

RT-2

Restraint

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. Safety sensor: Safety sensor is located in airbag ignition circuit. Safety sensor will operate airbag circuit at any deployment condition and release airbag circuit safely at normal driving condition. Safety sensor is a double contact electro-mechanical switch that will close detecting deceleration above certain criteria.
3. Back up power supply: SRSCM has separate back up power supply, that will supply deployment energy instantly in low voltage condition or upon power failure by front crash.
4. Self diagnosis: SRSCM will constantly monitor current SRS operation status and detect system failure while vehicle power supply is on, system failure may be checked with trouble codes using scantool. (Hi-Scan)

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

General Information

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Specification

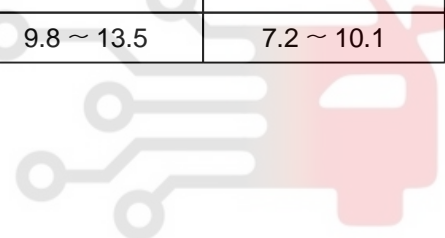
Item	Resistance (Ω)
Driver Airbag (DAB)	1.6 ~ 4.7
Passenger Airbag (PAB)	1.6 ~ 4.7
Side Airbag (SAB)	1.6 ~ 4.7
Curtain Airbag (CAB)	1.6 ~ 4.7
Seat Belt Retractor Pretensioner (BPT)	1.6 ~ 4.7

Tightening Torques

Item	kgf·m	Nm	lb-ft
Driver Airbag (DAB)	0.8 ~ 1.1	7.9 ~ 10.8	5.8 ~ 8.0
Passenger Airbag (PAB)	Bolt : 1.9 ~ 2.7 Nut : 0.6 ~ 0.7	18.6 ~ 26.5 5.9 ~ 6.9	13.7 ~ 19.5 4.3 ~ 5.0
Curtain Airbag (CAB)	1.1 ~ 1.5	10.8 ~ 14.7	8.0 ~ 10.8
Side Airbag (SAB)	0.7 ~ 0.9	6.9 ~ 8.8	5.0 ~ 6.5
Seat Belt Anchor Bolt (BPT)	4.0 ~ 5.5	39.2 ~ 53.9	28.9 ~ 39.8
SRSCM	0.8 ~ 1.0	7.9 ~ 9.8	5.8 ~ 7.2
Front Impact Sensor (FIS) Mounting Bolt	0.7 ~ 0.9	6.9 ~ 8.8	5.0 ~ 6.5
Side Impact Sensor (SIS) Mounting Bolt	1.0 ~ 1.4	9.8 ~ 13.5	7.2 ~ 10.1

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

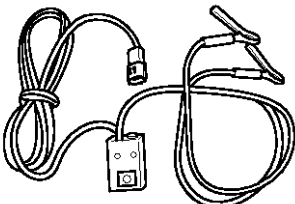
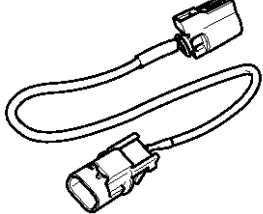
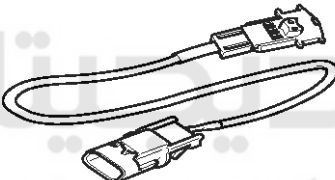
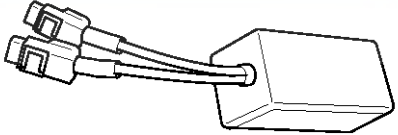
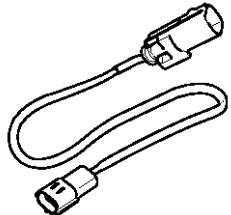
اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



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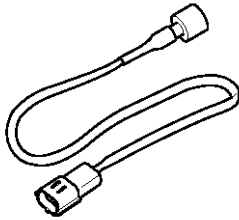
Restraint

Special Service Tools

Tool(Number and Name)	Illustration	Use
Deployment tool 0957A-34100A	 <p style="text-align: right;">ARIE500A</p>	Airbag deployment tool
Deployment adapter 0957A-3F100	 <p style="text-align: right;">ERKD001F</p>	Use with deployment tool. (PAB, SAB)
Deployment adapter 0957A-38500	 <p style="text-align: right;">ARIE500C</p>	Use with deployment tool. (DAB, CAB, BPT)
Dummy 0957A-38200	 <p style="text-align: right;">ARIE500D</p>	Simulator to check the resistance of e- ach wiring harness
Dummy adapter 0957A-3F000	 <p style="text-align: right;">ERKD001G</p>	Use with dummy (PAB, SAB)

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

DAB : Driver Airbag

PAB : Passenger Airbag

SAB : Side Airbag

CAB : Curtain Airbag

BPT : Seat Belt Retractor Pretensioner

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



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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.

NOTICE

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

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



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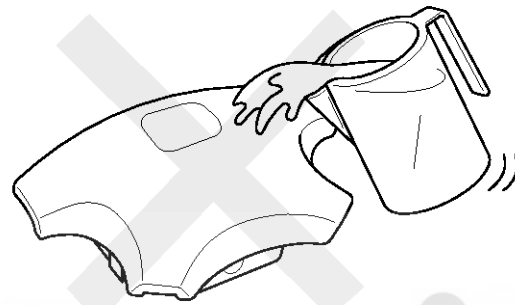
- Before removing any of the SRS parts (including the disconnection of the connectors), always disconnect the SRS connector.

Airbag Handling And Storage

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

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

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



SBLRT7026N

- Store the removed airbag on secure, flat surface away from any high heat source (exceeding 60°C/140°F).
- Never perform electrical inspections to the airbags, such as measuring resistance.
- Do not position yourself in front of the airbag assembly during removal, inspection, or replacement.
- Refer to the scrapping procedures for disposal of the damaged airbag.
- Be careful not to bump or impact the SRS unit or the side impact sensors whenever the ignition switch is ON, wait at least three minutes after the ignition switch is turned OFF before begin work.
- During installation or replacement, be careful not to bump (by impact wrench, hammer, etc.) the area around the SRS unit and the side impact sensor. The airbags could accidentally deploy and cause damage or injury.

General Information

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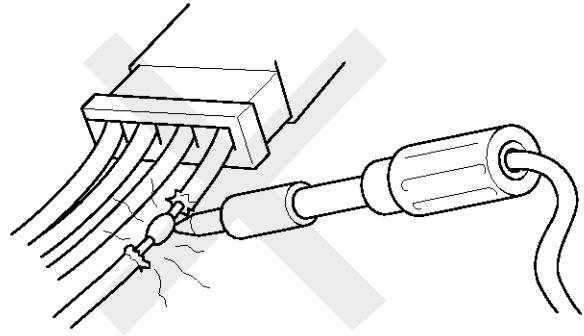
- After a collision in which the airbags were deployed, replace the front airbags and the SRS unit. After a collision in which the side airbag was deployed, replace the side airbag, the front impact sensor and side impact sensor on the side where the side airbag deployed and the SRS unit. After a collision in which the airbags or the side air bags did not deploy, inspect for any damage or any deformation on the SRS unit and 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 (except the SRS circuits under the front seats).

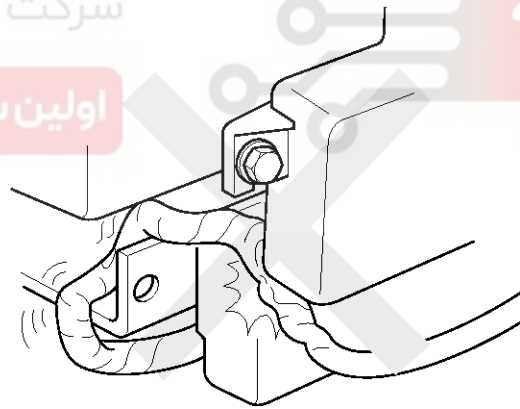
Observe the instructions described in this section.

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



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



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

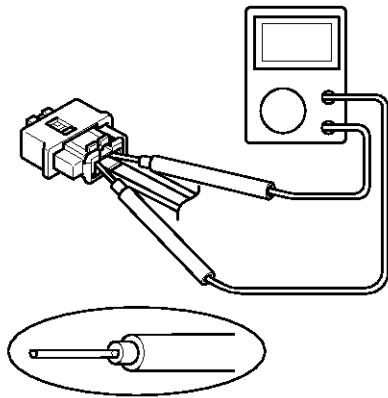
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Restraint

Precautions For Electrical Inspections

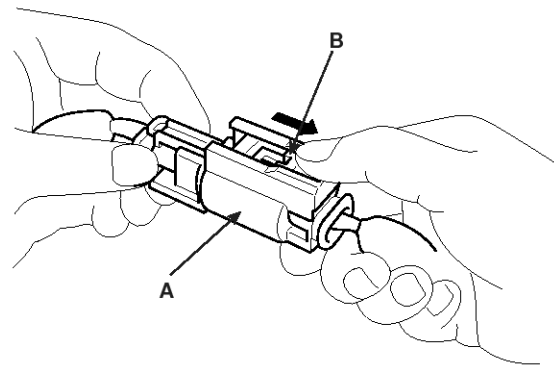
- When using electrical test equipment, insert the probe of the tester into the wire side of the connector. Do not insert the probe of the tester into the terminal side of the connector, and do not tamper with the connector.



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

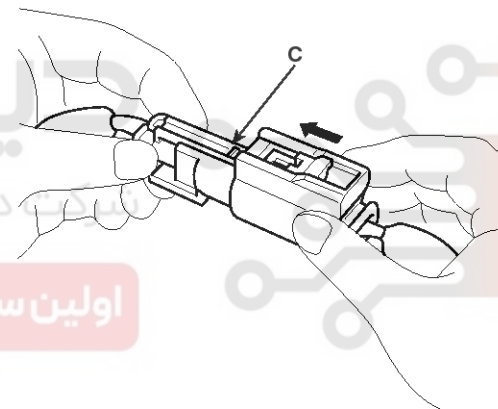
Airbag Connector



SHDRT7033N

Connecting

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



SHDRT7034N

General Information

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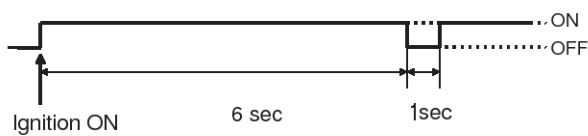
Warning Lamp Activation

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.

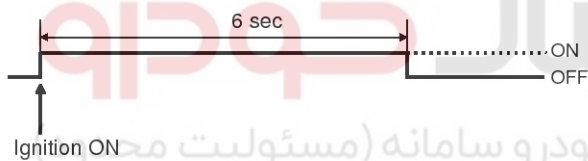
The lamp shall turn on for 6 seconds during the initialization phase and be turned off afterward. However, in order to indicate the driver, the warning lamp shall turn on for 6 seconds and off for one second then on continuously after the operating voltage is applied if any active fault exists.

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



BRIF500A

2. Normal or historical fault counter is less than 10



BRIF500B

SRSCM Independent Warning Lamp Activation

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

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

Component Replacement After Deployment

NOTICE

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

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

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

If any damage found, replace the clock spring.

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

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

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

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

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

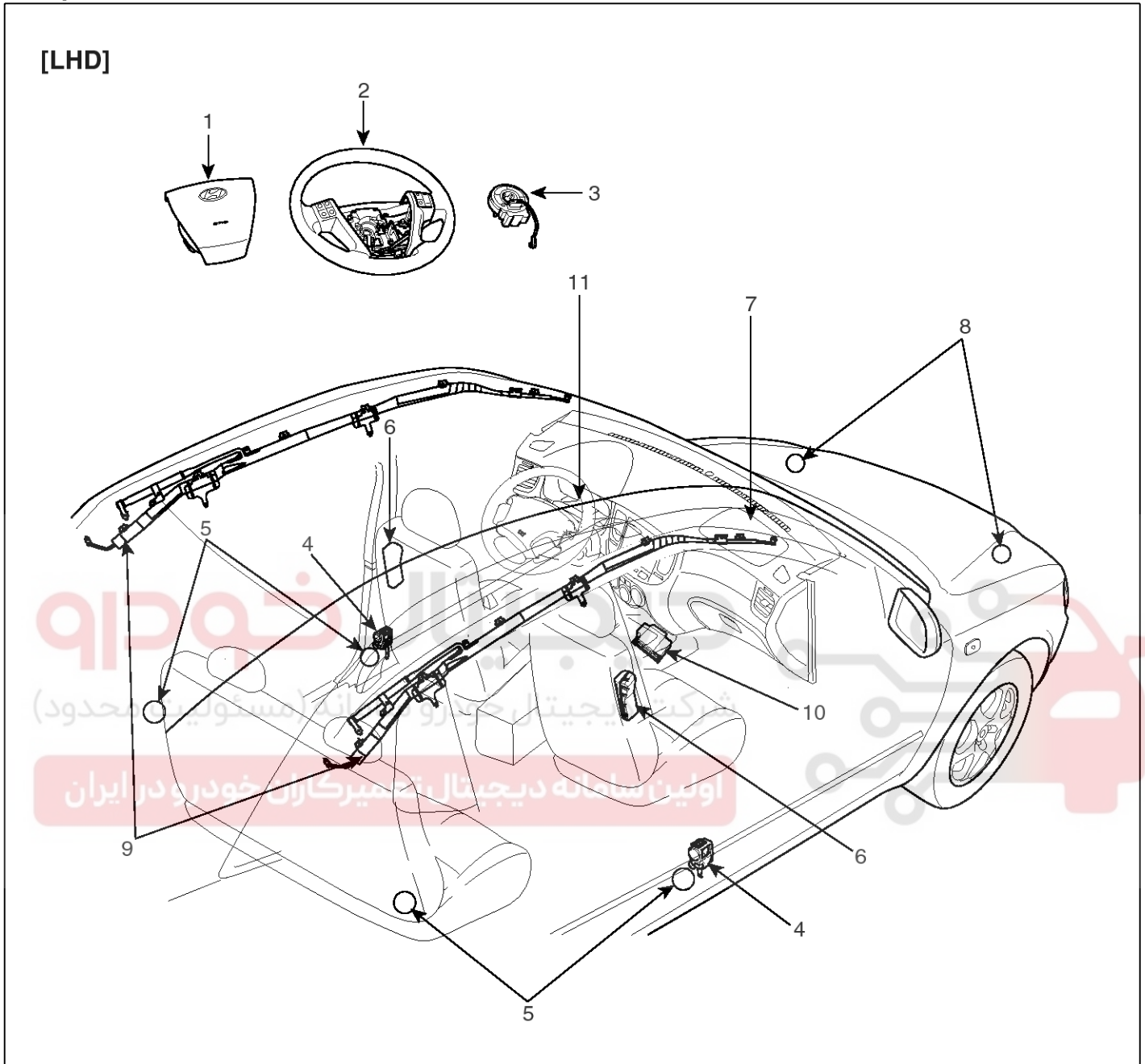
- Turn the ignition switch ON, the SRS indicator should come on for about 6 seconds and then go off.

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Restraint

Components

[LHD]



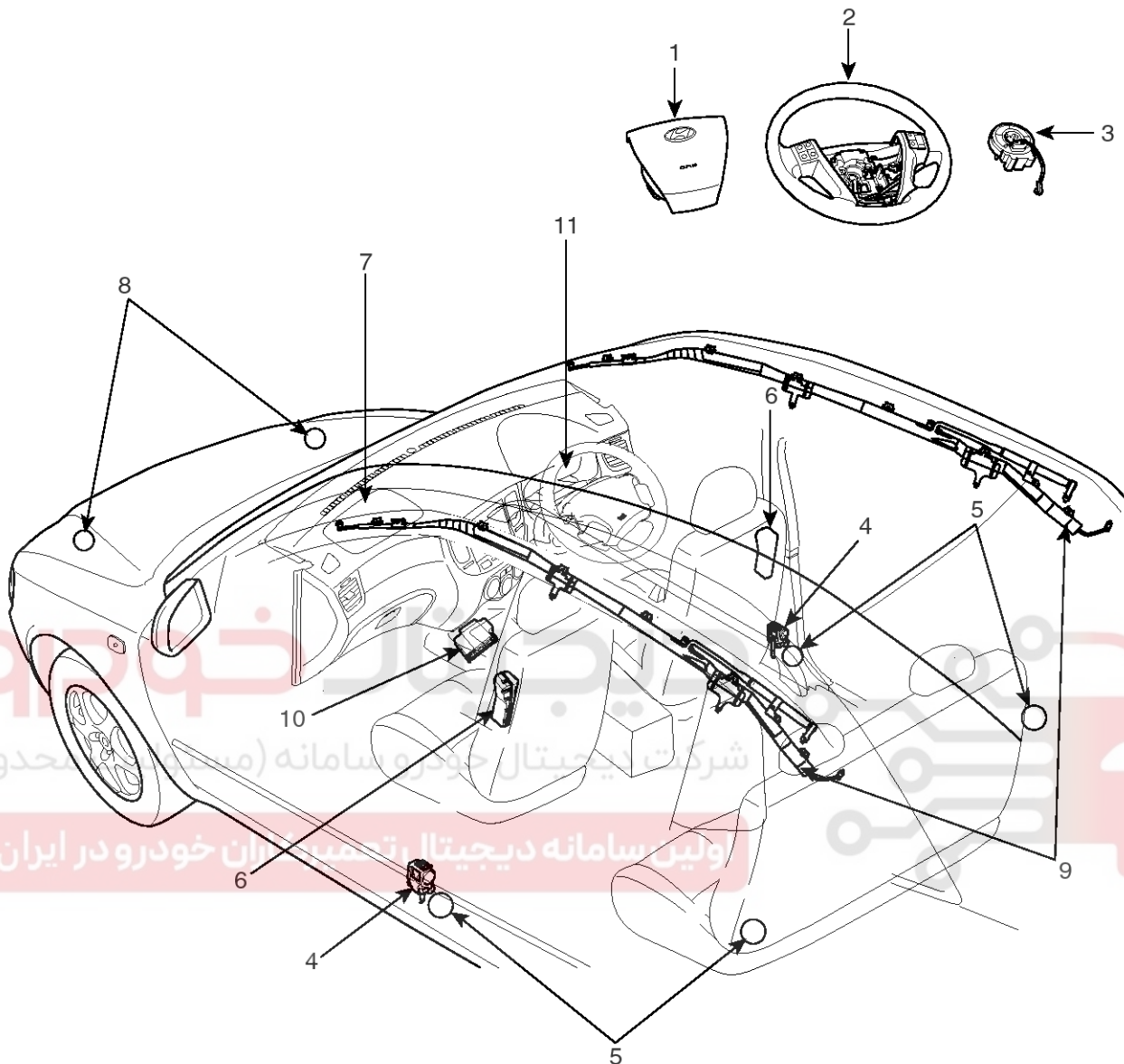
SENRT9001L

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

General Information

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[RHD]



SENRT9002L

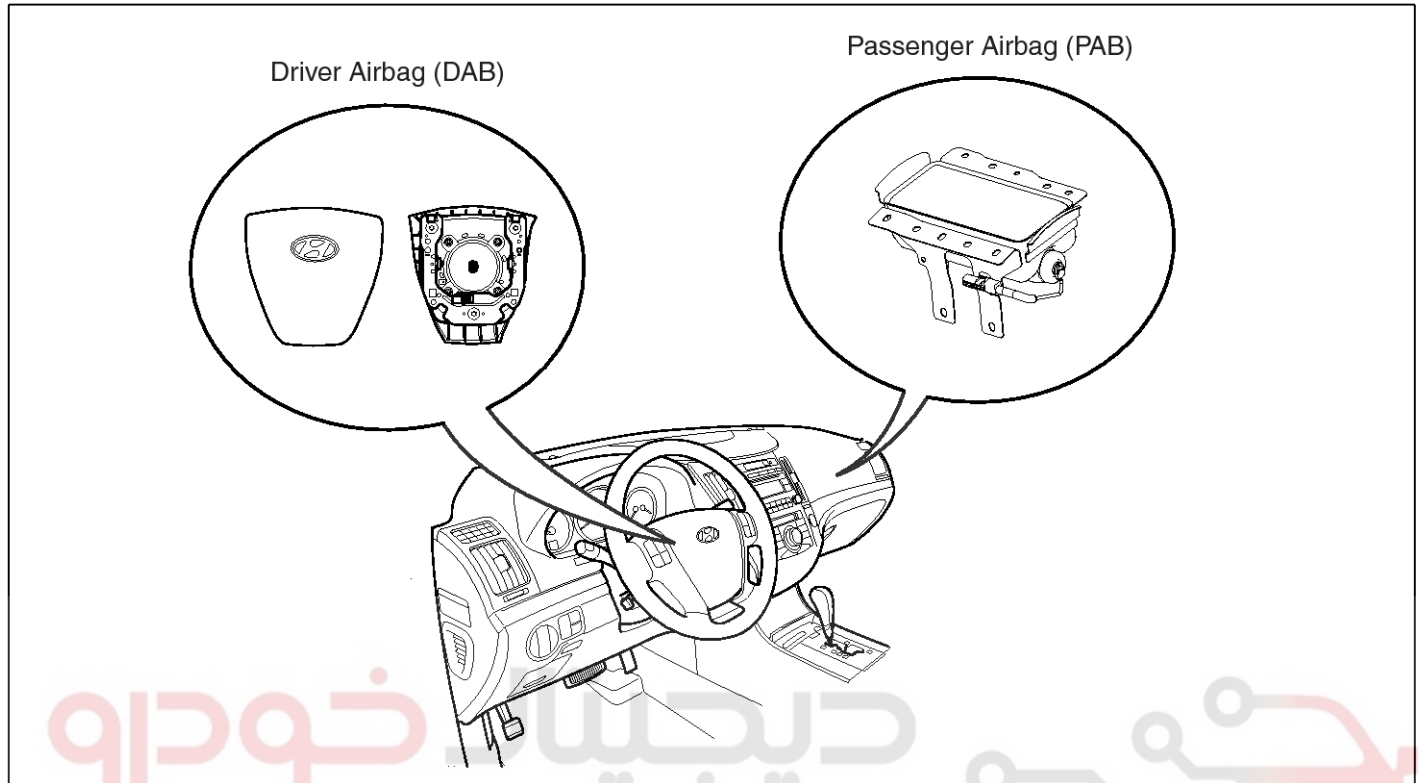
- | | |
|---------------------------------|--|
| 1. Driver Airbag (DAB) | 7. Passenger Airbag (PAB) |
| 2. Steering Wheel | 8. Front Impact Sensor (FIS) |
| 3. Clock Spring | 9. Curtain Airbag (CAB) |
| 4. Seat Belt Pretensioner (BPT) | 10. Supplemental Restraint System Control Module (SRSCM) |
| 5.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

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Restraint

Components Location

Driver Airbag (DAB) / Passenger Airbag (PAB)

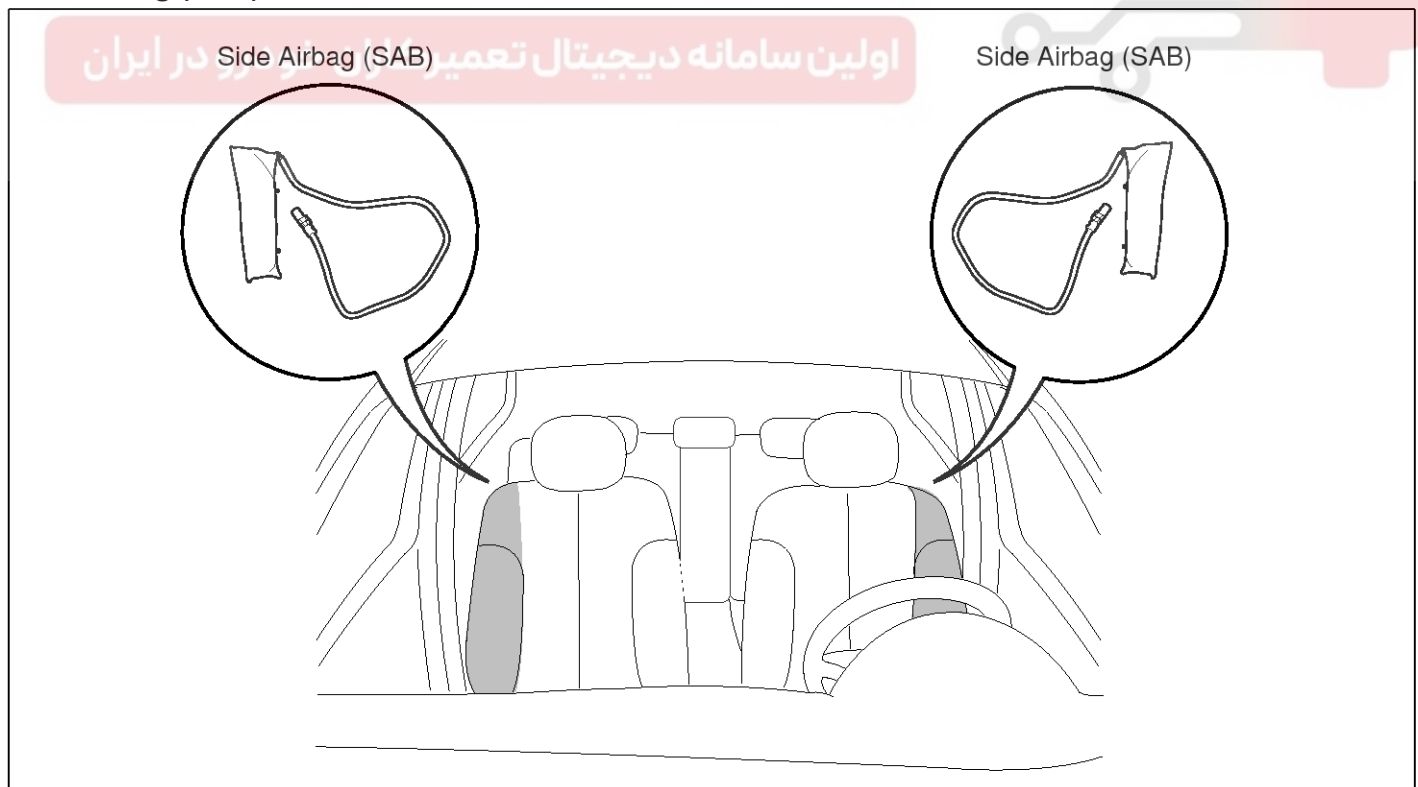


شرکت دیجیتال خودرو (مسئولیت محدود)

اولین سامانه دیجیتال تعمیر Side Airbag (SAB) در ایران

SENRT7110L

Side Airbag (SAB)

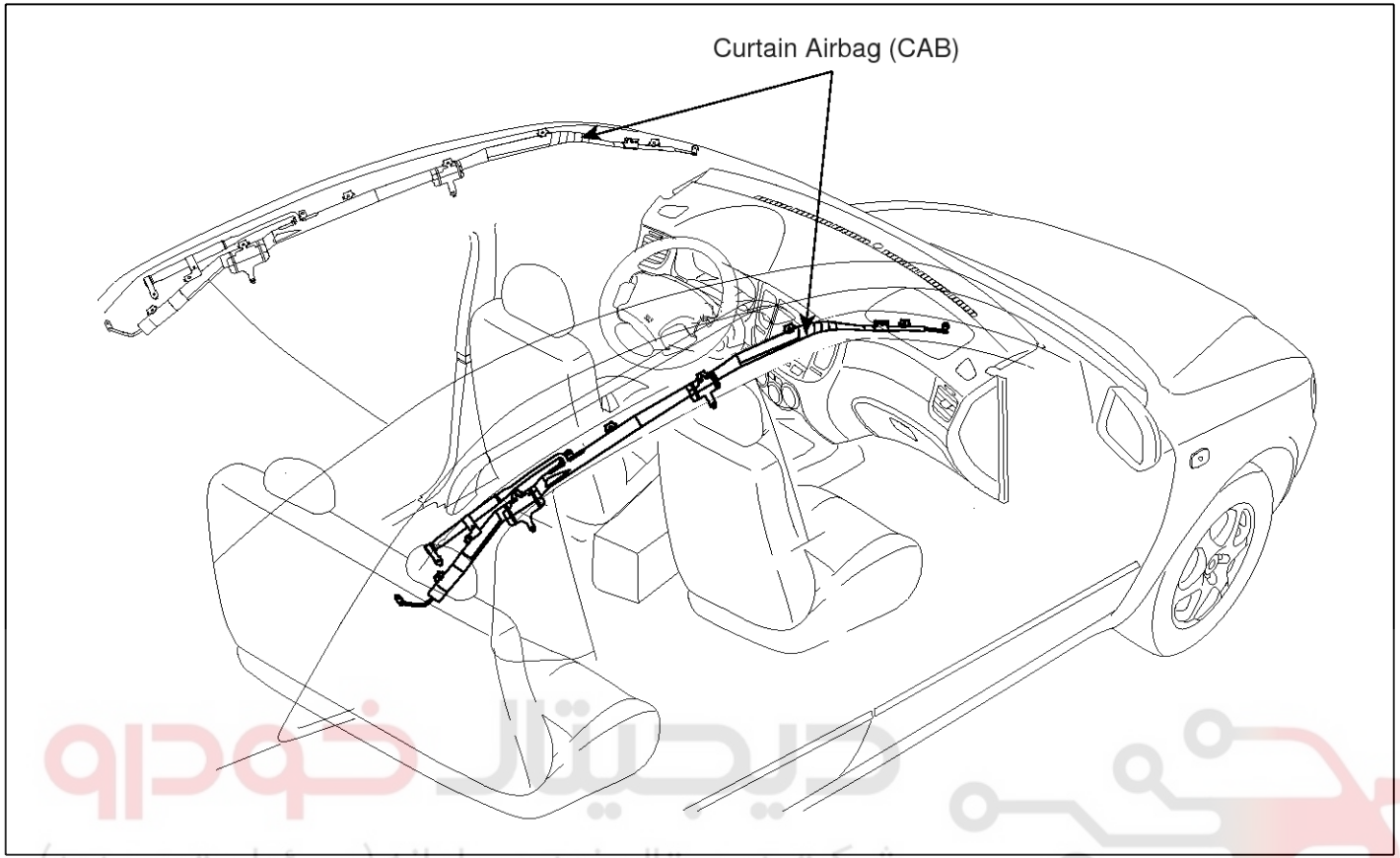


SENRT7120L

General Information

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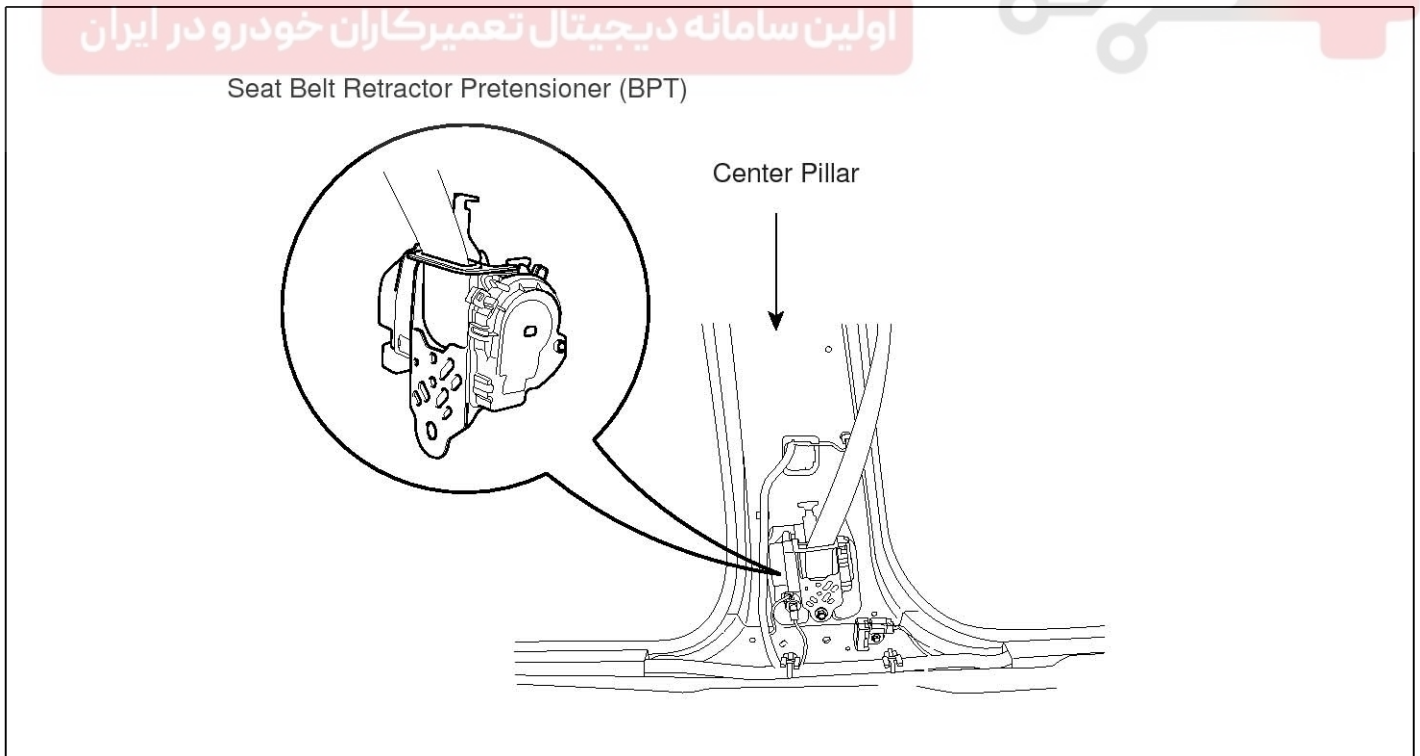
Curtain Airbag (CAB)



دریجیتال خودرو
شرکت دیجیتال خودرو سامانه (مستولیت محدود)

SENRT7130L

Seat Belt Retractor Pretensioner (BPT)



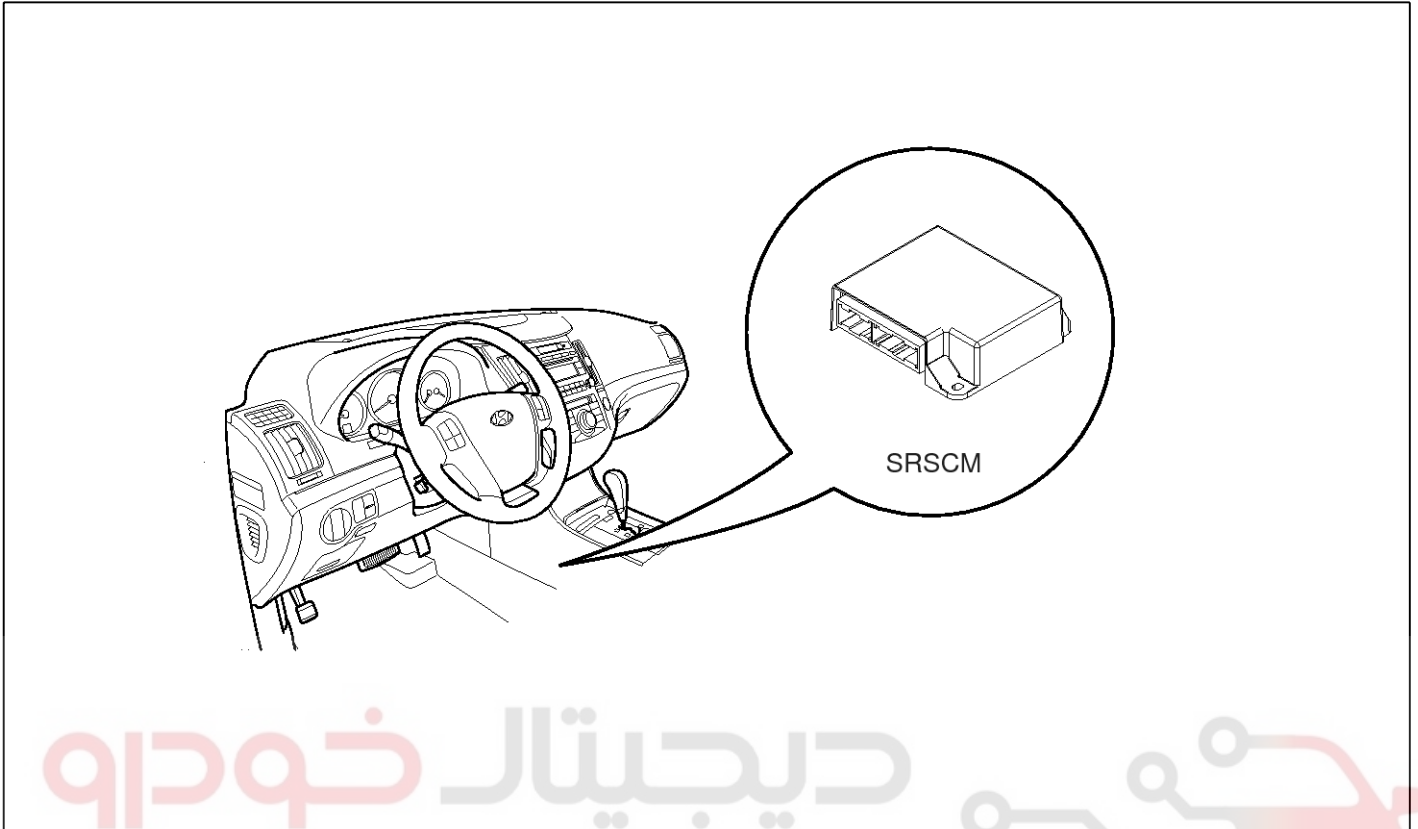
اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

SENRT7140L

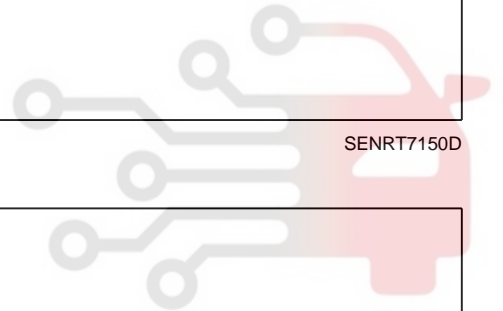
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Restraint

Supplemental Restraint System Control Module (SRSCM)



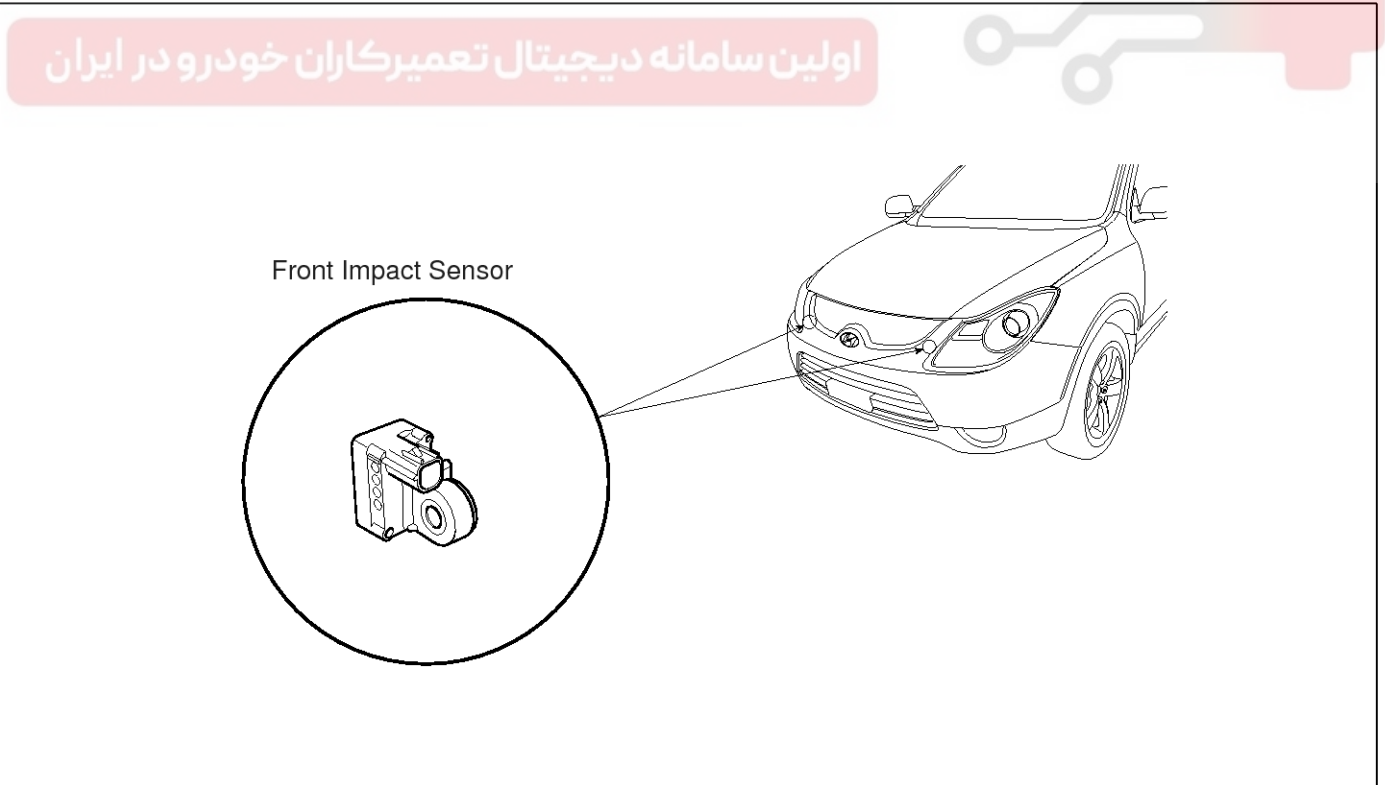
دیجیتال خودرو



شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

SENRT7150D

Front Impact Sensor (FIS)



SENRT7160L

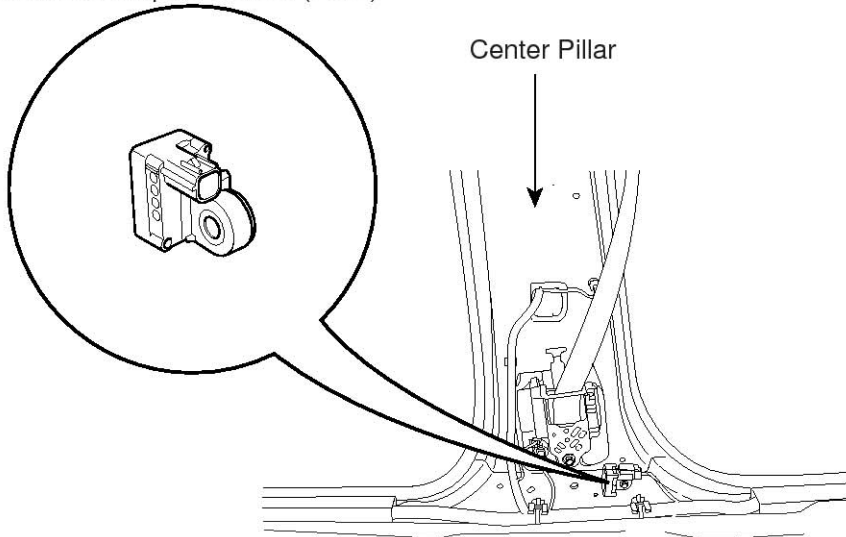
General Information

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Side Impact Sensor (SIS)

[FRONT]

Front Side Impact Sensor (FSIS)

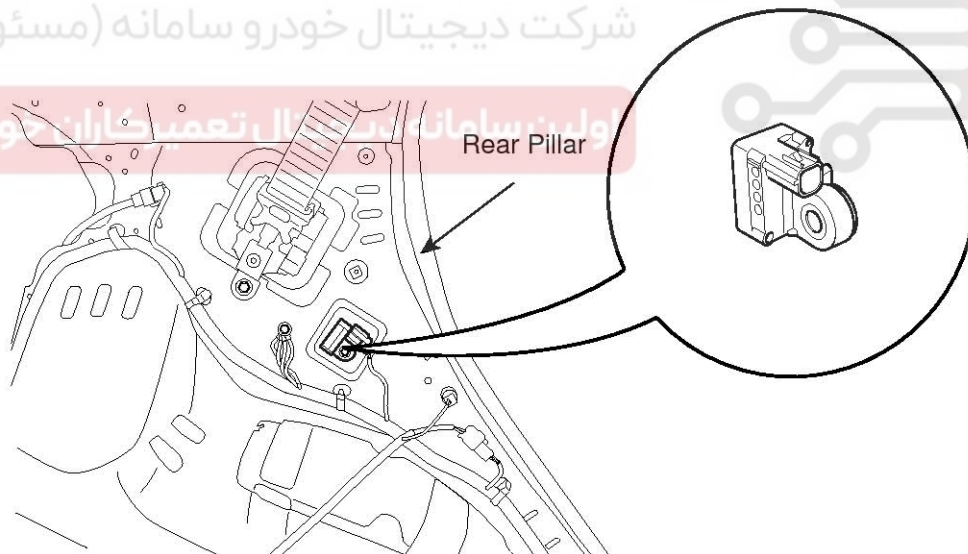


[REAR]

Rear Side Impact Sensor (RSIS)

شرکت دیجیتال خودرو (مسئولیت محدود)

اولین سامانه ایمنی الکترونیک برای خودرو در ایران



SENRT7170L

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Restraint

SRSCM

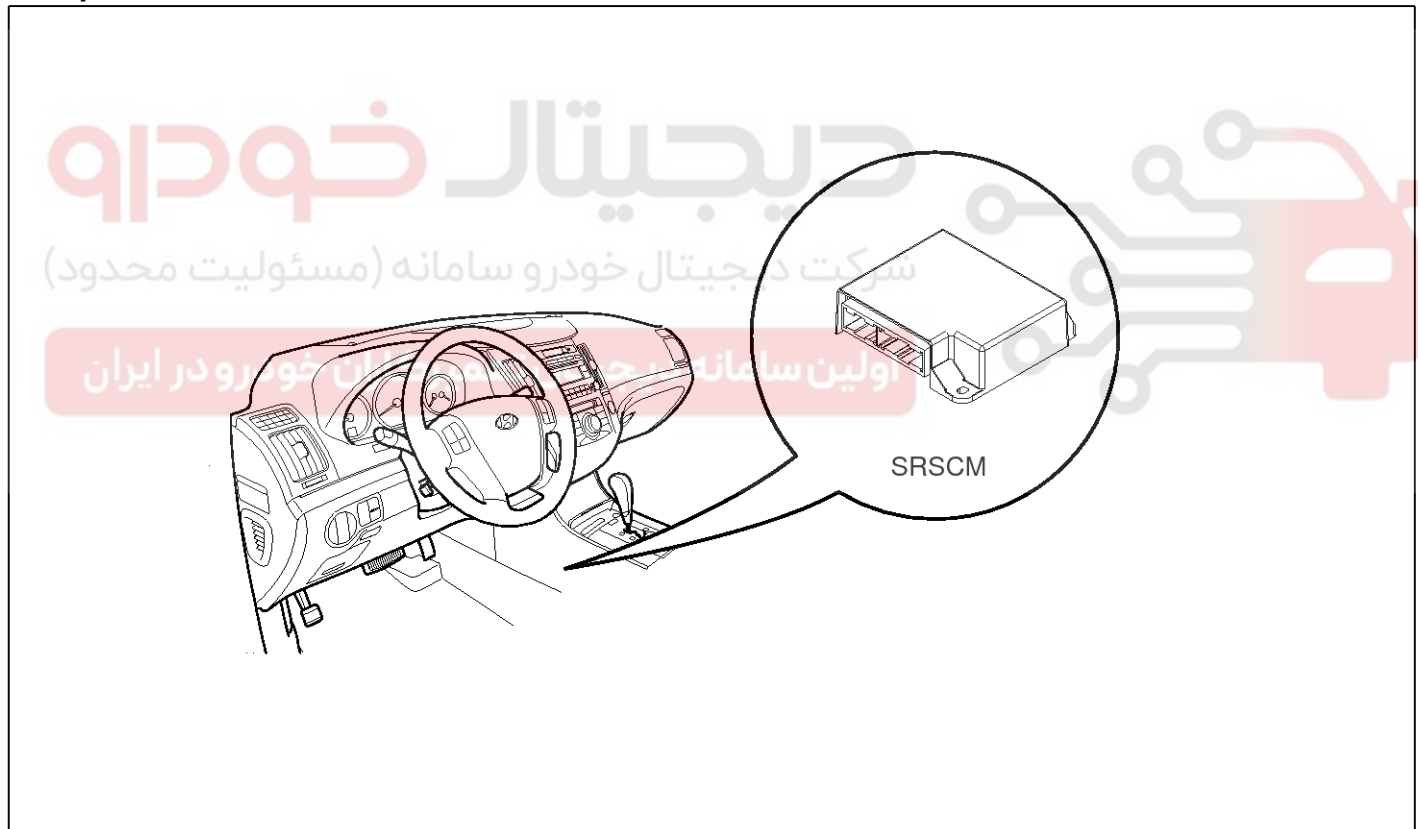
SRS Control Module (SRSCM)

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.

Components



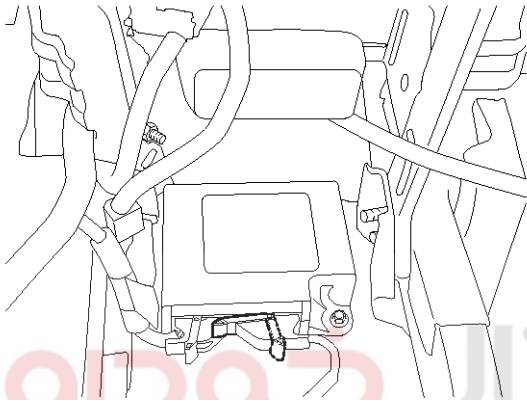
SENRT7150D

SRSCM

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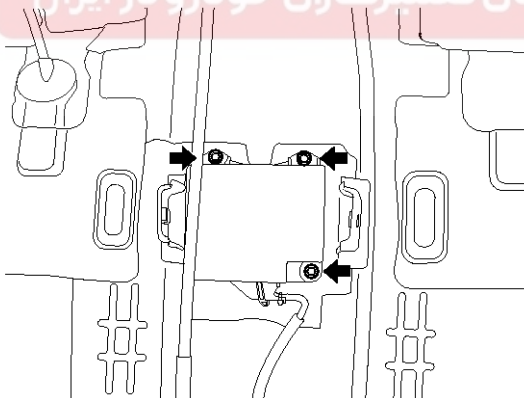
Removal

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 and heater ducts. (Refer to BD group)
5. Disconnect the SRSCM harness connector from the SRSCM.



SENRT7151D

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



SENRT7152D

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 nuts.

Tightening torque

: 0.8 ~ 1.0 kgf.m (7.9 ~ 9.8 Nm, 5.8 ~ 7.2 lb.ft)

NOTICE

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

4. Connect the SRSCM harness connector.
5. Install the heater ducts and floor console. (Refer to BD group)
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:
 - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

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Restraint

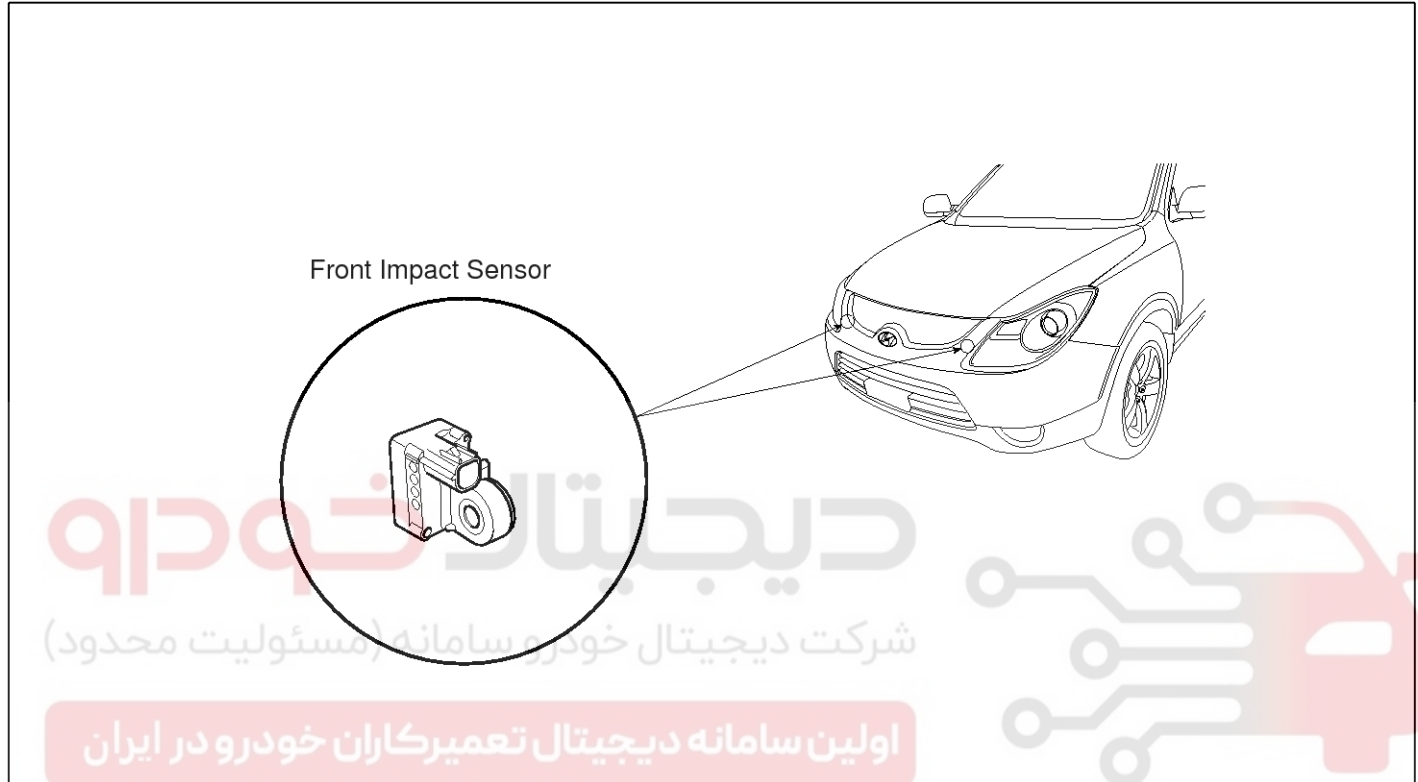
Front Impact Sensor (FIS)

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.

Components



SENRT7160L

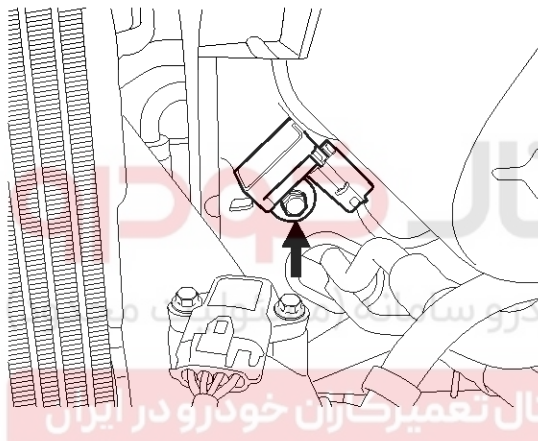
SRSCM

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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. Disconnect the Front Impact Sensor connector.
 3. Remove the Front Impact Sensor mounting bolt.



SENRT7161D

4. 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 bolt.

Tightening torque

: 0.7 ~ 0.9 kgf.m (6.8 ~ 9.2 Nm, 5.0 ~ 6.8 lb.ft)

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

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Restraint

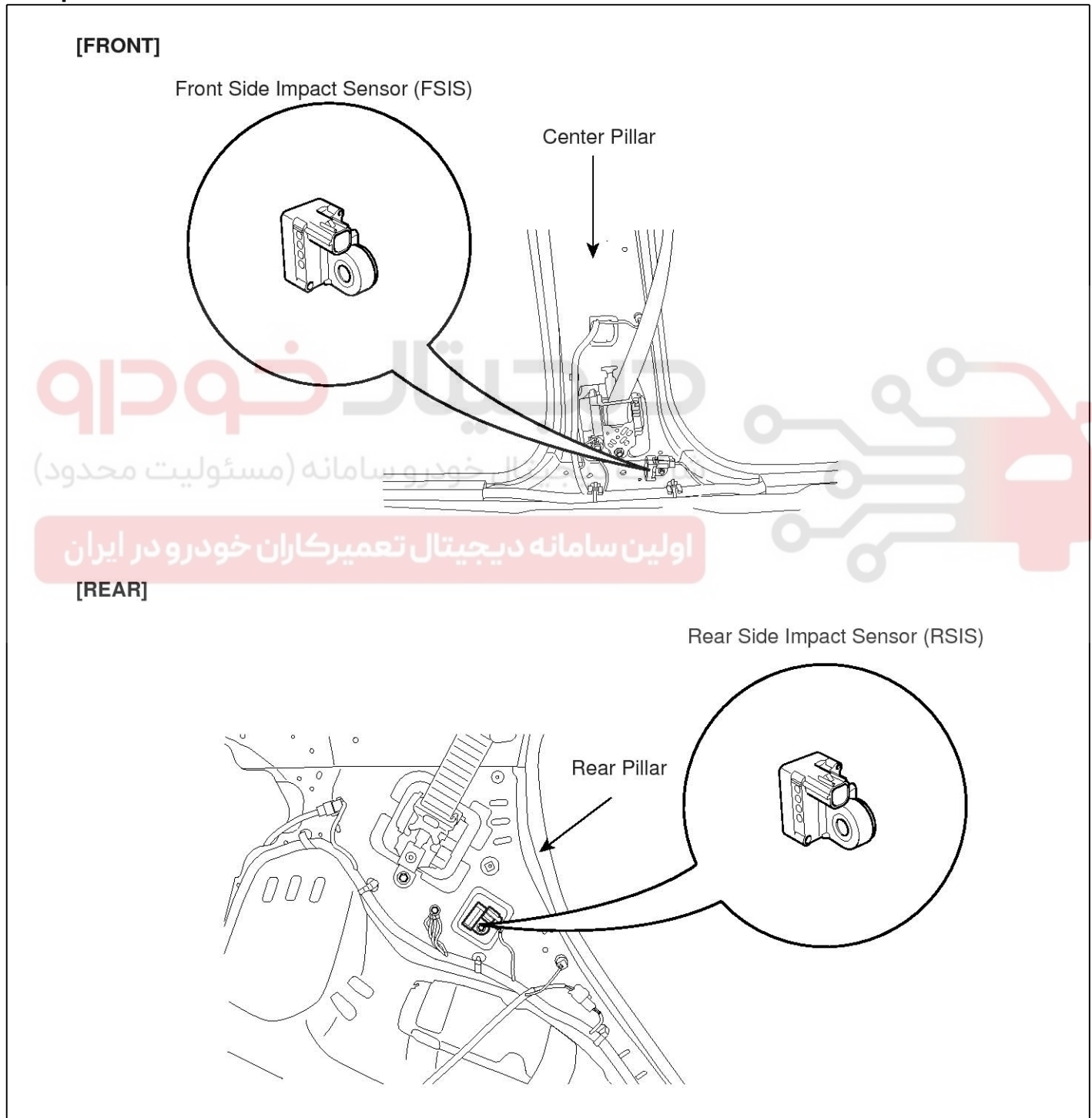
Side Impact Sensor (SIS)

Description

The Side Impact Sensor (SIS) system consists of two front SIS which are installed in the center pillar (LH and RH) and two rear SIS which are installed in the rear pillar (LH and RH).

They are remote sensors that detect acceleration due to collision at their mounting locations. The primary purpose of the Side Impact Sensor (SIS) is to provide an indication of a collision. The Side Impact Sensor (SIS) sends acceleration data to the SRSCM.

Components



SRSCM

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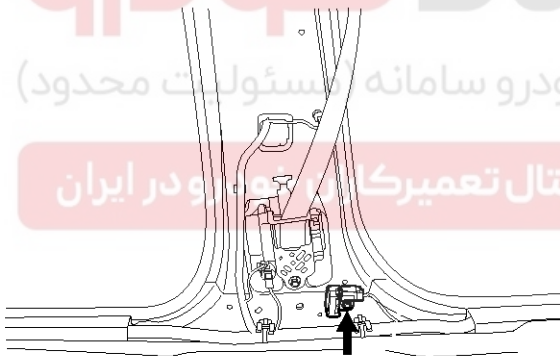
SENRT7170L

Removal

Front Side Impact Sensor

⚠ CAUTION

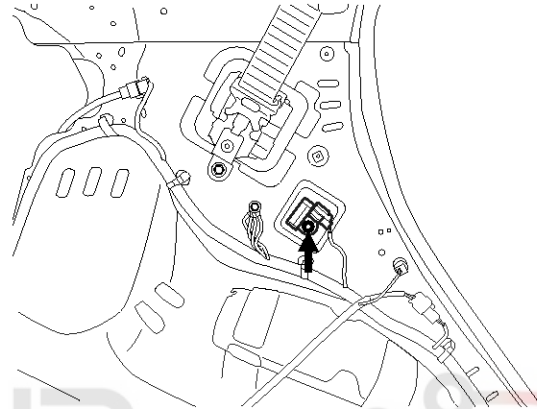
- Removal of the airbag must be performed according to the precautions/procedures described previously.
 - Before disconnecting the side impact sensor connector(s), disconnect the side airbag connector(s).
 - Do not turn the ignition switch ON and do not connect the battery cable while replacing the side impact sensor.
1. Disconnect the battery negative cable, and wait for at least three minutes before beginning work.
 2. Remove the lower anchor bolt.
 3. Remove the door scuff trim. (Refer to BD group)
 4. Remove the center pillar trim. (Refer to BD group)
 5. Disconnect the Side Impact Sensor connector and remove the Side Impact Sensor mounting bolt.



SENRT7171D

Rear 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 BD group)
3. Remove the Luggage side trim. (Refer to BD group)
4. Disconnect the side impact sensor connector.
5. Loosen the side impact sensor mounting bolt and remove the side impact sensor.



SENRT7172D

RT-22

Restraint

Installation

Front 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

: 0.7 ~ 0.9 kgf.m (6.9 ~ 8.8 Nm, 5.0 ~ 6.5 lb.ft)

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

Rear 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

: 1.0 ~ 1.4 kgf.m (9.8 ~ 13.5 Nm, 7.2 ~ 10.1 lb.ft)

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

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

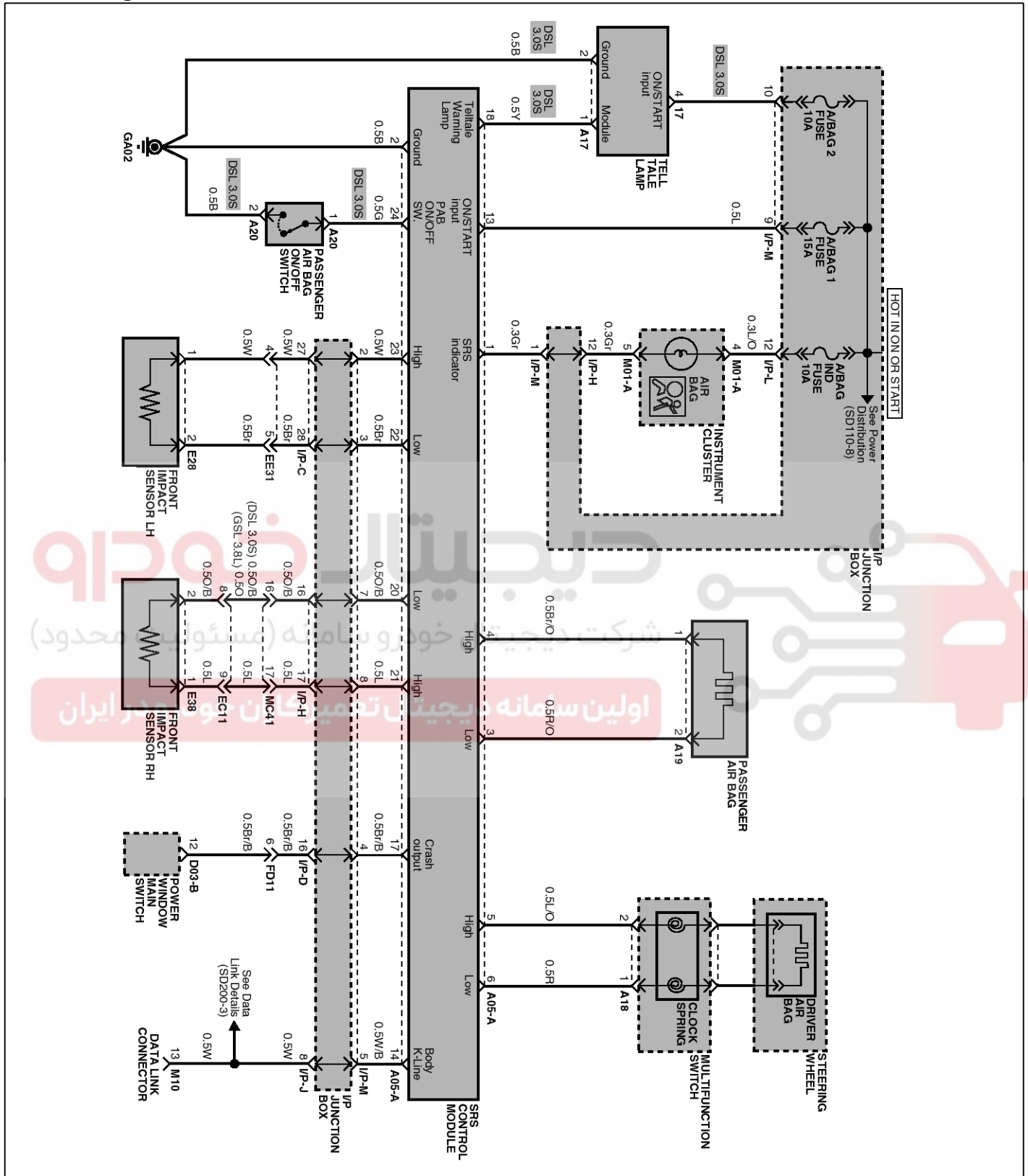
اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



SRSCM

RT-23

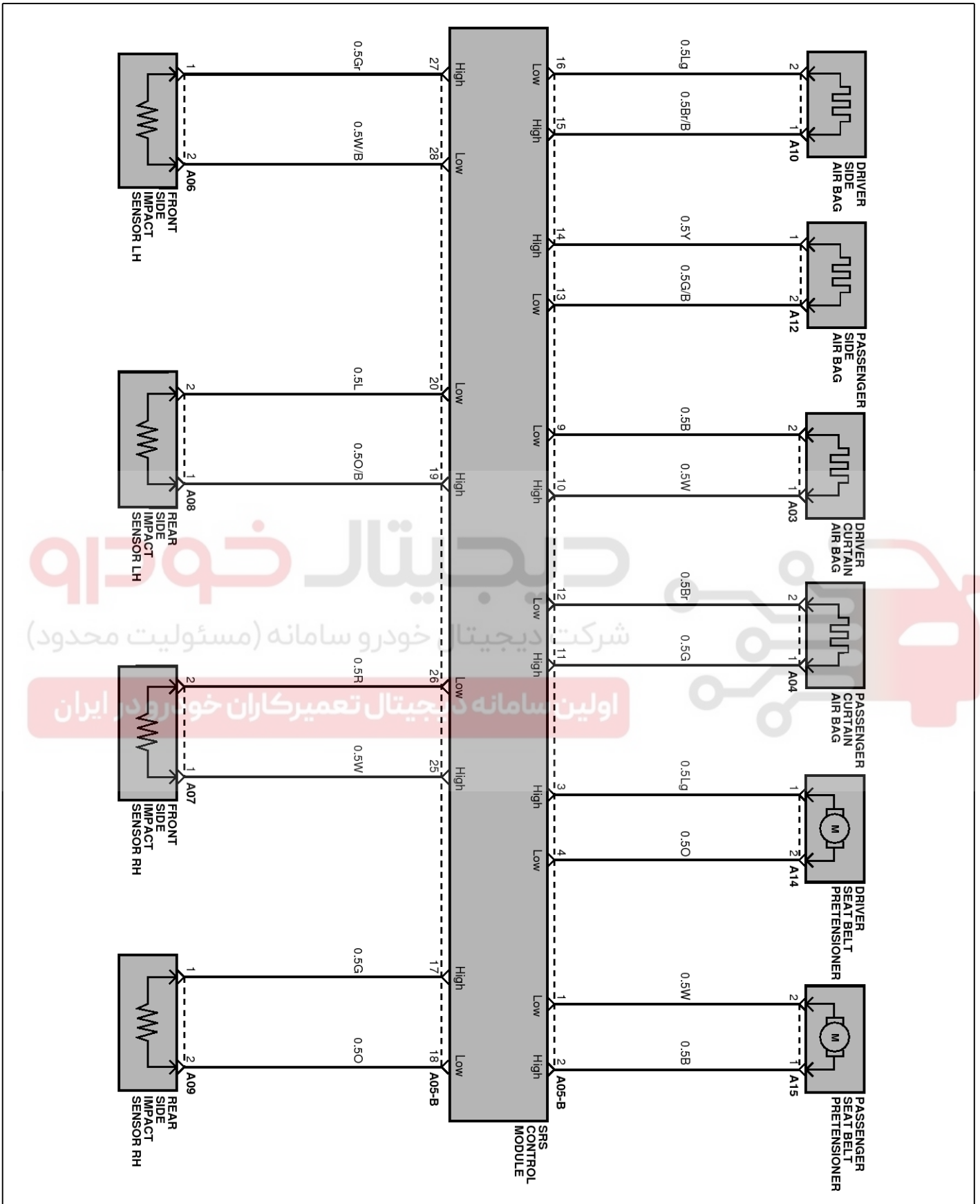
Circuit Diagram



SENRT9003L

RT-24

Restraint

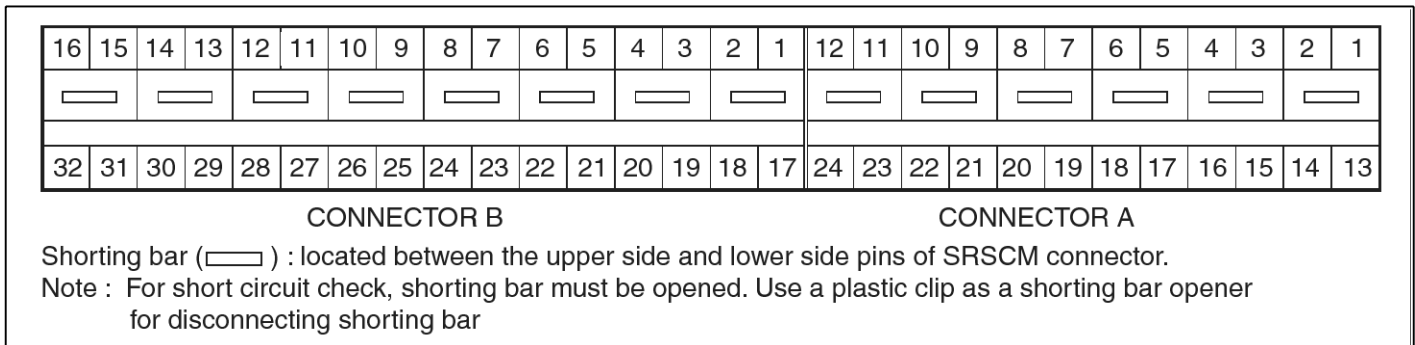


SENRT7221L

SRSCM

RT-25

SRSCM Connector Terminal Harness Connector



SENRT9004L

Pin	Function (Connector A)	Pin	Function (Connector B)
1	Airbag Warning Lamp	1	Seat Belt Pretensioner [Front-Passenger] Low
2	Ground	2	Seat Belt Pretensioner [Front-Passenger] High
3	Passenger Airbag Low	3	Seat Belt Pretensioner [Front-Driver] High
4	Passenger Airbag High	4	Seat Belt Pretensioner [Front-Driver] Low
5	Driver Airbag High	5~8	-
6	Driver Airbag Low	9	Curtain Airbag [Driver] Low
7	-	10	Curtain Airbag [Driver] High
8	-	11	Curtain Airbag [Passenger] High
9	-	12	Curtain Airbag [Passenger] Low
10	-	13	Side Airbag [Front-Passenger] Low
11	-	14	Side Airbag [Front-Passenger] High
12	-	15	Side Airbag [Front-Driver] High
13	Ignition	16	Side Airbag [Front-Driver] Low
14	K-Line Diagnostic	17	Side Impact Sensor [Rear-Passenger] High
15	-	18	Side Impact Sensor [Rear-Passenger] Low
16	-	19	Side Impact Sensor [Rear-Driver] High
17	Crash Output	20	Side Impact Sensor [Rear-Driver] Low
18	Telltale Lamp	21~24	-
19	-	25	Side Impact Sensor [Front-Passenger] High
20	Front Impact Sensor [Passenger] Low	26	Side Impact Sensor [Front-Passenger] Low
21	Front Impact Sensor [Passenger] High	27	Side Impact Sensor [Front-Driver] High
22	Front Impact Sensor [Driver] Low	28	Side Impact Sensor [Front-Driver] Low
23	Front Impact Sensor [Driver] High	29~32	-
24	PAB ON/OFF Switch		

RT-26

Restraint

Airbag Module

Driver Airbag (DAB) Module and Clock Spring

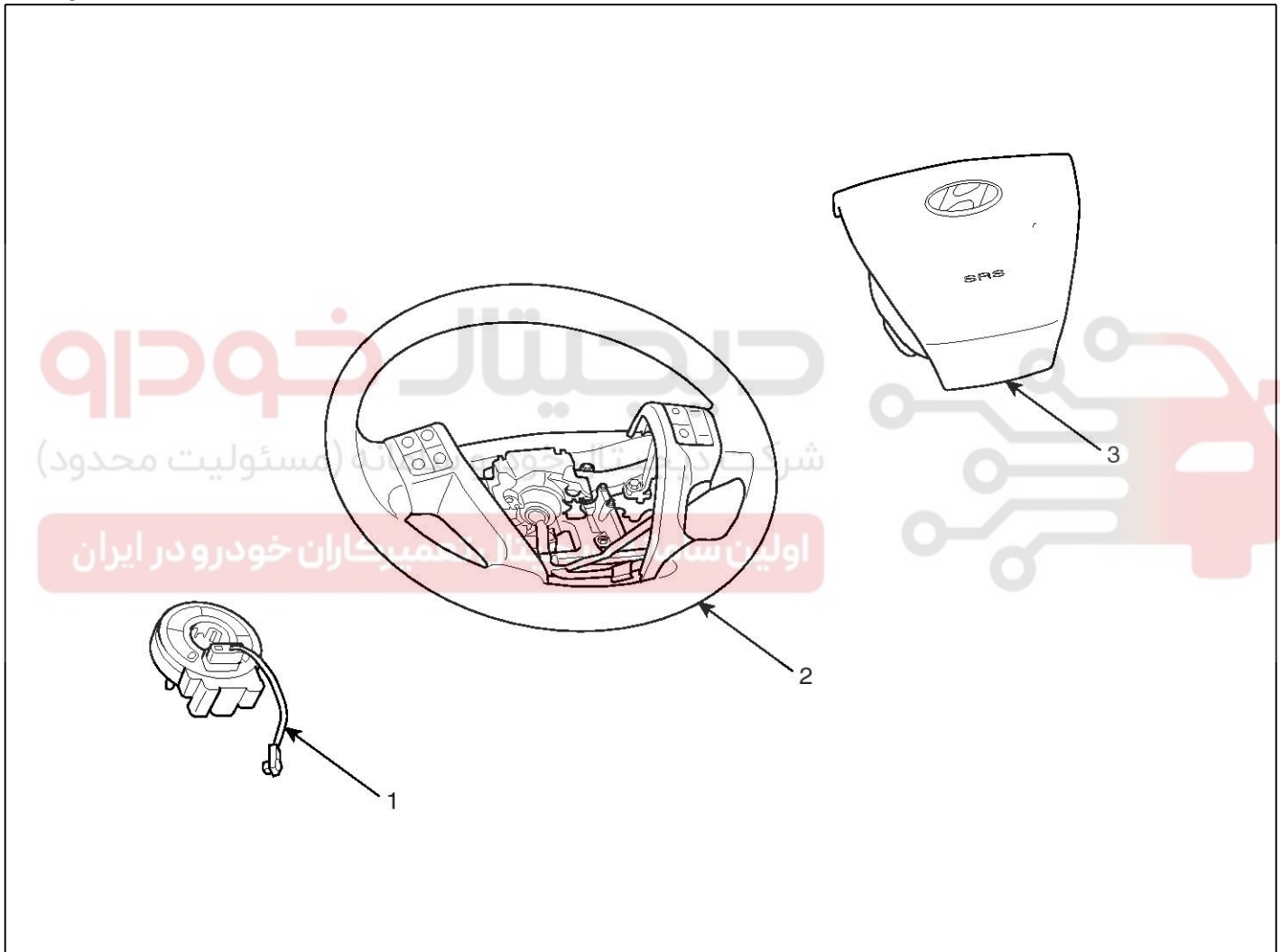
Description

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

Components



SENRT9005L

1. Clock Spring
2. Steering Wheel

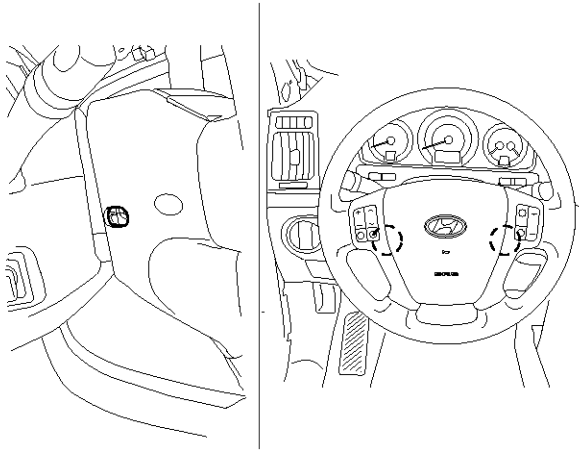
3. Driver Airbag (DAB)

Airbag Module

RT-27

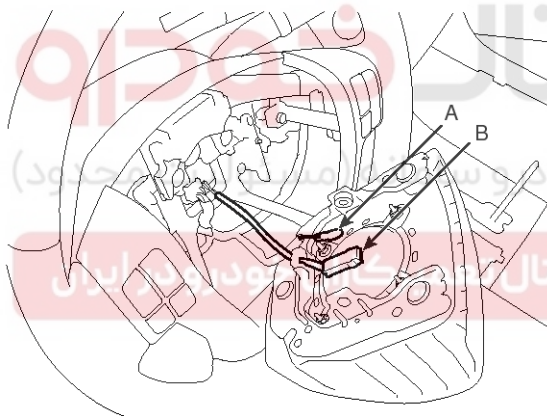
Removal

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



SENRT7181D

3. Disconnect the horn connector(A).



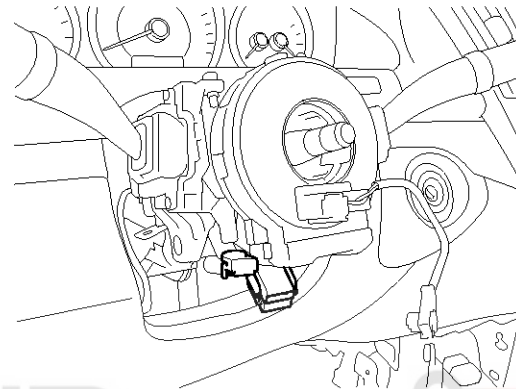
SENRT7182L

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

⚠CAUTION

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

5. Remove the steering wheel and steering wheel column cover. (Refer to ST group)
6. Disconnect the clock spring and horn connector, then remove the clock spring.



SENRT7183D

RT-28

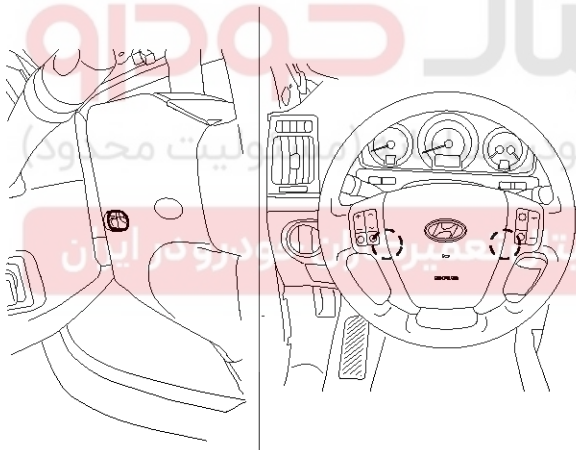
Restraint

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 ST group)
6. Connect the Driver Airbag (DAB) module connector and horn connector, then install the Driver Airbag (DAB) module on the steering wheel.
7. Secure the Driver Airbag (DAB) with the new mounting bolts.

Tightening torque

: 0.8 ~ 1.1 kgf.m (7.9 ~ 10.8 Nm, 5.8 ~ 8.0 lb.ft)



SENRT7181D

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

Inspection

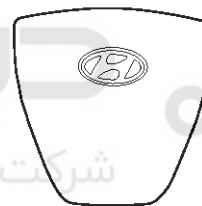
Driver Airbag (DAB)

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

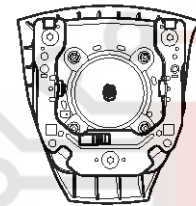
⚠ CAUTION

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.



(Front view)



(Rear view)

SENRT7184L

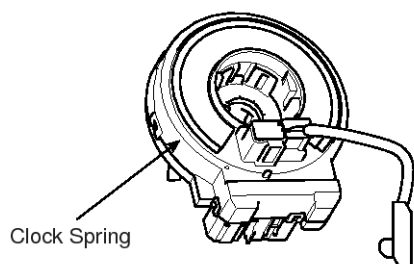
5. Install the airbag module to the steering wheel to check for fit or alignment with the wheel.

Airbag Module

RT-29

Clocksring

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.



SENRT7185L

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



RT-30

Restraint

Passenger Airbag (PAB) Module

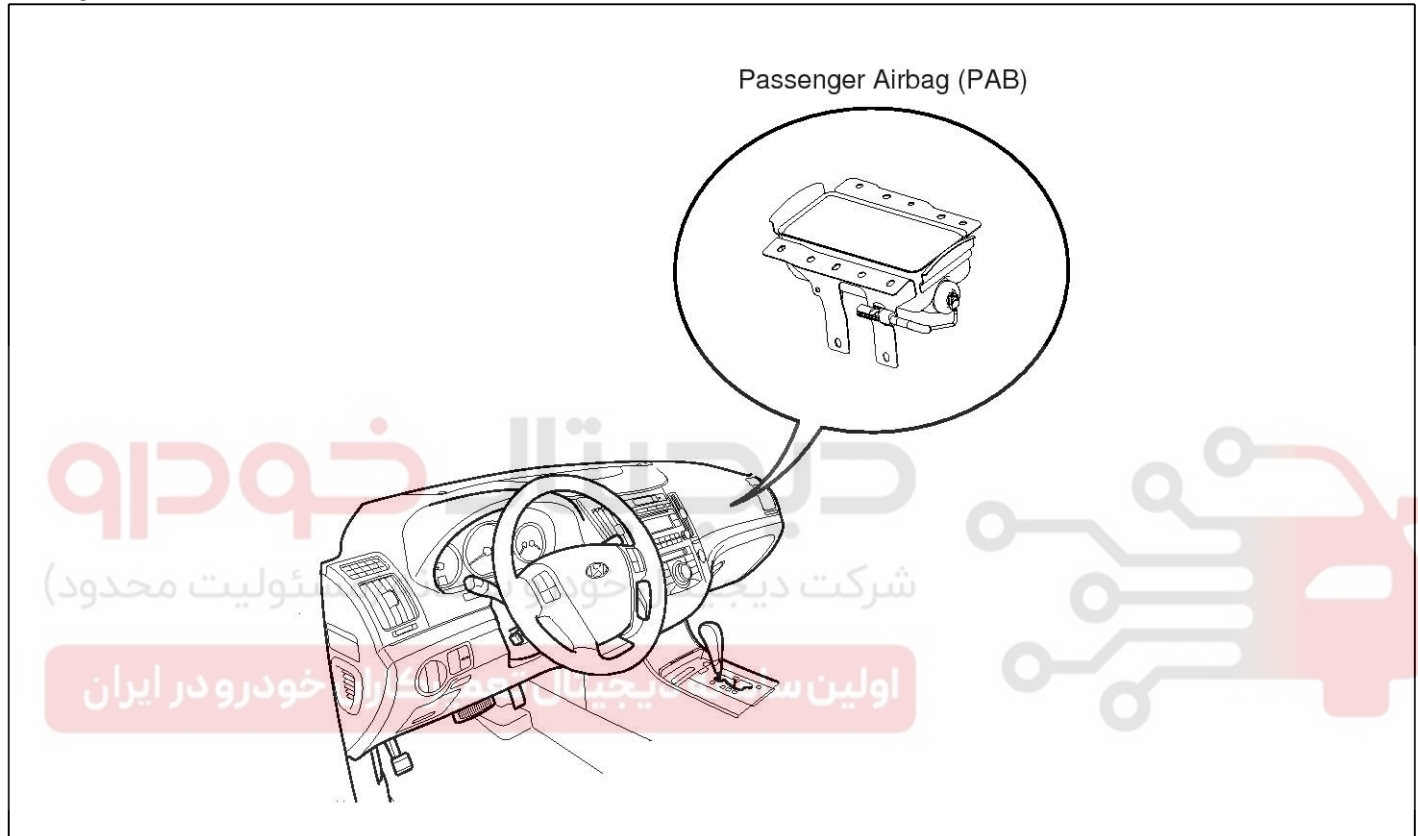
Description

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.

Components



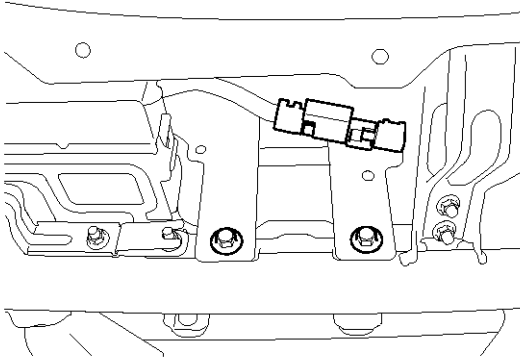
SENRT7190L

Airbag Module

RT-31

Removal

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



SENRT7191D

4. Remove the PAB mounting bolts(2EA).
5. Remove the crash pad. (Refer to BD group)

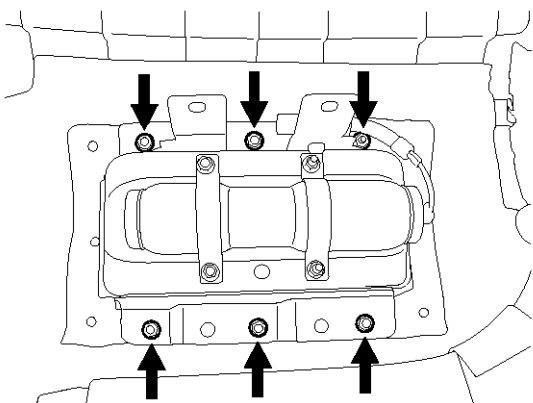
NOTICE

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

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

CAUTION

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



SENRT7192D

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

: 0.6 ~ 0.7 kgf.m (5.9 ~ 6.9 N.m, 4.3 ~ 5.0 lb.ft)

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

Tightening torque

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

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

RT-32

Restraint

Side Airbag (SAB) Module

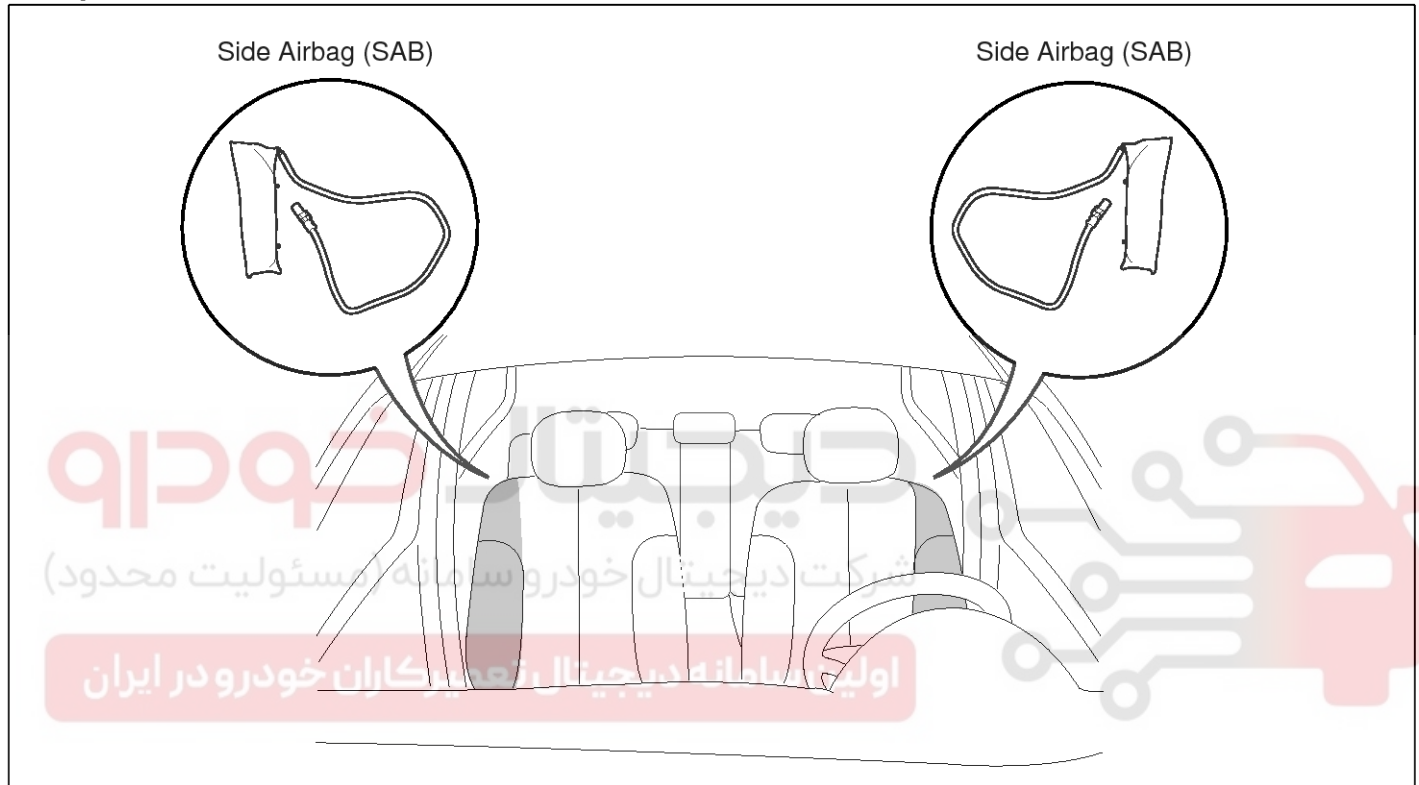
Description

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.

Components

⚠ 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.



SENRT7120L

Airbag Module

RT-33

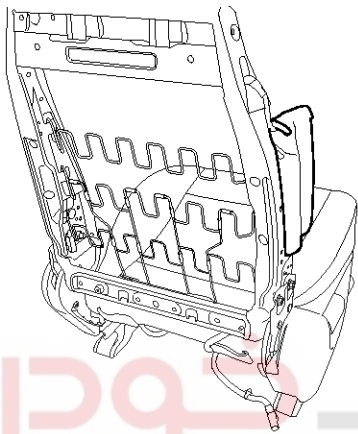
Removal

1. Disconnect the battery negative cable and wait for at least 3 minutes before beginning work.
2. Remove the front seat assembly.(Refer to BD group)
3. Remove the seatback cover.(Refer to BD group)

NOTICE

When the side airbag deployed after a collision, replace the seatback as an assembly.

4. Loosen the SAB mounting nuts and remove the SAB module.



SENRT7121D

Installation

CAUTION

Ensure that the harness is installed and routed properly to prevent damage to the wiring.

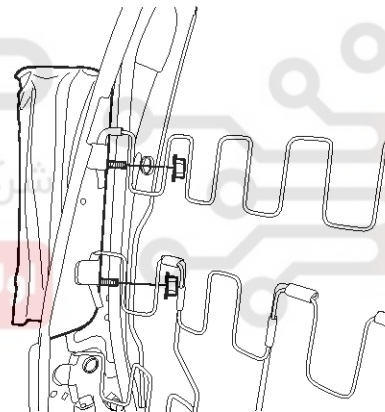
NOTICE

- 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 seatback cover is installed properly. Improper installation may prevent the proper deployment.

1. Remove 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 seatback frame and tighten the side airbag mounting nuts.

Tightening torque

: 0.7 ~ 0.9 kgf.m (7.0 ~ 9.0 Nm, 5.2 ~ 6.6 lb.ft)



SENRT7122D

4. Install the new seatback cover.(Refer to BD group)
5. Install the seat assembly, 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:
 - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.

RT-34

Restraint

Curtain Airbag (CAB) Module

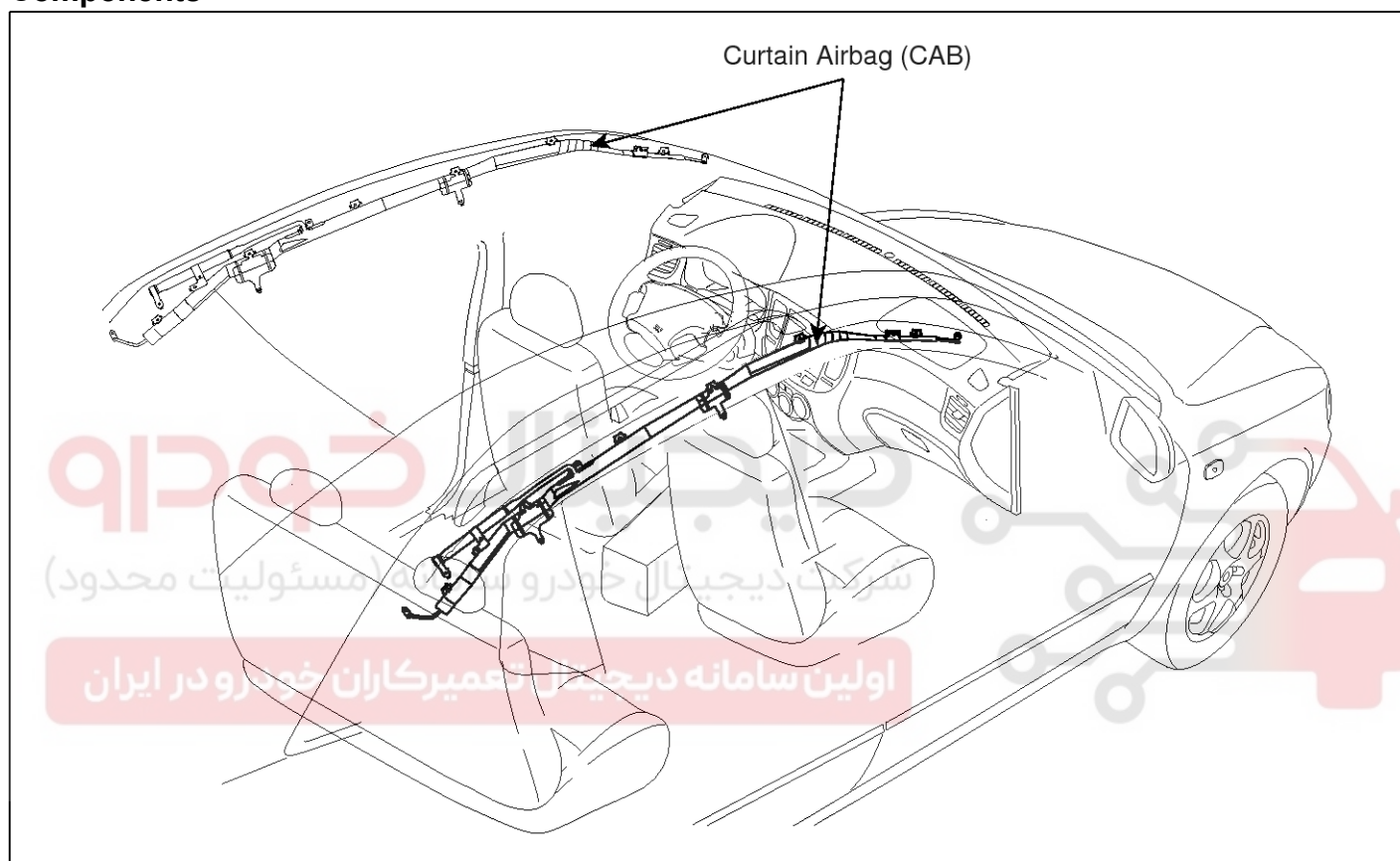
Description

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.

Components

⚠ 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.



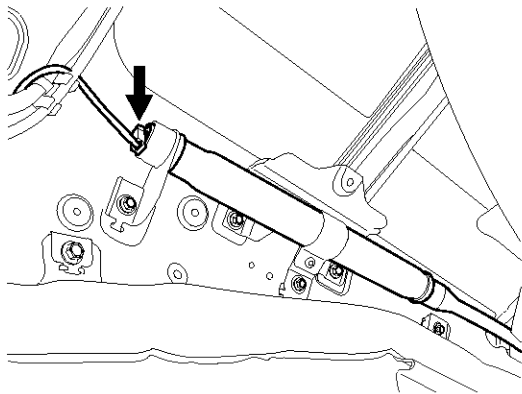
SENRT7130L

Airbag Module

RT-35

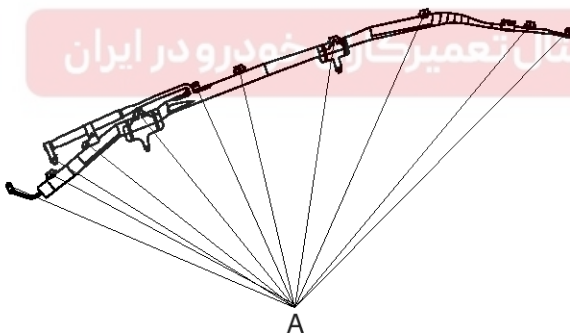
Removal

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



SENRT7131D

4. After loosening the mounting bolts and nuts remove the curtain airbag.



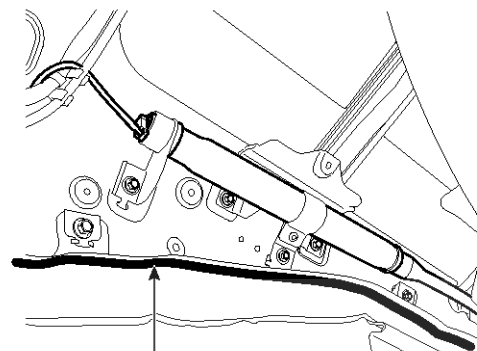
SENRT7133D

Installation

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

Tightening torque

: 1.1 ~ 1.5 kgf.m(10.8 ~ 14.7 Nm, 8.0 ~ 10.8 lb.ft)



LH : Blue stripe
RH : Red stripe

SENRT7132L

CAUTION

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

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

RT-36

Restraint

Airbag Disposal

Special Tool Required

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, 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 (10 meters) 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.



SBLRT7600N

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

Disposal Of Damaged Airbag

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

Seat Belt Pretensioner

RT-37

Seat Belt Pretensioner

Seat Belt Pretensioner (BPT)

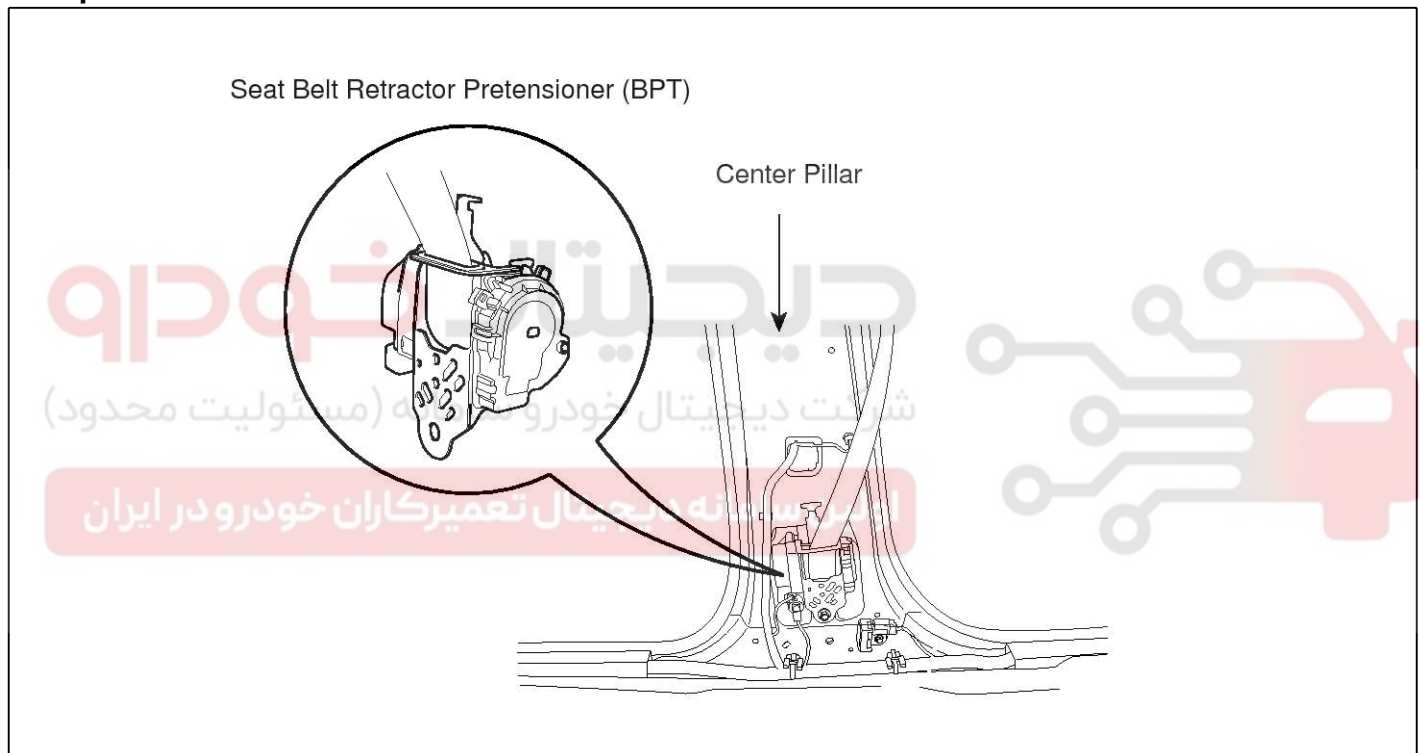
Description

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.

Components



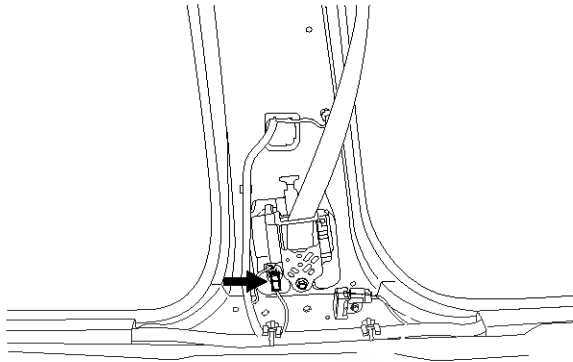
SENRT7140L

RT-38

Restraint

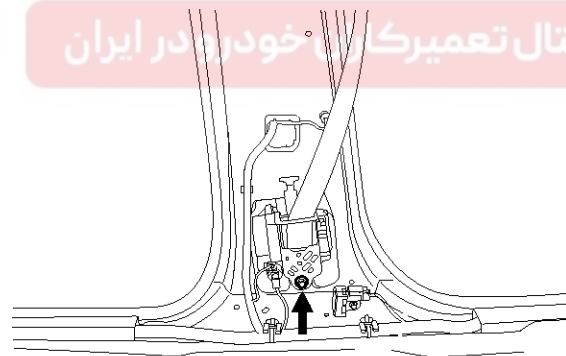
Removal

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 door scuff trim. (Refer to BD group)
4. Remove the center pillar trim. (Refer to BD group)
5. Remove the upper anchor bolt.
6. Disconnect the Seat Belt Pretensioner connector.



SENRT7141D

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



SENRT7142D

Installation

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

Tightening torque

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

5. Connect the Seat Belt Pretensioner (BPT) connector.
6. Install the center pillar trim.
7. Install the door scuff trim.
8. Install the lower anchor bolts.

Tightening torque

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

9. Reconnect the battery negative cable.
10. After installing the Seat Belt Pretensioner (BPT), confirm proper system operation:
 - Turn the ignition switch ON; the SRS indicator light should be turned on for about six seconds and then go off.