the DTCs
4. Operate the vehicle within DTC Enable conditions in General information.
5. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1496 PODS(Passenger Occupant Detecting System) Not calibrated

General Description

The system is intended to classify the occupancy status of the front passenger seat in a motor vehicle based upon the measured force on the bottom seat cushion.

The system also communicates to the SRSCM whether to allow or inhibit the deployment of the passenger airbags and/or pretensioner based upon this status.

The System also measured dynamic responses of the occupant.

This information is used to identify when a child seat is cinched down tightly with the seat belt, and to also determine if the seat is unoccupied.

However, the dynamic measurements are not intended, nor capable of monitoring the seating position of the occupant, nor can they determine the proximity of the occupant to the inflator modules.

The system should not be confused with an occupant position recognition system, or any other occupant proximity sensor.

The Passenger Occupant Detecting System (PODS) utilizes bladder placed between the passenger seat cushion and suspension to measure the occupant's loading force on the vehicle seat.

The bladder is connected to pressure sensor and ultimately to an electronic control unit (ECU), both of which are mounted under the seat pan.

The quantitative force determined by the system is compared to a given threshold for determination of passenger airbag suppression.

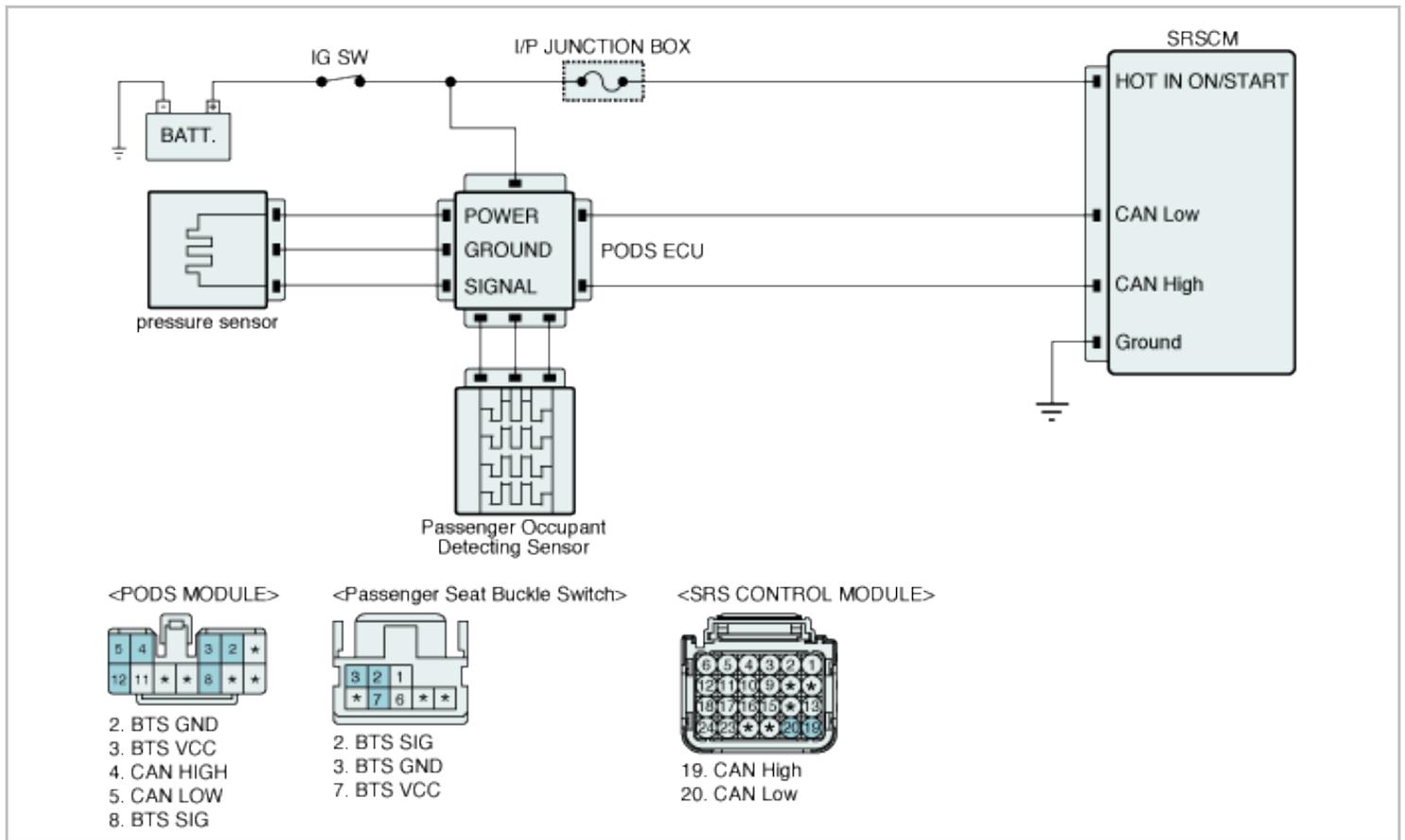
DTC Description

The SRSCM sets above Diagnosis trouble code in case of PODS not calibrated.

DTC Detecting Condition

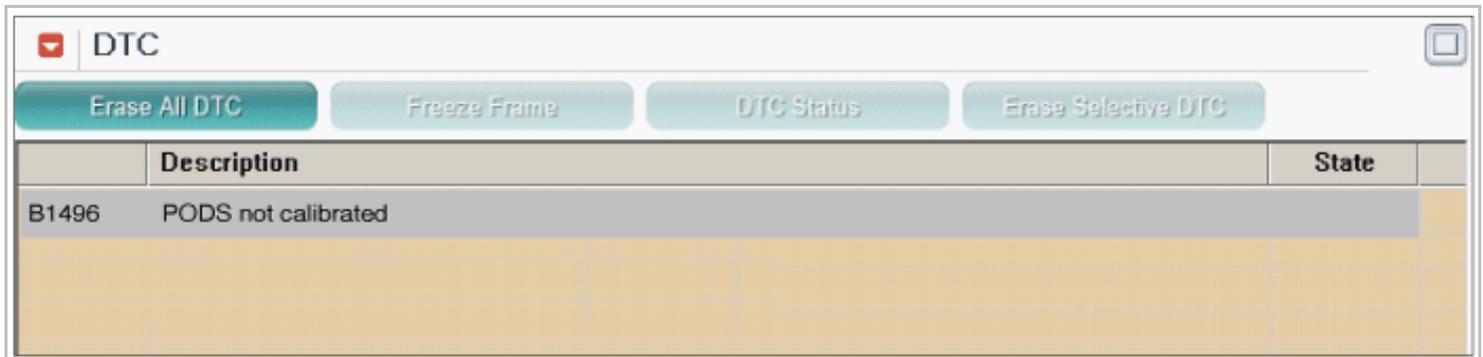
Item		Detecting Condition	Possible cause
DTC Strategy		• CAN communication	<ul style="list-style-type: none"> PODS Sensor (Bladder). Faulty OC ECU. Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• SRSCM get ODS not calibrated message via CAN communication	
Diagnostic Time	Qualification	• More than 1.1 sec	
	De-Qualification	• No in same IGN Cycle	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect PODS ECU connector .
5. Substitute the PODS ECU and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good PODS ECU, and check for proper operation. If the problem is corrected, replace Pressure Sensor and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Initialize PODS using scantool when replacing PODS ECU.
2. Connect scan tool and select "Diagnostic Trouble Codes(DTCs)" mode
3. Using a scan tool, clear the DTCs
4. Operate the vehicle within DTC Enable conditions in General information.
5. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

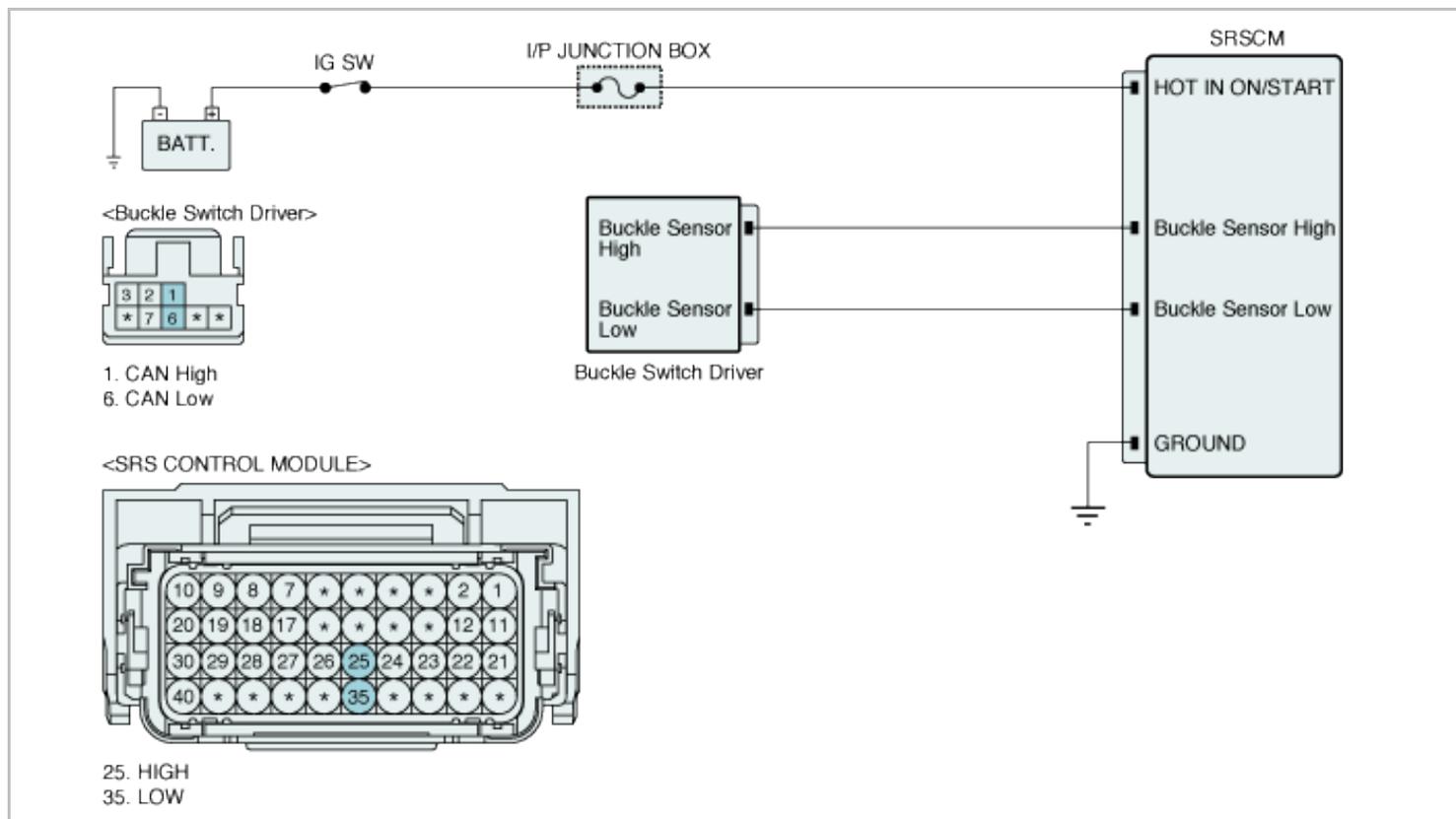
DTC Description

The SRSCM sets DTC B1511 if there is a open circuit or short to power in DSBBS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check current	<ul style="list-style-type: none"> • Short to power in DSBBS harness. • Open circuit in DSBBS harness. • Poor connection of connected part. • Faulty DSBBS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• $I < 3.9\text{mA}$	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2s (200ms x 10) • Steady:1 time 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):4s • Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver Buckle Switch status" parameter on the Scantool.

Specification : Driver Buckle Switch on : Buckled, Driver Buckle Switch off : Unbuckled

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection(1)

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Seat-belt Buckle Switch connector and SRSCM main harness connector.
4. Measure resistance between of the Buckle Switch Driver wiring connector and SRSCM harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection(2)

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Seat-belt Buckle Switch connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "High" of the Seat-belt Buckle Switch harness connector and chassis ground.

Specification : 0V

6. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation.
------------	--

—	If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1512 Buckle Switch Driver short or short to Ground

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

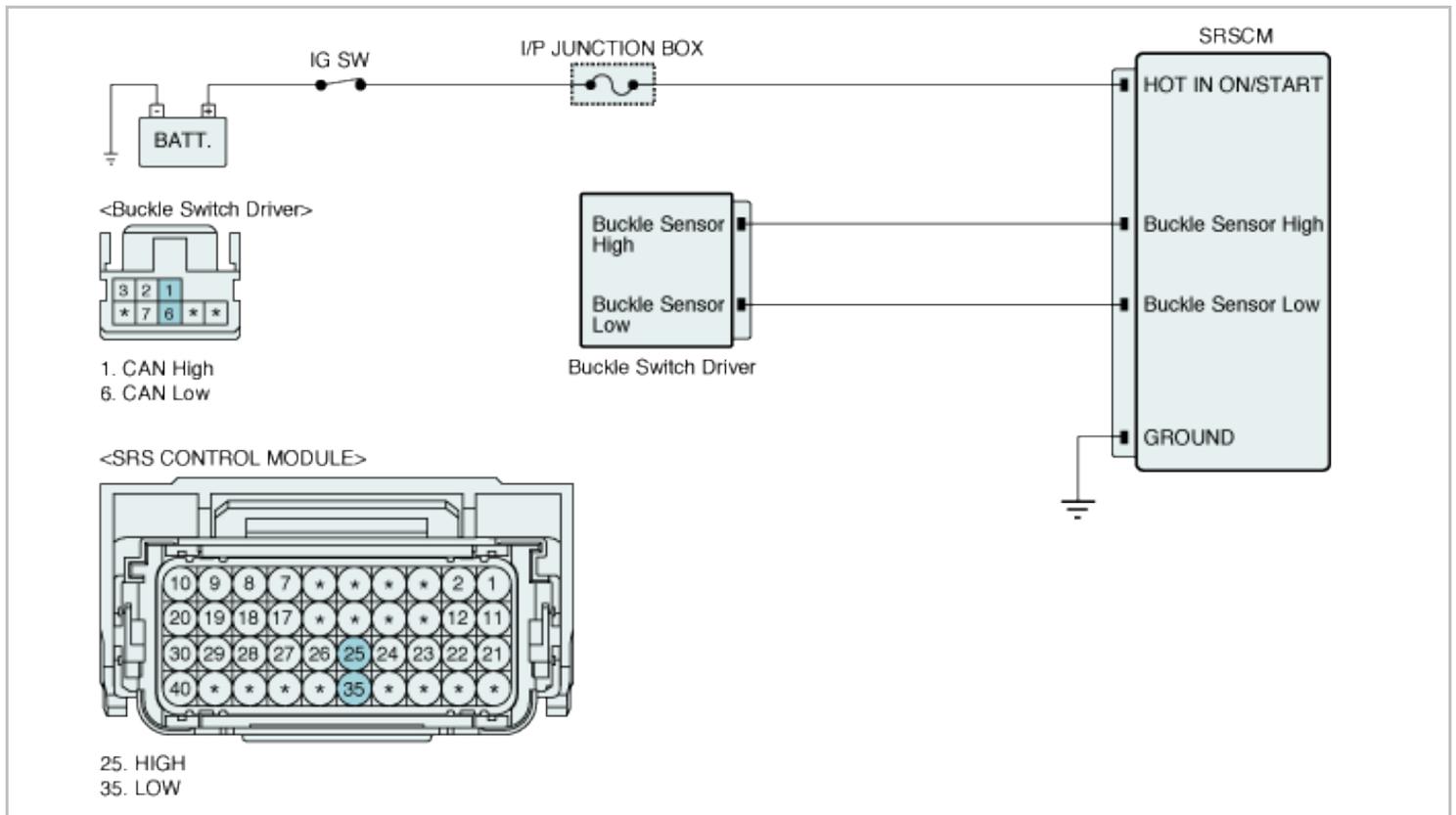
DTC Description

The SRSCM sets DTC B1512 if there is a short or short to ground in DSBBS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check current	<ul style="list-style-type: none"> • Short to ground in DSBBS harness. • Short circuit in DSBBS harness. • Poor connection of connected part. • Faulty DSBBS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• I > 18.4mA	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2s (200ms x 10) • Steady:1 time 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):4s • Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver Buckle Switch status" parameter on the Scantool.

Specification : Driver Buckle Switch on : Buckled, Driver Buckle Switch off : Unbuckled

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".

2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect Seat-belt Buckle Switch connector and SRSCM main harness connector.
4. Measure resistance between terminal "High" of the Seat-belt Buckle Switch harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1513 Buckle Switch Passenger open or short to Battery

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

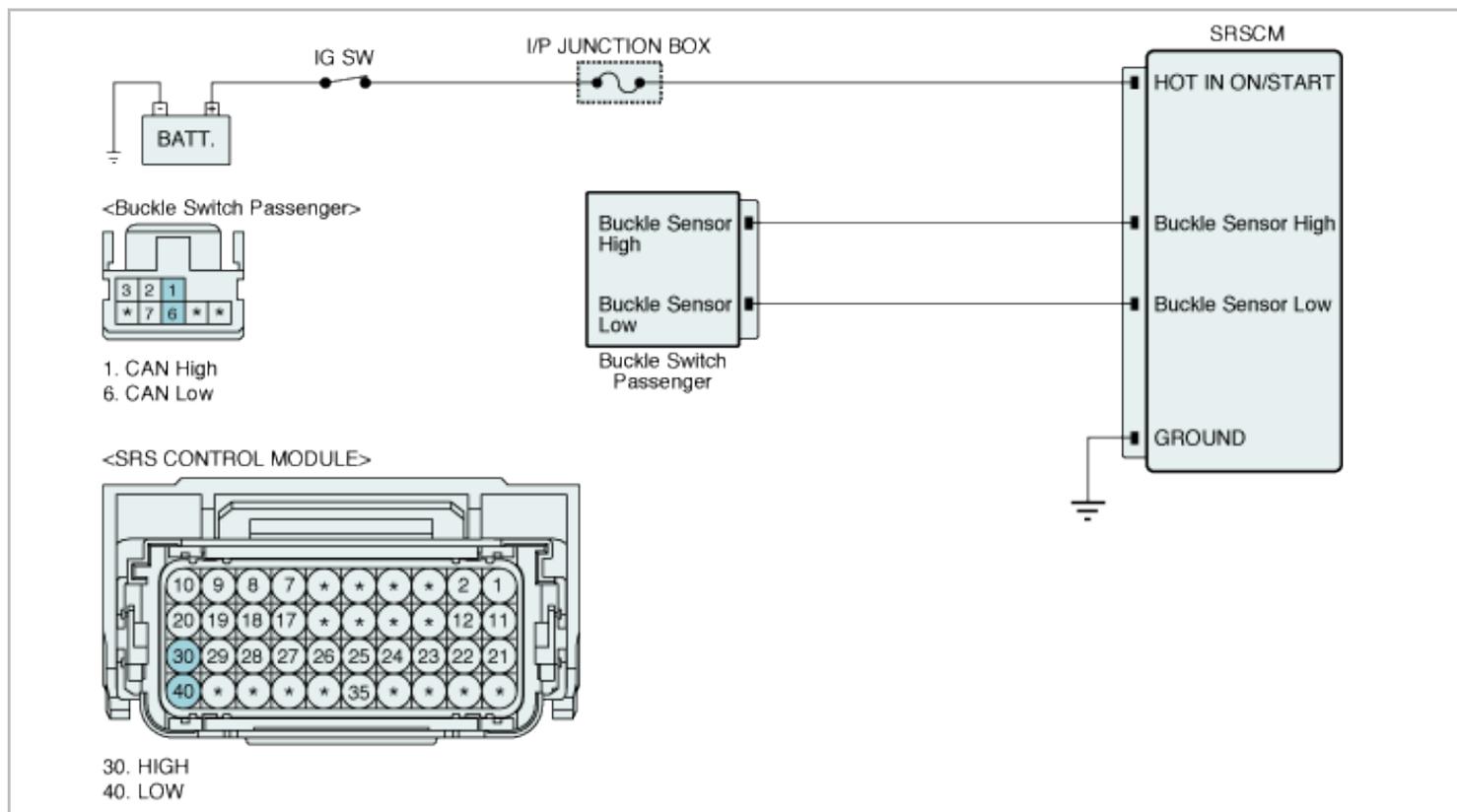
DTC Description

The SRSCM sets DTC B1513 if there is a open circuit or short to power in PSBBS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check current	<ul style="list-style-type: none"> • Short to power in PSBBS harness. • Open circuit in PSBBS harness. • Poor connection of connected part. • Faulty PSBBS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• $I < 3.9 \text{ mA}$	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2s (200ms x 10) • Steady:1 time 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):4s • Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.

3. Monitor the "Passenger Buckle Switch status" parameter on the Scantool.

Specification : Passenger Buckle Switch on : Buckled, Passenger Buckle Switch off : Unbuckled

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Go to "W/Harness Inspection" procedure.</p>

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	<p>▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Go to "Main harness circuit inspection" procedure.</p>

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Seat-belt Buckle Switch connector and SRSCM main harness connector.
4. Measure resistance between of the Buckle Switch Passenger wiring connector and SRSCM harness connector.

Specification : approx. 1 Ω below

5. Is the measured resistance within specifications?

YES	▶ Go to "Main harness circuit inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Seat-belt Buckle Switch connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "High" of the Seat-belt Buckle Switch harness connector and chassis ground.

Specification : 0V

6. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle

Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1514 Buckle Switch Passenger short or short to Ground

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

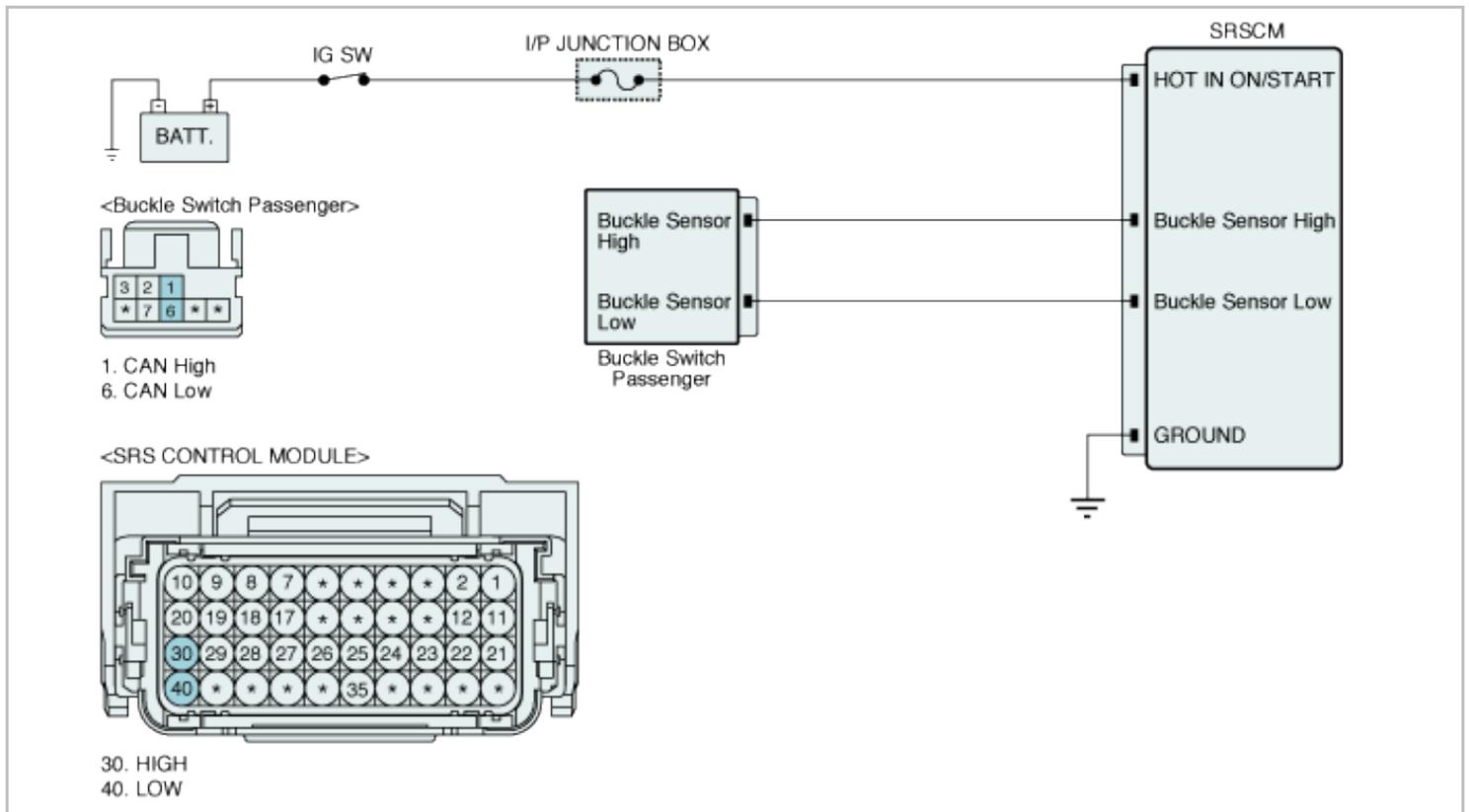
DTC Description

The SRSCM sets DTC B1514 if there is a short or short to ground in PSBBS harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check current	• Short to ground in PSBBS harness. • Short circuit in PSBBS harness. • Poor connection of connected part. • Faulty PSBBS. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• $I > 18.4\text{mA}$	
Diagnostic Time	Qualification	• Ini(Start Up):2s (200ms x 10) • Steady:1 time	
	De-Qualification	• Ini(Start Up):4s • Steady:IGN off -> on	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger Buckle Switch status" parameter on the Scantool.

Specification : Passenger Buckle Switch on : Buckled, Passenger Buckle Switch off : Unbuckled

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".

2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect Seat-belt Buckle Switch connector and SRSCM main harness connector.
4. Measure resistance between terminal "High" of the Seat-belt Buckle Switch harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1515 Buckle Switch Driver Defect

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

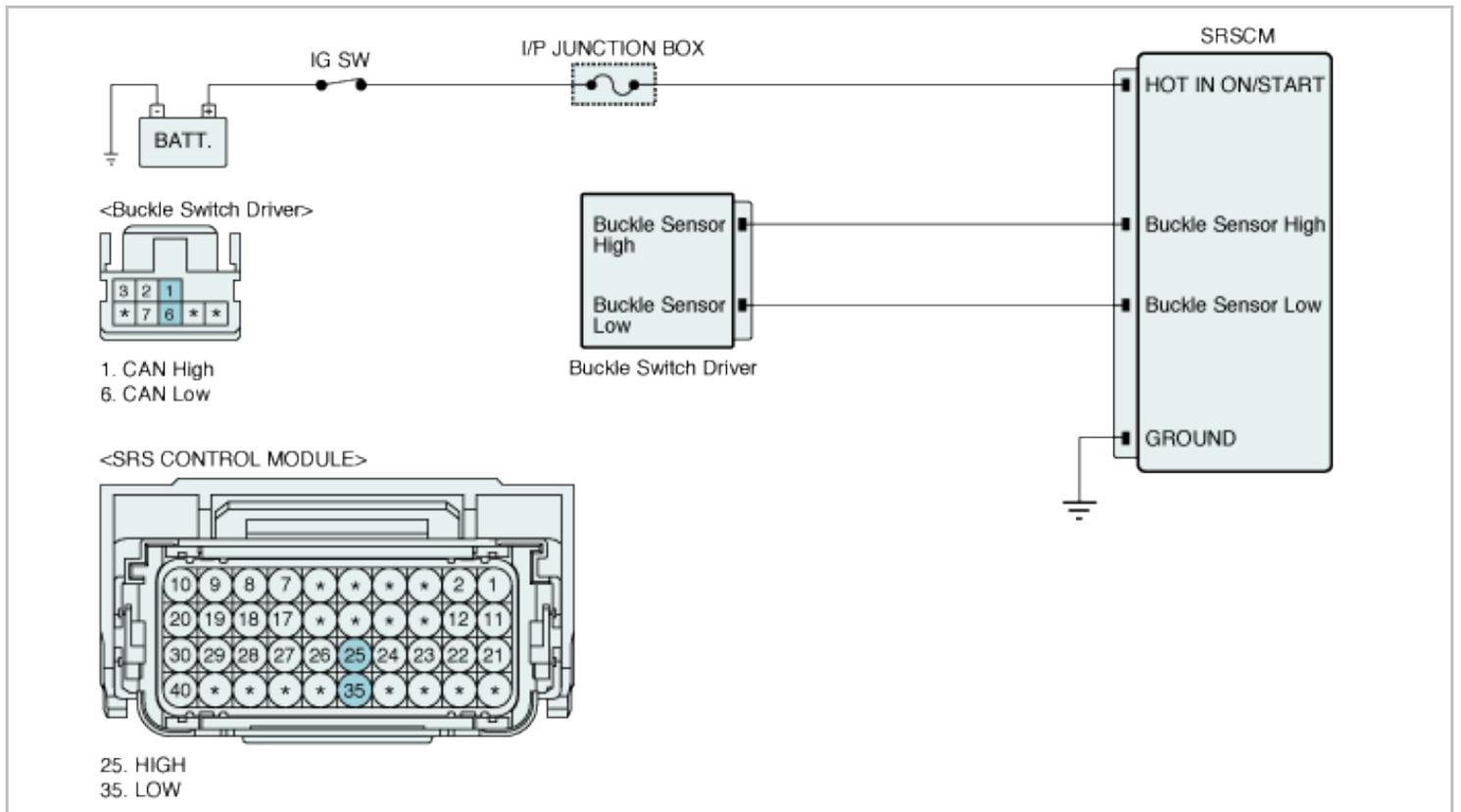
DTC Description

The SRSCM sets DTC B1515 if there is any fault in DSBBS circuit.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		<ul style="list-style-type: none"> Check current 	<ul style="list-style-type: none"> Faulty DSBBS circuit. Faulty DSBBS. Faulty SRSCM.
Enable Conditions		<ul style="list-style-type: none"> Ignition "ON" 	
Threshold Value		<ul style="list-style-type: none"> Sensor lines are cross coupled. (Dbuckle, Pbuckle) Input test signal to other switch, but this line voltage > 0.8V $7.9\text{mA} < \text{Sensor line current} < 10.7\text{mA}$ 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):2s (200ms x 10) Steady:1 time 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):4s Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver Buckle Switch status" parameter on the Scantool.

Specification : Driver Buckle Switch on : Buckled, Driver Buckle Switch off : Unbuckled

Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1516 Buckle Switch Passenger Defect

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

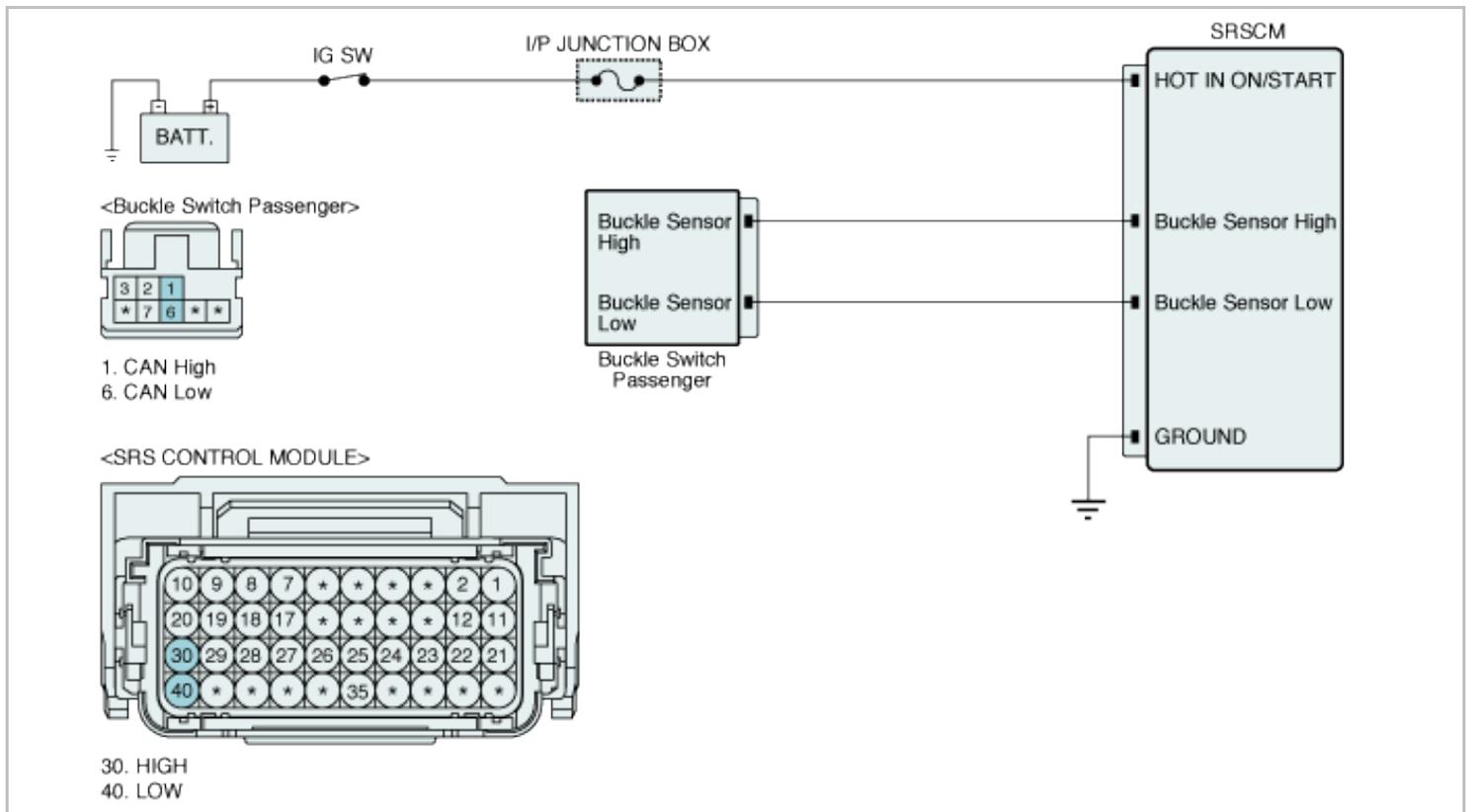
DTC Description

The SRSCM sets DTC B1516 if there is any fault in PSBBS circuit.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		<ul style="list-style-type: none"> Check current 	<ul style="list-style-type: none"> Faulty PSBBS circuit. Faulty PSBBS. Faulty SRSCM.
Enable Conditions		<ul style="list-style-type: none"> Ignition "ON" 	
Threshold Value		<ul style="list-style-type: none"> Sensor lines are cross coupled. (Dbuckle, Pbuckle) Input test signal to other switch, but this line voltage > 0.8V 7.9mA < Sensor line current < 10.7mA 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):2s (200ms x 10) Steady:1 time 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):4s Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger Buckle Switch status" parameter on the Scantool.

Specification : Passenger Buckle Switch on : Buckled, Passenger Buckle Switch off : Unbuckled

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1517 Buckle Switch Driver Instability

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

DTC Description

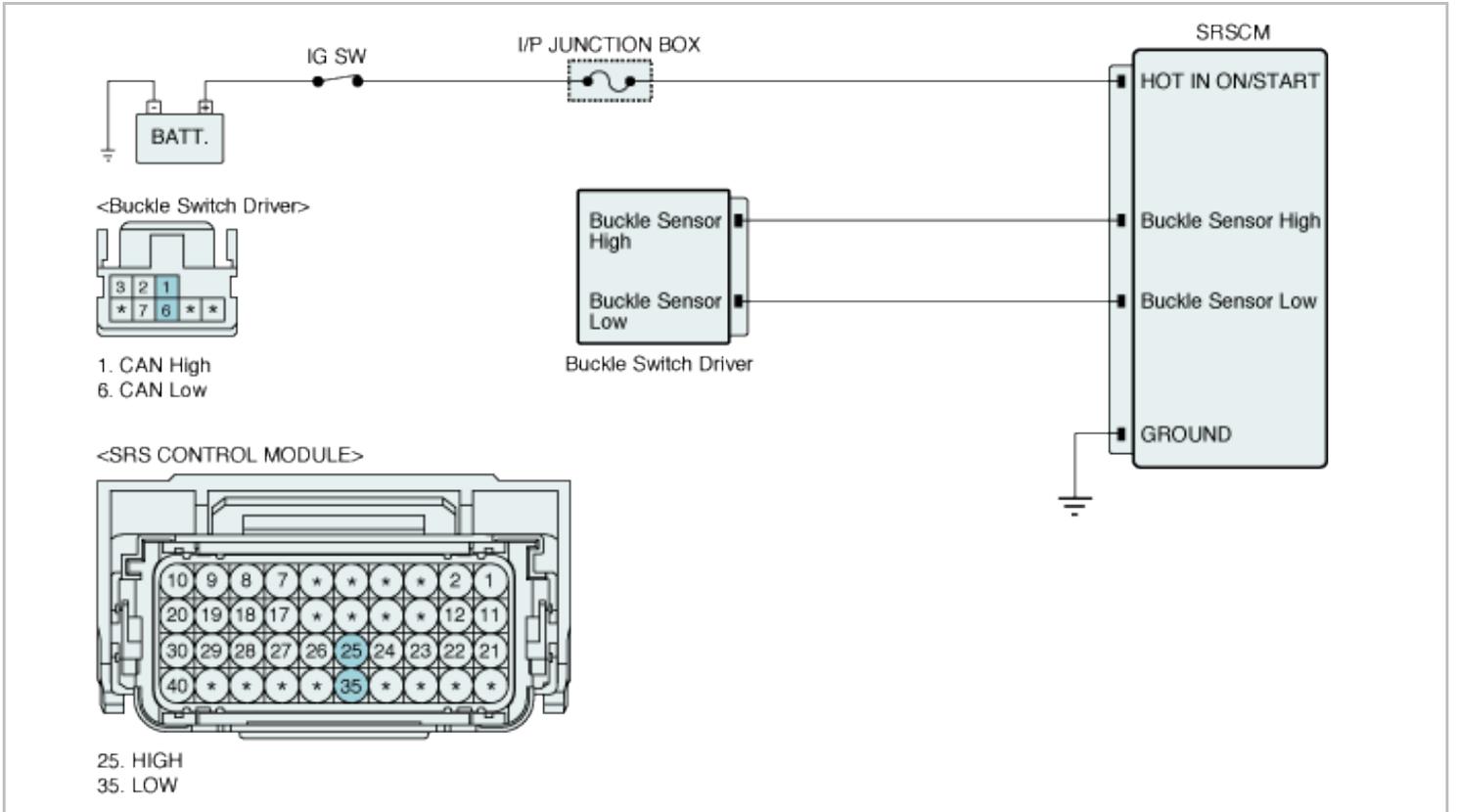
The SRSCM sets DTC B1517 if the value of Seat-belt Buckle Switch changes frequently.

DTC Detecting Condition

Item	Detecting Condition	Possible cause
DTC Strategy	• Check current	• Faulty DSBBS circuit.
Enable Conditions	• Ignition "ON"	

Threshold Value		• Instability Unstable input within 20 samples	• Faulty DSBBS. • Faulty SRSCM.
Diagnostic Time	Qualification	• More than 15 sec	
	De-Qualification	• N/A	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Driver Buckle Switch status" parameter on the Scantool.

Specification : Driver Buckle Switch on : Buckled, Driver Buckle Switch off : Unbuckled

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.

2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	<ul style="list-style-type: none"> ▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1518 Buckle Switch Passenger instability

General Description

Seat-belt Buckle Switch(SBBS) is located in driver and passenger side seat.

SRSCM checks if seatbelt is buckled by signal of SBBS.

SRSCM controls air bag module and BPT differently in accordance with vehicle speed at the moment of collision and signal from SBBS.

DTC Description

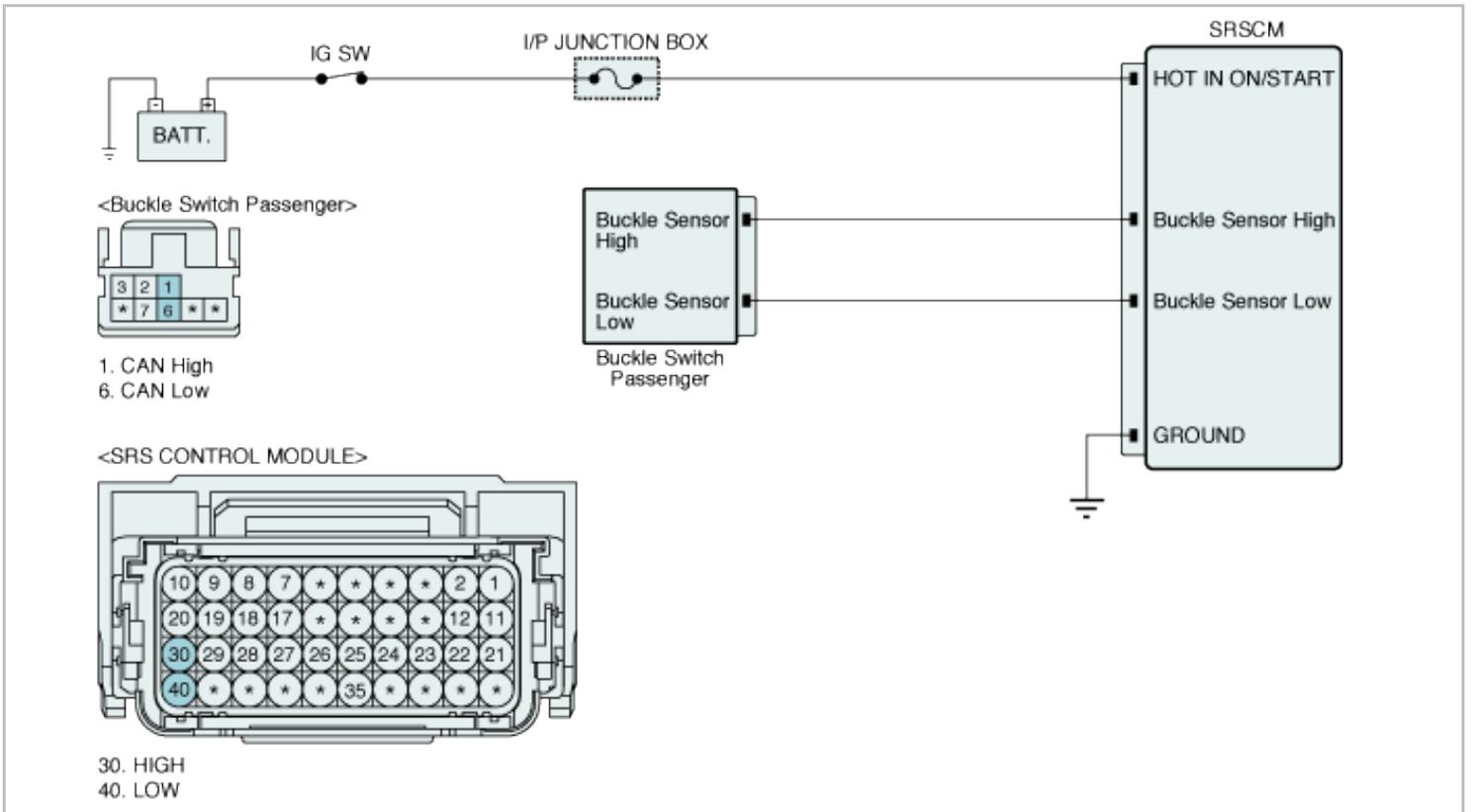
The SRSCM sets DTC B1518 if the value of Seat-belt Buckle Switch changes frequently.

DTC Detecting Condition

Item	Detecting Condition	Possible cause
DTC Strategy	• Check current	<ul style="list-style-type: none"> • Faulty PSBBS circuit. • Faulty PSBBS.
Enable Conditions	• Ignition "ON"	
Threshold Value	• Instability Unstable input within 20 samples	

Diagnostic Time	Qualification	• More than 15 sec	• Faulty SRSCM.
	De-Qualification	• N/A	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Current Data" mode.
3. Monitor the "Passenger Buckle Switch status" parameter on the Scantool.

Specification : Passenger Buckle Switch on : Buckled, Passenger Buckle Switch off : Unbuckled

Current Data		
Standard Display	Full List	Graph
Items List	Reset Min.Max.	Record
Stop	Filter	
Sensor Name	Value	Unit
<input type="checkbox"/> Battery Voltage	12.71	V
<input type="checkbox"/> Driver STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Passenger STPS STATUS	NOT SUPP.	-
<input type="checkbox"/> Driver Buckle Switch STATUS	Unbuckled	-
<input type="checkbox"/> Passenger Buckle Switch Status	Unbuckled	-
<input type="checkbox"/> DAB-1st resistance	2.76	Ohm
<input type="checkbox"/> DAB-2nd resistance	2.88	Ohm
<input type="checkbox"/> PAB-1st resistance	2.37	Ohm
<input type="checkbox"/> PAB-2nd resistance	2.49	Ohm
<input type="checkbox"/> Retractor DPT resistance	2.33	Ohm
<input type="checkbox"/> Retractor PPT resistance	2.41	Ohm
<input type="checkbox"/> DSAB resistance	2.37	Ohm
<input type="checkbox"/> PSAB resistance	2.33	Ohm
<input type="checkbox"/> DCAB resistance	2.33	Ohm
<input type="checkbox"/> PCAB resistance	2.41	Ohm
<input type="checkbox"/> Buckle DPT resistance	NOT SUPP.	Ohm
<input type="checkbox"/> Buckle PPT resistance	NOT SUPP.	Ohm

Fig.1

Fig.1) Unbuckled Data

4. Is parameter displayed within specifications?

YES	<ul style="list-style-type: none"> ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Go to "W/Harness Inspection" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.

2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Seat-belt Buckle Switch connector .
5. Substitute the Seat-belt Buckle Switch and check for proper operation.
6. Is DTC present problem ?

YES	<ul style="list-style-type: none"> ▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none"> ▶ Substitute a known-good Seat-belt Buckle Switch, and check for proper operation. If the problem is corrected, replace Seat-belt Buckle Switch and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1620 Internal fault-Replace SRSCM

General Description

In collision, SRSCM sends current to pertinent air bag for deployment.

Besides SRSCM performs diagnosis of overall air bag system and light warning lamp if there's any fault in it.

Main functions of SRSCM are as follows.

1. Collision and Passenger presence Detection.
2. Determination of BPT and air bag deployment in accordance with given condition.
3. Internal and external diagnosis of air bag system.
4. Warning by warning lamp if there's any fault in airbag system.
5. Proffering data for scantool diagnosis.

DTC Description

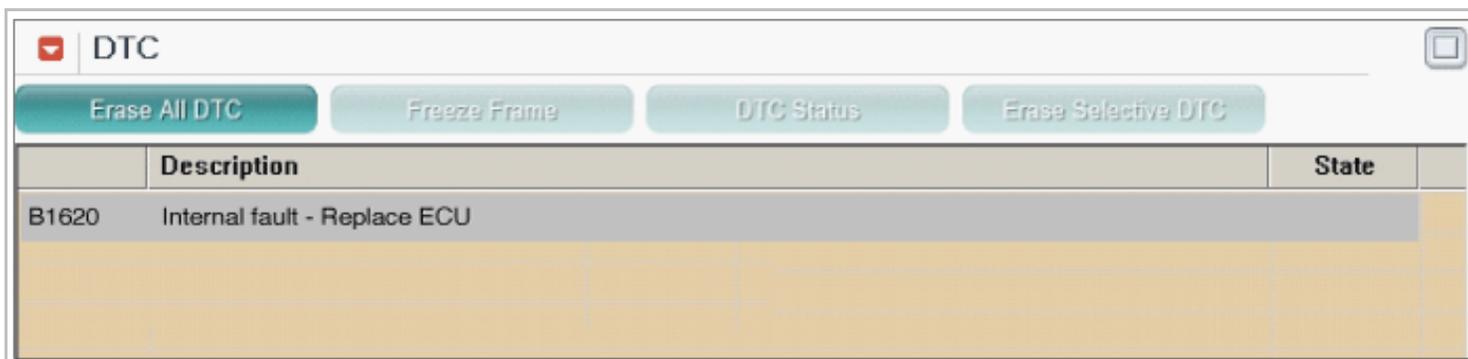
The SRSCM sets DTC B1620 if there is any fault in SRSCM.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check SRSCM	• SRSCM.
Enable Conditions		• Ignition "ON"	
Diagnostic Time	Qualification	• N/A	
	De-Qualification	• ∞(infinite-DTC cannot be erased)	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Internal fault of SRSCM. Substitute with a SRSCM and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
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Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1650 Crash Recorded in 1st Stage Only(Frontal-Replace SRSCM)

General Description

In collision, SRSCM sends current to pertinent air bag for deployment.

Besides SRSCM performs diagnosis of overall air bag system and light warning lamp if there's any fault in it.

Main functions of SRSCM are as follows.

1. Collision and Passenger presence Detection.
2. Determination of BPT and air bag deployment in accordance with given condition.
3. Internal and external diagnosis of air bag system.
4. Warning by warning lamp if there's any fault in airbag system.
5. Proffering data for scantool diagnosis.

DTC Description

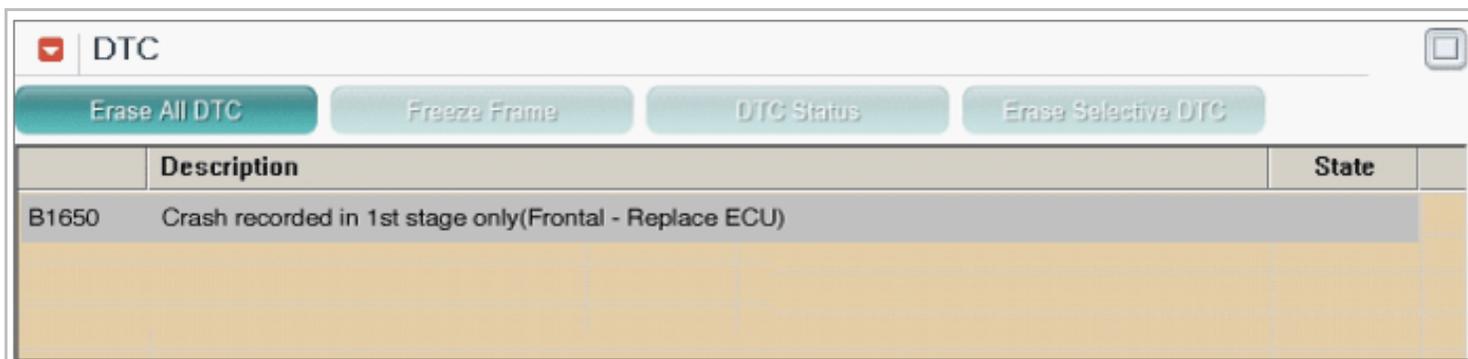
The SRSCM sets DTC B1650 if DAB or PAB deploys.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check DAB or PAB deployment	• SRSCM. • DAB or PAB deployment
Enable Conditions		• Ignition "ON"	
Diagnostic Time	Qualification	• N/A	
	De-Qualification	• ∞(infinite-DTC cannot be erased)	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES

▶ DTC caused by deployment of front(1ST)air bag. Substitute with a SRSCM and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.

2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1651 Crash Recorded in Front-Driver Side Airbag(Replace SRSCM)

General Description

In collision, SRSCM sends current to pertinent air bag for deployment. Besides SRSCM performs diagnosis of overall air bag system and light warning lamp if there's any fault in it.

Main functions of SRSCM are as follows.

1. Collision and Passenger presence Detection.
2. Determination of BPT and air bag deployment in accordance with given condition.
3. Internal and external diagnosis of air bag system.
4. Warning by warning lamp if there's any fault in airbag system.
5. Proffering data for scantool diagnosis.

DTC Description

The SRSCM sets DTC B1651 if DSAB and DCAB deploys.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check DSAB and DCAB deployment	• SRSCM. • DSAB and DCAB deployment
Enable Conditions		• Ignition "ON"	
Diagnostic Time	Qualification	• N/A	
	De-Qualification	• ∞(infinite-DTC cannot be erased)	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC	
<div style="display: flex; justify-content: space-around;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>	
Description	State
B1651 Crash recorded in front-Driver side airbag(Replace ECU)	

5. Is DTC present problem ?

YES	▶ DTC caused by deployment of front driver SAB and driver CAB. Substitute with a SRSCM and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
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Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1652 Crash Recorded in Front-Passenger Side Airbag(Replace SRSCM)

General Description

In collision, SRSCM sends current to pertinent air bag for deployment.

Besides SRSCM performs diagnosis of overall air bag system and light warning lamp if there's any fault in it.

Main functions of SRSCM are as follows.

1. Collision and Passenger presence Detection.
2. Determination of BPT and air bag deployment in accordance with given condition.
3. Internal and external diagnosis of air bag system.
4. Warning by warning lamp if there's any fault in airbag system.
5. Proffering data for scantool diagnosis.

DTC Description

The SRSCM sets DTC B1652 if PSAB and PCAB deploys.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check PSAB and PCAB deployment	• SRSCM. • PSAB and PCAB deployment
Enable Conditions		• Ignition "ON"	
Diagnostic Time	Qualification	• N/A	
	De-Qualification	• ∞(infinite-DTC cannot be erased)	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ DTC caused by deployment of front passenger SAB and passenger CAB. Substitute with a SRSCM and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
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Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1657 Crash Recorded in Belt Pretensioner only

General Description

In collision, SRSCM sends current to pertinent air bag for deployment.

Besides SRSCM performs diagnosis of overall air bag system and light warning lamp if there's any fault in it.

Main functions of SRSCM are as follows.

1. Collision and Passenger presence Detection.
2. Determination of BPT and air bag deployment in accordance with given condition.
3. Internal and external diagnosis of air bag system.
4. Warning by warning lamp if there's any fault in airbag system.
5. Proffering data for scantool diagnosis.

DTC Description

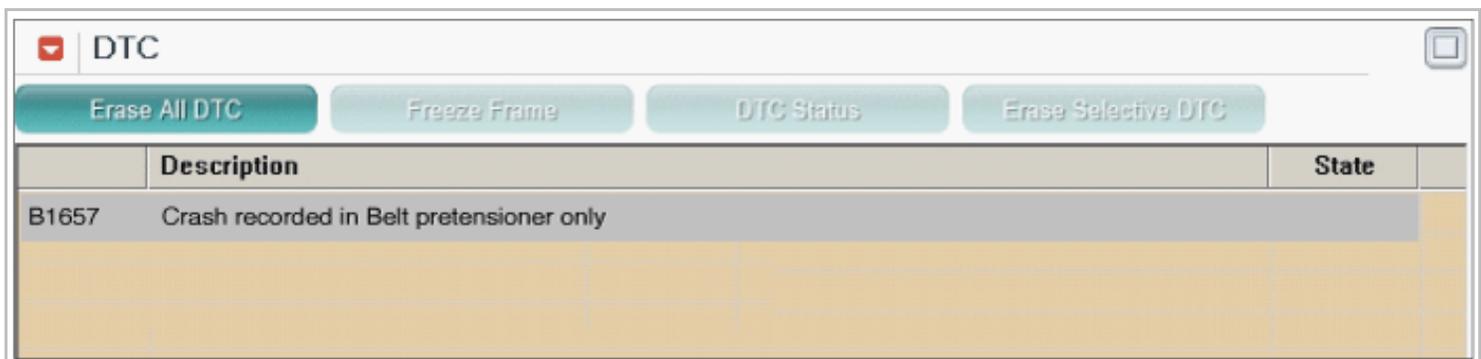
The SRSCM sets DTC B1657 if any BPT deploys.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check BPT deployment	• BPT deployment • SRSCM.
Enable Conditions		• Ignition "ON"	
Diagnostic Time	Qualification	• NA	
	De-Qualification	• NA	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ DTC caused by deployment of BPT. Substitute with a SRSCM and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
------------	--

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.

2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1658 Belt Pretensioner 6 times Deployment

General Description

In collision, SRSCM sends current to pertinent air bag for deployment. Besides SRSCM performs diagnosis of overall air bag system and light warning lamp if there's any fault in it.

Main functions of SRSCM are as follows.

1. Collision and Passenger presence Detection.
2. Determination of BPT and air bag deployment in accordance with given condition.
3. Internal and external diagnosis of air bag system.
4. Warning by warning lamp if there's any fault in airbag system.
5. Proffering data for scantool diagnosis.

DTC Description

When the Crash (Belt pretensioner 6 times deployment) recorded in the SRSCM.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check BPT deployment	• SRSCM. • Crash recorded(Belt pretensioner 6 times deployment).
Enable Conditions		• Ignition "ON"	
Diagnostic Time	Qualification	• NA	
	De-Qualification	• ∞(infinite-DTC cannot be erased)	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC	
<div style="display: flex; justify-content: space-around; align-items: center;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>	
Description	State
B1658 Belt pretensioner 6 times deployment	

5. Is DTC present problem ?

YES	<p>▶ DTC caused by 6th deployment of BPT. Substitute with a SRSCM and check for proper operation.</p> <p>If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p>
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Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1670 Crash recorded in full stage(Frontal-Replace SRSCM)

General Description

In collision, SRSCM sends current to pertinent air bag for deployment.

Besides SRSCM performs diagnosis of overall air bag system and light warning lamp if there's any fault in it.

Main functions of SRSCM are as follows.

1. Collision and Passenger presence Detection.
2. Determination of BPT and air bag deployment in accordance with given condition.
3. Internal and external diagnosis of air bag system.
4. Warning by warning lamp if there's any fault in airbag system.
5. Proffering data for scantool diagnosis.

DTC Description

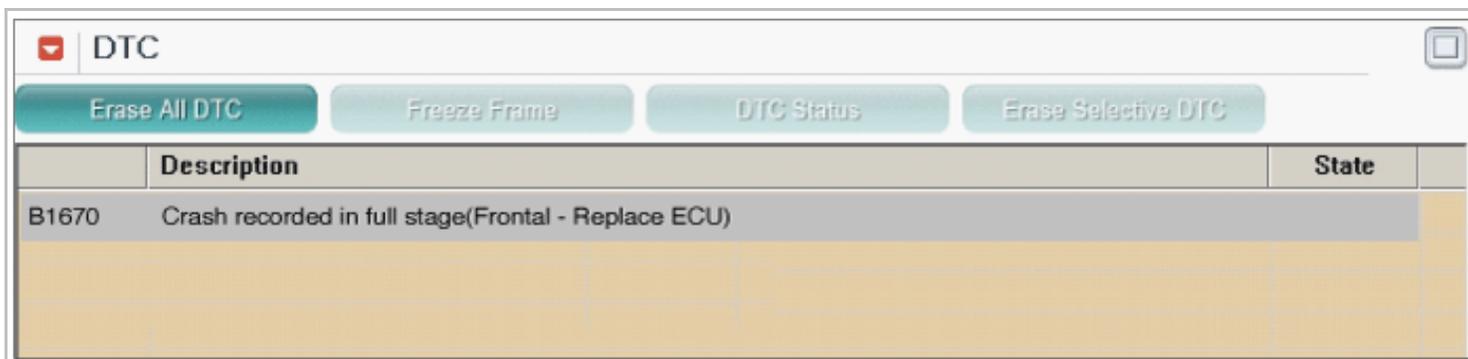
When the Crash recorded in full stage in the SRS Control module.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Crash recorded in full stage in the SRSCM	<ul style="list-style-type: none"> • Unable to control SRS system due to internal fault. • Crash recorded in full stage
Enable Conditions		• Ignition "ON"	
Threshold Value		• Crash recorded in the SRSCM	
Diagnostic Time	Qualification	• N/A	
	De-Qualification	• ∞(infinite-DTC cannot be erased)	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ DTC caused by deployment of front full stage(1ST,2ND)air bag. Substitute with a SRSCM and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
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Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1683 Exceed Maximum Coding Number

General Description

When the new SRSCM is set up on a vehicle by SRSCM's failure, SRSCM(ACU) Variant coding must be performed. Since a new SRSCM is normally supplied with unsetting state, the ACU has to be set up based on the vehicle specifications by operating ACU Variant Coding procedure.

The SRSCM checks its specifications in it in order to run its airbag system normally.

If the warning light of airbag is flickering continuously, that is because SRSCM(ACU) Variant Coding is not completed.

NOTE

SRSCM Variant Coding is available only one time. And when it is already finished, it is impossible to retry SRSCM Variant Coding.

Warning lamp's operation during SRSCM(ACU) Variant Coding Mode : It will be flicking on every 1 second before the Variant Coding is normally done.

DTC Description

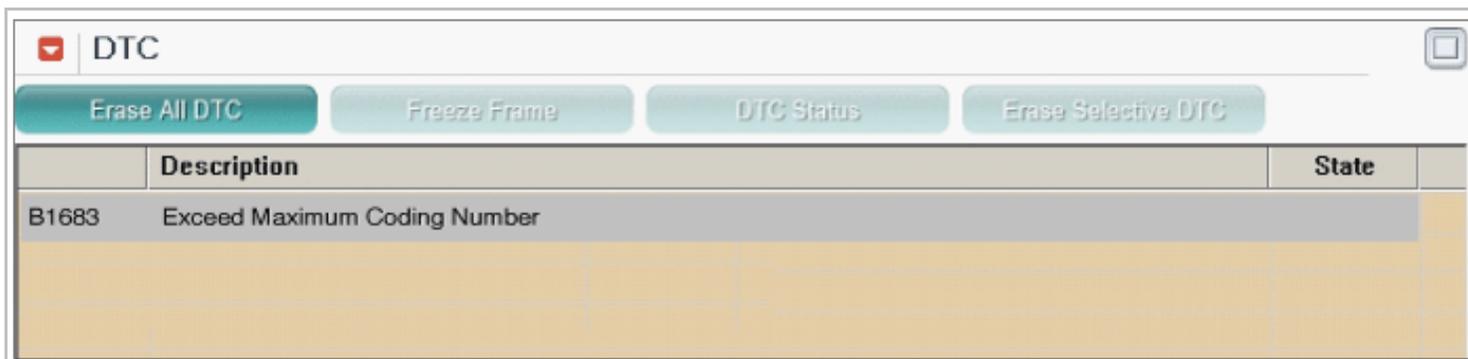
In order to run the airbag system normally, check if there is an incorrect vehicle specifications at performing SRSCM(ACU) Variant Coding. This DTC is set up when SRSCM(ACU) Variant Coding is not done over 255 times.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• SRSCM Coding	<ul style="list-style-type: none"> • Connection for DAB, PAB, BPT, CAB and SAB • SRSCM(ACU) Variant Coding's failure • Incorrect vehicle specifications • SRSCM's connector and circuit • SRSCM
Enable Conditions		• SRSCM(ACU) Variant Coding	
Threshold Value		• Failure of SRSCM(ACU) Variant Coding is over 255 times.	
Diagnostic Time	Qualification	• More than one time	
	De-Qualification	• N/A	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES

▶ Replace it with a new one and then check if the vehicle specifications are correct. After that, perform SRSCM(ACU) Variant Coding and then, go to "Verification of Vehicle Repair" procedure.

NO

- ▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.
- ▶ Thoroughly check release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

ACU Variant Coding

■ ACU Variant Coding (On-line type on GDS)

Fig.1) Initial ACU Variant Coding screen

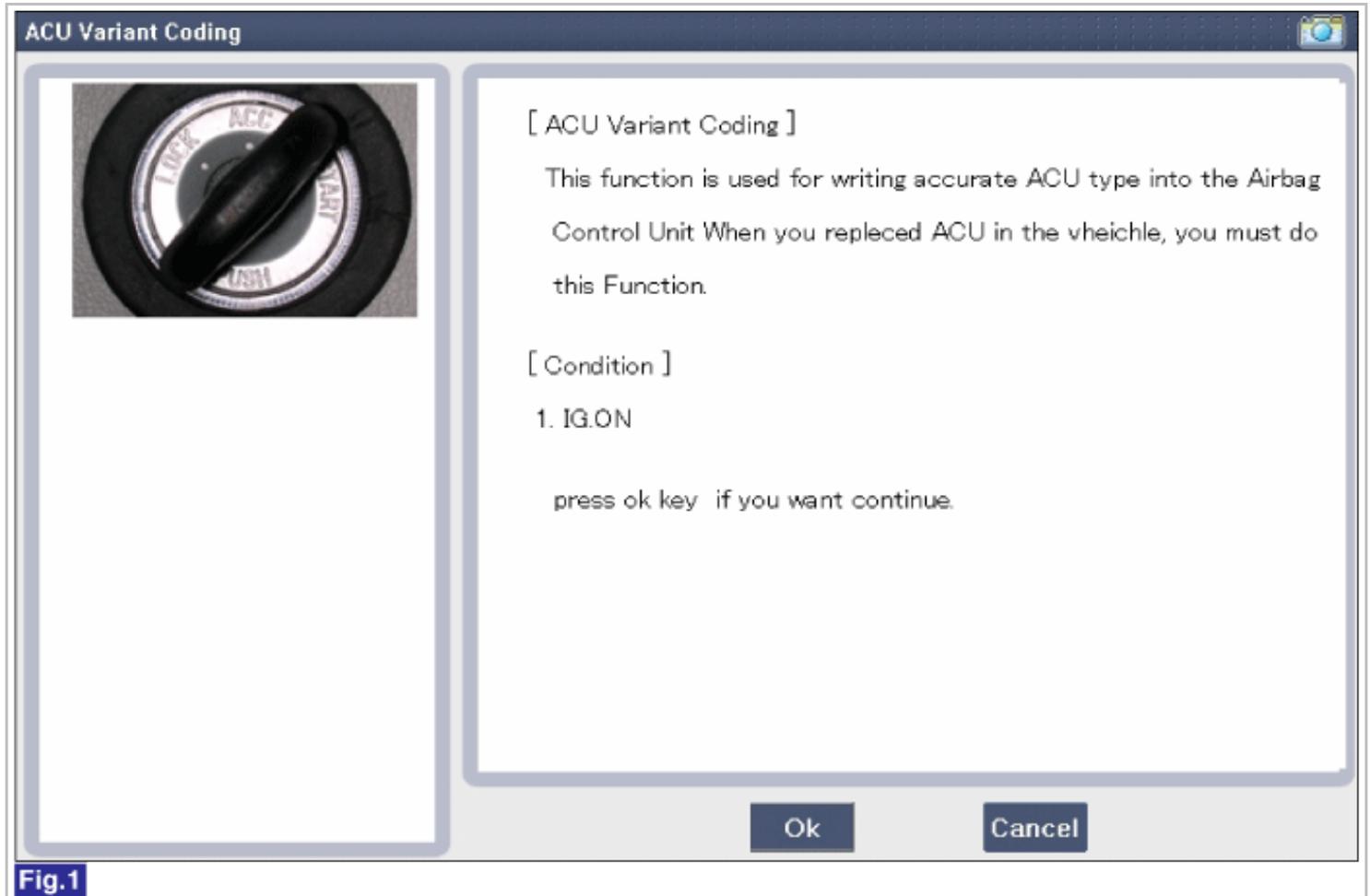


Fig.2) VIN Code entering screen

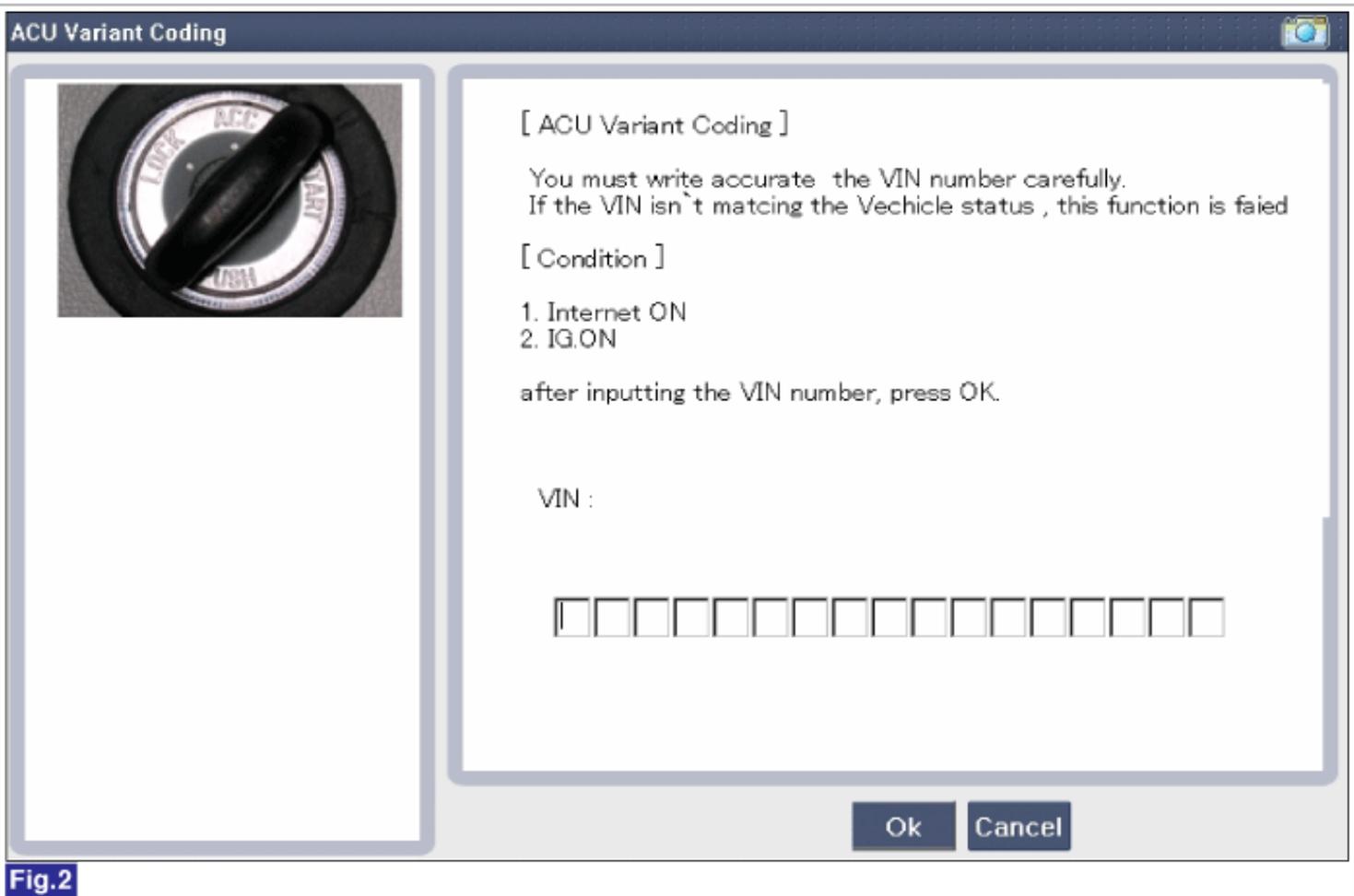


Fig.2

Fig.3) Variant coding's proceeding screen-1

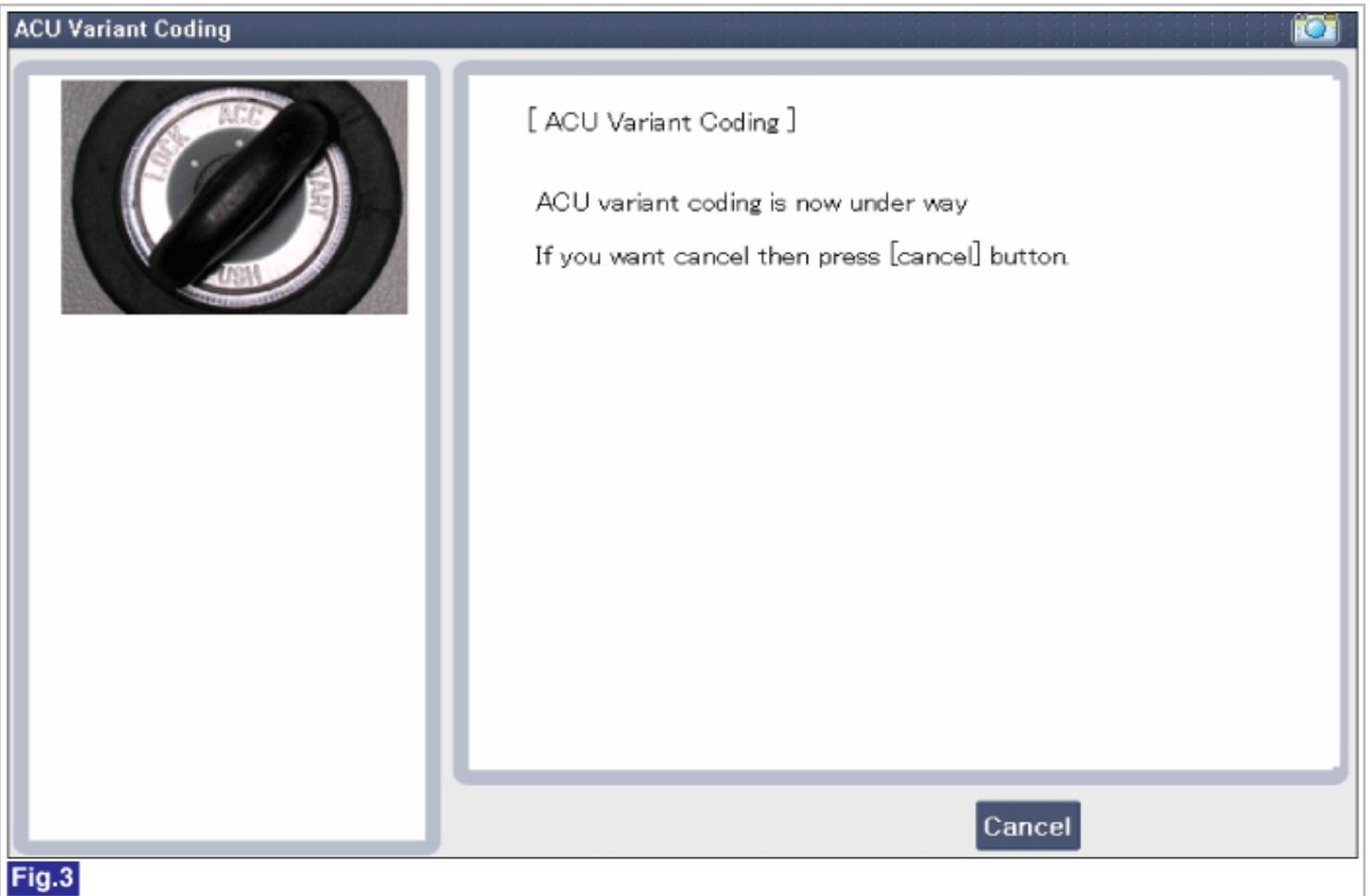


Fig.3

Fig.4) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.4

Fig.5) Variant coding is completed

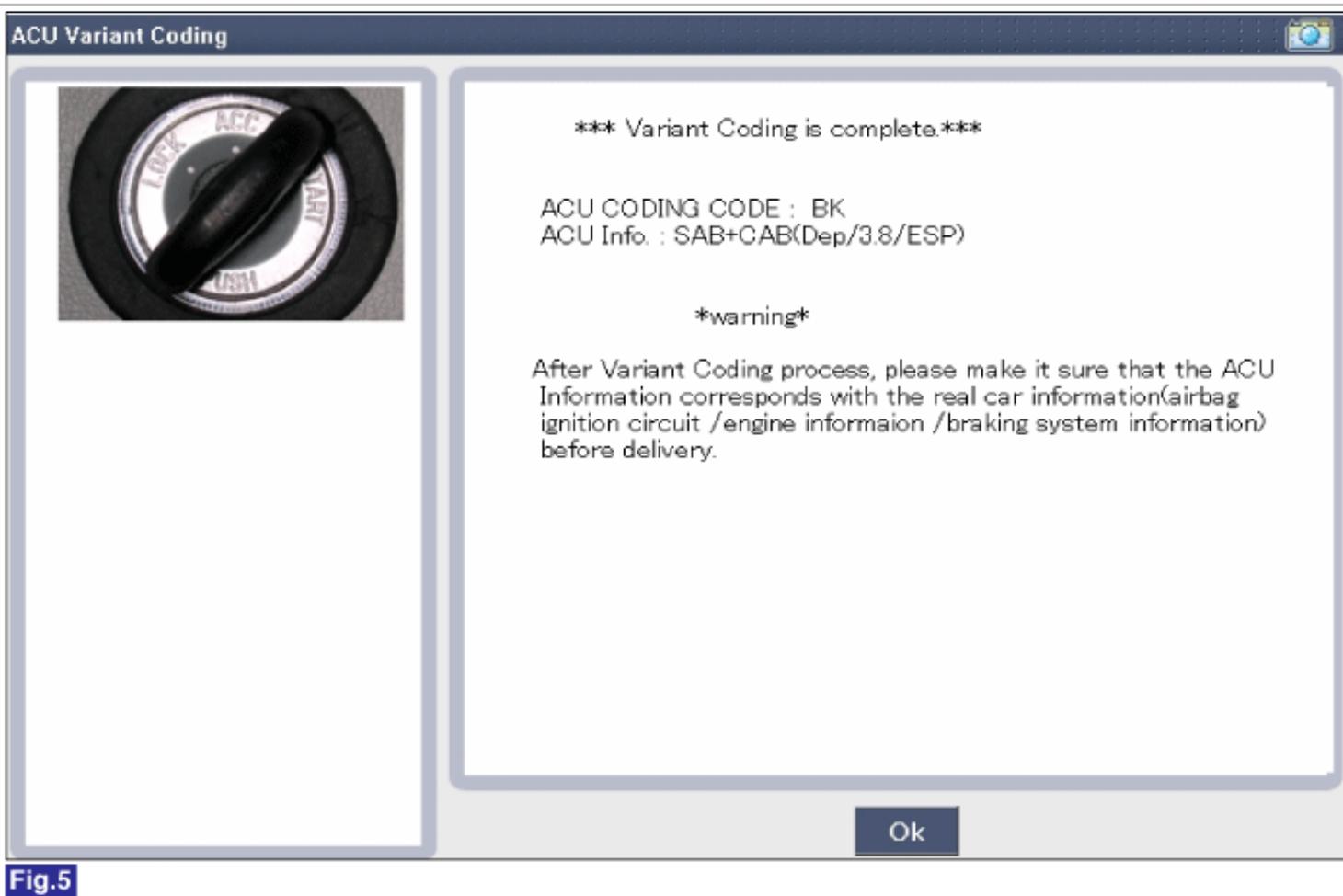
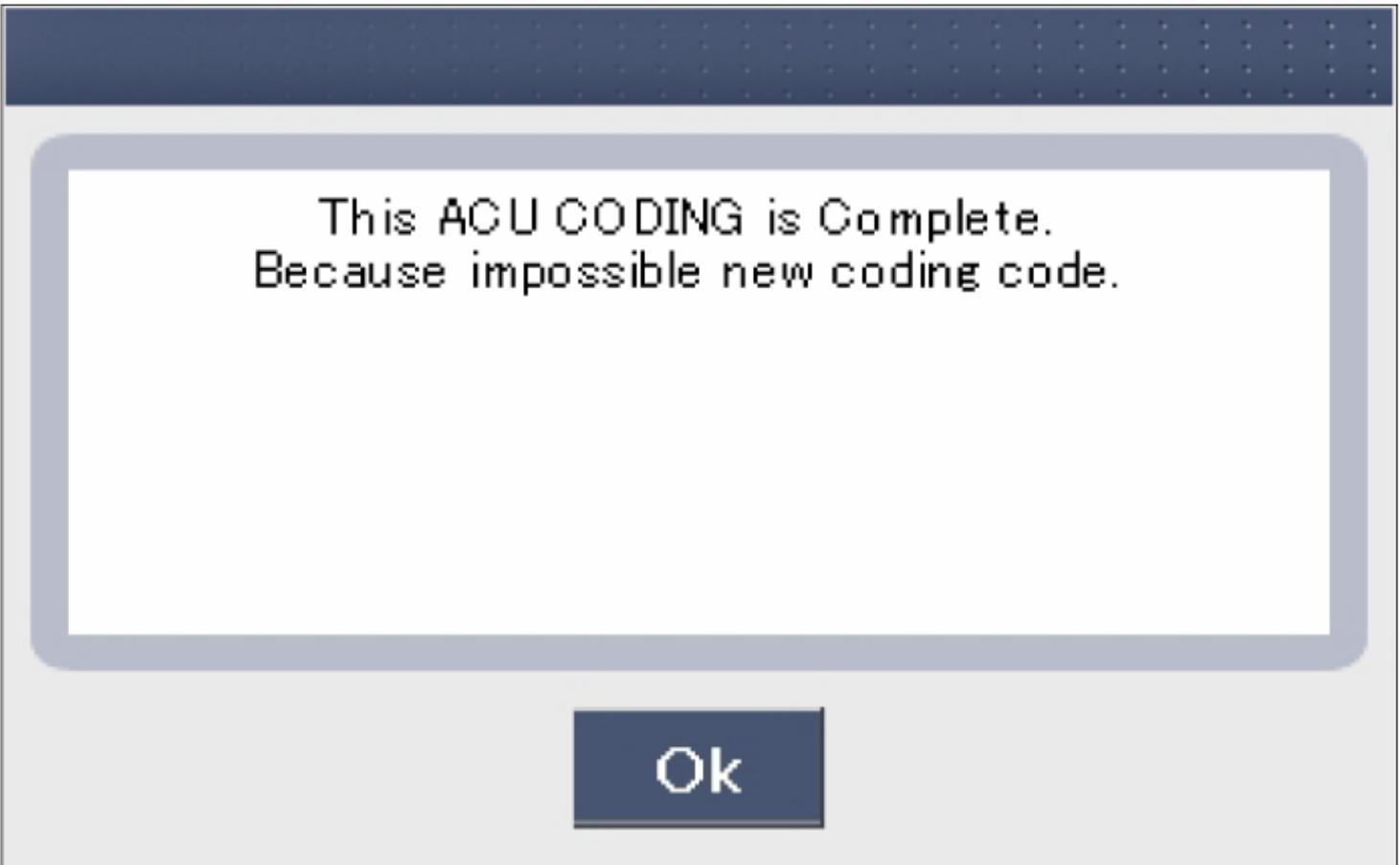


Fig.5

Fig.6) Screen of Retrying the Variant coding after finishing variant coding

The image shows a screenshot of a software interface. At the top, there is a dark blue header bar with a grid of small white dots. Below this is a large, light gray rectangular area with a thick, rounded border. Inside this area, the text "This ACU CODING is Complete. Because impossible new coding code." is displayed in a black, monospaced font. At the bottom center of the gray area, there is a dark blue rectangular button with the word "Ok" written in white. The entire interface is set against a white background.

This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.6

Fig.7) Screen of communication failure

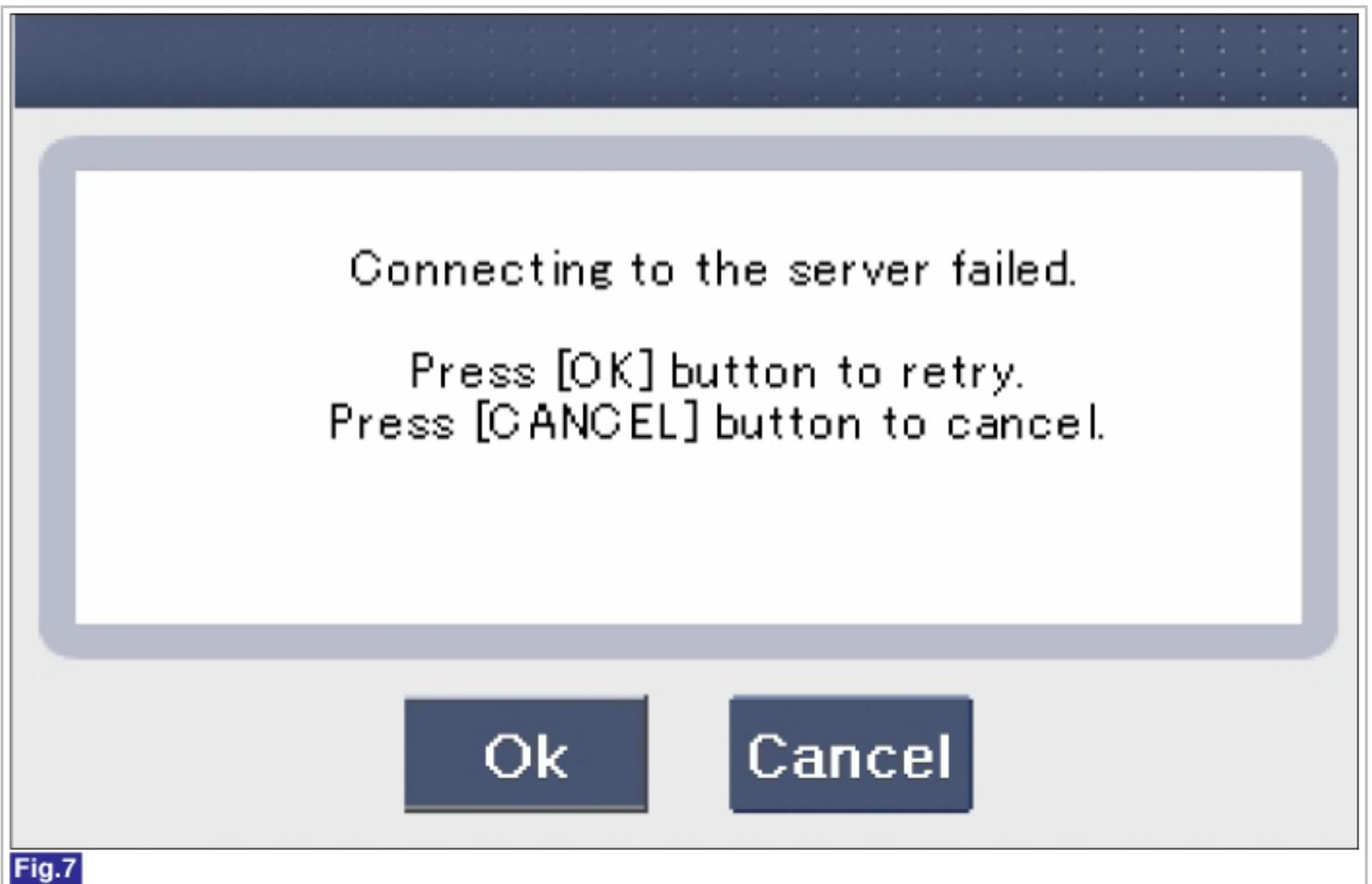


Fig.7

■ **ACU Variant Coding (Off-line type on GDS-this can be used when not connecting to internet)**

Fig.1) Initial ACU Variant Coding screen

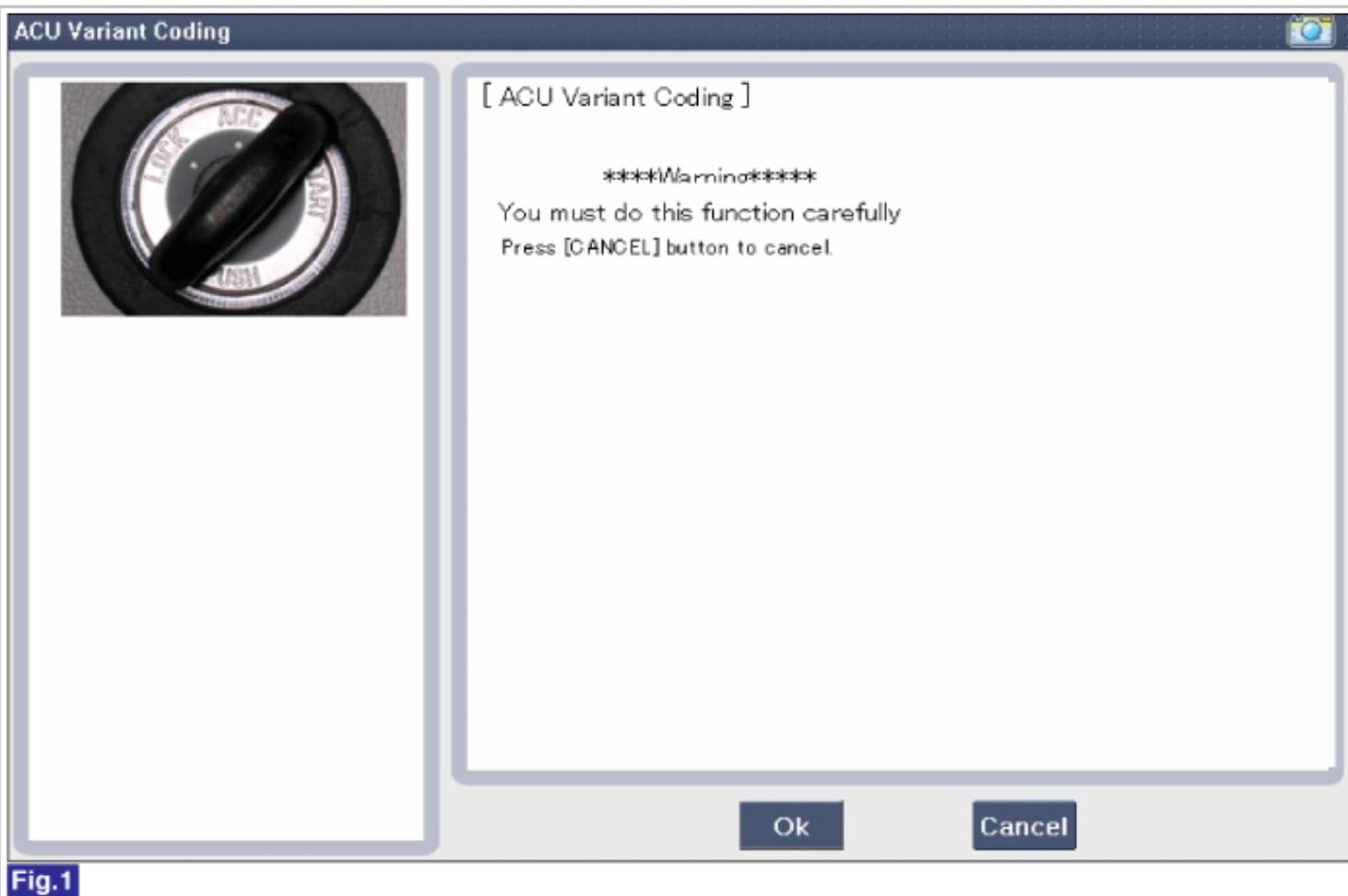


Fig.1

Fig.2) ACU CODING Code entering screen

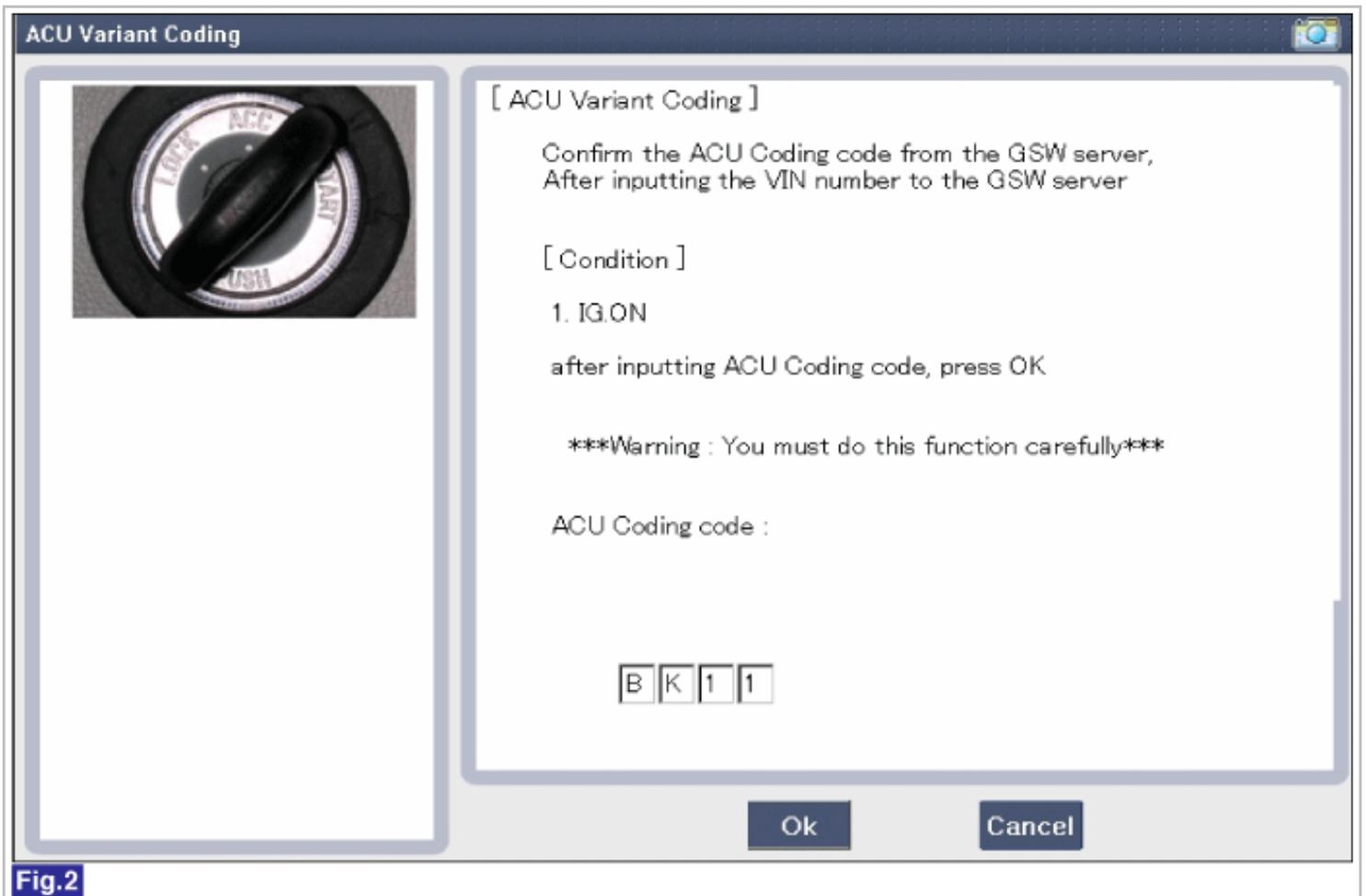


Fig.2

Fig.3) Screen of rechecking ACU CODING code's entering



[ACU Variant Coding]

Warning

You must do this function carefully

Confirm the ACU Coding code from the GSW server , After inputting the VIN number to the GSW server

If you want continue press ok or cancel.

Ok

Cancel

Fig.3

Fig.4) Variant coding's proceeding screen-1

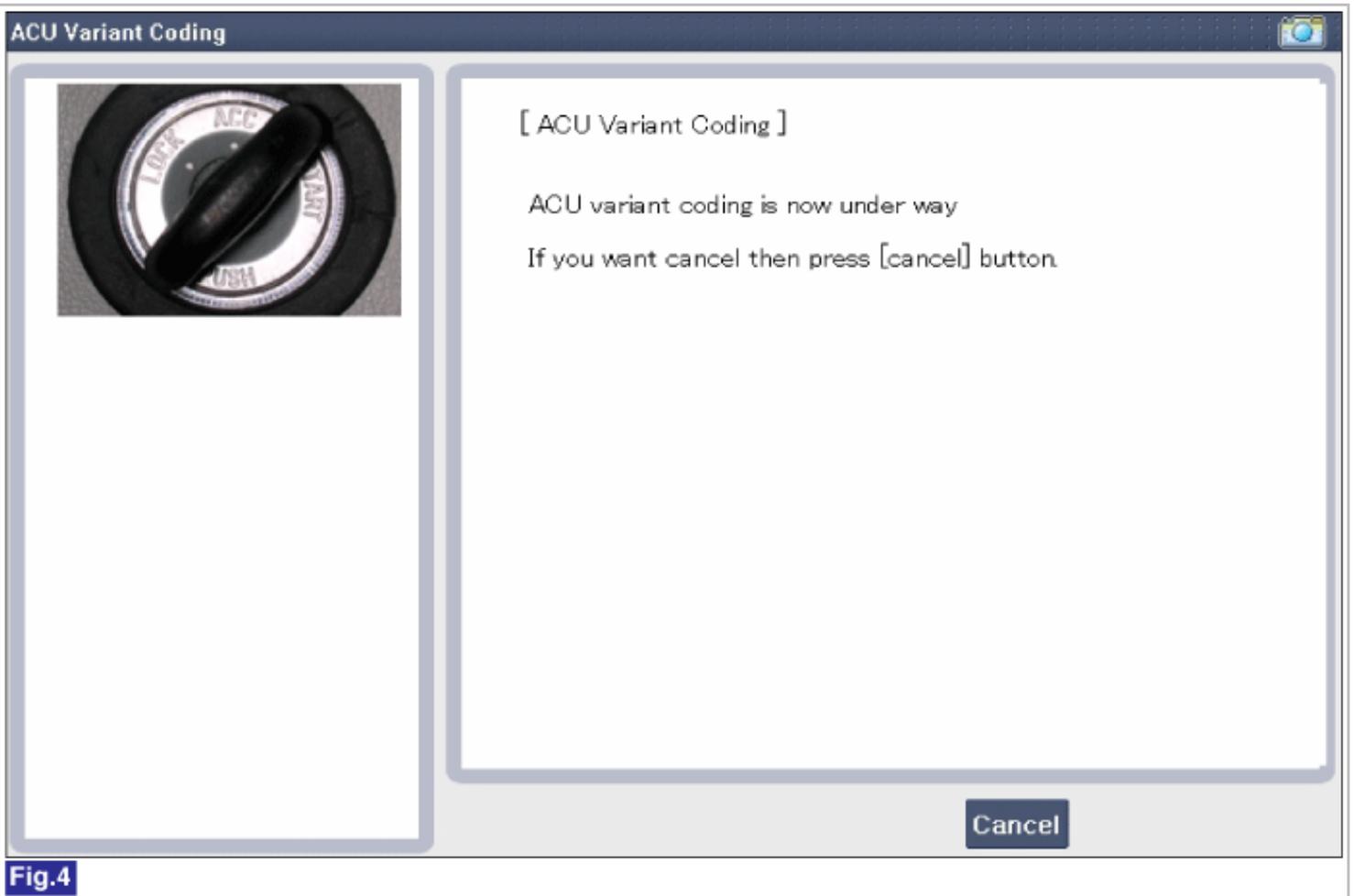


Fig.4

Fig.5) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.5

Fig.6) Variant coding is completed



*** Variant Coding is complete.***

ACU CODING CODE : BK
ACU Info. : SAB+CAB(Dep/3.8/ESP)

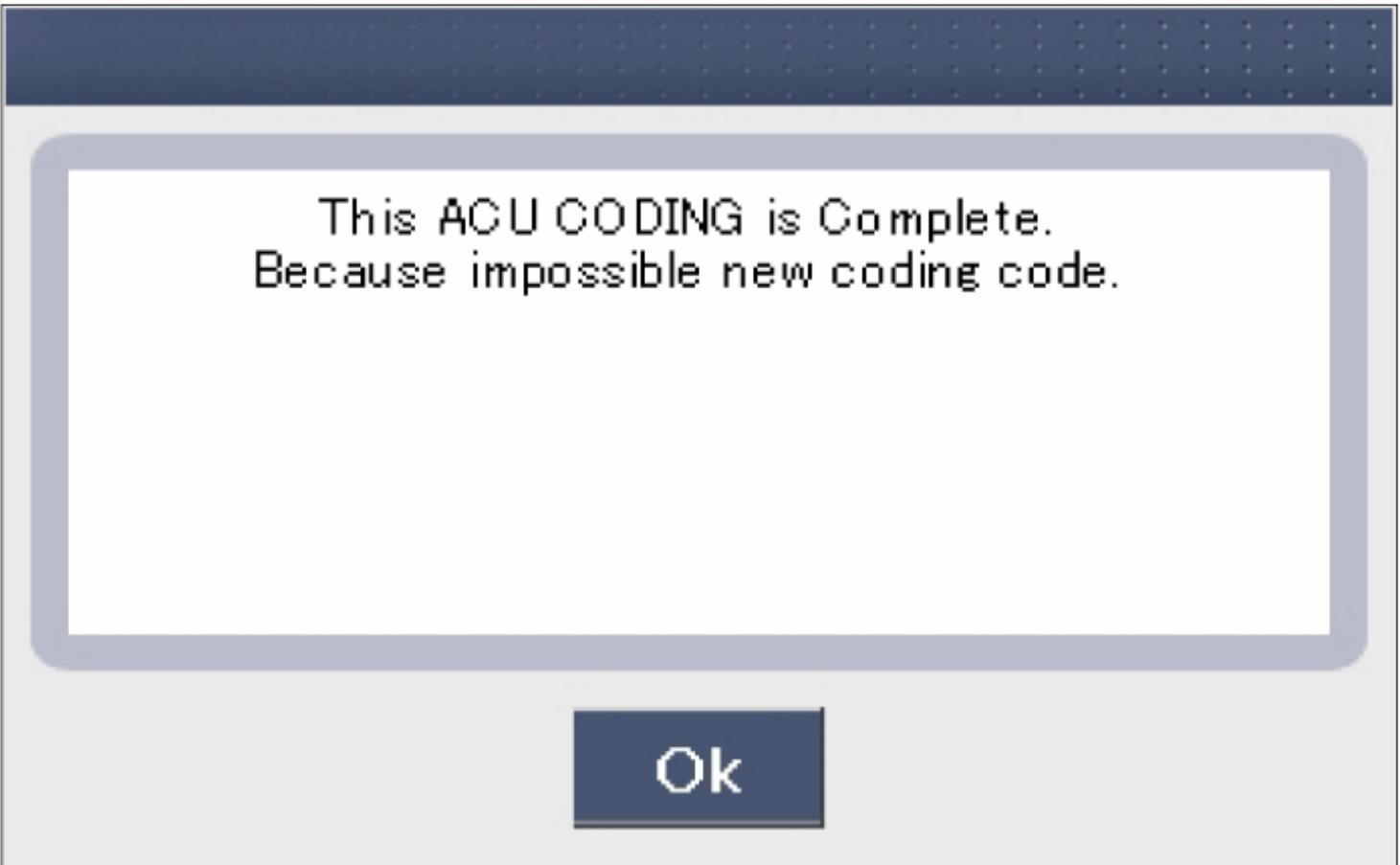
warning

After Variant Coding process, please make it sure that the ACU Information corresponds with the real car information(airbag ignition circuit /engine informaion /braking system information) before delivery.

Ok

Fig.6

Fig.7) Screen of Retrying the Variant coding after finishing variant coding



This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.7

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1684 ACU Configuration is different

General Description

When the new SRSCM is set up on a vehicle by SRSCM's failure, SRSCM(ACU) Variant coding must be performed. Since a new SRSCM is normally supplied with unsetting state, the ACU has to be set up based on the vehicle specifications by operating ACU Variant Coding procedure.

The SRSCM checks its specifications in it in order to run its airbag system normally.

If the warning light of airbag is flickering continuously, that is because SRSCM(ACU) Variant Coding is not completed.

NOTE

SRSCM Variant Coding is available only one time. And when it is already finished, it is impossible to retry SRSCM

Variant Coding.

Warning lamp's operation during SRSCM(ACU) Variant Coding Mode : It will be flicking on every 1 second before the Variant Coding is normally done.

DTC Description

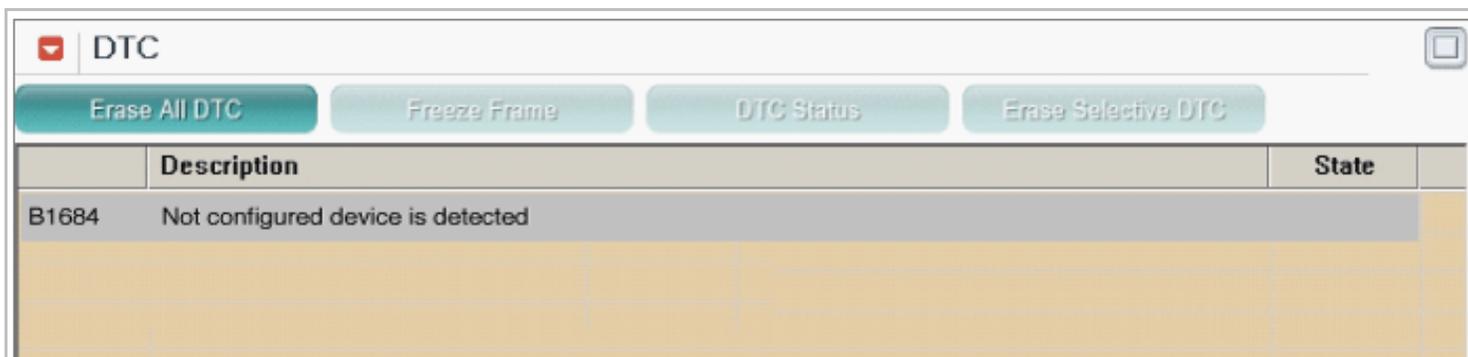
In order to run the airbag system normally, check if there is an incorrect vehicle specifications at performing SRSCM(ACU) Variant Coding. This DTC is set up if there is a difference between actual vehicle specifications and stored vehicle specifications on SRSCM(ACU).

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• SRSCM Coding	• Connection for DAB, PAB, BPT,CAB and SAB • SRSCM(ACU) Variant Coding's failure • Incorrect vehicle specifications • SRSCM's connector and circuit • SRSCM
Enable Conditions		• For 6 seconds after Start-Up	
Threshold Value		• SRSCM has an unmatching specifications with actual vehicle specifications	
Diagnostic Time	Qualification	• More than one time	
	De-Qualification	• More than one time	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	<ul style="list-style-type: none">▶ Replace it with a new one and then check if the vehicle specifications are correct. After that, perform SRSCM(ACU) Variant Coding and then, go to "Verification of Vehicle Repair" procedure.
NO	<ul style="list-style-type: none">▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.▶ Thoroughly check release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

ACU Variant Coding

■ ACU Variant Coding (On-line type on GDS)

Fig.1) Initial ACU Variant Coding screen

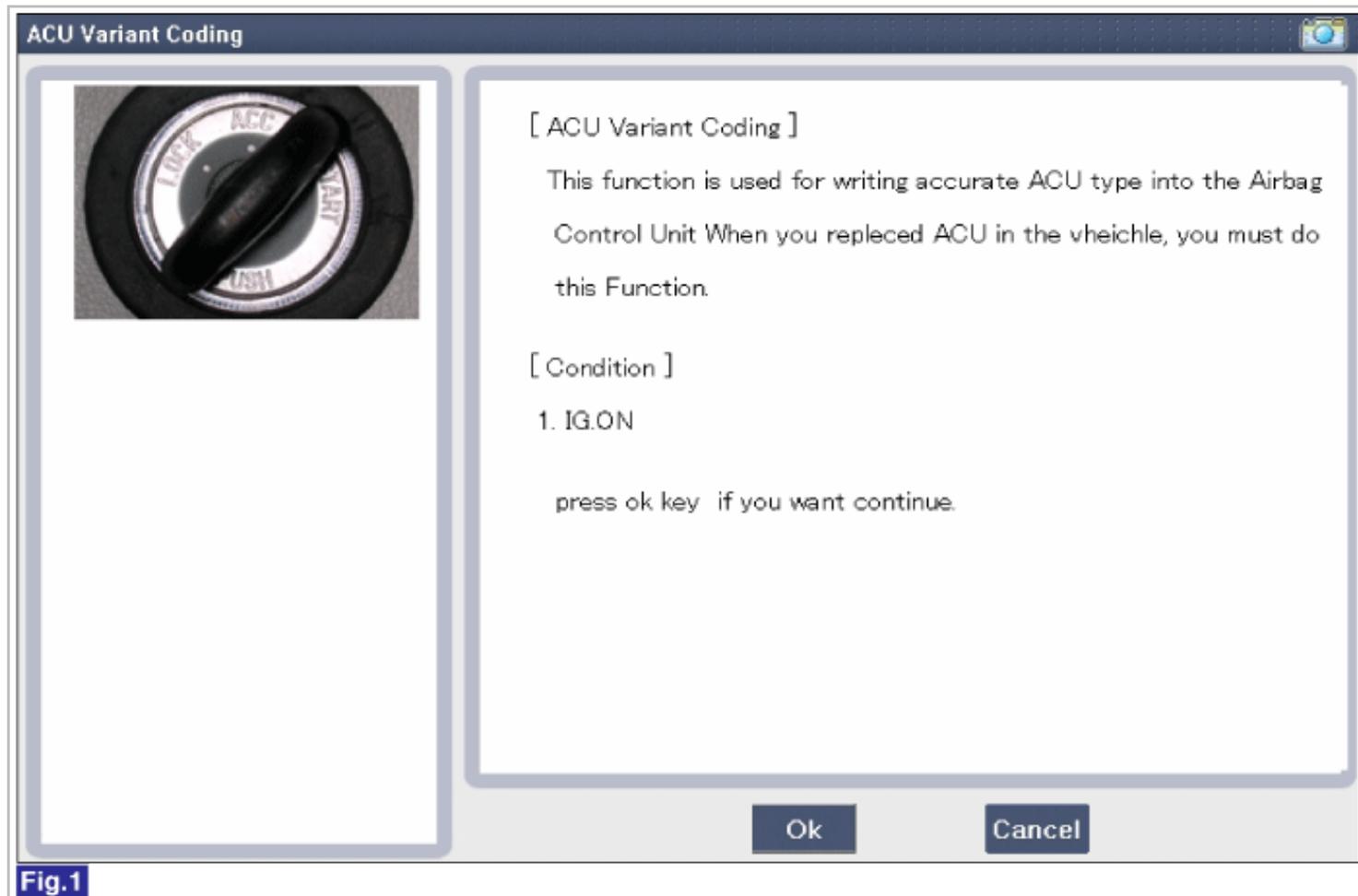


Fig.1

Fig.2) VIN Code entering screen

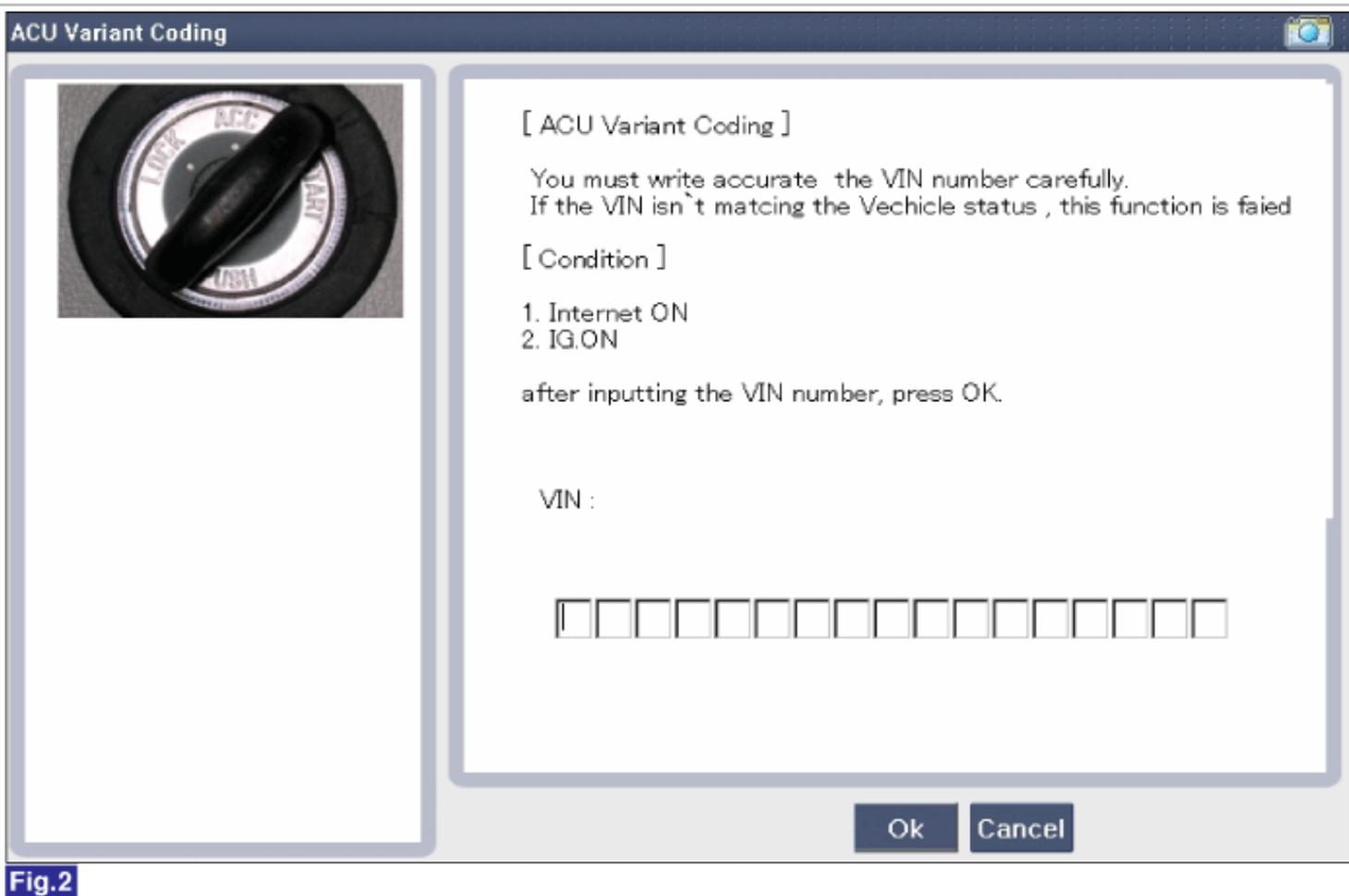


Fig.2

Fig.3) Variant coding's proceeding screen-1

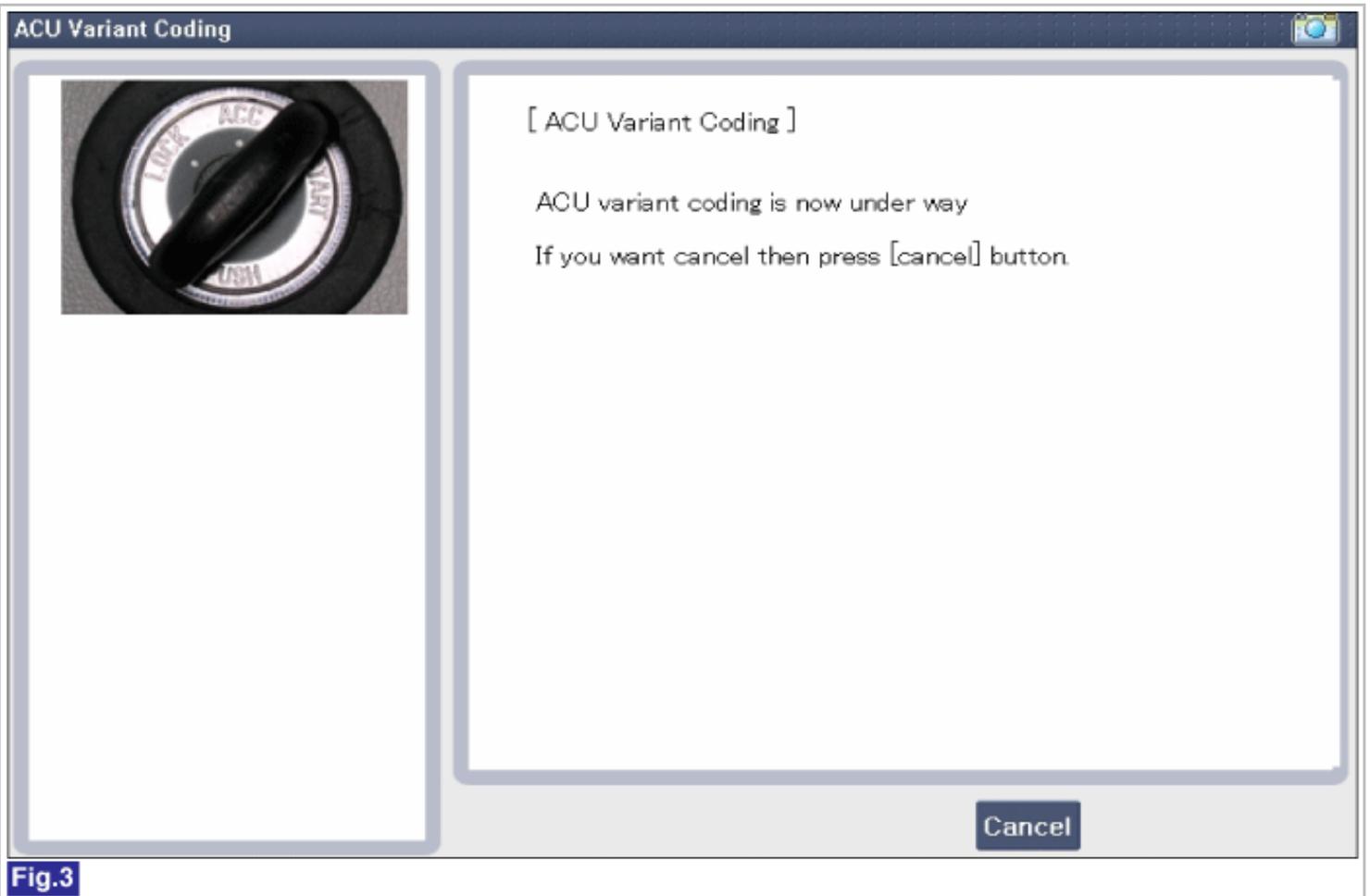


Fig.3

Fig.4) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.4

Fig.5) Variant coding is completed

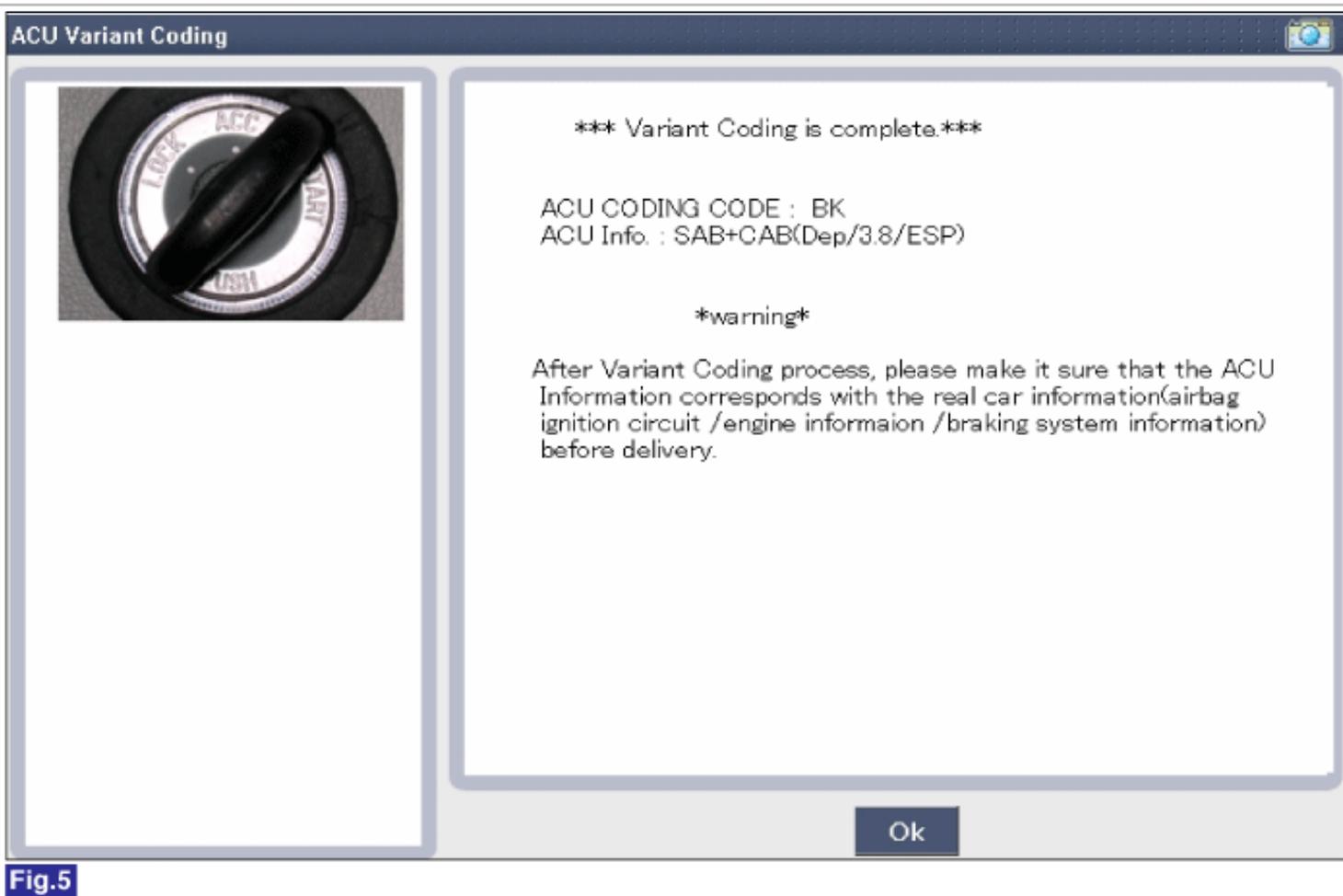
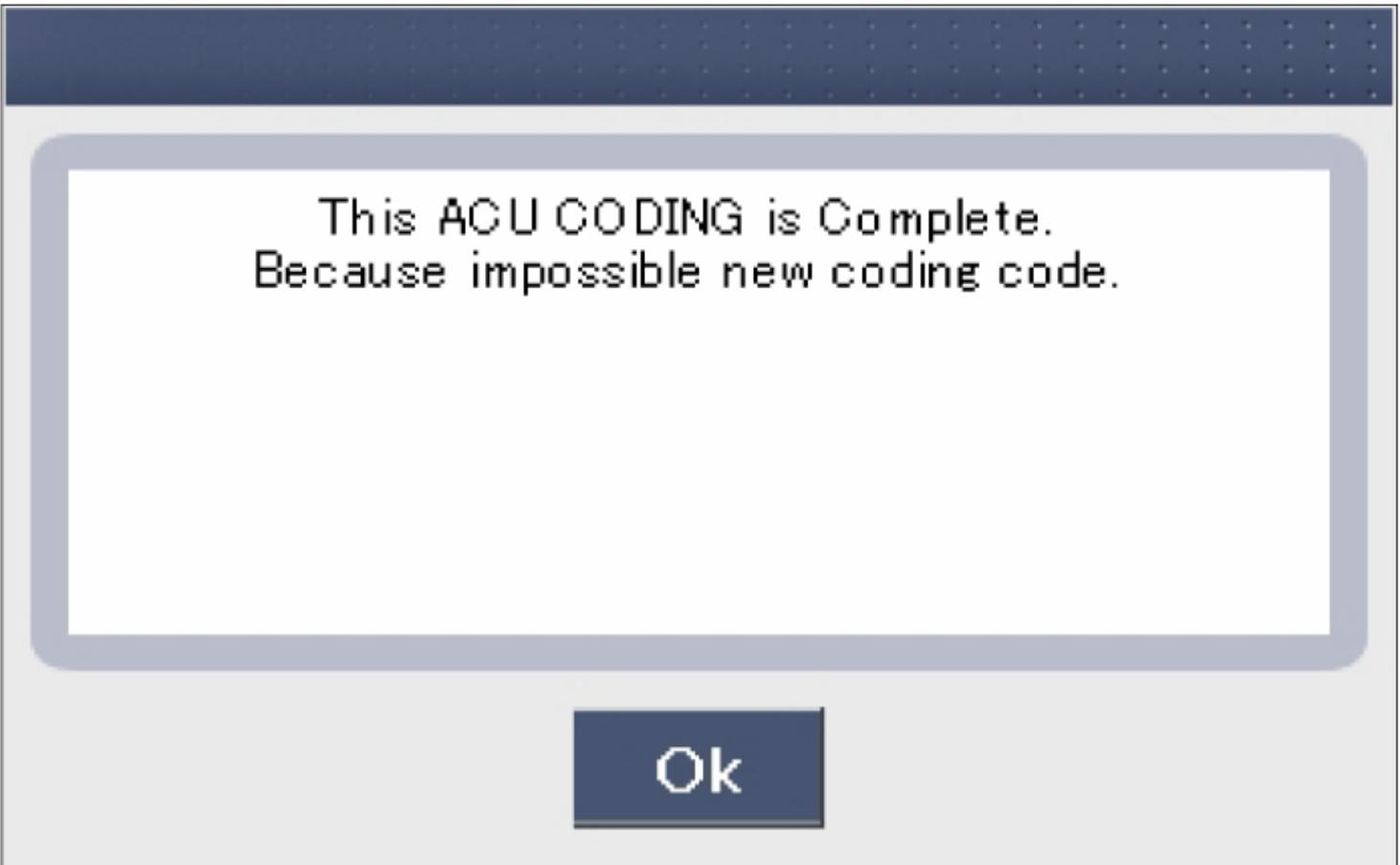


Fig.5

Fig.6) Screen of Retrying the Variant coding after finishing variant coding

The image shows a screenshot of a software interface. At the top, there is a dark blue header bar with a grid of small white dots. Below this is a large, light gray rectangular area with a thick, rounded border. Inside this area, the text "This ACU CODING is Complete. Because impossible new coding code." is displayed in a black, monospaced font. At the bottom center of the gray area, there is a dark blue rectangular button with the word "Ok" written in white. The entire interface is set against a white background.

This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.6

Fig.7) Screen of communication failure

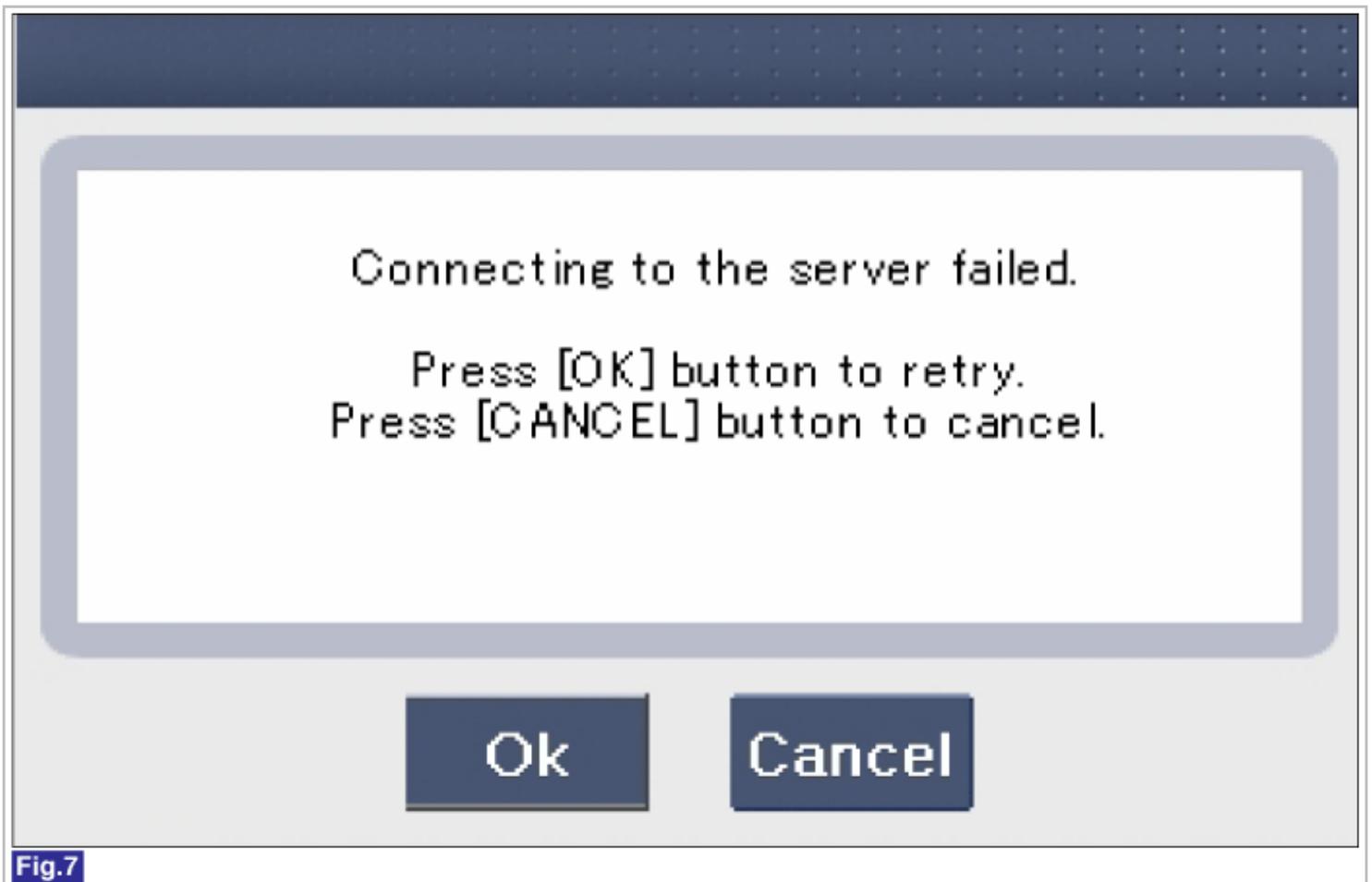


Fig.7

■ **ACU Variant Coding (Off-line type on GDS-this can be used when not connecting to internet)**

1) Initial ACU Variant Coding screen

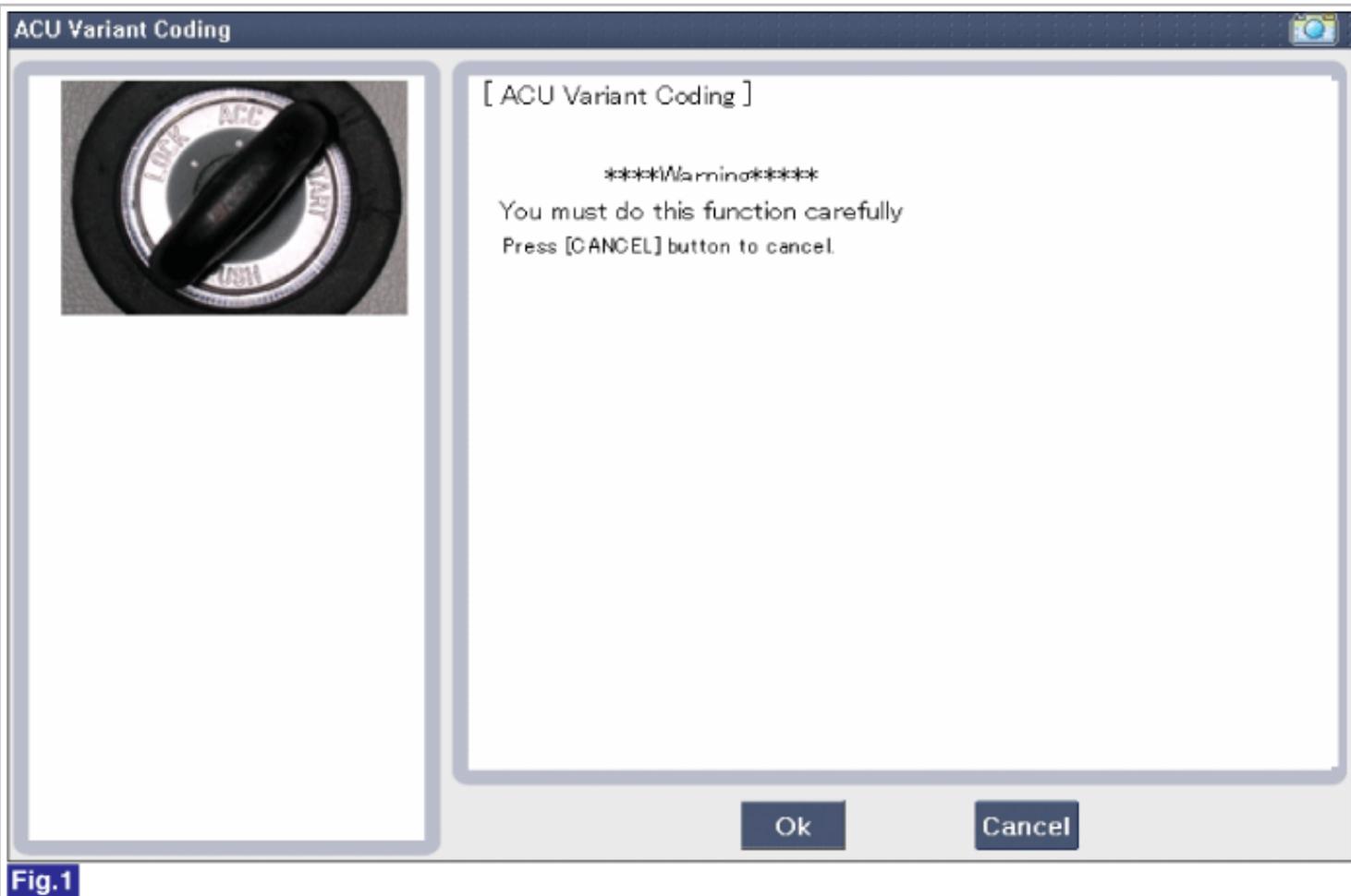


Fig.1

2) ACU CODING Code entering screen

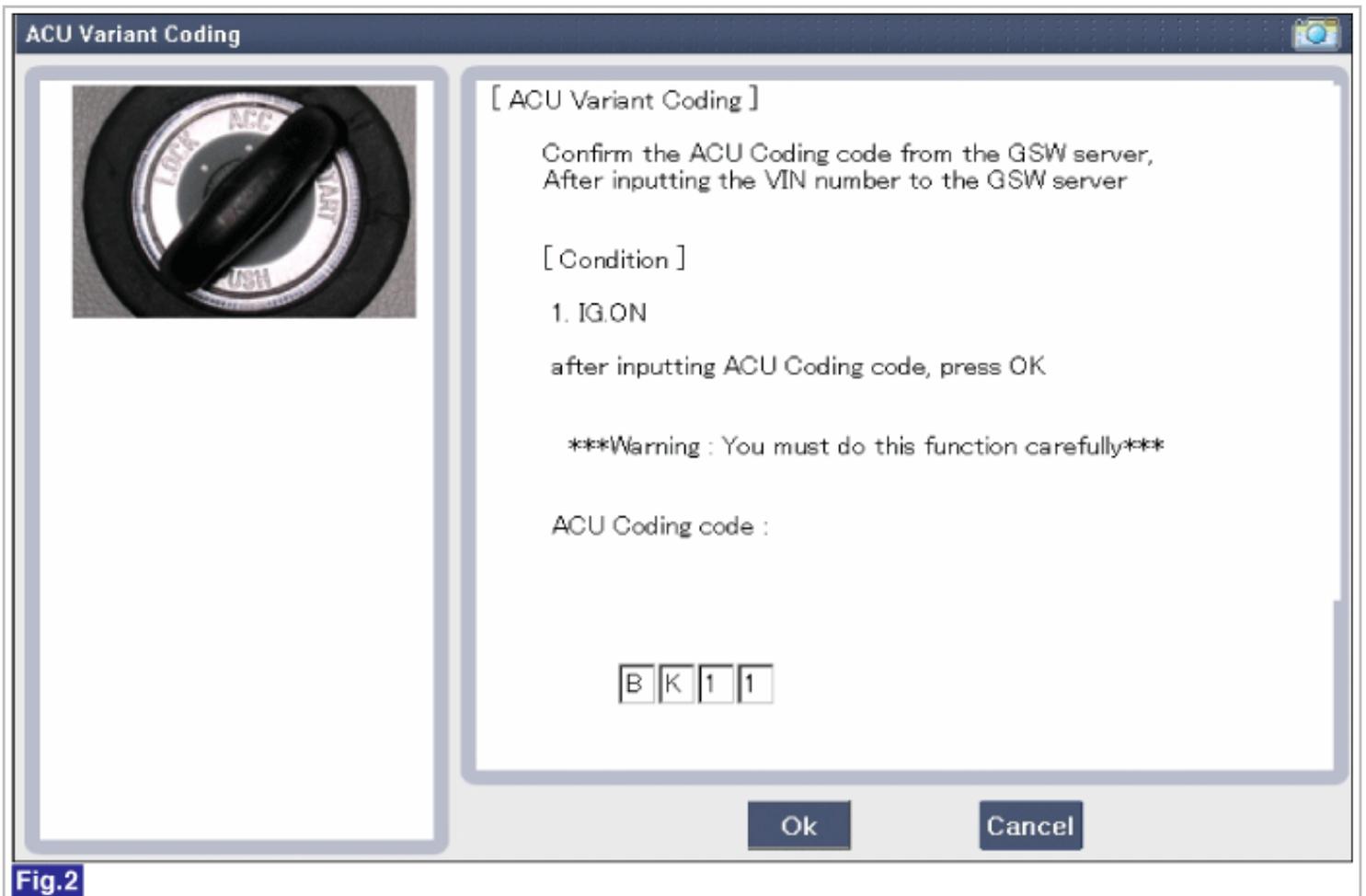


Fig.2

3) Screen of rechecking ACU CODING code's entering



[ACU Variant Coding]

Warning

You must do this function carefully

Confirm the ACU Coding code from the GSW server , After inputting the VIN number to the GSW server

If you want continue press ok or cancel.

Ok

Cancel

Fig.3

4) Variant coding's proceeding screen-1

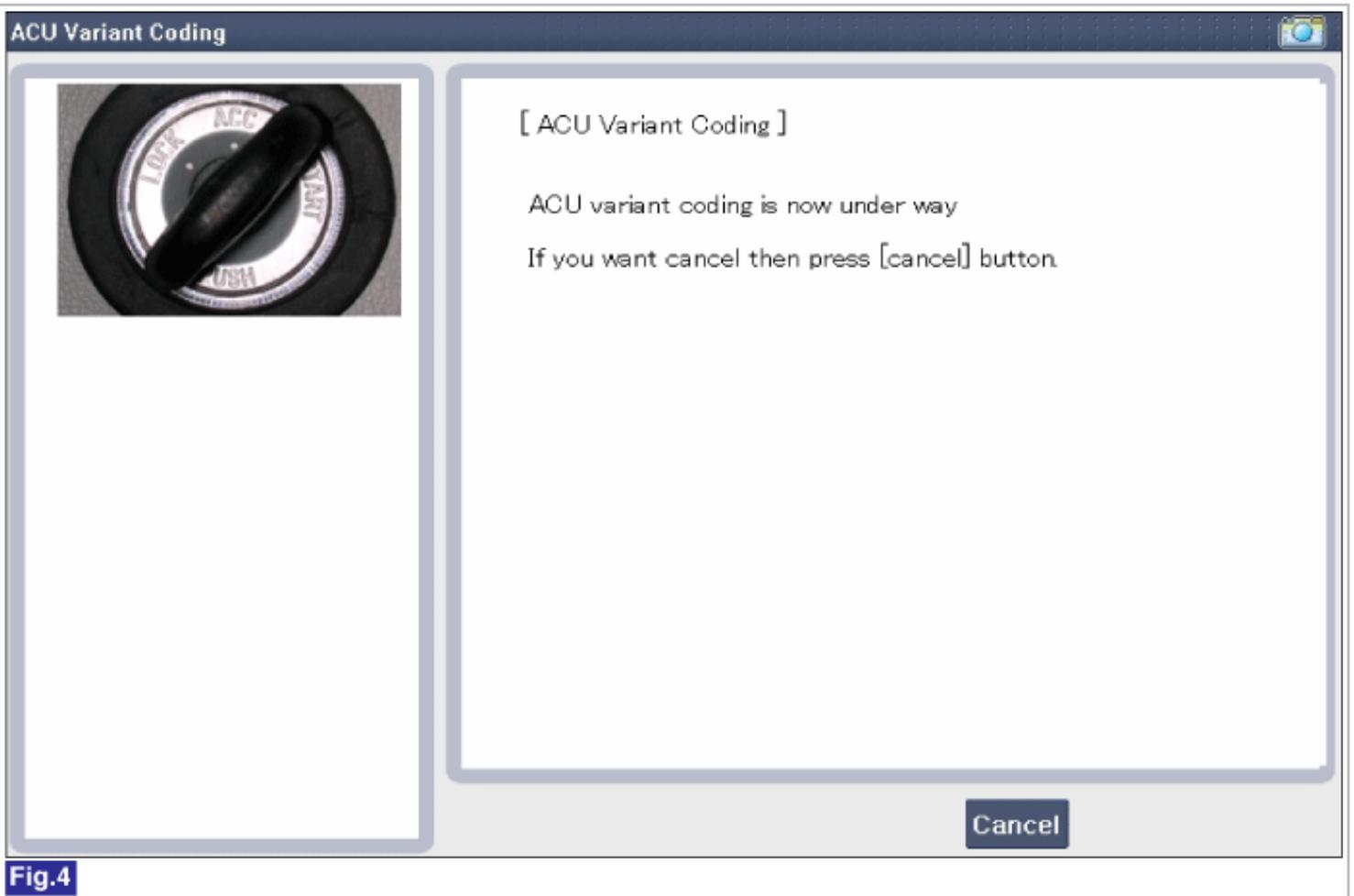


Fig.4

5) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.5

6) Variant coding is completed



*** Variant Coding is complete.***

ACU CODING CODE : BK
ACU Info. : SAB+CAB(Dep/3.8/ESP)

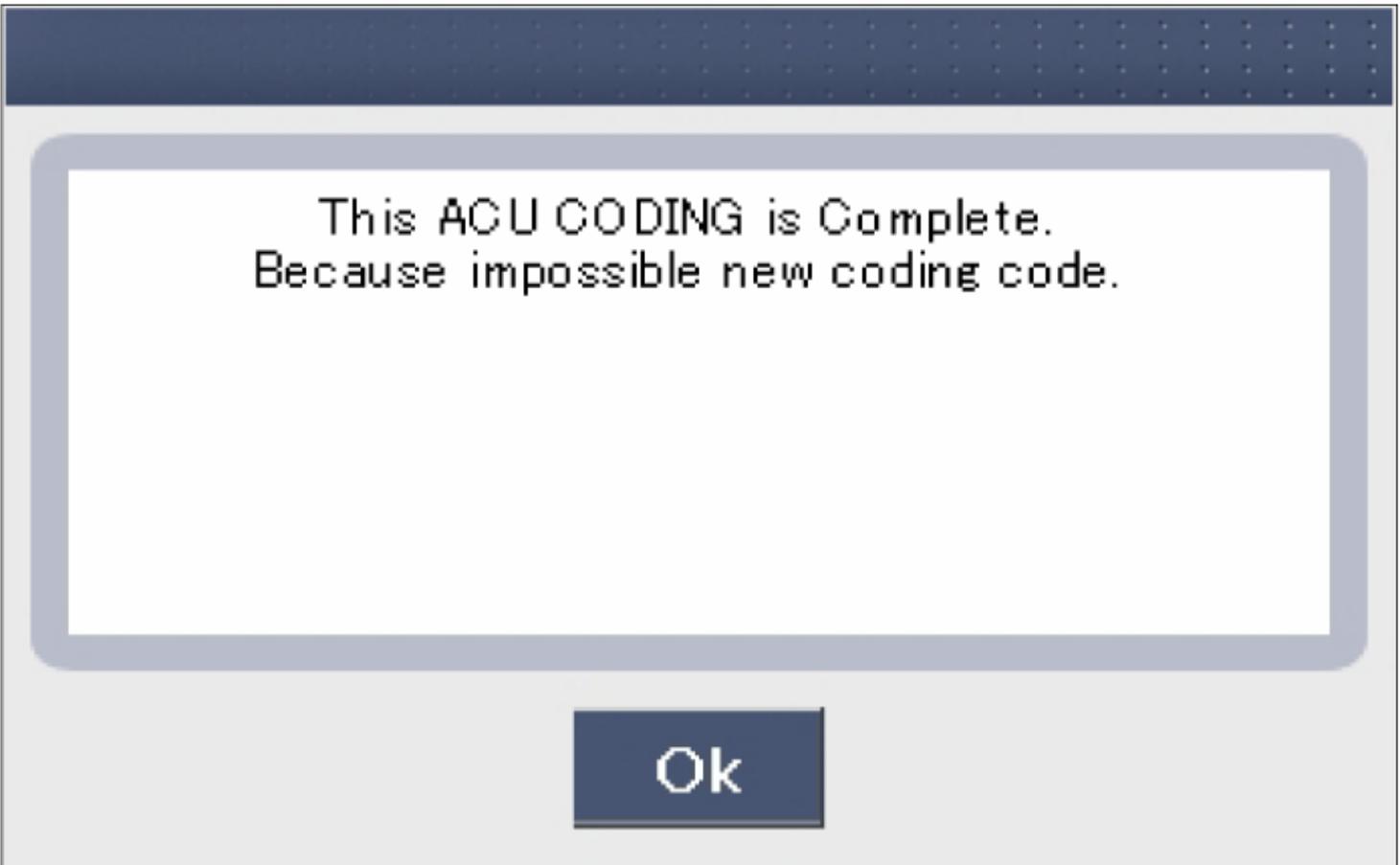
warning

After Variant Coding process, please make it sure that the ACU Information corresponds with the real car information(airbag ignition circuit /engine informaion /braking system information) before delivery.

Ok

Fig.6

7) Screen of Retrying the Variant coding after finishing variant coding



This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.7

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1738 P-SIS front – Driver Wrong ID

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

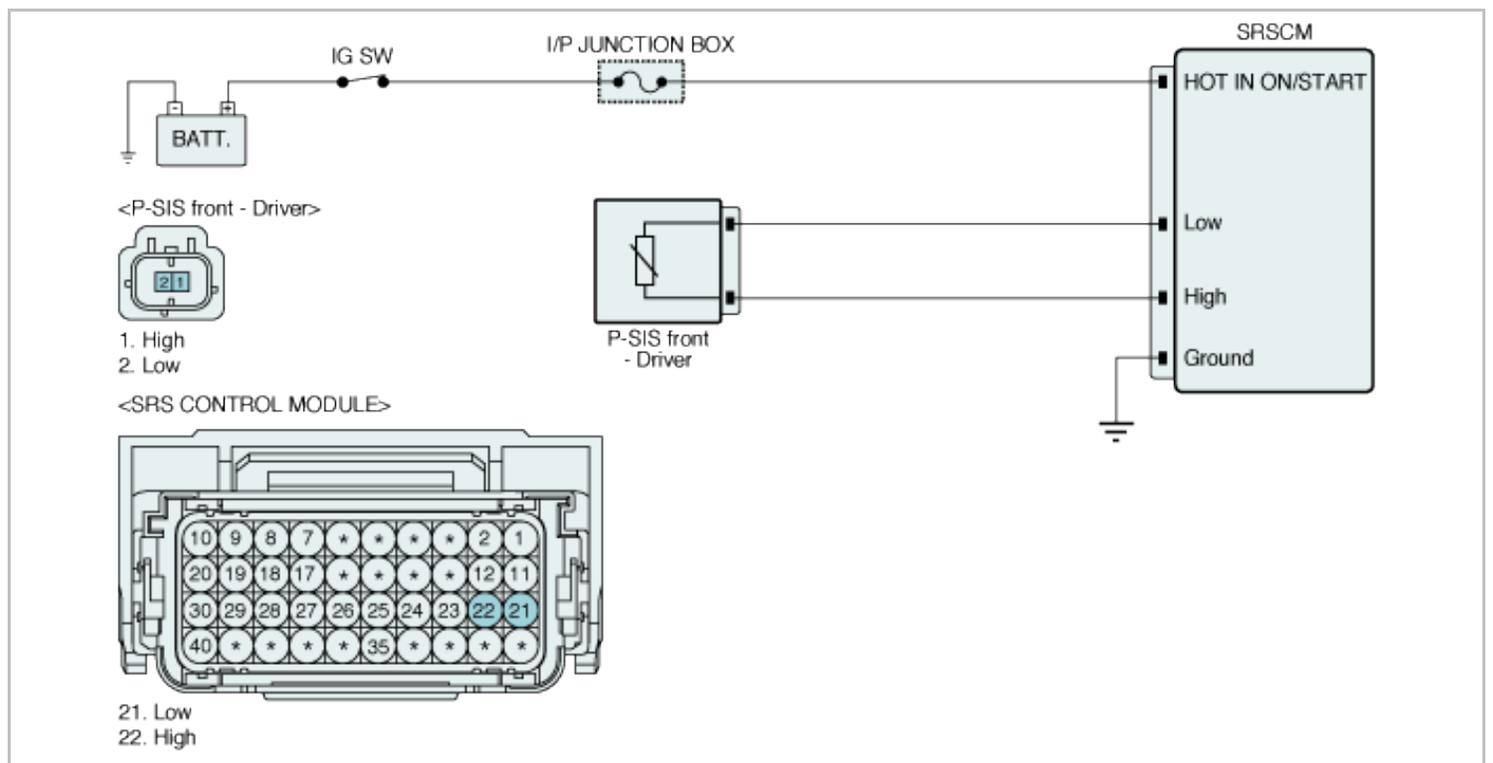
DTC Description

The SRSCM sets DTC B1738 if Pressure-Side Impact(Driver) with wrong ID is detected.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	• Pressure-Side Impact(Driver) with wrong ID. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact ID is different from programmed in ACU	
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.

4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

- Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
- Ignition "OFF".
- Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
- Disconnect Pressure-Side Impact connector .
- Substitute the Pressure-Side Impact and check for proper operation.
- Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
------------	--

NO

▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES

▶ Go to the applicable troubleshooting procedure.

NO

▶ System is performing to specification at this time.

Restraint > SRSCM > B1739 P-SIS Front-Driver Defect

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

DTC Description

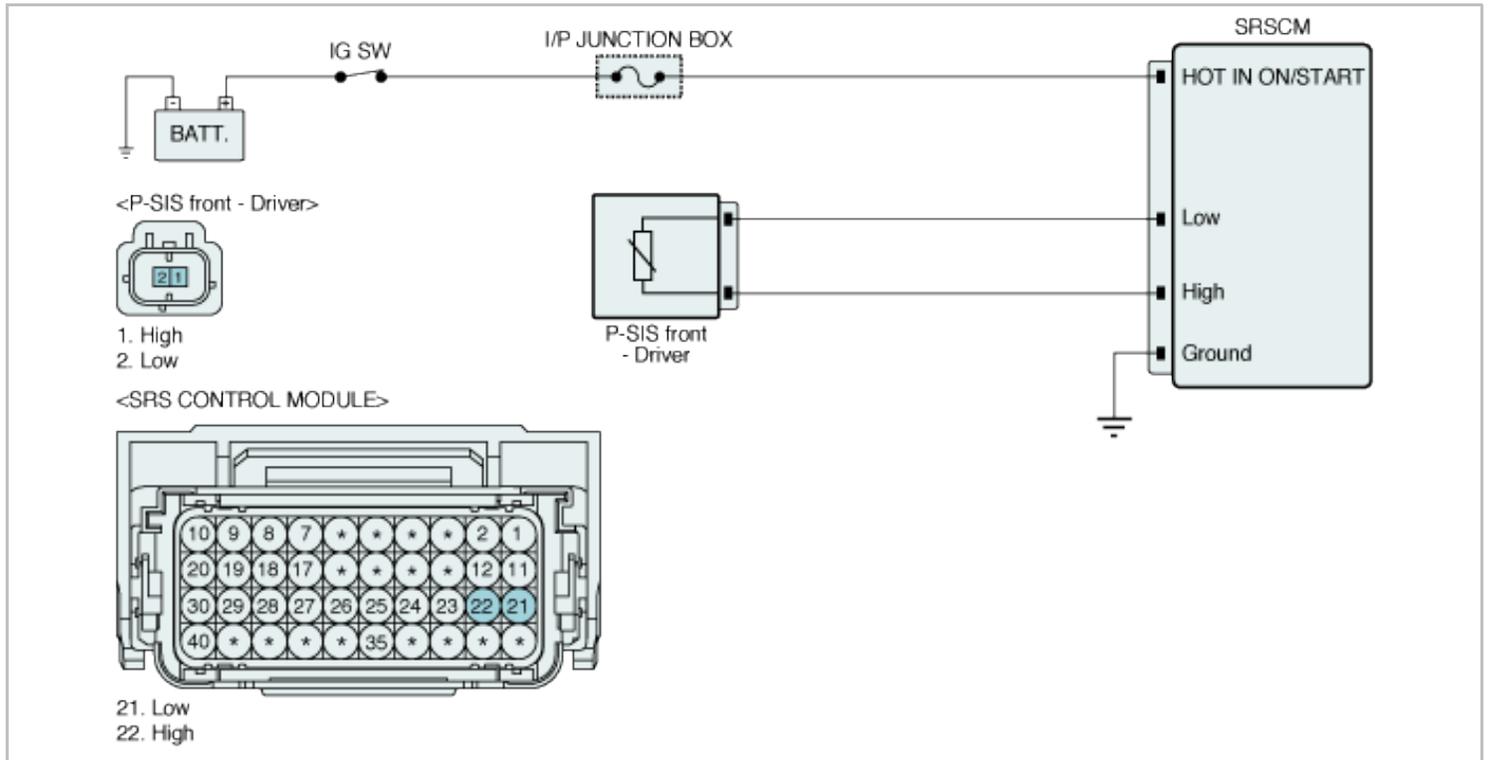
The SRSCM sets DTC B1739 if there is any fault in Pressure-Side Impact(Driver) circuit.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Faulty Pressure -Side Impact (Driver) circuit. • Faulty Pressure - Side Impact(Driver). • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		<ul style="list-style-type: none"> • Pressure-Side Impact send defect code • Pressure-Side Impact output is not expected value 	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):10 ms (500μs x 20) • Steady:1s (10ms x 100) 	

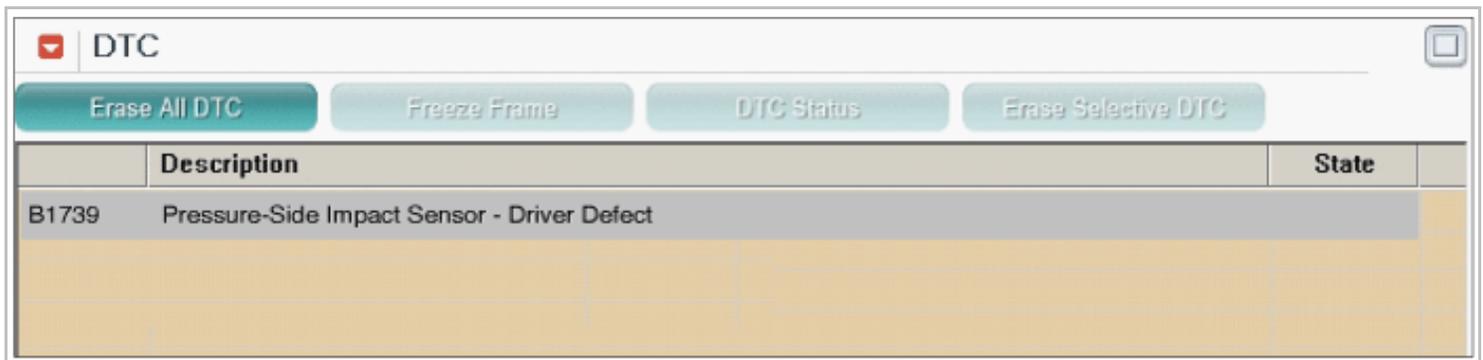
Time	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):IGN off -> on • Steady:IGN off -> on 	
------	------------------	---	--

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination,

deterioration, or damage.

▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace Pressure- Side Impact and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1740 P-SIS Front-Driver Short to Ground

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

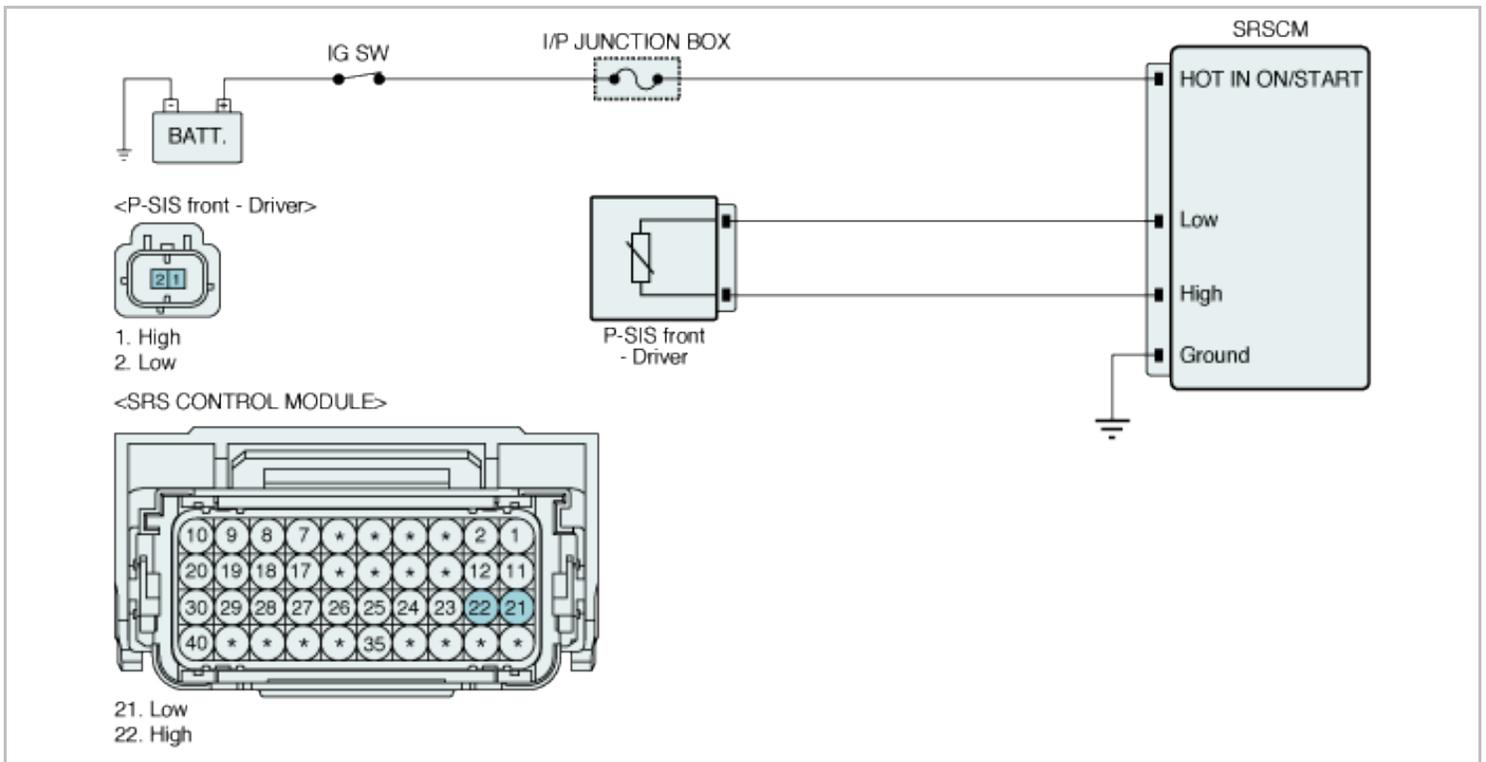
DTC Description

The SRSCM sets DTC B1740 if there is a short to ground in Pressure-Side Impact(Driver) harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	• Short to ground in Pressure-Side Impact(Driver) harness. • Faulty Pressure - Side Impact(Driver). • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact no acceleration data, and line voltage < 3V	
Diagnostic Time	Qualification	• Ini(Start Up):2.1s (2 times) • Steady:500 μ s x 8 + 2.2s (2 times)	
	De-Qualification	• Ini(Start Up):1 time • Steady:1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Pressure-Side Impact connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the Pressure-Side Impact harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace Pressure- Side Impact and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.

2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1741 P-SIS Front-Driver Short to Battery

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

DTC Description

The SRSCM sets DTC B1741 if there is short to power harness in Pressure-Side Impact(Driver) harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> Short to power in Pressure-Side Impact(Driver) harness. Faulty Pressure - Side Impact (Driver). Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact no acceleration data, and line voltage >11V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):0.2s (100ms x 2) Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):1 time Steady:1 time 	

Diagnostic Circuit Diagram

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Pressure-Side Impact connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the Pressure-Side Impact harness connector and chassis ground.

Specification : 0V

6. Is the measured Voltage within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace Pressure- Side Impact and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1742 P-SIS Front-Driver Communication Error

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

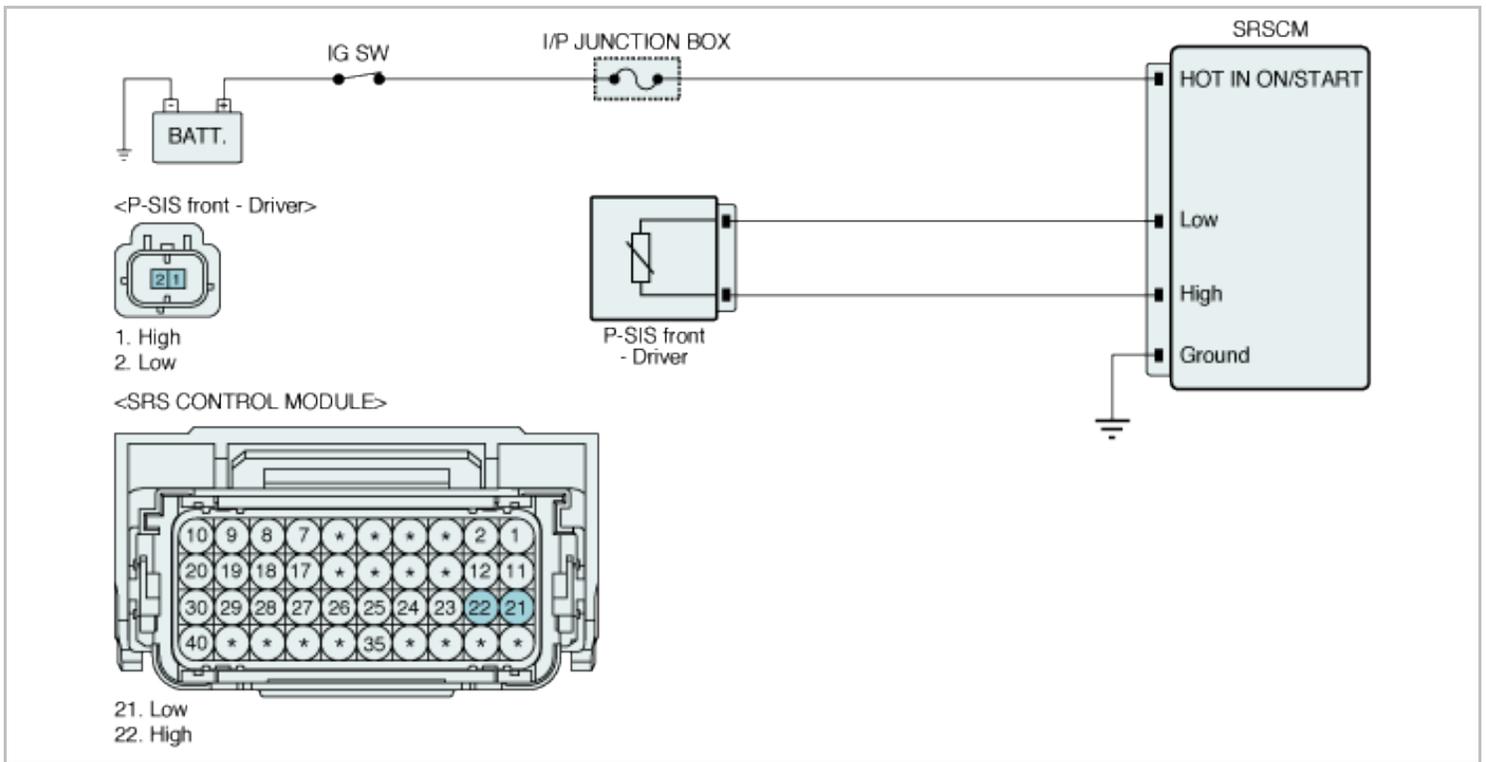
DTC Description

The SRSCM sets DTC B1742 if there is any error in communication between Pressure-Side Impact(Driver) and SRSCM.

DTC Detecting Condition

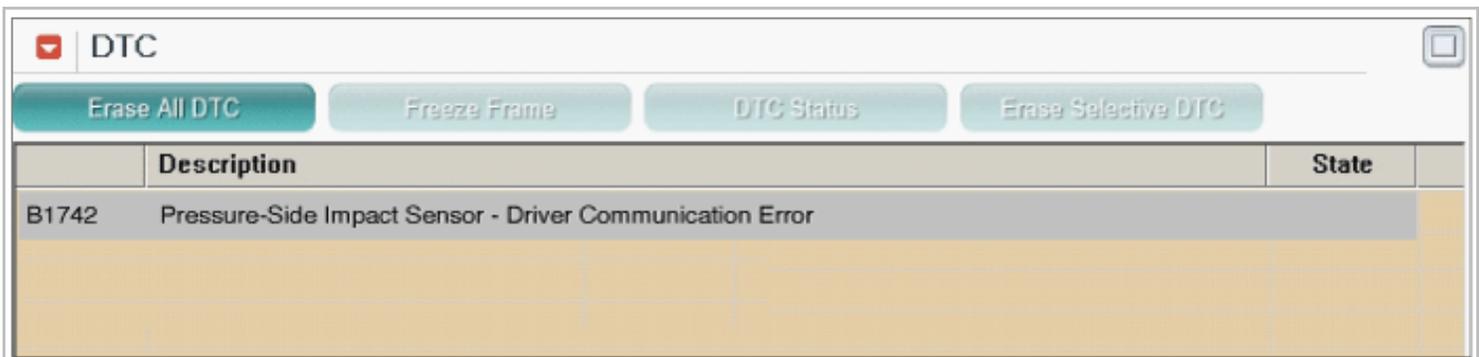
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Faulty Pressure - Side Impact (Driver) circuit. • Faulty Pressure - Side Impact (Driver). • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact no acceleration data, and line voltage is ok (between 3V and 11V)	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2.5 ~ 3.1s (2 times) • Steady:500 μs x 8 + 2.3~2.9s (2 times) 	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace Pressure- Side Impact and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1744 P-SIS front - Passenger Wrong ID

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

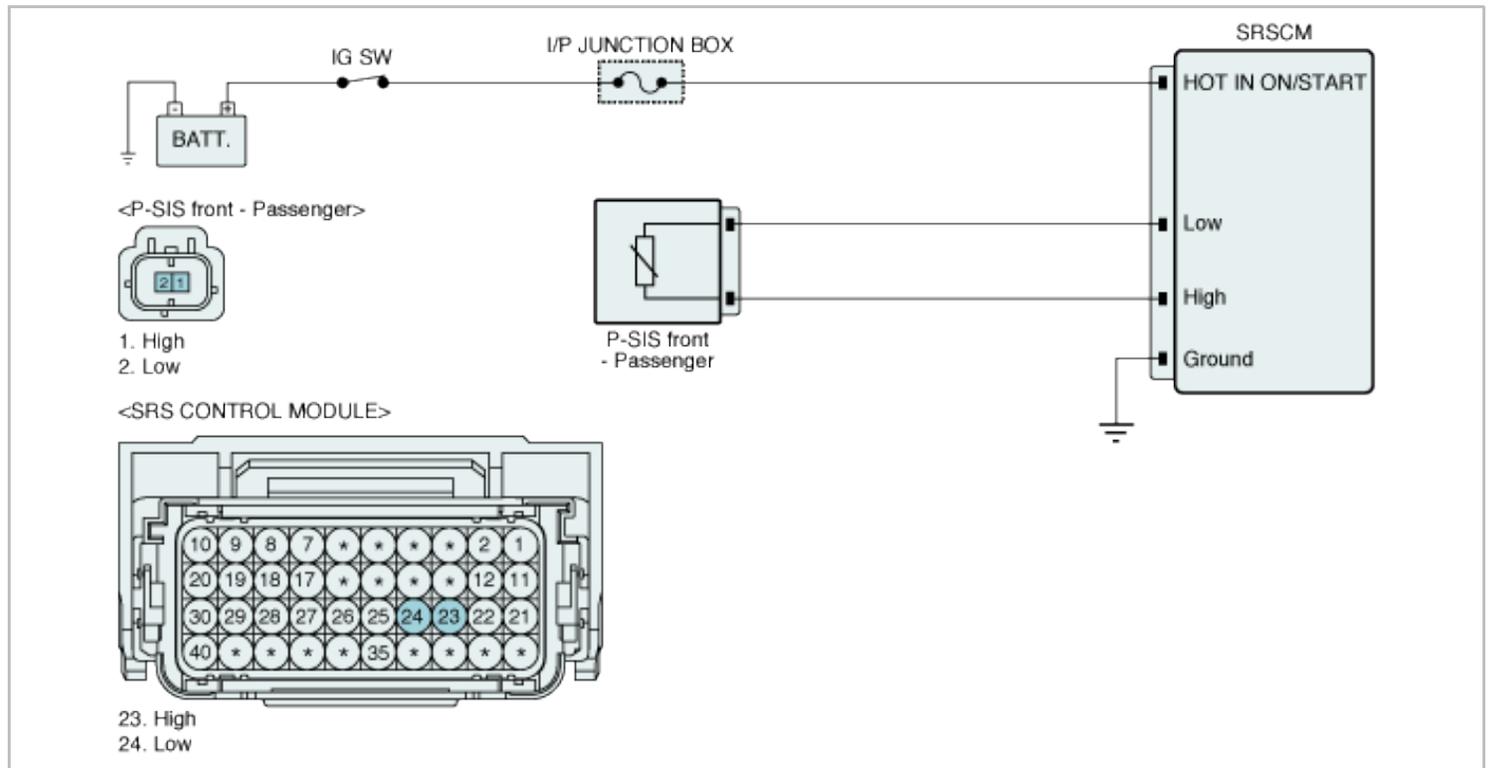
DTC Description

The SRSCM sets DTC B1744 if Pressure-Side Impact(Passenger) with wrong ID is detected.

DTC Detecting Condition

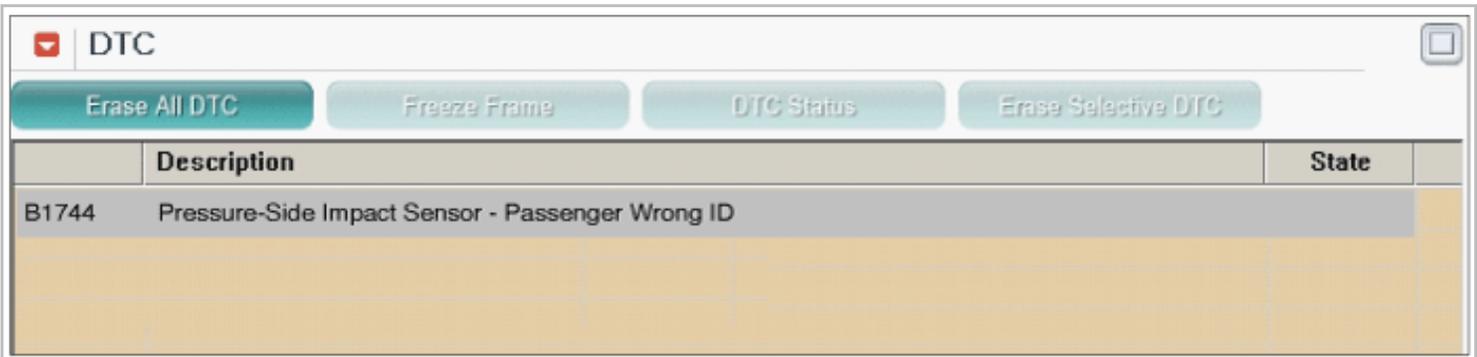
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Pressure-Side Impact(Passenger) with wrong ID. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact ID is different from programmed in ACU	
Diagnostic Time	Qualification	• 1 time	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	<p>▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1745 P-SIS Front-Passenger Defect

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

DTC Description

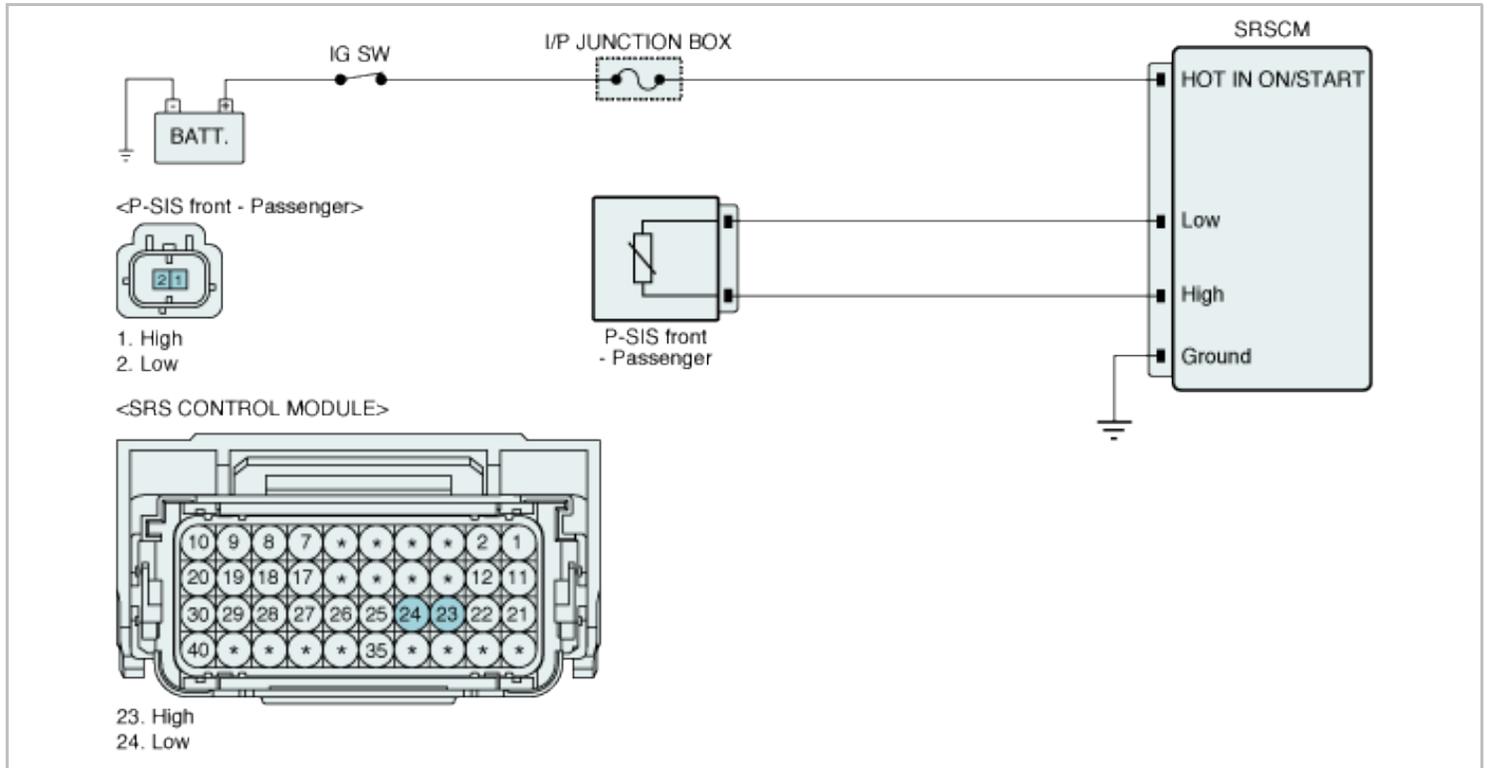
The SRSCM sets DTC B1745 if there is any fault in Pressure-Side Impact(Passenger) circuit.

DTC Detecting Condition

Item	Detecting Condition	Possible cause
DTC Strategy	<ul style="list-style-type: none"> • Check Data 	
Enable Conditions	<ul style="list-style-type: none"> • Ignition "ON" 	

Threshold Value		<ul style="list-style-type: none"> • Pressure-Side Impact send defect code • Pressure-Side Impact output is not expected value 	<ul style="list-style-type: none"> • Faulty Pressure - Side Impact (Passenger) circuit. • Faulty Pressure - Side Impact (Passenger). • Faulty SRSCM.
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):10 ms (500μs x 20) • Steady:1s (10ms x 100) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):IGN off -> on • Steady:IGN off -> on 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC		State
<div style="display: flex; justify-content: space-around;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>		
Description	State	
B1745 Pressure-Side Impact Sensor - Passenger Defect		

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure. ▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace Pressure- Side Impact and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.

4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1746 P-SIS Front-Passenger Short to Ground

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

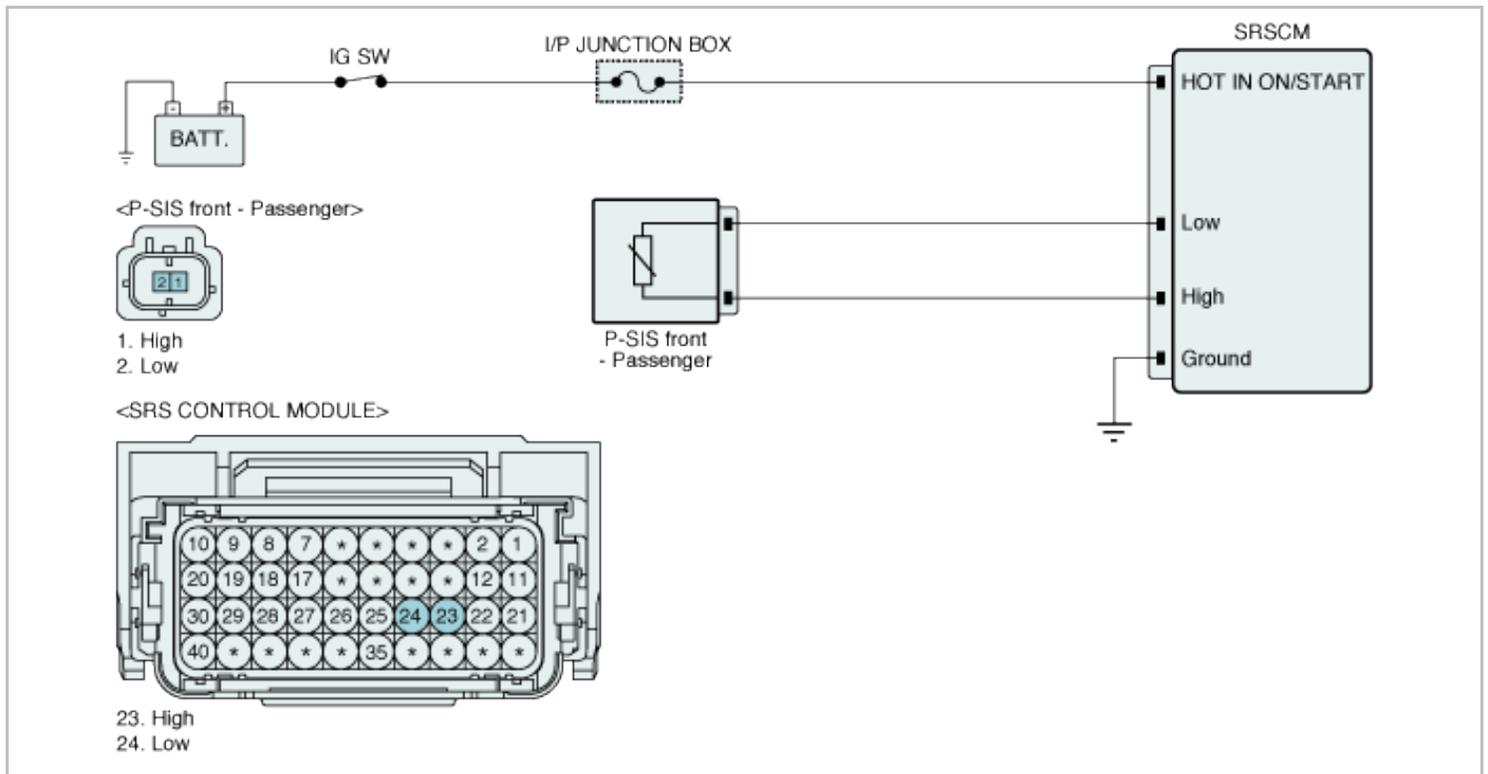
DTC Description

The SRSCM sets DTC B1746 if there is a short to ground in Pressure-Side Impact(Passenger) harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Short to ground in Pressure-Side Impact(Passenger) harness. • Faulty Pressure-Side Impact. • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact no acceleration data, and line voltage < 3V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2.1s (2 times) • Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> • Ini(Start Up):1 time • Steady:1 time 	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Pressure-Side Impact connector and SRSCM main harness connector.
4. Measure resistance between terminal "Low" or "High" of the Pressure-Side Impact harness connector and chassis ground.

Specification : ∞

5. Is the measured resistance within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace Pressure- Side Impact and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.

2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1747 P-SIS Front Passenger Short to Battery

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

DTC Description

The SRSCM sets DTC B1747 if there is short to power harness in Pressure-Side Impact(Passenger) harness.

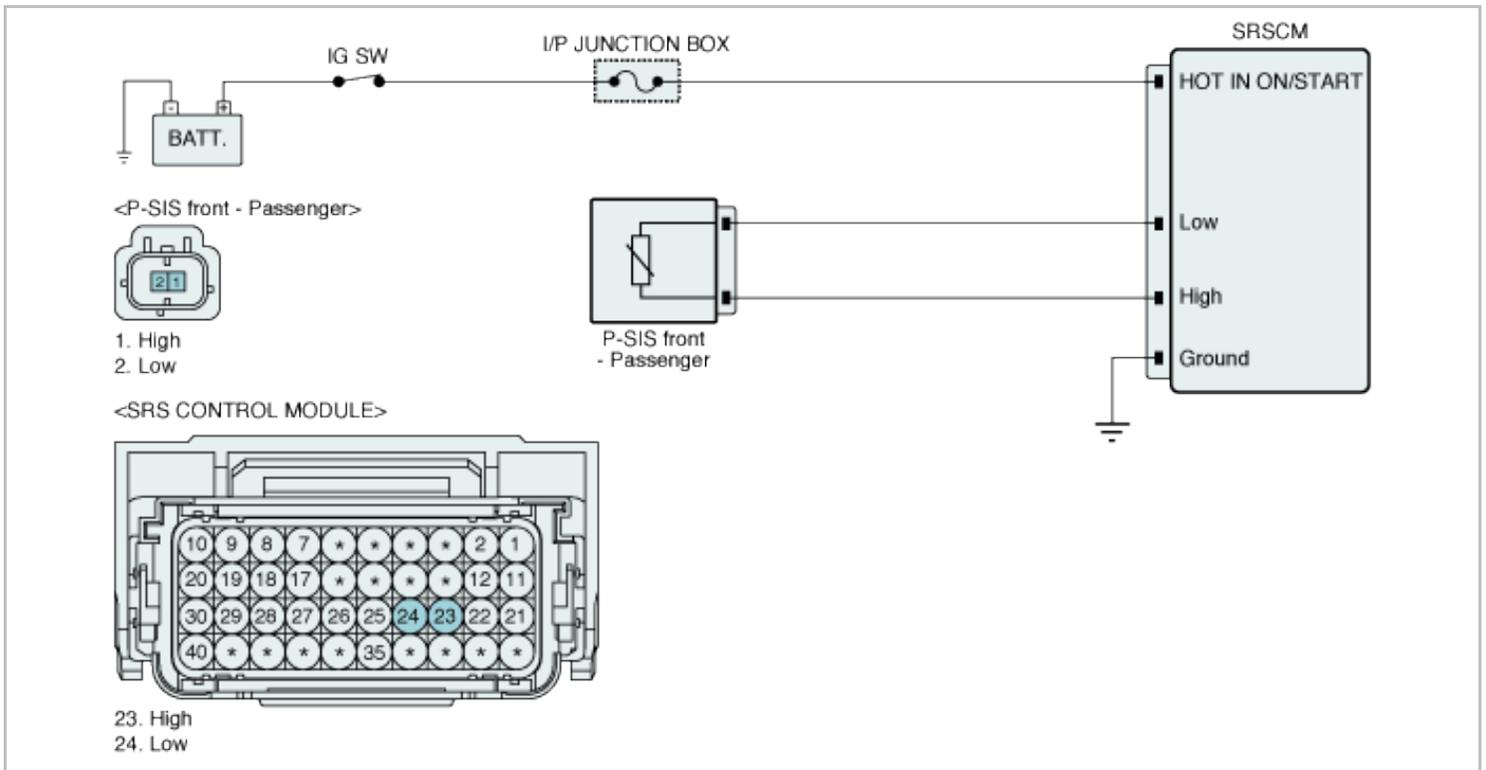
DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> Short to power in Pressure-Side Impact(Passenger) harness. Faulty Pressure-Side Impact. Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact no acceleration data, and line voltage >11V	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> Ini(Start Up):0.2s (100ms x 2) Steady:500μs x 8 + 2.2s (2 times) 	
	De-Qualification	<ul style="list-style-type: none"> Ini(Start Up):1 time Steady:1 time 	

Specification

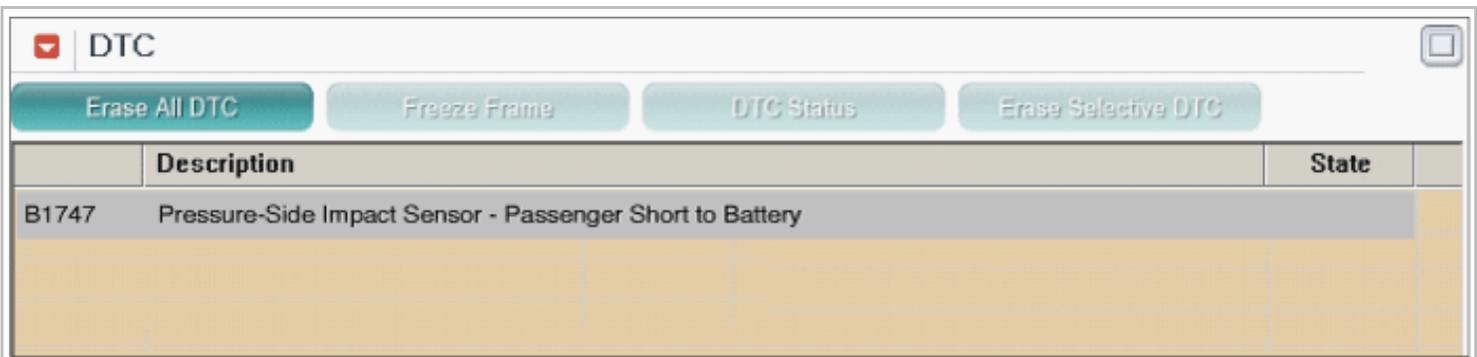
Test Condition	Resistance
Ignition ON (Closed circuit)	Rs >1.3kΩ

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
3. Disconnect Pressure-Side Impact connector and SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between terminal "Low" or "High" of the Pressure-Side Impact harness connector and chassis ground.

Specification : 0V

6. Is the measured Voltage within specifications?

YES	▶ Go to "Component Inspection" procedure.
NO	▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace Pressure- Side Impact and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1748 P-SIS Front-Passenger Communication Error

Component Location

Pressure-Side Impact Sensor and Side Impact Sensor are installed in the left and the right side of front door and in the lower of B-pillar respectively.

The Pressure-Side Impact Sensor senses an impact based on an acceleration at crashing. Unlike the conventional acceleration sensor, the Pressure Sensor senses an air pressure by a distorted door at crashing and measures an impact.

The SCM detects the impact signals of the Pressure-Side Impact Sensor and Rear Side Impact Sensor and compares with signals of the safe sensor inside. If the signals of all sensors are judged as a collision, the side-airbag and the curtain-airbag would be unfolded.

NOTE

At inspecting the pressure sensor, keep the door airtight for an exact measuring.

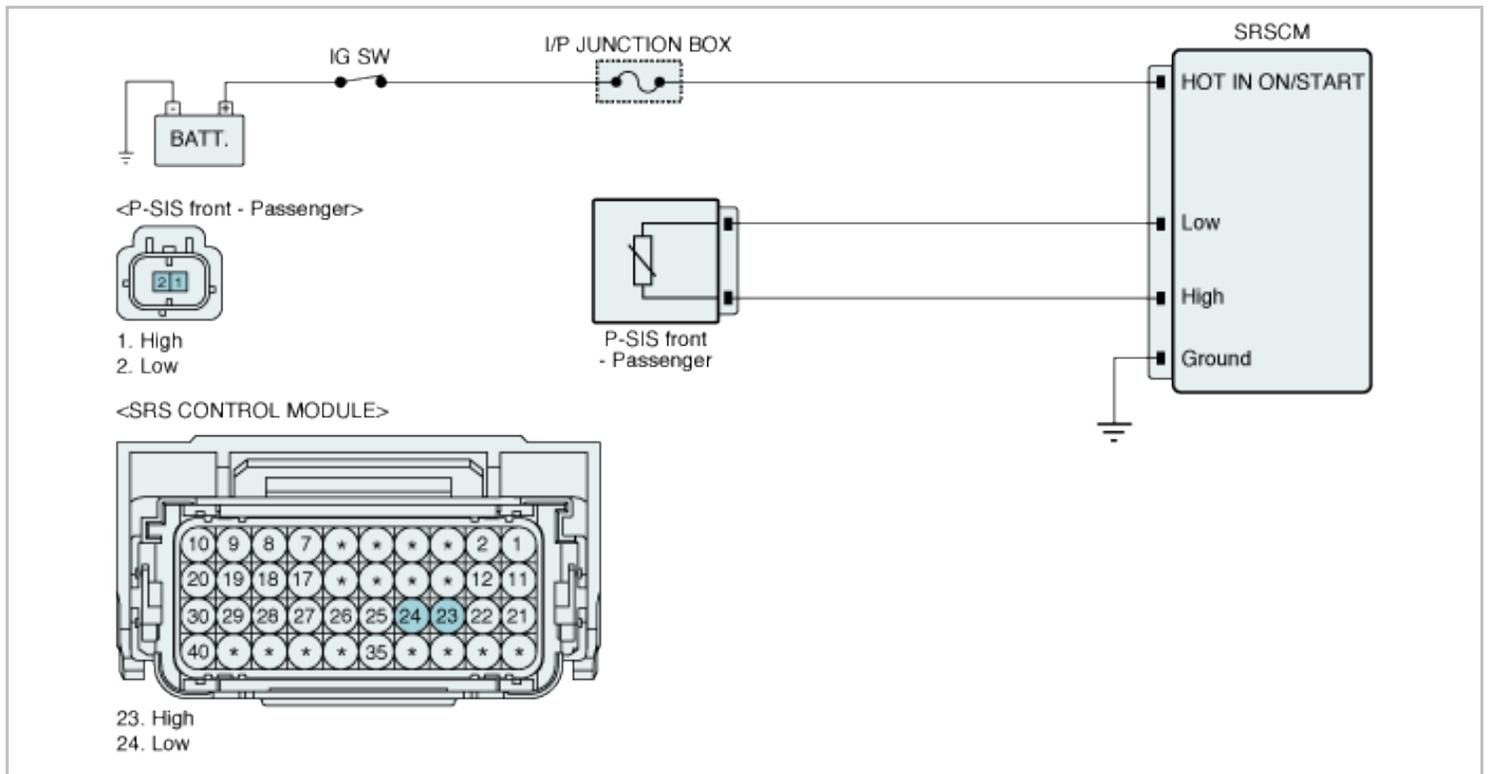
DTC Description

The SRSCM sets DTC B1748 if there is any error in communication between Pressure-Side Impact(Passenger) and SRSCM.

DTC Detecting Condition

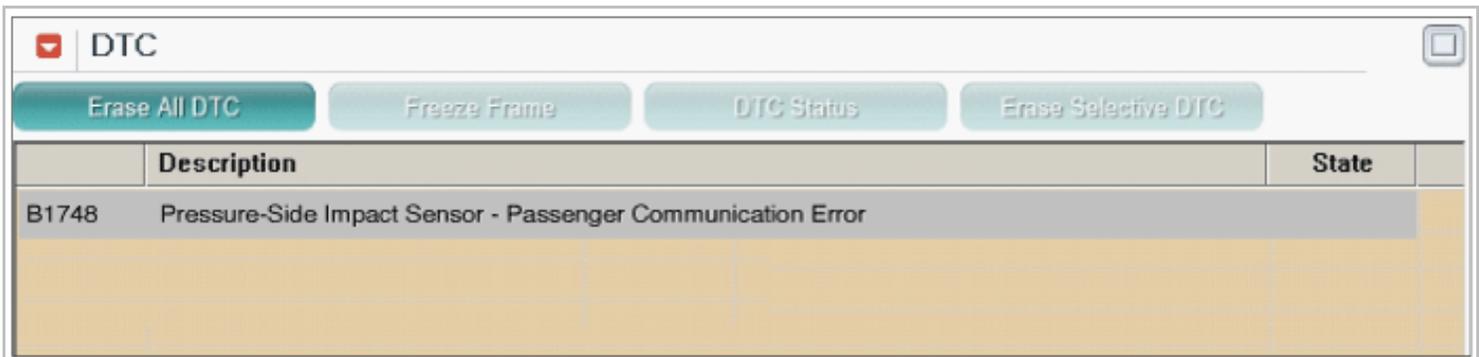
Item		Detecting Condition	Possible cause
DTC Strategy		• Check Data	<ul style="list-style-type: none"> • Faulty Pressure - Side Impact(Passenger) circuit. • Faulty Pressure - Side Impact(Passenger). • Faulty SRSCM.
Enable Conditions		• Ignition "ON"	
Threshold Value		• Pressure-Side Impact no acceleration data, and line voltage is ok (between 3V and 11V)	
Diagnostic Time	Qualification	<ul style="list-style-type: none"> • Ini(Start Up):2.5 ~ 3.1s (2 times) • Steady:500 μs x 8 + 2.3~2.9s (2 times) 	
	De-Qualification	• 1 time	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.
Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Component Inspection" procedure.

Component Inspection

1. Ignition "ON" & Engine "OFF" and Using a scan tool, clear the DTC.
2. Ignition "OFF".
3. Disconnect the battery (-) terminal cable from the battery, and wait at least one minutes.
4. Disconnect Pressure-Side Impact connector .
5. Substitute the Pressure-Side Impact and check for proper operation.
6. Is DTC present problem ?

YES	<p>▶ Substitute a known-good SRSCM, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.</p> <p>▶ Substitute the SRSCM main harness and check for proper operation. If the problem is corrected, replace SRSCM main harness and then go to "Verification of Vehicle Repair" procedure.</p>
NO	▶ Substitute a known-good Pressure-Side Impact, and check for proper operation. If the problem is corrected, replace SRSCM and then go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B1762 ACU Coding Error

General Description

When the new SRSCM is set up on a vehicle by SRSCM's failure, SRSCM(ACU) Variant coding must be performed. Since a new SRSCM is normally supplied with unsetting state, the ACU has to be set up based on the vehicle

specifications by operating ACU Variant Coding procedure.

The SRSCM checks its specifications in it in order to run its airbag system normally.

If the warning light of airbag is flickering continuously, that is because SRSCM(ACU) Variant Coding is not completed.

NOTE

SRSCM Variant Coding is available only one time. And when it is already finished, it is impossible to retry SRSCM Variant Coding.

Warning lamp's operation during SRSCM(ACU) Variant Coding Mode : It will be flicking on every 1 second before the Variant Coding is normally done.

DTC Description

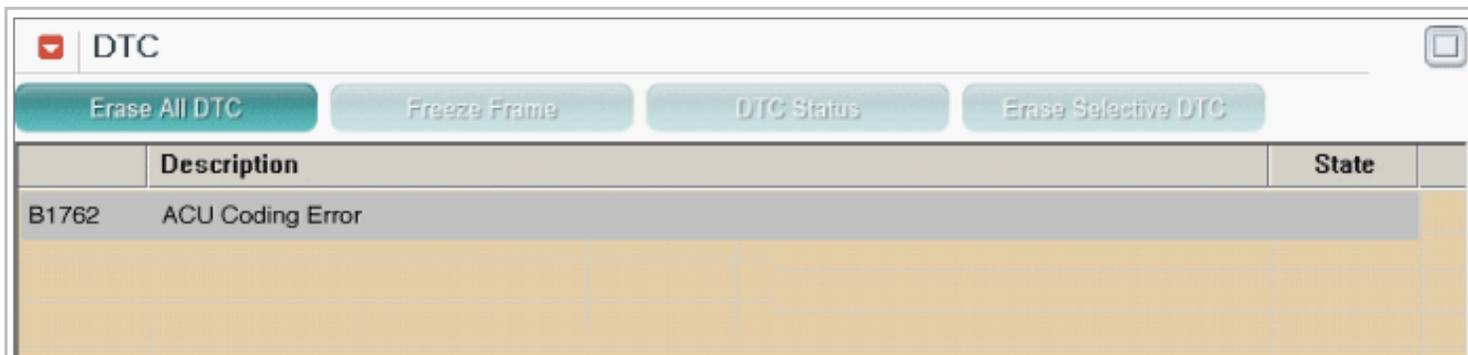
In order to run the airbag system normally, check if there is an incorrect vehicle specifications at performing SRSCM(ACU) Variant Coding. This DTC is set up if SRSCM's variant code doesn't match with the entering variant code at performing SRSCM(ACU) Variant Coding procedure.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• SRSCM Coding	<ul style="list-style-type: none"> • Connection for DAB, PAB, BPT, CAB and SAB • SRSCM(ACU) Variant Coding's failure • Incorrect vehicle specifications • SRSCM's connector and circuit • SRSCM
Enable Conditions		• SRSCM(ACU) Variant Coding Mode	
Threshold Value		• Incorrect variant code entering at SRSCM(ACU) Variant Coding mode	
Diagnostic Time	Qualification	• More than one time	
	De-Qualification	• More than one time	

Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	<p>▶ Check if the vehicle specifications are correct. After that, perform SRSCM(ACU) Variant Coding and then, go to "Verification of Vehicle Repair" procedure.</p>
------------	---

NO

- ▶ Displaying nothing(no DIC) or DIC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.
- ▶ Thoroughly check release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

ACU Variant Coding

■ ACU Variant Coding (On-line type on GDS)

1) Initial ACU Variant Coding screen

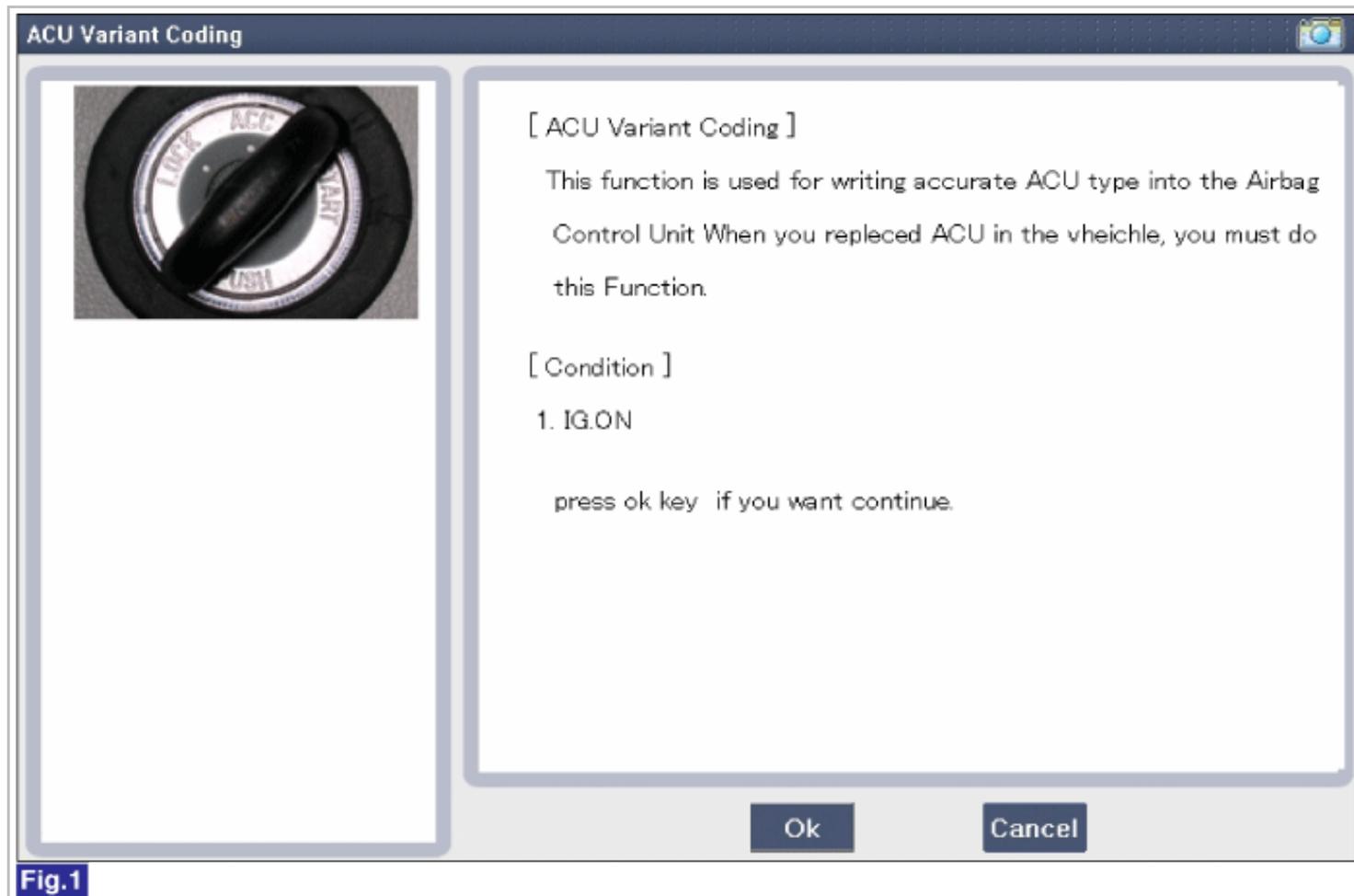


Fig.1

2) VIN Code entering screen

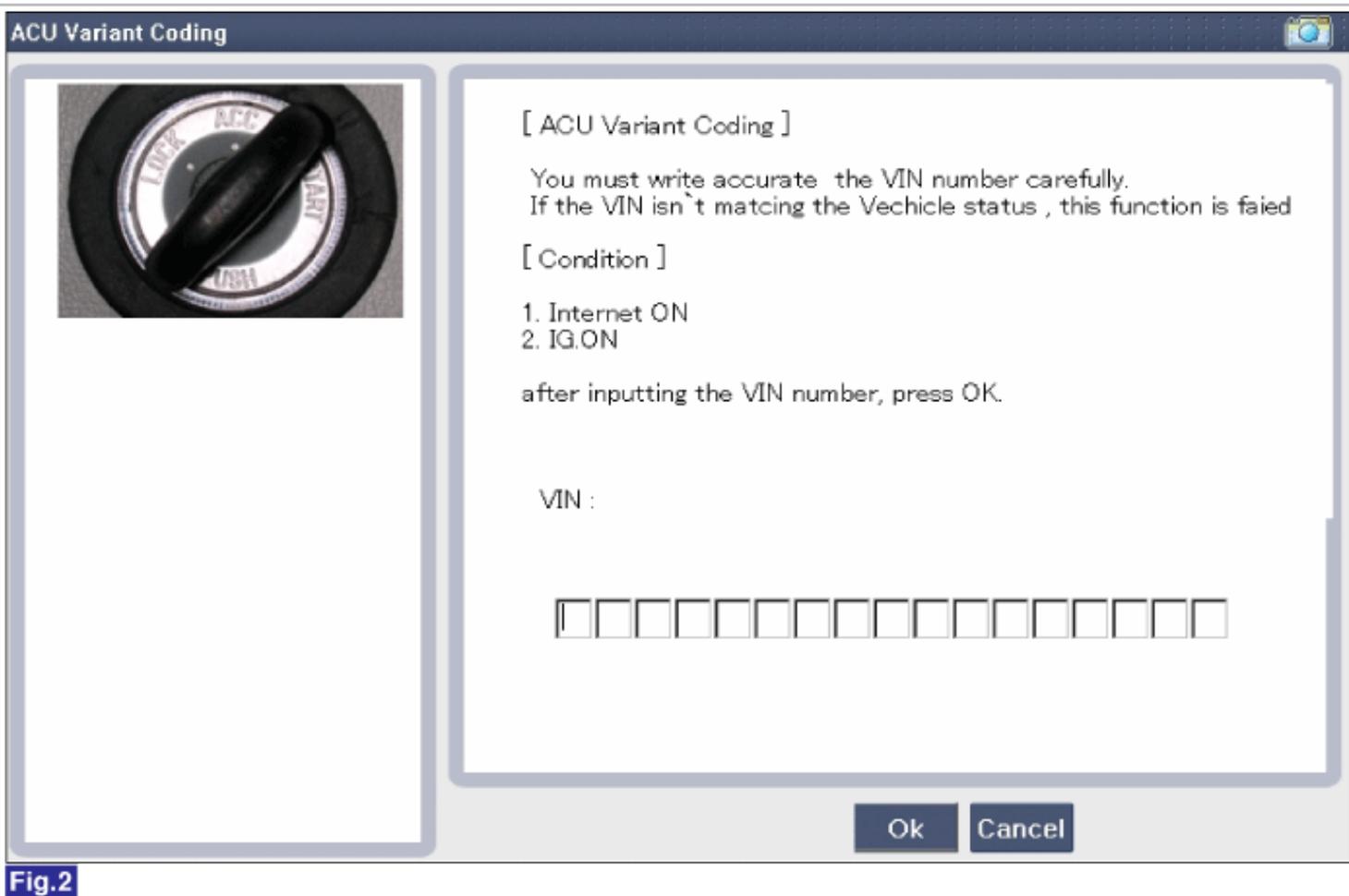


Fig.2

3) Variant coding's proceeding screen-1

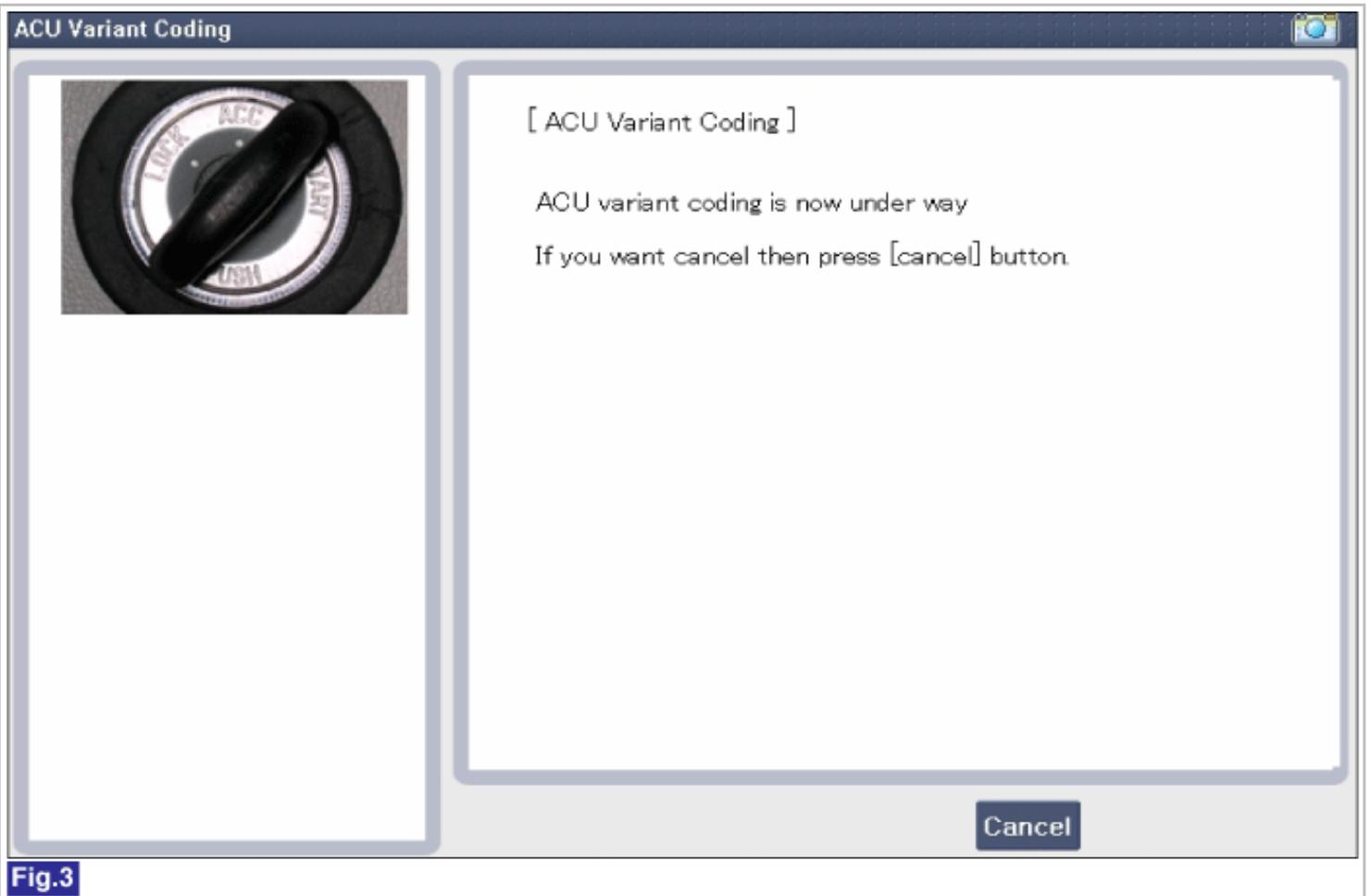


Fig.3

4) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.4

5) Variant coding is completed

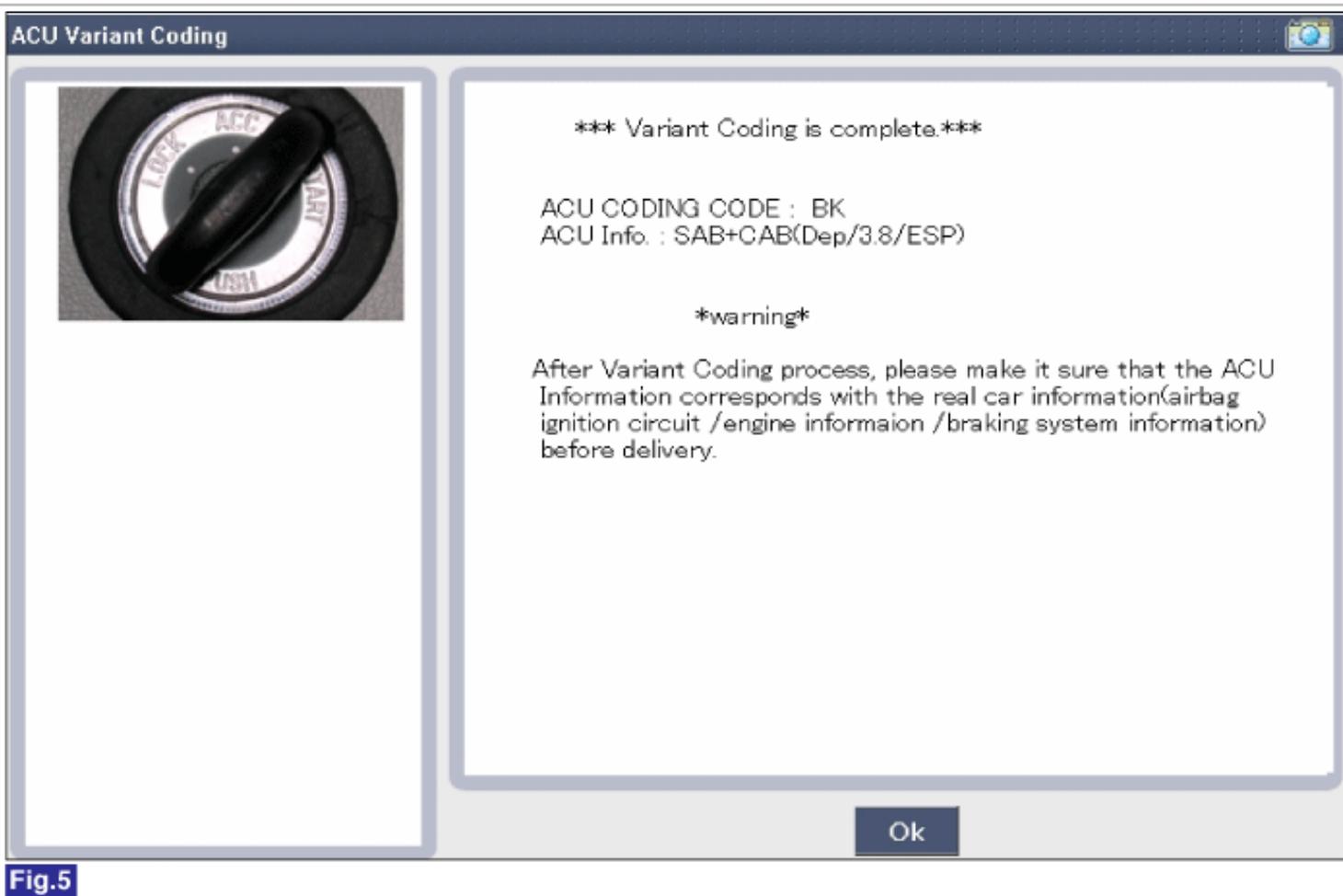
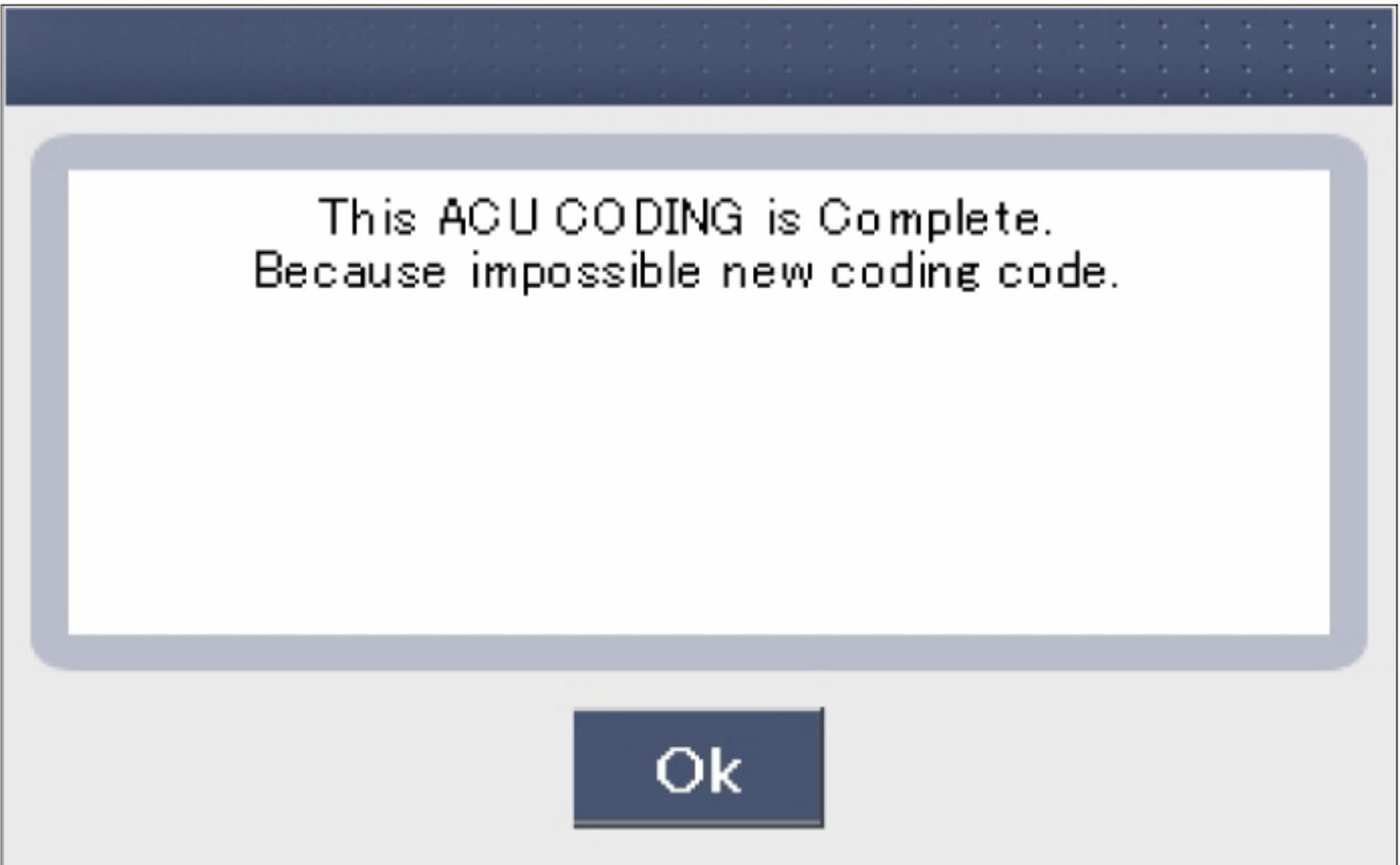


Fig.5

6) Screen of Retrying the Variant coding after finishing variant coding



This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.6

7) Screen of communication failure

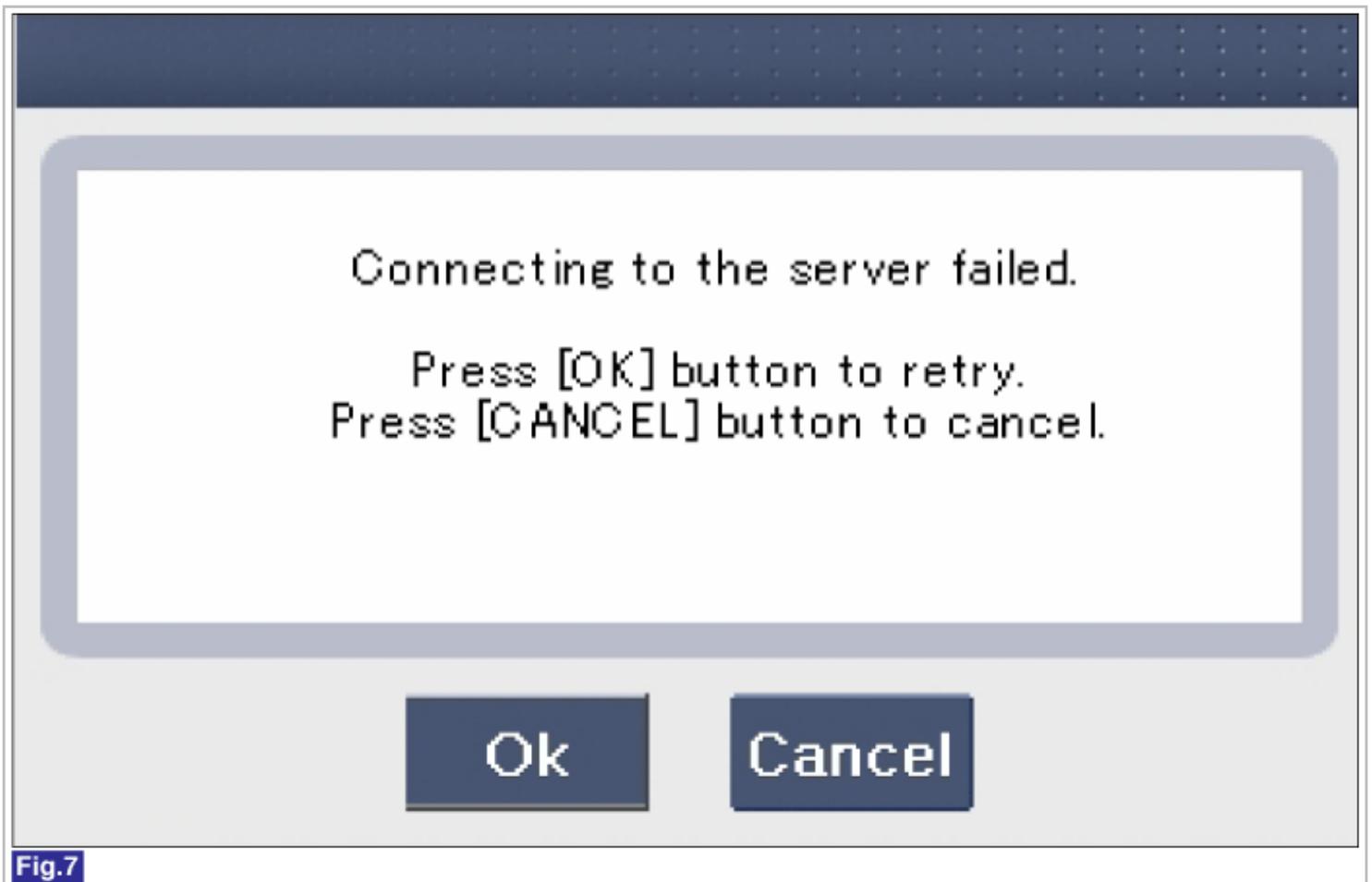


Fig.7

■ **ACU Variant Coding (Off-line type on GDS-this can be used when not connecting to internet)**

1) Initial ACU Variant Coding screen

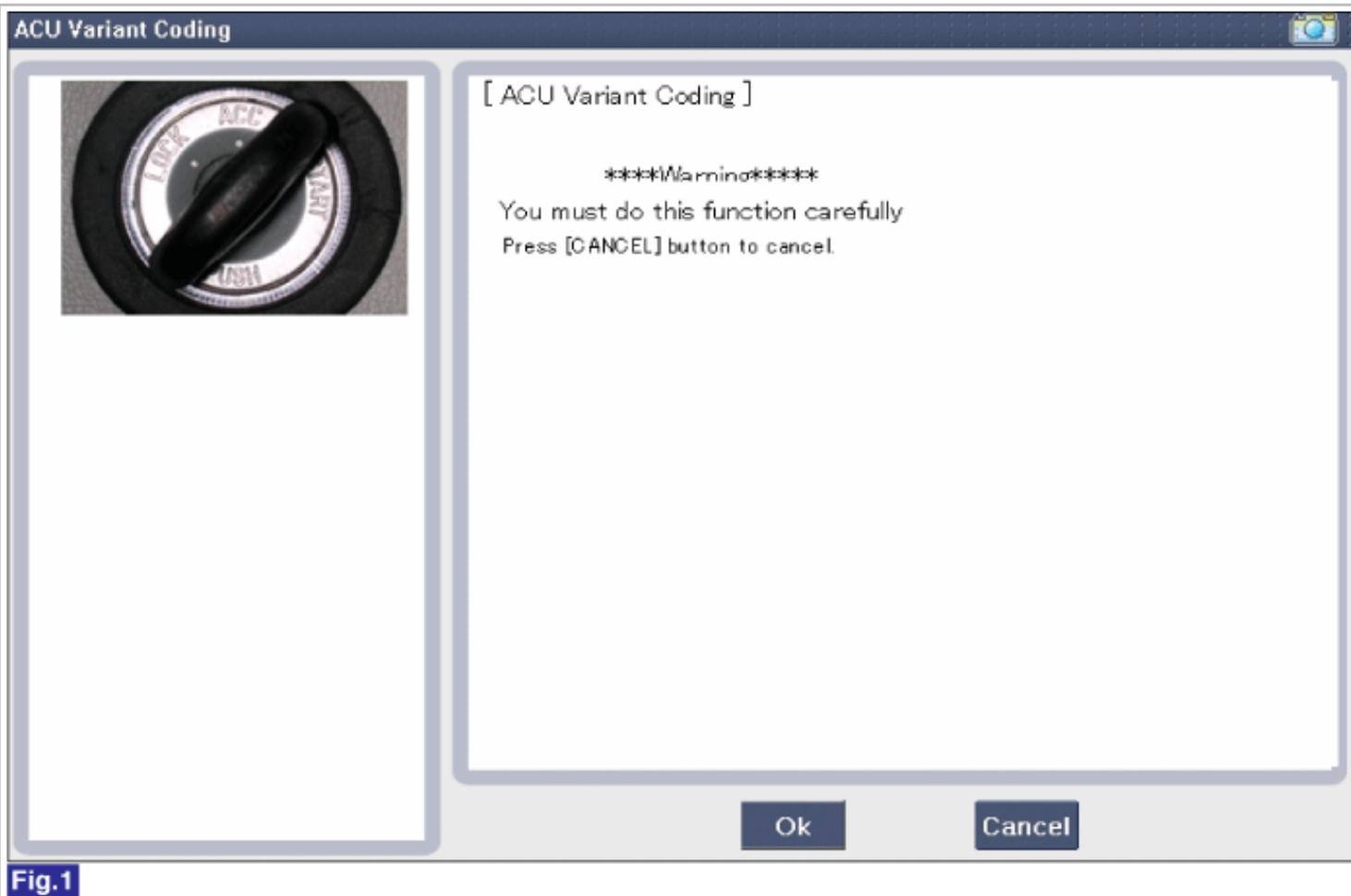


Fig.1

2) ACU CODING Code entering screen

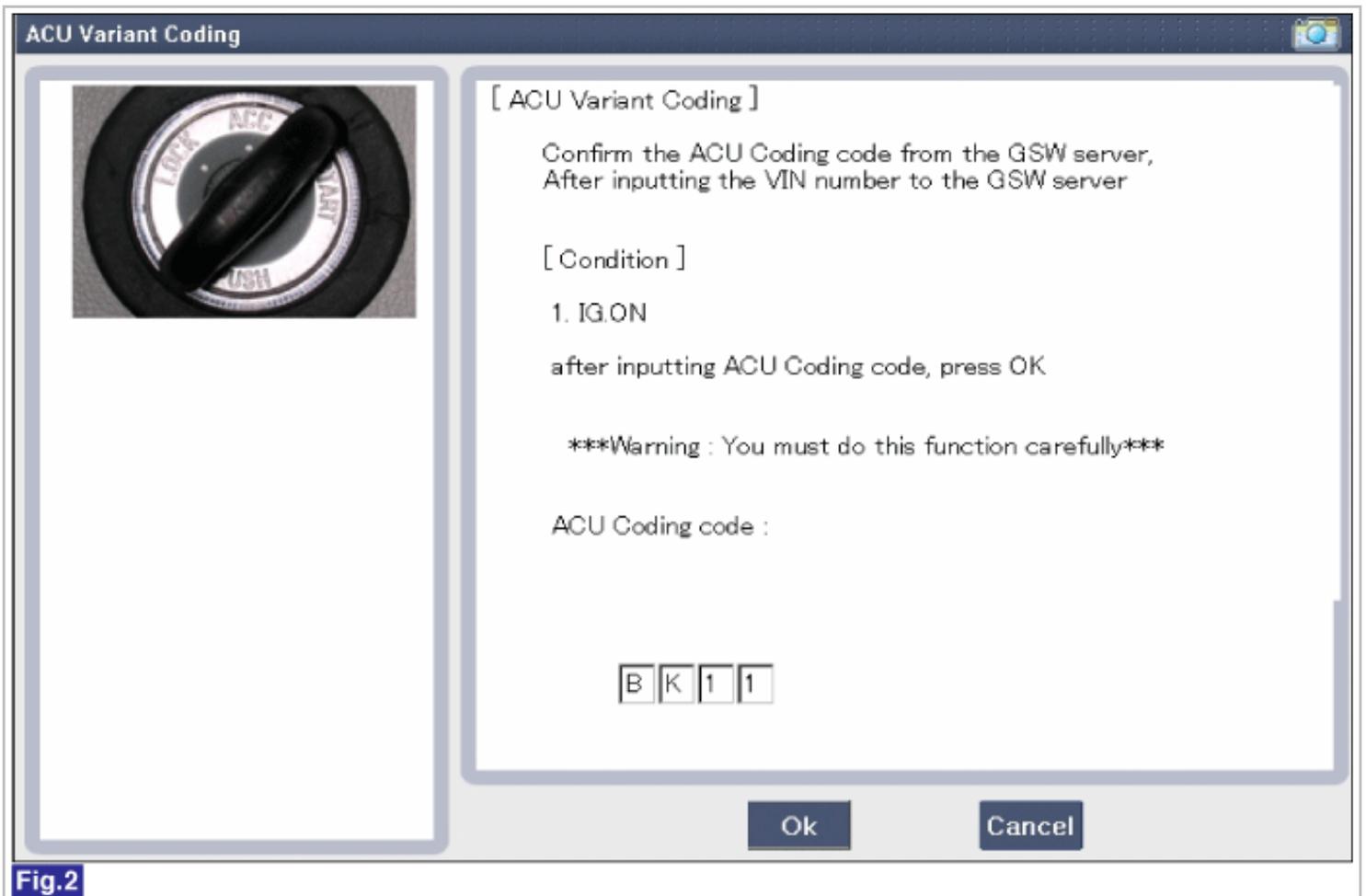


Fig.2

3) Screen of rechecking ACU CODING code's entering



[ACU Variant Coding]

Warning

You must do this function carefully

Confirm the ACU Coding code from the GSW server , After inputting the VIN number to the GSW server

If you want continue press ok or cancel.

Ok

Cancel

Fig.3

4) Variant coding's proceeding screen-1

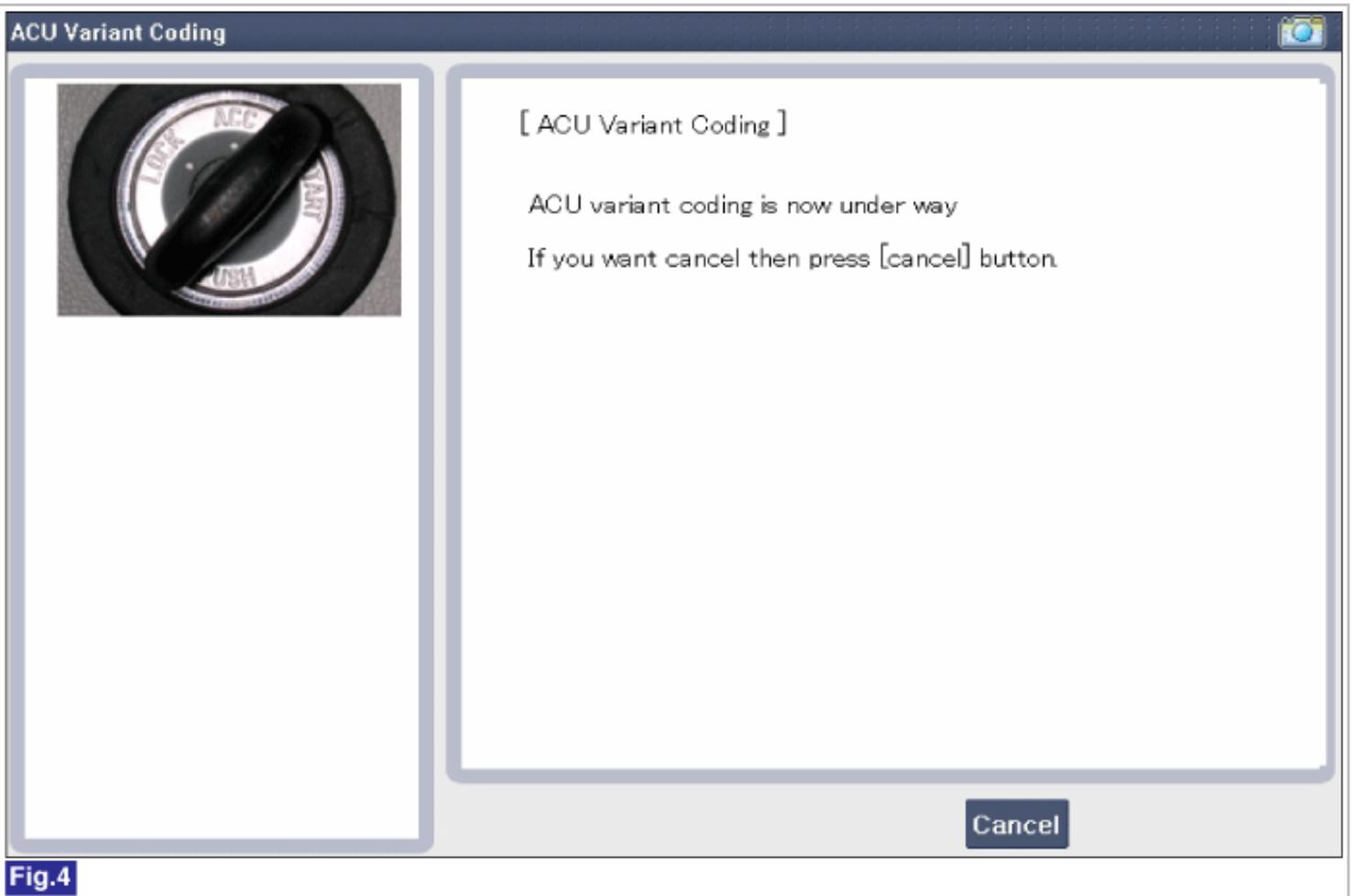


Fig.4

5) Variant coding's proceeding screen-2

[ACU Variant Coding]

ACU variant coding is now under way

If you want continue press ok
Press [CANCEL] button to cancel.

Ok

Cancel

Fig.5

6) Variant coding is completed



*** Variant Coding is complete.***

ACU CODING CODE : BK
ACU Info. : SAB+CAB(Dep/3.8/ESP)

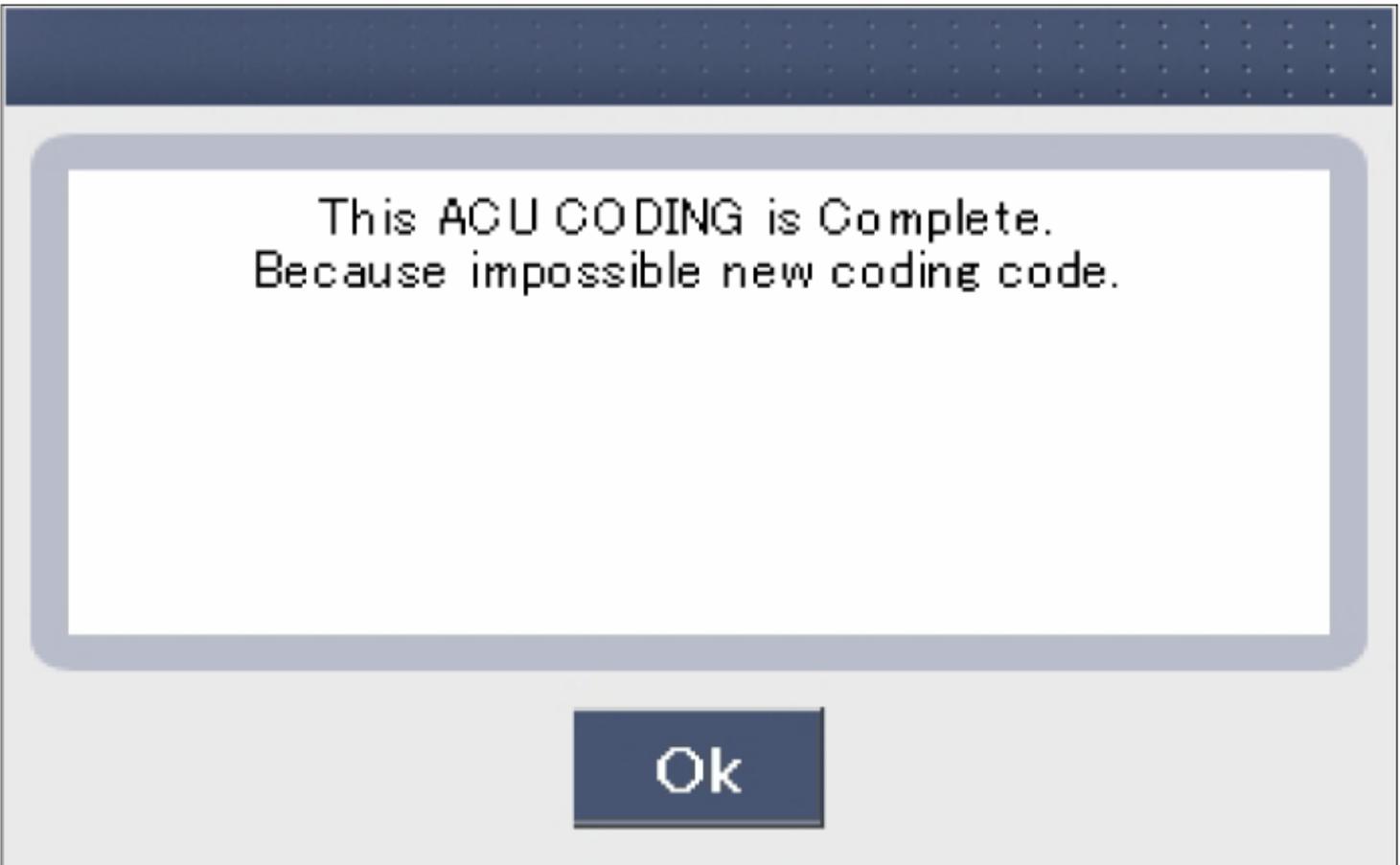
warning

After Variant Coding process, please make it sure that the ACU Information corresponds with the real car information(airbag ignition circuit /engine informaion /braking system information) before delivery.

Ok

Fig.6

7) Screen of Retrying the Variant coding after finishing variant coding



This ACU CODING is Complete.
Because impossible new coding code.

Ok

Fig.7

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B2500 Warning lamp Failure

General Description

Air bag warning lamp is located at cluster

When key is in 'ignition on' position, SRSCM performs diagnosis of overall air bag system.If there's no fault, air bag. Warning lamp in cluster flickers for a whlie and then goes out.

SRSCM measures voltage of out terminal of warning lamp to check if warning lamp is operated in accordance with signal SRSCM sends.

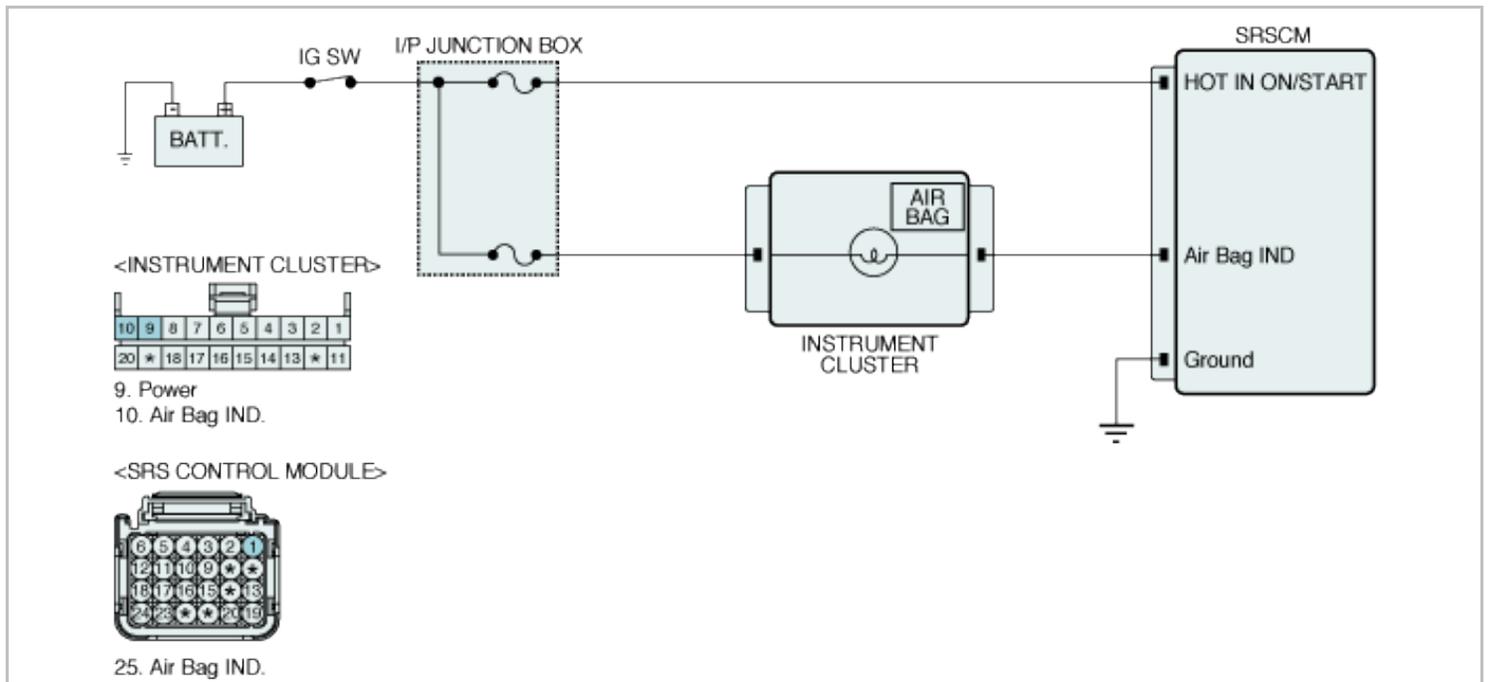
DTC Description

The SRSCM sets DTC B2500 if there is an open circuit or short to ground in air bag circuit harness.

DTC Detecting Condition

Item		Detecting Condition	Possible cause
DTC Strategy		• Check voltage	<ul style="list-style-type: none"> • Burnt-out fuse. • Burnt-out warning lamp. • Open circuit in warning lamp harness. • Short circuit in warning lamp harness. • Faulty SRSCM.
Enable conditions		• Ignition "ON"	
Threshold Value	Lamp "OFF"	• Line voltage < 0.3V -> ground short	
	Lamp "ON"	• Line voltage < 0.3V -> ground short • Line voltage > 6.1V -> battery short	
Diagnostic Time	Qualification	• More than 2 sec	
	De-Qualification	• More than 4 sec	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.

DTC	
<div style="display: flex; justify-content: space-around;"> Erase All DTC Freeze Frame DTC Status Erase Selective DTC </div>	
Description	State
B2500 Warning lamp failure	

5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	<p>▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared.</p> <p>Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.</p> <p>▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.</p>

Terminal and Connector Inspection

- Many malfunctions in the electrical system are caused by poor harness and terminals. Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.
- Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
- Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Main harness circuit inspection" procedure.

Main harness Circuit Inspection

- Ignition "OFF".
- Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
- Disconnect SRSCM main harness connector.
- Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
- Measure voltage between Air bag warning lamp terminal of the SRSCM harness connector and chassis ground.

Specification : Approx. Batt Voltage

6. Is the measured resistance within specifications?

YES	▶ Check warning lamp and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	<p>▶ Check airbag fuse, junction block, Warning Lamp, harness between junction block and SRSCM .</p> <p>Repair as necessary and go to "Verification of Vehicle Repair" procedure.</p>

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > SRSCM > B2502 Passenger Airbag Telltale Lamp Failure

General Description

The SRS Telltale Lamp is located on the center of crash pad consists with the Digital Clock.

When the passenger seat are unoccupied, the Telltale Lamp lights up for the notice, and if passenger are occupied under seat, Telltale Lamp are goes off automatically.

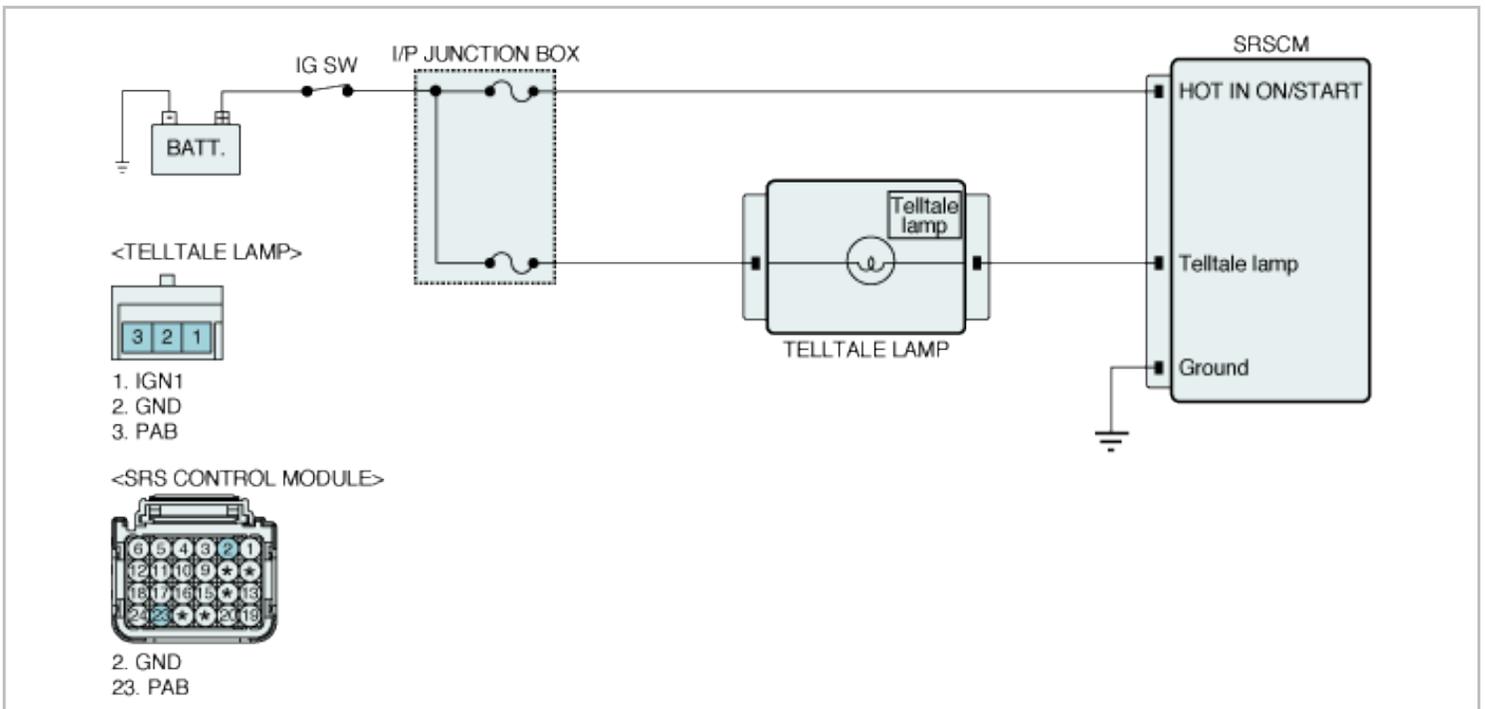
DTC Description

DTC B2502 is recorded when occurrence of a malfunction in the Telltale indicator Lamp system.

DTC Detecting Condition

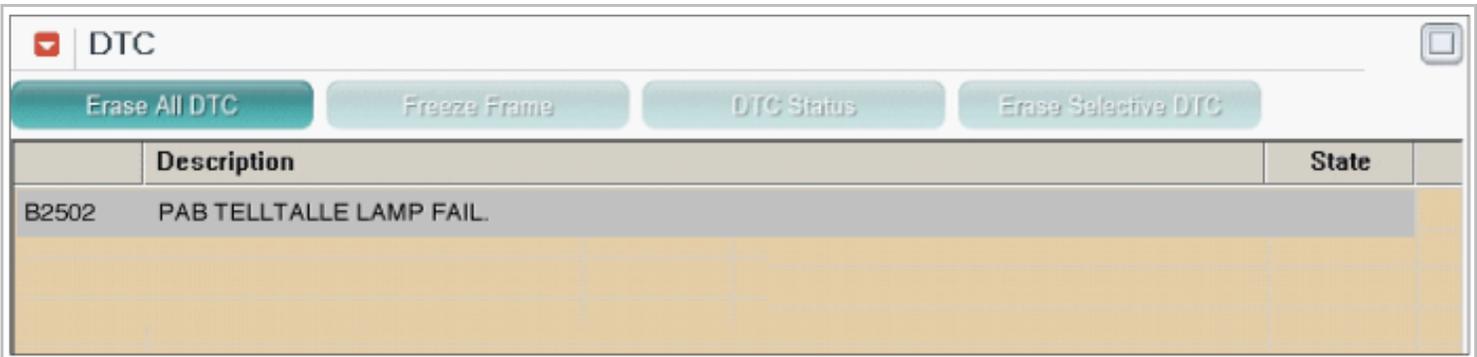
Item		Detecting Condition	Possible cause
DTC Strategy		• Passenger Telltale Lamp failure Ground short or Battery short	• Burnt-out fuse. • Burnt-out warning lamp. • Open circuit in Telltale lamp harness. • Short circuit in Telltale lamp harness. • Faulty SRSCM.
Enable conditions		• Ignition "ON"	
Threshold Value	Lamp "OFF"	• Line voltage < 2.0V -> ground short	
	Lamp "ON"	• Line voltage < 0.1V -> ground short • Line voltage > 6.1V -> battery short	
Diagnostic Time	Qualification	• More than 2 sec	
	De-Qualification	• More than 4 sec	

Diagnostic Circuit Diagram



Monitor Scantool Data

1. Ignition "OFF", connect scantool.
2. Ignition "ON"& Engine "OFF", select "Diagnostic Trouble Codes(DTC)" mode.
3. Monitor diagnostic trouble code and present of trouble code.
4. Using a scan tool, clear the DTC.



5. Is DTC present problem ?

YES	▶ Go to "W/Harness Inspection" procedure.
NO	▶ Displaying nothing(no DTC) or DTC with label "H"(historical) shows that Fault is intermittent caused by poor contact in the part's and/or SRSCM connector or was repaired and SRSCM memory was not cleared. Thoroughly check shorting bar/shorting bar release pin and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. ▶ Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.

Terminal and Connector Inspection

1. Many malfunctions in the electrical system are caused by poor harness and terminals.

Faults can also be caused by interference from other electrical systems, and mechanical or chemical damage.

2. Thoroughly check shorting connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage.
3. Has a problem been found?

YES	▶ Repair as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Go to "Telltale lamp Circuit Inspection" procedure.

Telltale lamp Circuit Inspection

1. Ignition "OFF".
2. Disconnect the battery (-) terminal cable from the battery and wait at least one minutes.
3. Disconnect SRSCM main harness connector.
4. Connect the battery (-) terminal cable to the battery and Ignition "ON" & Engine "OFF".
5. Measure voltage between Telltale lamp terminal of the SRSCM harness connector and chassis ground.

Specification : Batt Voltage

6. Is the measured voltage within specifications?

YES	▶ Check telltale lamp and connectors for looseness, poor connection, bending, corrosion, contamination, deterioration, or damage. Repair or replace as necessary and then go to "Verification of Vehicle Repair" procedure.
NO	▶ Check airbag fuse, passenger compartment junction block, harness between junction block and SRSCM. Repair as necessary and go to "Verification of Vehicle Repair" procedure.

Verification of Vehicle Repair

After a repair, it is essential to verify that the fault has been corrected.

1. Connect scan tool and select "Diagnostic Trouble Codes(DTC)" mode.
2. Using a scan tool, clear the DTC.
3. Operate the vehicle within DTC Enable conditions in General information.
4. Are any DTC present ?

YES	▶ Go to the applicable troubleshooting procedure.
NO	▶ System is performing to specification at this time.

Restraint > Airbag Module > Driver Airbag (DAB) Module and Clock Spring > Description and Operation

Description

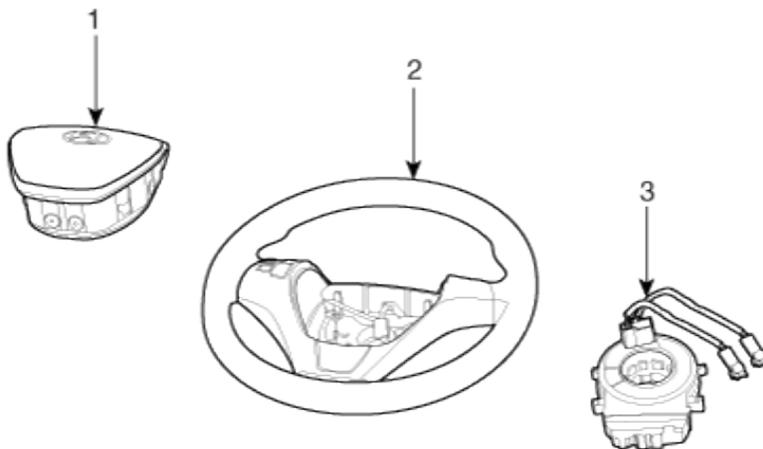
Driver Airbag (DAB) is installed in steering wheel and electrically connected to SRSCM via clock spring. It protects the driver from danger by deploying a bag when frontal crash occurs. The SRSCM determines deployment of Driver Airbag (DAB).

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.

Restraint > Airbag Module > Driver Airbag (DAB) Module and Clock Spring > Components and Components Location

Components

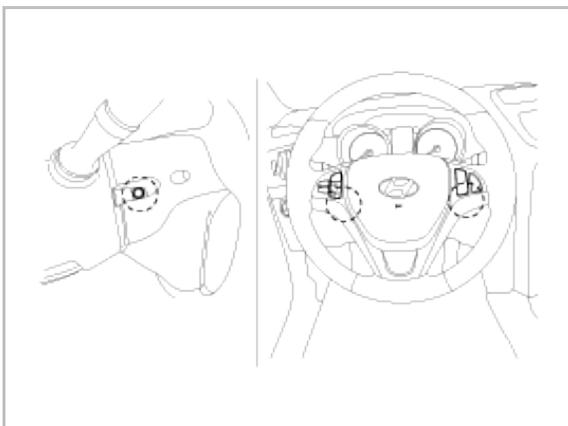


1. Driver Airbag (DAB)
2. Steering Wheel
3. Clock Spring

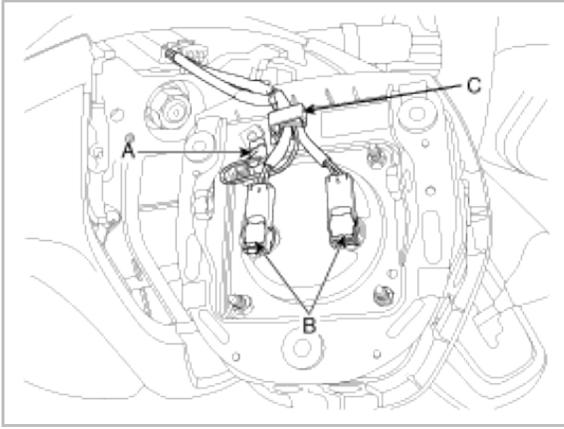
Restraint > Airbag Module > Driver Airbag (DAB) Module and Clock Spring > Repair procedures

Removal

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



3. Disconnect the horn connector(A).



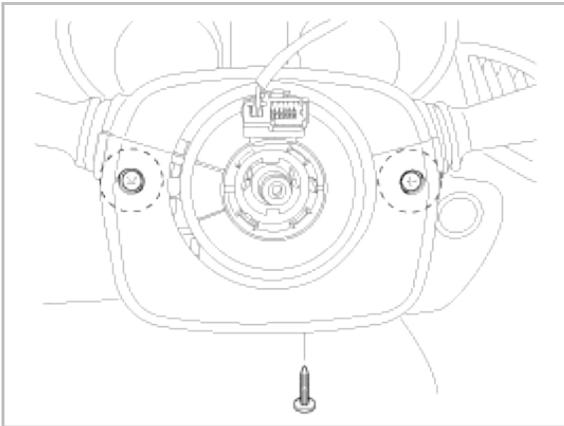
4. Remove the wiring fixing clip(C) and disconnect airbag module connector (B).

5. Separate the airbag module from the steering wheel.

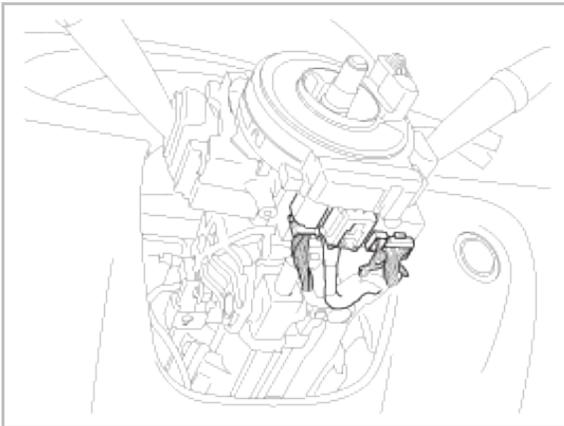
CAUTION

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

6. Remove the steering wheel and steering wheel column cover. (Refer to the Steering System group- Steering Column and Shaft)



7. Disconnect the clock spring and horn connector, then remove the clock spring.



Inspection

Driver Airbag (DAB)

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

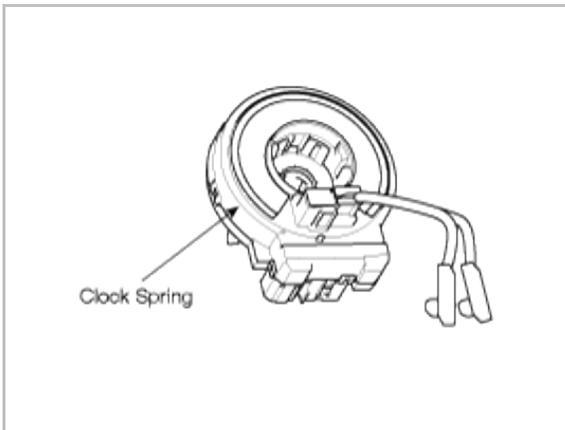
CAUTION

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.
4. Check airbag inflator case for dents, cracks or deformities.
5. Install the airbag module to the steering wheel to check for fit or alignment with the wheel.

Clock Spring

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.

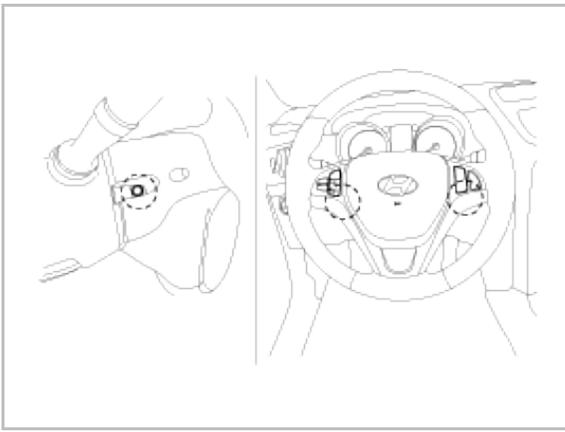


Installation

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. 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 3 revolutions counterclockwise.
5. Install the steering wheel column cover and the steering wheel. (Refer to the Steering System group- Steering Column and Shaft)
6. Connect the Driver Airbag (DAB) module connector and horn connector, and then install the Driver Airbag (DAB) module on the steering wheel.
7. Secure the Driver Airbag (DAB) with the new mounting bolts.

Tightening torque

: 7.8 ~ 10.8 Nm (0.8 ~ 1.1 kgf.m, 5.8 ~ 8.0 lb.ft)



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

Restraint > Airbag Module > Passenger Airbag (PAB) Module > Description and Operation

Description

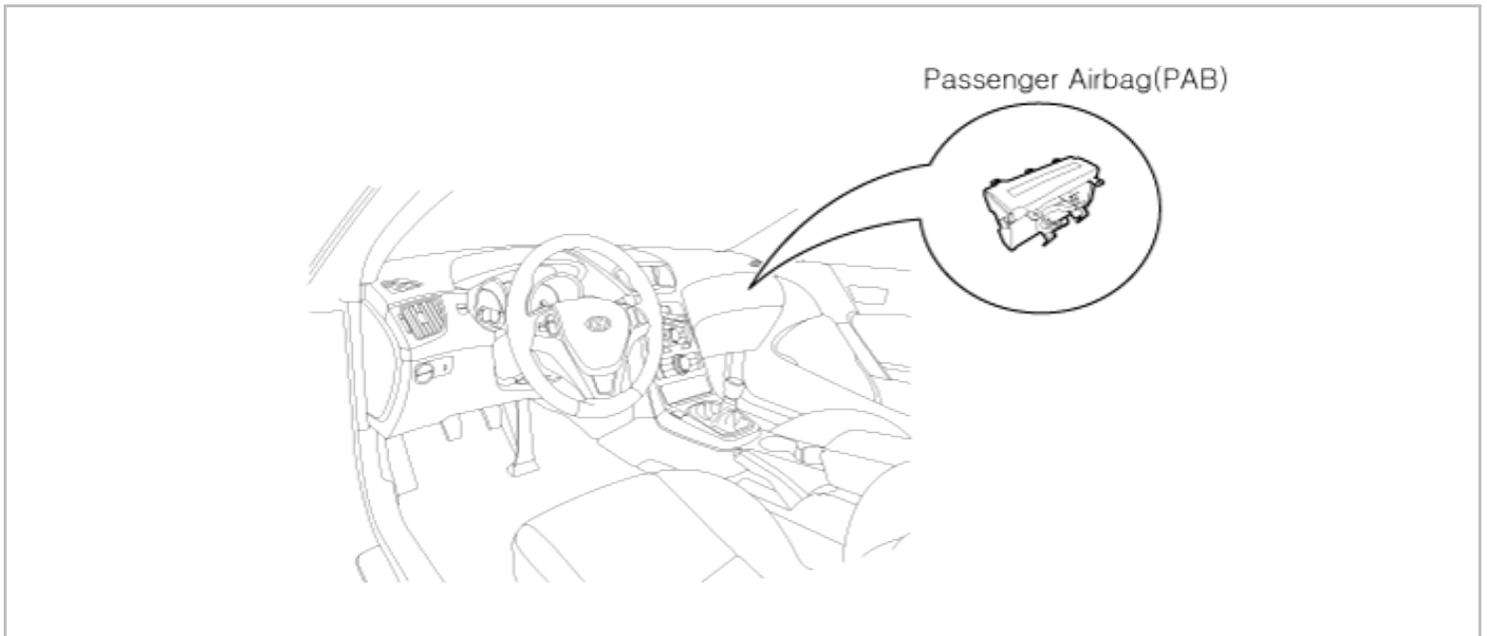
The passenger Airbag (PAB) is installed inside the crash pad and protects the front passenger in the event of a frontal crash. The SRSCM determines if and when to deploy the PAB.

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.

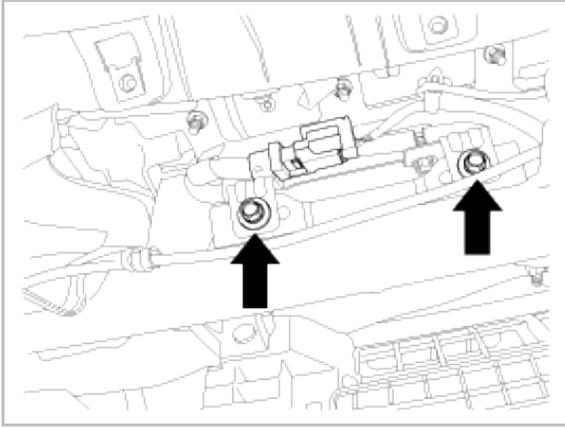
Restraint > Airbag Module > Passenger Airbag (PAB) Module > Components and Components Location

Components



Removal

1. Disconnect the battery negative cable and wait for at least three minutes before beginning work.
2. Remove the glove box assembly. (Refer to the Body group- crash pad).
3. Disconnect the PAB connector and remove the PAB mounting bolt.



4. Remove the crash pad. (Refer to the Body group- crash pad).

NOTE

Replace the crash pad which is damaged while PAB is deployed.

5. Remove the heater duct from the crash pad.
6. 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, dry place with the airbag cushion up.

Installation

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

: 3.9 ~ 6.9 Nm (0.4 ~ 0.7 kgf.m, 2.9 ~ 5.0 lb.ft)

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

Tightening torque

: 6.9 ~ 10.8 Nm (0.7 ~ 1.1 kgf.m, 5.1 ~ 8.0 lb.ft)

7. Connect the Passenger Airbag (PAB) harness connector to the SRS main harness connector.
8. Reinstall the glove box assembly. (Refer to the Body group- crash pad)

9. Reconnect the battery negative cable.
10. After installing the Passenger Airbag (PAB), confirm proper system operation:
 - A. Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

Restraint > Airbag Module > Side Airbag (SAB) Module > Description and Operation

Description

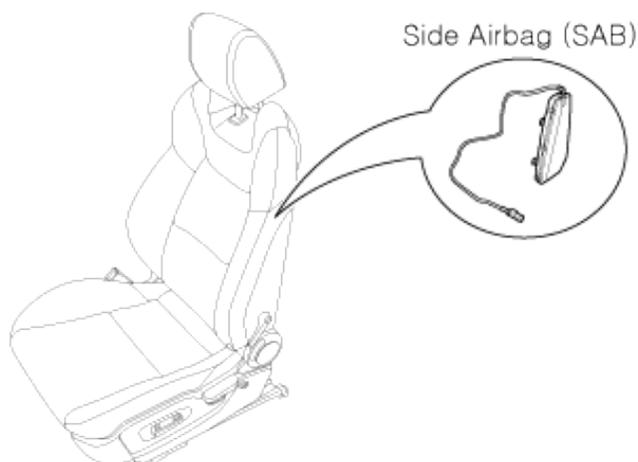
The Side Airbags (SAB) are installed inside the front seat and protect the driver and front passenger from danger when side crash occurs. The SRSCM determines deployment of side airbag by using Side Impact Sensor (SIS) signal.

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.

Restraint > Airbag Module > Side Airbag (SAB) Module > Components and Components Location

Components



Restraint > Airbag Module > Side Airbag (SAB) Module > Repair procedures

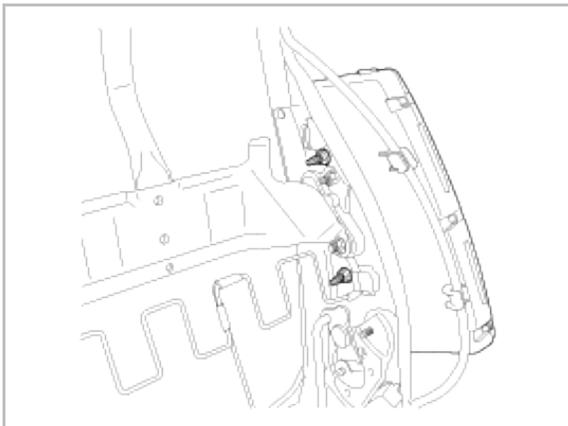
Removal

1. Disconnect the battery negative cable and wait for at least 3 minutes before beginning work.
2. Remove the front seat assembly. (Refer to the Body group- Seat)
3. Remove the seat back cover. (Refer to the Body group- Seat)

NOTE

When the front side airbag deployed after a collision, replace the seat back as an assembly.

4. Loosen the SAB mounting nuts and remove the SAB module.



WARNING

The removed airbag module should be stored in a clean and dry place with the cushion side up.

Installation

CAUTION

Be sure to install the harness wires not to be pinched or interfered with other parts.

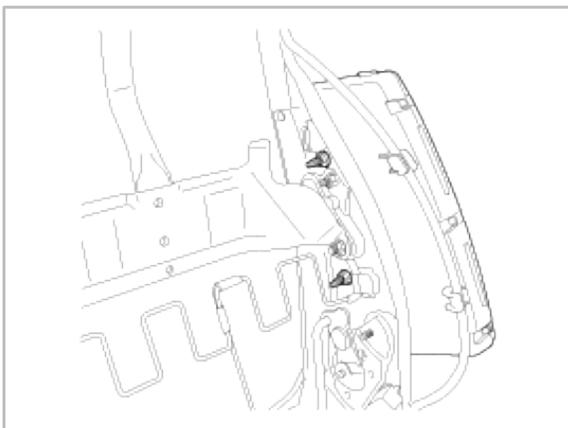
NOTE

- Do not open the lid of the side airbag cover.
- Use a new mounting nuts when you replace a side airbag.
- Make sure that the airbag assembly cover is installed properly. Improper installation may prevent the proper deployment.

1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable and wait for at least three minutes.
3. Place a Side Airbag (SAB) on the side airbag frame and tighten the side airbag mounting nuts (2EA).

Tightening torque

: 5.9 ~ 7.8 Nm (0.6 ~ 0.8 kgf.m , 4.3 ~ 5.8 lb.ft)



4. Install the new seat back cover. (Refer to the Body group- Seat)
5. Install the front seat assembly, and then connect the Side Airbag (SAB) harness connector.

6. Recline and slide the front seat forward fully, make sure the harness wires are not pinched or interfering with other parts.
7. Reconnect the battery negative cable.
8. After installing the Side Airbag (SAB), confirm proper system operation:
 - A. Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

Restraint > Airbag Module > Curtain Airbag (CAB) Module > Description and Operation

Description

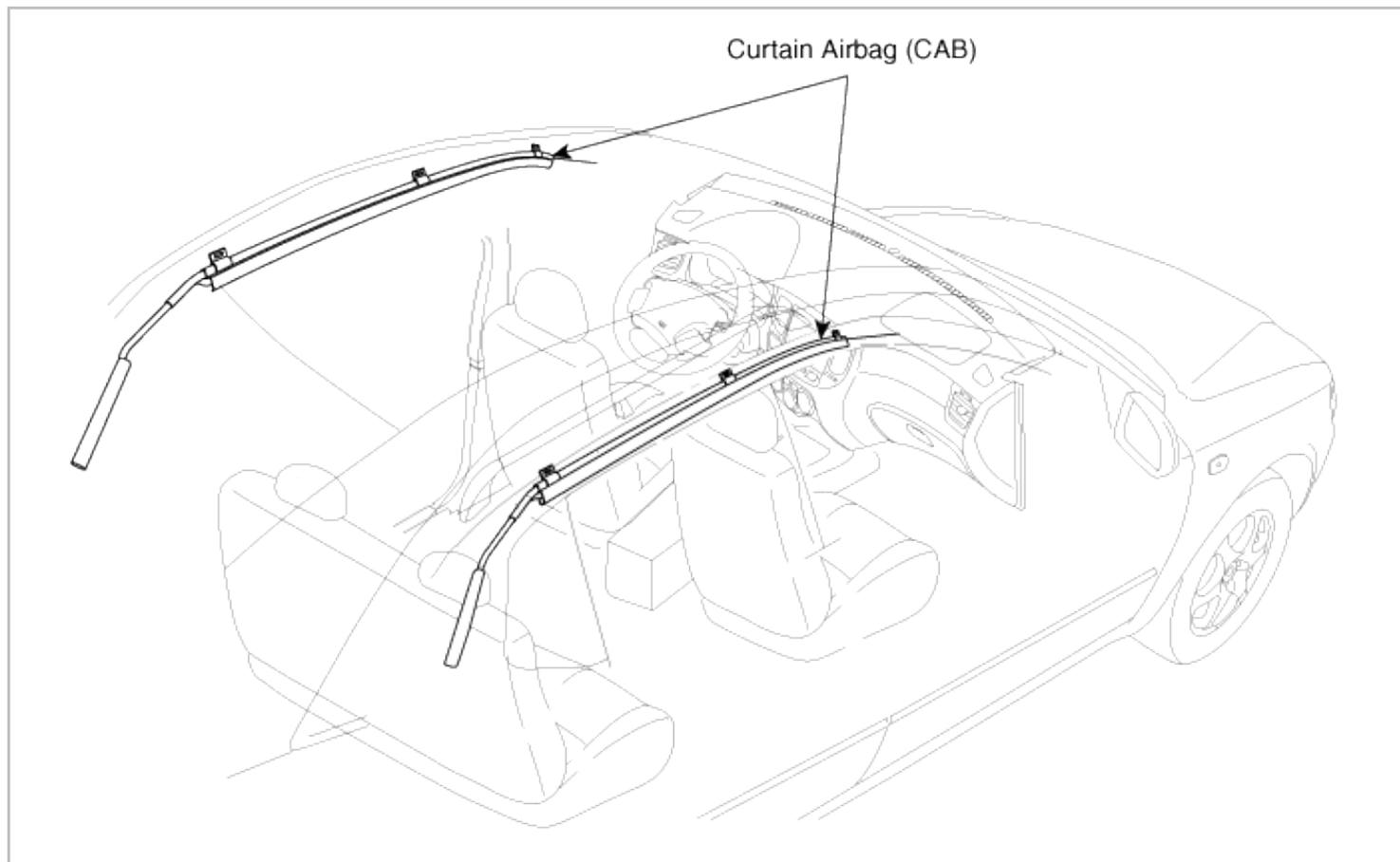
Curtain airbags are installed inside the headliner (LH and RH) and protect the driver and passenger from danger when side crash occurs. The SRSCM determines deployment of curtain airbag by using side impact sensor (SIS) signal.

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.

Restraint > Airbag Module > Curtain Airbag (CAB) Module > Components and Components Location

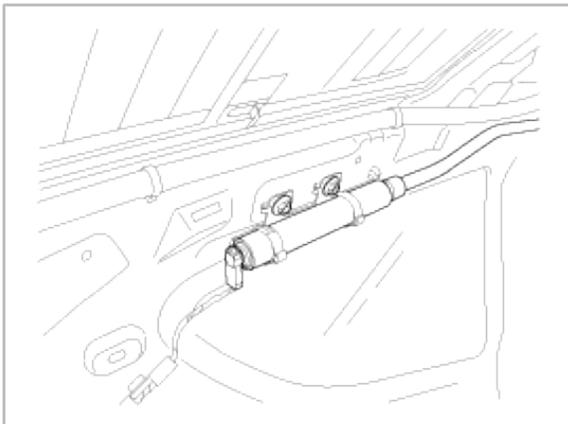
Components



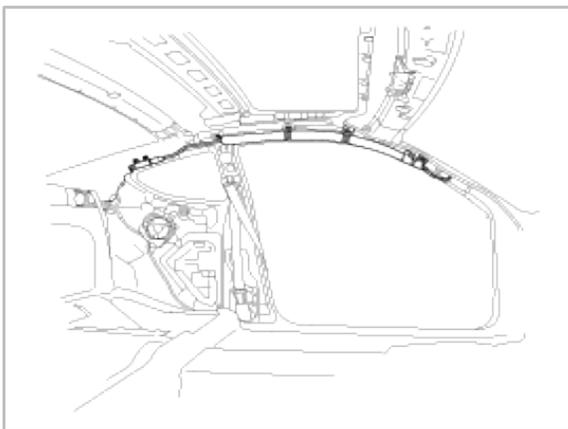
Restraint > Airbag Module > Curtain Airbag (CAB) Module > Repair procedures

Removal

1. Disconnect the battery negative cable and wait for at least 3 minutes before beginning work.
2. Remove the following parts. (Refer to the Body group- Interior trim)
 - A. Front pillar trim, Rear seat assembly, Door scuff trim
 - B. Rear pillar trim, Headliner, luggage side trim
3. Disconnect the Curtain Airbag harness connector.



4. After loosening the mounting bolts and nuts remove the curtain airbag.



Installation

1. Remove the ignition key from the vehicle.
2. Disconnect the battery negative cable and wait for at least three minutes.
3. Tighten the Curtain Airbag (CAB) mounting bolts.

Tightening torque

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

CAUTION

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

4. Connect the CAB connector.
5. Install the following parts. (Refer to the Body group- Interior trim)
 - A. Headliner, Front pillar trim, Rear seat assembly
 - B. Door scuff trim, luggage side trim, Rear pillar trim
6. Reconnect the battery negative cable.

7. After installing the Curtain Airbag (CAB), confirm proper system operation:

- A. Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

Restraint > Airbag Module > Airbag Module Disposal > Description and Operation

Airbag Disposal

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.
 - (1) Driver's Airbag :
 - A. Remove the driver's airbag and install the SST (0957A-38500).
 - B. Install the driver's airbag on the steering wheel.
 - (2) Front Passenger's Airbag :
 - A. Remove the glove box, and then disconnect the 2P connector between the front passenger's airbag and SRS main harness.
 - B. Install the SST(0957A-3F100).
 - (3) Side Airbag :
 - A. Disconnect the 2P connector between the side airbag and side wire harness.
 - B. Install the SST (0957A-3F100).
 - (4) Curtain Airbag :
 - A. Disconnect the 2P connector between the curtain airbag and wire harness.
 - B. Install the SST (0957A-38500).
 - (5) Seat Belt Pretensioner :
 - A. Disconnect the 2P connector from the seat belt pretensioner.
 - B. Install the SST (0957A-38500).
4. Place the deployment tool at least thirty feet (10meters) away from the airbag.
5. Connect a 12 volt battery to the tool.
6. 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)
7. Dispose of the complete airbag. No part of it can be reused. Place it in a sturdy plastic bag and seal it securely.

Deploying the airbag out of the vehicle

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

1. Confirm that the special is functioning properly by following the check procedure on this page.

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 come in.

Restraint > Seat Belt Pretensioner > Seat Belt Pretensioner (BPT) > Description and Operation

Description

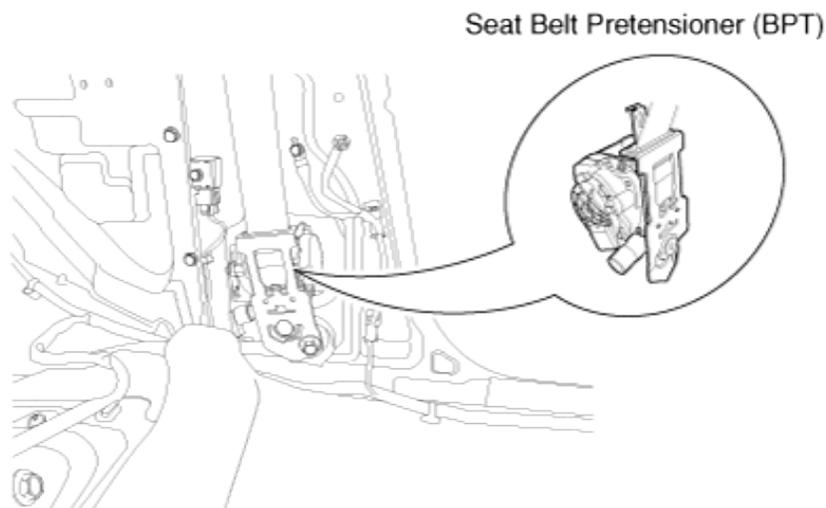
The Seat Belt Pretensioners (BPT) are installed inside Center Pillar (LH & RH). When a vehicle crashes with a certain degree of frontal impact, the pretensioner seat belt helps to reduce the severity of injury to the front seat occupants by retracting the seat belt webbing. This prevents the front occupants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

Restraint > Seat Belt Pretensioner > Seat Belt Pretensioner (BPT) > Components and Components Location

Components

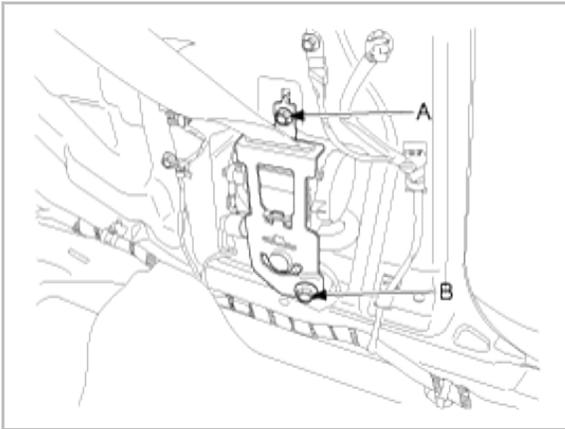


Restraint > Seat Belt Pretensioner > Seat Belt Pretensioner (BPT) > Repair procedures

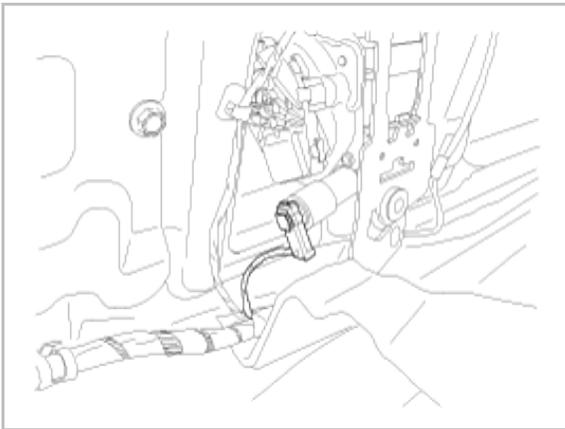
Removal

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

3. Remove the following parts. (Refer to the Body group- Interior trim)
 - A. Rear seat assembly, Door scuff trim
 - B. Luggage side trim, Center upper trim
4. Remove the upper anchor bolt.
5. Loosen the Seat Belt Pretensioner mounting bolt and remove the Seat Belt Pretensioner.



6. Disconnect the Seat Belt Pretensioner connector.

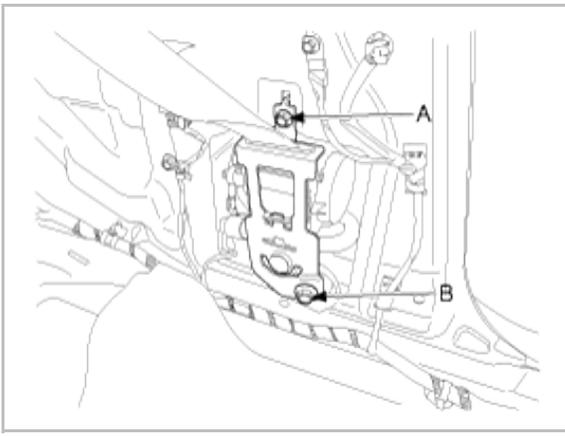


Installation

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

Tightening torque

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



5. Install the upper anchor bolts.

Tightening torque

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

6. Install the following parts. (Refer to the Body group- Interior trim)

- A. Center upper trim, luggage side trim
- B. Door scuff trim, Rear seat assembly

7. Install the lower anchor bolts.

Tightening torque

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

8. Reconnect the battery negative cable.

9. After installing the Seat Belt Pretensioner (BPT), confirm proper system operation:

- A. Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.28