# SECTION SRS SUPPLEMENTAL RESTRAINT SYSTEM (SRS) С

## **CONTENTS**

Presentions for Cumplemental Destroint Custom
(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-
SIONER"
Precautions for SRS "AIR BAG" and "SEAT BELT
PRE-TENSIONER" Service 3
Occupant Classification System Precaution
PREPARATION 4
Special Service Tools 4
SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 5
SRS Configuration
Driver Air Bag Module6
Front Passenger Air Bag Module
Front Side Air Bag
Side Curtain Air Bag
Front Seat Belt Pre-tensioner with Load Limiter 7
Occupant Classification System (OCS) 7
Direct-connect SRS Component Connectors 7
TROUBLE DIAGNOSIS
Trouble Diagnosis Introduction
WORK FLOW
SRS Components Parts Location
Wiring Diagram — SRS —
MODELS WITH POWER SEATS
MODELS W/O POWER SEATS 19
CONSULT-II Function (AIR BAG) 20
CONSULT-II Function
HOW TO CHANGE SELF-DIAGNOSIS MODE
WITH CONSULT-II
HOW TO ERASE SELF-DIAGNOSIS RESULTS 21
Self-Diagnosis Function (Without CONSULT-II) 21
HOW TO CHANGE SELF-DIAGNOSIS MODE 22
HOW TO ERASE SELF-DIAGNOSIS RESULTS 22
SRS Operation Check 22
DIAGNOSTIC PROCEDURE 1 22
Trouble Diagnosis With CONSULT-II 24

DIAGNOSTIC PROCEDURE 2	F
DIAGNOSTIC PROCEDURE 3	
DIAGNOSTIC PROCEDURE 4	
DIAGNOSTIC PROCEDURE 5	G
Trouble Diagnosis Without CONSULT-II	
DIAGNOSTIC PROCEDURE 6	
WARNING LAMP FLASH CODE CHART	СD
Trouble Diagnosis: "AIR BAG" Warning Lamp Does	
Not Turn Off	
DIAGNOSTIC PROCEDURE 7	
Trouble Diagnosis: "AIR BAG" Warning Lamp Does	
Not Turn On37	
DIAGNOSTIC PROCEDURE 8	
DRIVER AIR BAG MODULE	J
Removal and Installation	
REMOVAL	
INSTALLATION	K
SPIRAL CABLE 40	1.
Removal and Installation40	
REMOVAL40	
INSTALLATION	L
FRONT PASSENGER AIR BAG MODULE	
Removal and Installation42	
REMOVAL	M
INSTALLATION	
WIRING HARNESS MODIFICATION	
SIDE CURTAIN AIR BAG MODULE	
Removal and Installation	
REMOVAL	
INSTALLATION	
CRASH ZONE SENSOR 48	
Removal and Installation	
REMOVAL	
INSTALLATION	
SIDE AIR BAG (SATELLITE) SENSOR	
Kemoval and Installation	
INSTALLATION	
PRUNI SEAL BELL PRE-LENSIONER	
Kemoval and Installation	

А

В

D

Е

DIAGNOSIS SENSOR UNIT	51
Removal and Installation	51
REMOVAL	51
INSTALLATION	51
ECU DISCRIMINATED NO.	51
OCCUPANT CLASSIFICATION SYSTEM CON-	
TROL UNIT	52
Removal and Installation	52
COLLISION DIAGNOSIS	53
For Frontal Collision	53

SRS INSPECTION (FOR FRONTAL COLLI-	
SION)	.53
For Side and Rollover Collision	.54
WHEN SRS IS ACTIVATED IN THE SIDE OR	
ROLLOVER COLLISION	.54
WHEN SRS IS NOT ACTIVATED IN THE SIDE	
OR ROLLOVER COLLISION	.54
SRSINSPECTION (FOR SIDE AND ROLLOVER	
COLLISION)	.55

## PRECAUTIONS

## PRECAUTIONS

PFP:00001

А

D

Е

F

# Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

#### WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

## Precautions for SRS "AIR BAG" and "SEAT BELT PRE-TENSIONER" Service

- Do not use electrical test equipment to check SRS circuits unless instructed to in this Service Manual.
- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes. For approximately 3 minutes after the cables are removed, it is still possible for the air bag and seat belt pre-tensioner to deploy. Therefore, do not work on any SRS connectors or wires until at least 3 minutes have passed.
- The air bag diagnosis sensor unit must always be installed with the arrow mark "
   "
   " pointing toward the
   front of the vehicle for proper operation. Also check the air bag diagnosis sensor unit for cracks, deformi ties or rust before installation and replace as required.
- The spiral cable must be aligned with the neutral position since its rotations are limited. Do not attempt to turn steering wheel or column after removal of steering gear.
- Handle air bag module carefully. Always place driver and front passenger air bag modules with the pad side facing upward and seat mounted front side air bag module standing with the stud bolt side facing down.
- Conduct self-diagnosis to check entire SRS for proper function after replacing any components.
- After air bag inflates, the front instrument panel assembly should be replaced if damaged.

## **Occupant Classification System Precaution**

Replace control unit and passenger front seat cushion as an assembly.

EHS001BF

0

SRS

J

Κ

L

## PREPARATION

## PREPARATION

**Special Service Tools** 

PFP:00002

EHS0017P

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name		Description
 (J-42057-UPD) Air bag key set Part of kit (J-42057)	gg gg LRS210	Removing and installing air bag lock



The air bag deploys if the air bag diagnosis sensor unit is activated while the ignition switch is in the ON or START position. The collision modes for which supplemental restraint systems are activated are different among the SRS systems. For example, the driver air bag module, front passenger air bag module and front seat belt pre-tensioners are activated in a frontal collision but not in a side collision. SRS configurations for some collision modes are as follows:

SRS configuration	Frontal collision	Left side collision	Right side colli- sion	Rollover	L
Driver air bag module	х	—	_		•
Front passenger air bag module	x	—	—		M
Front LH seat belt pre-tensioner	x	_	_	х	
Front RH seat belt pre-tensioner	x	—	—	х	
Front LH side air bag module (if equipped)		x			
Front RH side air bag module (if equipped)		_	x		
LH side curtain air bag module (if equipped)		x		х	
RH side curtain air bag module (if equipped)			х	x	

Κ

#### **Driver Air Bag Module**

The driver air bag module is dual stage and located in the steering wheel assembly. It operates with the SRS system in a frontal collision exceeding a specified level.



## Front Passenger Air Bag Module

The front passenger air bag module is located behind the instrument panel assembly. It operates with the SRS system in a frontal collision exceeding a specified level. Refer to <u>SRS-7</u>, "Occupant Classification System (OCS)" for more information.

## Front Side Air Bag

Front side air bag modules are built into the front seatback assemblies. Vehicles with side air bags are equipped with labels as shown.



EHS001BK

## Side Curtain Air Bag

Side curtain air bag modules are located above the vehicle headlining. Vehicles with side curtain air bags are equipped with labels as shown.



EHS0025Q

EHS0025R

WHIA0332E

EHS001BJ

#### Front Seat Belt Pre-tensioner with Load Limiter

The seat belt pre-tensioner system with load limiter is installed for both the driver's seat and the front passenger's seat. It operates simultaneously with the SRS air bag system in the event of a frontal collision with an impact exceeding a specified level.

When the frontal collision with an impact exceeding a specified level occurs, seat belt slack resulting from clothing or other factors is immediately taken up by the pre-tensioner. Vehicle passengers are securely restrained.

When passengers in a vehicle are thrown forward in a collision and the restraining force of the seat belt exceeds a specified level, the load limiter permits the specified extension of the seat belt by the twisting of the ELR shaft, and a relaxation of the chest-area seat belt web tension while maintaining force.

## **Occupant Classification System (OCS)**

The occupant classification system (OCS) identifies different size occupants, out of position occupants, and detects if child seat is present in the front passenger seat. The OCS receives inputs from the occupant classification sensor (located inside the passenger seat cushion assembly) and belt tension sensor (part of the passenger front seat belt assembly and located at the belt anchor location). Depending on classification of the passenger, the OCS sends a signal to the air bag diagnosis sensor unit. The air bag diagnosis sensor unit uses this signal and the seat belt buckle switch RH signal to determine deployment or non deployment of the passenger front air bag in the event of a collision. Depending on the signals received, the air bag diagnosis sensor unit can disable the passenger front air bag completely.

#### NOTE:

In case of customer concern, CONSULT-II can be used to confirm the passenger air bag status (readiness).

#### **Passenger Air Bag Status Conditions**

Front Passenger Seat (Condition)	PASS AIR BAG OFF Indicator (Status)	Passenger Air Bag Status (Readiness)	CONSULT-II Display
Seat occupied	OFF	Active (enabled)	ON
Seat occupied NOTE	ON	Deactivated (disabled)	OFF
Seat empty	OFF	Deactivated (disabled)	OFF

#### NOTE:

Passenger does not meet Occupant Classification System specifications for passenger air bag activation.



## **Direct-connect SRS Component Connectors**

The following SRS components use direct-connect style harness connectors.

- Driver air bag module
- Front passenger air bag module
- LH side curtain air bag module
- RH side curtain air bag module
- Front LH seat belt pre-tensioner
- Front RH seat belt pre-tensioner

Always pull up to release locking tab prior to removing connector from SRS component.



EHS001SB

F

М

Κ

EHS001BM



Always push down to lock locking tab after installing connector to SRS component. When locked, the locking tab is level with the connector housing.



## **TROUBLE DIAGNOSIS**

PFP:00004

А

Е

SRS

EH\$001BN

#### **Trouble Diagnosis Introduction**

#### **CAUTION:**

- Do not use electrical test equipment on any circuit related to the SRS unless instructed to do so in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harness connectors.
- Do not attempt to repair, splice or modify SRS wiring harnesses. If a harness is damaged, replace it with a new one.
- Keep ground connections clean.

#### **DIAGNOSIS FUNCTION**

The SRS self-diagnosis results can be read by using "AIR BAG" warning lamp and/or CONSULT-II. The User mode is exclusively prepared for the customer (driver). This mode warns the driver of a system malfunction through the operation of the "AIR BAG" warning lamp.

The Diagnosis mode allows the technician to locate and inspect the malfunctioning part.

The mode applications for the "AIR BAG" warning lamp and CONSULT-II are as follows:

	User mode	Diagnosis mode	Display type	
"AIR BAG" warning lamp	Х	Х	ON-OFF operation	
CONSULT-II	_	Х	Monitoring	

#### HOW TO PERFORM TROUBLE DIAGNOSES FOR QUICK AND ACCURATE REPAIR

A good understanding of the malfunction conditions can make troubleshooting faster and more accurate. In general, each customer feels differently about a malfunction. It is important to fully understand the symptoms or conditions for a customer complaint.

#### **Information From Customer**

WHAT - Vehicle model WHEN - Date, Frequencies WHERE - Road conditions HOW - Operating conditions, Symptoms	
Preliminary Check	J
Check that the following parts are in good order.	
<ul> <li>Battery (Refer to <u>SC-4, "How to Handle Battery"</u>.)</li> </ul>	K
<ul> <li>Fuse (Refer to <u>SRS-13, "Wiring Diagram — SRS —</u>".)</li> </ul>	
System component-to-harness connections	L

М

#### WORK FLOW



\*4: <u>SRS-31</u>



Μ

## Schematic

SA): WITH SIDE AIR BAGS



WHWA0276E



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

WHWA0315E

SRS-SRS-02



WHWA0264E





WHWA0326E





WHWA0316E



WHWA0267E

#### **MODELS WITH POWER SEATS**



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

WHWA0268E

#### **MODELS W/O POWER SEATS**



\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

WHWA0269E

## **CONSULT-II Function (AIR BAG)**

EHS001BR

#### CONSULT-II can display each diagnostic item using the diagnostic test modes shown following.

AIR BAG diagnostic mode	Descrip	ption
SELF-DIAG [CURRENT]	A current Self-diagnosis result (also indicated by the mode) is displayed on the CONSULT-II screen in rea ing repairs.	number of warning lamp flashes in the Diagnosis al time. This refers to a malfunctioning part requir-
SELF-DIAG [PAST]	Diagnosis results previously stored in the memory a stored results will remain until memory erasing is ex-	re displayed on the CONSULT-II screen. The ecuted.
TROUBLE DIAG RECORD	With TROUBLE DIAG RECORD, diagnosis results p played on the CONSULT-II screen.	previously erased by a reset operation can be dis-
ECU DISCRIMINATED NO.	The air bag diagnosis sensor unit for each vehicle model is assigned with its own, individual classifi- cation number. This number will be displayed on the CONSULT-II screen, as shown. When replac- ing the air bag diagnosis sensor unit, refer to the part number for the compatibility. After installation, replacement with a correct unit can be checked by confirming this classification number on the CON- SULT-II screen. The air bag diagnosis sensor unit discrimi- nated numbers assigned are as follows: (VQ models) • F64B (for models with side air bags.) (QR models) • F651 (for models with side air bags) • F650 (for models without side air bags)	ECU DISCRIMINATED NO. ECU No. XXXX PRINT BACK LIGHT COPY ARS366
PASSENGER AIR BAG	The STATUS (readiness) of the front passenger air bag module is displayed. The STATUS displayed (ON/OFF) depends on the signals supplied to the occupant classification system control module and air bag diagnosis sensor unit. Refer to <u>SRS-7</u> , <u>"Occupant Classification System (OCS)"</u> for more information.	PASSENGER AIRBAG STATUS OFF MODE BACK LIGHT COPY

#### CONSULT-II Function HOW TO CHANGE SELF-DIAGNOSIS MODE WITH CONSULT-II From User Mode to Diagnosis Mode

EHS001BS

After selecting "AIR BAG" on the "SELECT SYSTEM" screen, User mode automatically changes to Diagnosis mode.

SELECT SYSTEM ENGINE	
A/T	
AIR BAG	
	"AIR BAG" warning lamp operation indicates Diagnosis mode.
	SR\$803

#### From Diagnosis Mode to User Mode

To return to User mode from Diagnosis mode, touch "BACK" key of CONSULT-II until "SELECT SYSTEM" A appears, Diagnosis mode automatically changes to User mode.



#### HOW TO ERASE SELF-DIAGNOSIS RESULTS

• "SELF-DIAG [CURRENT]"

A current self-diagnosis result is displayed on the CONSULT-II screen in real time.

After the malfunction is repaired completely, no malfunction is detected on "SELF-DIAG [CURRENT]".



• "SELF-DIAG [PAST]"

Return to the "SELF-DIAG [CURRENT]" CONSULT-II screen by touching "BACK" key of CONSULT-II and select "SELF-DIAG [PAST]" in SELECT DIAG MODE. Touch "ERASE" in "SELF-DIAG [PAST]" mode.

#### NOTE:

If the memory of the malfunction in "SELF-DIAG [PAST]" is not erased, the User mode will continue to show the system malfunction by the operation of the warning lamp even if the malfunction is repaired completely.

- "TROUBLE DIAG RECORD" The memory of "TROUBLE DIAG RECORD" cannot be erased.

## Self-Diagnosis Function (Without CONSULT-II)

- The reading of these results is accomplished using one of two modes "User mode" and "Diagnosis mode".
- After a malfunction is repaired, turn the ignition switch OFF for at least one second, then back ON. Diagnosis mode returns to the User mode. At that time, the self-diagnostic result is cleared.

EHS001BT

#### HOW TO CHANGE SELF-DIAGNOSIS MODE



#### HOW TO ERASE SELF-DIAGNOSIS RESULTS

After a malfunction is repaired, turn the ignition switch OFF for at least one second, then back ON. Diagnosis mode returns to the User mode. At that time, the self-diagnostic result is cleared.

## SRS Operation Check DIAGNOSTIC PROCEDURE 1

Checking SRS Operation Using "AIR BAG" Warning Lamp—User Mode

- 1. Turn the ignition switch from OFF to ON, and check that the air bag warning lamp blinks.
- 2. Compare the SRS air bag warning lamp blinking pattern with the examples.



EHS001BU

#### Warning lamp examples

"AIR BAG" warning lamp operation-User mode-	SRS condition	Reference item	ŀ
ON OFF 7 sec. SHA001E	<ul> <li>No malfunction is detected.</li> <li>No further action is necessary.</li> </ul>		E
ON OFF T sec. 0.5 sec. 0.5 sec.	The system is malfunctioning and needs to be repaired as indicated.	Go to <u>SRS-24, "DIAGNOSTIC</u> <u>PROCEDURE 2"</u> with CONSULT- II or <u>SRS-31, "DIAGNOSTIC PRO-</u> <u>CEDURE 6"</u> without CONSULT-II.	F
	Air bag is deployed.     Southelt protonomination deployed.	Go to <u>SRS-53, "COLLISION DIAG-</u>	
IGN ON ON OFF SHIA0013E	<ul> <li>Seat beit pre-tensioner is deployed.</li> <li>Air bag diagnosis sensor unit is malfunctioning.</li> <li>Air bag power supply circuit is malfunctioning.</li> <li>SRS air bag warning lamp circuit is malfunctioning.</li> </ul>	Go to <u>SRS-36. "Trouble Diagnosis:</u> <u>"AIR BAG" Warning Lamp Does Not</u> <u>Turn Off"</u> .	ŀ
OFF SHIA0014E	<ul> <li>Air bag diagnosis sensor unit is mal- functioning.</li> <li>Air bag warning lamp circuit is mal- functioning.</li> </ul>	Go to <u>SRS-37, "Trouble Diagnosis:</u> <u>"AIR BAG" Warning Lamp Does Not</u> <u>Turn On"</u> .	ľ

#### Trouble Diagnosis With CONSULT-II DIAGNOSTIC PROCEDURE 2

Refer to <u>GI-38, "CONSULT-II Start Procedure"</u> Diagnostic code is displayed on "SELF-DIAG [CURRENT]".



If no malfunction is detected on "SELF-DIAG [CURRENT]", but malfunction is detected in "SRS Operation Check", the following cases may exist:

- "SELF-DIAG [PAST]" memory might not be erased.
- The SRS system malfunctions intermittently.

Refer to SRS-29, "DIAGNOSTIC PROCEDURE 4" .



## **CONSULT-II Diagnostic Code Chart**

Diagnostic item	Explanation		Repair order Recheck SRS at each replacement
	Malfunction is indi- cated by the "AIR	Low battery voltage (Less than 9V)	1. Go to <u>SC-4, "BATTERY"</u> 2. Go to <u>SRS-28, "DIAGNOSTIC PRO- CEDURE 3"</u>
NO DTC IS DETECTED	BAG" warning lamp in User mode.	"SELF-DIAG [PAST]" memory might not be erased.	Go to <u>SRS-29, "DIAGNOSTIC PRO-</u> <u>CEDURE 4"</u> .
		Intermittent malfunction has been detected in the past.	Go to <u>SRS-29, "DIAGNOSTIC PRO-</u> <u>CEDURE 5"</u> .
	No malfunction is detected in User mode.		_
DRIVER AIRBAG MODULE [OPEN]	Driver air bag module circuit is open (including the spiral cable).		1. Visually check the wiring harness connection.
			2. Replace the harness if it has visible
DRIVER AIRBAG MODULE [VB-SHORT] [B1050] or [B1055]	Driver air bag module circuit is shorted to some power supply circuit (including the spiral cable).		<ol> <li>Replace driver air bag module.</li> <li>Replace the spiral cable.</li> </ol>
DRIVER AIRBAG MODULE [GND-SHORT] [B1051] or [B1056]	Driver air bag module circuit is shorted to ground (including the spiral cable).		<ol> <li>5. Replace the air bag diagnosis sensor unit.</li> <li>6. Replace the related harness.</li> </ol>
DRIVER AIRBAG MODULE [SHORT] [B1052] or [B1057]	Driver air bag module o	circuits are shorted to each other.	

EHS0025S

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
ASSIST A/B MODULE [OPEN]	Front passenger air bag module circuit is open.	1. Visually check the wiring harness connection.
[B1065] or [B1070]		2. Replace the harness if it has visible
ASSIST A/B MODULE [VB-SHORT] [B1066] or [B1071]	Front passenger air bag module circuit is shorted to some power supply circuit.	damage. 3. Replace front passenger air bag module
ASSIST A/B MODULE [GND-SHORT]	Front passenger air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sen- sor unit.
[B1067] or [B1072]		5. Replace the related harness.
ASSIST A/B MODULE [SHORT] [B1068] or [B1073]	Front passenger air bag module circuits are shorted to each other.	
	Crash zone sensor	1. Visually check the wiring harness connection.
CRASH ZONE SEN [UNIT FAIL] [B1033] or [B1034]		2. Replace the harness if it has visible damage.
CRASH ZONE SEN		3. Replace the crash zone sensor.
[COMM FAIL] [B1035]		<ol> <li>Replace the air bag diagnosis sen- sor unit.</li> </ol>
		5. Replace the related harness.
SIDE MODULE LH [OPEN]	Front LH side air bag module circuit is open.	1. Visually check the wiring harness connection.
[B1134]		2. Replace the harness if it has visible
SIDE MODULE LH [VB-SHORT] [B1135]	Front LH side air bag module circuit is shorted to some power supply circuit.	damage. 3. Replace front LH seat back assem- bly (front LH side air bag module).
SIDE MODULE LH [GND-SHORT]	Front LH side air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sensor unit.
[B1136] SIDE MODULE LH [SHORT] [B1137]	Front LH side air bag module circuits are shorted to each other.	5. Replace the related harness.
SIDE MODULE RH [OPEN]	Front RH side air bag module circuit is open.	1. Visually check the wiring harness connection.
[B1129]		2. Replace the harness if it has visible
SIDE MODULE RH [VB-SHORT] [B1130]	Front RH side air bag module circuit is shorted to some power supply circuit.	damage. 3. Replace front RH seat back assem-
SIDE MODULE RH	Front RH side air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sen-
[B1131]		5. Replace the related harness.
SIDE MODULE RH [SHORT] [B1132]	Front RH side air bag module circuits are shorted to each other.	
	LH side air bag (satellite) sensor	1. Visually check the wiring harness connection.
SATELLITE SENS LH [UNIT FAIL]		2. Replace the harness if it has visible damage.
[B1118] or [B1119] SATELLITE SENS LH		3. Replace the LH side air bag (satel- lite) sensor.
[B1120]		4. Replace the air bag diagnosis sen- sor unit.
		5. Replace the related harness.

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
	RH side air bag (satellite) sensor	1. Visually check the wiring harness connection.
SATELLITE SENS RH [UNIT FAIL]		2. Replace the harness if it has visible damage.
[B1113] or [B1114] SATELLITE SENS RH		3. Replace the RH side air bag (satel- lite) sensor.
[B1115]		4. Replace the air bag diagnosis sensor unit.
		5. Replace the related harness.
PRE-TEN FRONT LH [OPEN]	The circuit for front LH seat belt pre-tensioner is open.	1. Visually check the wiring harness connections.
	The circuit for front LH seat belt pre-tensioner is shorted to	2. Replace the harness if it has visible damage.
[VB-SHORT] [B1087]	some power supply circuit.	3. Replace front LH seat belt pre-ten- sioner.
PRE-TEN FRONT LH [GND-SHORT]	The circuit for front LH seat belt pre-tensioner is shorted to ground.	4. Replace the air bag diagnosis sen- sor unit.
[B1088]		5. Replace the related harness.
PRE-TEN FRONT LH [SHORT] [B1089]	The circuits for the front LH seat belt pre-tensioner are shorted to each other.	
PRE-TEN FRONT RH [OPEN]	The circuit for front RH seat belt pre-tensioner is open.	1. Visually check the wiring harness connections.
PRF-TEN FRONT RH	The circuit for front RH seat belt pre-tensioner is shorted to	2. Replace the harness if it has visible damage.
[VB-SHORT] [B1082]	some power supply circuit.	3. Replace front RH seat belt pre-ten- sioner.
PRE-TEN FRONT RH [GND-SHORT]	The circuit for front RH seat belt pre-tensioner is shorted to ground.	4. Replace the air bag diagnosis sen- sor unit.
	The circuite for the front PH soat belt pro-tensioner are	5. Replace the related harness.
[SHORT] [B1084]	shorted to each other.	
CURTAIN MODULE LH [OPEN] [B1150]	The LH side rear curtain air bag module circuit is open.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible</li> </ol>
CURTAIN MODULE LH	The LH side rear curtain air bag module circuit is shorted to	damage.
[VB-SHORT] [B1151]	some power supply circuits.	3. Replace LH side curtain air bag module.
CURTAIN MODULE LH [GND-SHORT] [B1152]	The LH side rear curtain air bag module circuit is shorted to ground.	<ol> <li>4. Replace the air bag diagnosis sensor unit.</li> <li>5. Replace the related harness.</li> </ol>
CURTAIN MODULE LH [SHORT] [B1153]	The circuits for the LH side rear curtain air bag module are shorted to each other.	

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement	А
CURTAIN MODULE RH [OPEN]	The RH side rear curtain air bag module circuit is open.	1. Visually check the wiring harness connection.	
	The RH side rear curtain air bag module circuit is shorted to	2. Replace the harness if it has visible damage.	В
[VB-SHORT] [B1146]	some power supply circuits.	3. Replace RH side curtain air bag module.	C
CURTAIN MODULE RH [GND-SHORT]	The RH side rear curtain air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sen- sor unit.	0
CURTAIN MODULE RH [SHORT] [B1148]	The circuits for the RH side rear curtain air bag module are shorted to each other.	5. Replace the related harness.	D
CONTROL UNIT	Air bag diagnosis sensor unit is malfunctioning.	1. Visually check the wiring harness connection.	E
[B1XXX]		2. Replace the air bag diagnosis sen- sor unit.	F
OCCUPANT SENS C/U [UNIT FAIL] [B1017], [B1020] or [B1021]	Occupant classification system is malfunctioning.	<ol> <li>Replace RH front seat cushion/ occupant classification system con- trol unit assembly.</li> </ol>	G
	Communication between the occupant classification system control unit and air bag diagnosis sensor unit is interrupted.	1. Visually check the wiring harness connection.	
		2. Replace the harness if it has visible damage.	SR
OCCUPANT SENS C/U [COMM FAIL] [B1022]		3. Replace RH front seat cushion/ occupant classification system con- trol unit assembly.	
		<ol> <li>Replace the air bag diagnosis sen- sor unit.</li> </ol>	
		5. Replace the related harness.	J
OCCUPANT SENS [UNIT FAIL] [B1018]	Occupant classification sensor is malfunctioning.	1. Replace RH front seat cushion/ occupant classification system con- trol unit assembly.	K
	Belt tension sensor is malfunctioning.	1. Visually check the wiring harness connection.	
		2. Replace the harness if it has visible damage.	L
BELT TENSION SENS [UNIT FAIL]		3. Replace RH front seat belt assembly.	
[B1019]		<ol> <li>Replace RH front seat cushion/ occupant classification system con- trol unit assembly.</li> </ol>	Μ
		5. Replace the related harness.	
	Front passenger air bag off indicator is malfunctioning.	1. Visually check the wiring harness connection.	
PASS A/R INDCTR CKT		2. Replace the harness if it has visible damage.	
[B1023]		3. Replace front passenger air bag off indicator.	
		4. Replace the air bag diagnosis sensor unit.	
		5. Replace the related harness.	

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
FRONTAL COLLISION DETECTION [B1209]	Driver and front passenger air bag modules are deployed.	1. Refer to <u>SRS-53, "COLLISION</u> <u>DIAGNOSIS"</u> .
SIDE COLLISION DETECTION [B1210]	Side or curtain air bag modules are deployed (with side air bags only).	
ROLLOVER DETECTION [B1211]	Curtain air bag module and seat belt pre-tensioner are deployed.	

#### NOTE:

Follow the procedures in numerical order when repairing malfunctioning parts. Confirm whether malfunction is eliminated using air bag warning lamp or CONSULT-II each time repair is finished. If malfunction is still observed, proceed to the next step. When malfunction is eliminated, further repair work is not required.

#### **DIAGNOSTIC PROCEDURE 3**

#### Final Check of SRS Using CONSULT-II—Diagnosis Mode

Refer to GI-38, "CONSULT-II Start Procedure" .

 If no DTC is detected on "SELF-DIAG [CURRENT]", repair of SRS is completed. Go to step 2.
 If any DTC is detected on "SELF-DIAG [CURRENT]", the malfunctioning part has not been repaired completely or another malfunctioning part is being detected. Go to <u>SRS-24, "DIAG-NOSTIC PROCEDURE 2"</u>.

SELF-DIAG [CUF	RENT]	
DTC RESULTS:		
NO DTC IS DETE FURTHER TES MAY BE REQUI	CTED. FING RED.	
		SRS701

2. Touch "ERASE".

NOTE:

## Touch "ERASE" to clear the memory of the malfunction ("SELF-DIAG [PAST]").

If the memory of the malfunction in "SELF-DIAG [PAST]" is not erased, the User mode shows the system malfunction by the operation of the warning lamp even if the malfunction is repaired completely.



3. Touch "BACK" key of CONSULT-II to "SELECT DIAG MODE" screen. Touch "SELF-DIAG [PAST]".



- Check that no malfunction is detected on "SELF-DIAG [PAST]". 4.
- Touch "BACK" key of CONSULT-II until "SELECT SYSTEM" 5. appears in order to return to User mode from Diagnosis mode.
- 6. Turn ignition switch OFF then turn off and disconnect CON-SULT-II.
- 7. Go to SRS-22, "DIAGNOSTIC PROCEDURE 1"

4. 5.	Check that no malfunction is detected on "SELF-DIAG [PAST]". Touch "BACK" key of CONSULT-II until "SELECT SYSTEM"		SELF-DIAG [PAST] DTC RESULTS:	-	А
6.	appears in order to return to User mode from Diagnosis mode. Turn ignition switch OFF then turn off and disconnect CON- SULT-II.		NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.		В
7.	Go to <u>SRS-22, "DIAGNOSTIC PROCEDURE 1"</u> .				
				-	С
				SRS702	D
DI/ Ch	GNOSTIC PROCEDURE 4				D
	eck SKS Repair history				
1.	CONSIDER POSSIBILITY THAT SELF-DIAGNOSTIC RESULT V	NAS N	OT ERASED AFTE	R REPAIR	Е

F

Check repair history of the SRS.

Have any previous repairs been made to the SRS?

- Yes >> Self-diagnostic result "SELF-DIAG [PAST]" (previously stored in the memory) might not be erased after repair. Go to SRS-28, "DIAGNOSTIC PROCEDURE 3"
- >> Go to SRS-24, "DIAGNOSTIC PROCEDURE 2" No

#### **DIAGNOSTIC PROCEDURE 5**

#### Check SRS Intermittent Malfunction Using CONSULT-II—Diagnosis Mode

Refer to GI-38, "CONSULT-II Start Procedure" .

1. If diagnostic codes are displayed on "SELF-DIAG [PAST]", go to step 4.



If no malfunction is detected on "SELF-DIAG [PAST]", touch "BACK" and go back to "SELECT DIAG MODE".



 Touch "TROUBLE DIAG RECORD".
 NOTE: With "TROUBLE DIAG RECORD", diagnosis results previously erased by a reset operation can be displayed.



- 3. Diagnostic code is displayed on "TROUBLE DIAG RECORD".
- 4. Touch "PRINT".
- 5. Compare diagnostic codes to <u>SRS-24, "CONSULT-II Diagnostic</u> <u>Code Chart"</u>.
- 6. Touch "BACK" key of CONSULT-II until "SELECT SYSTEM" appears.
- 7. Turn ignition switch OFF, then turn off and disconnect CON-SULT-II, and both battery cables.
- 8. Repair the system as outlined by the "Repair order" in "Intermittent Malfunction Diagnostic Code Chart", that corresponds to the self-diagnostic result. For replacement procedure of component
- parts, refer to the Removal and Installation procedure for the appropriate component.
- 9. Go to <u>SRS-28, "DIAGNOSTIC PROCEDURE 3"</u>, for final checking.

p	
TROUBLE DIAG RECORD	
DTC RESULTS	
[B1049]	
L \	VHIA0153E

Tro DIA	ouble Diagnosis Without CONSULT-II	EHS001BW	А
Ins	pect SRS Malfunction Using "AIR BAG" Warning Lamp—Diagnosis Mode		
NO	TE:		
SR	S will not enter Diagnosis mode if no malfunction is detected in User mode.		В
1.	Turn ignition switch ON.		
2.	After "AIR BAG" warning lamp lights for 7 seconds, turn ignition switch OFF within 1 second.		
3.	Wait more than 3 seconds.		C
4.	Repeat steps 1 to 3 two more times (3 times total).		
5.	Turn ignition switch ON.		Г
SR	S is now in Diagnosis mode.		
"Alf	R BAG" warning lamp operates in Diagnosis mode as follows:		
			E

SRS

L

J

Κ

L

Μ

F

G

#### WARNING LAMP FLASH CODE CHART

<Diagnosis results (previously stored in the memory) might not be erased after repair or intermittent malfunctions have been detected in the past.>



<driver air="" bag="" module=""></driver>	
Flash pattern	Repair order
a through d are repeated. d: Two flashes indicate malfunctioning driver air bag module circuits. ON OFF 7 sec. 2 sec. 2 sec. 2 sec. 2 sec. 2 sec. 2 sec. 2 sec. 2 sec. 2 sec.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace the spiral cable.</li> <li>Replace driver air bag module.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>
	WINA0200E



<front air="" bag="" module="" passenger=""></front>	
Flash pattern	Repair order
a through d are repeated. d: Eight flashes indicate malfunctioning front passenger air bag module circuit. 8 flashes ON OFF 7 sec. 2 sec. 2 sec. 2 sec. 0.5 sec.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace front passenger air bag module.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>
	WINKO201L





nopali oldel	
<ol> <li>Visually check the wiring harness connections.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace front LH seat belt pre-tensioner.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>	
W	VHIA0263E

<rh (satellite)="" air="" bag="" sensor="" side=""></rh>		L
Flash pattern	Repair order	
a through f are repeated. f: Three flashes indicate malfunctioning RH side air bag (Satellite) sensor circuit.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace the RH side air bag (Satellite) sensor.</li> </ol>	
$\begin{array}{c} 3 \text{ flashes} \\ \text{ON} \\ \text{OFF} \end{array} \begin{array}{c} a & b \ c \ d & e & f & a & b \ c \ d \\ \hline 1.5 & 1.5 \\ \text{sec.} & \text{sec.} \end{array} \begin{array}{c} 1.5 \\ \text{sec.} \\ \text{sec.} \end{array}$	<ol> <li>4. Replace the air bag diagnosis sensor unit.</li> <li>5. Replace the related harness.</li> </ol>	
2 sec. 2 sec. 2 sec.	WHIA0203E	

Κ







<rh air="" bag="" curtain="" module="" side=""></rh>	
Flash pattern	Repair order
a through f are repeated. f: Five flashes indicate malfunctioning RH side curtain air bag module circuit. ON OFF 7 sec. 2 sec. 0.5 sec. 0.5 sec. 2 sec. 0.5 sec. 2 sec.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace RH side curtain air bag module.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>
0.0 560.	WHIA0266E



L

Μ

#### Trouble Diagnosis: "AIR BAG" Warning Lamp Does Not Turn Off DIAGNOSTIC PROCEDURE 7

EHS001BX

#### 1. CHECK CONDITION OF AIR BAG MODULES

#### Inspect for any deployed air bag modules or seat belt pre-tensioners.

Are any air bag modules or seat belt pre-tensioners deployed?

Yes >> Refer to <u>SRS-53, "COLLISION DIAGNOSIS"</u>.

No >> GO TO 2.

## 2. CHECK THE AIR BAG FUSE

Check 10A fuse [No. 13, located in the fuse block (J/B)]. Refer to <u>PG-4, "POWER SUPPLY ROUTING CIRCUIT"</u>.

#### OK or NG

OK >> GO TO 4. NG >> GO TO 3.

## 3. CHECK AIR BAG FUSE AGAIN

Replace 10A fuse [No. 13, located in the fuse block (J/B)] and turn ignition switch ON.

Does the fuse blow again?

Yes >> Repair harness.

No >> Inspection End.

#### 4. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Connect CONSULT-II and CONSULT-II CONVERTER and touch "START".

#### Is "AIR BAG" displayed on CONSULT-II?

Yes >> GO TO 5.

No >> Visually inspect the air bag diagnosis sensor unit harness connections. If the connections are OK, replace the air bag diagnosis sensor unit. Refer to <u>SRS-51</u>, <u>"Removal and Installation"</u>.



## 5. CHECK HARNESS CONNECTION

Check for loose connections between the combination meter and the air bag diagnosis sensor unit. OK or NG

OK >> Replace air bag diagnosis sensor unit. Refer to <u>SRS-51, "Removal and Installation"</u>.

NG >> Properly connect the combination meter and air bag diagnosis sensor unit harness connectors. If "AIR BAG" warning lamp still does not turn off, replace the wiring harness.

Trouble Diagnosis: "AIR BAG" Warning Lamp Does Not Turn On DIAGNOSTIC PROCEDURE 8
1. CHECK METER FUSE
Check the 10A fuse [No. 14, located in the fuse block (J/B)] . Refer to <u>PG-4, "POWER SUPPLY ROUTING CIRCUIT"</u> . <u>OK or NG</u>
NG >> GO TO 2.
2. REPLACE METER FUSE AND CHECK AGAIN
Replace 10A fuse [No. 14, located in the fuse block (J/B)] and turn ignition switch ON.         Does the fuse blow again?         Yes       >> Replace harness.         No       >> Inspection End.
$3. \ check \ harness \ connections \ between \ air \ bag \ diagnosis \ sensor \ unit \ and \ combination \ meter$
Inspect the harness and connectors between the air bag diagnosis sensor unit and the combination meter. Do the harness or connectors have any visible damage? Yes >> Replace harness. No >> GO TO 4.
4. CHECK COMBINATION METER
Disconnect the air bag diagnosis sensor unit harness connectors and turn ignition switch ON.Does "AIR BAG" warning lamp turn on?Yes>> Replace the air bag diagnosis sensor unit. Refer to SRS-51, "Removal and Installation"No>> Replace the combination meter. Refer to IP-13, "COMBINATION METER"

Μ

## DRIVER AIR BAG MODULE

## DRIVER AIR BAG MODULE

PFP:K8510

## **Removal and Installation**





#### REMOVAL

#### **CAUTION:**

- Do not attempt to repair or replace damaged direct-connect SRS component connectors. If a driver air bag direct-connect harness connector is damaged, the spiral cable must be replaced.
- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- When servicing the SRS, do not work from directly in front of air bag module.
- 1. Disconnect both the negative and positive battery cables, then wait at least 3 minutes.
- 2. Locate retaining clip access hole and insert suitable 4mm 6mm blunt tool.

#### **CAUTION:**

Do not use sharp edged objects such as screwdrivers to release driver air bag module from steering wheel, SRS components may be unintentionally damaged.



- 3. Press upward (toward center of steering wheel) on retaining clip until driver air bag module is released from steering wheel.
- 4. Lift the driver air bag module from the steering wheel.
- 5. Disconnect the driver air bag module and horn connectors, then remove the driver air bag module.
  - For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7</u>, "Direct-connect <u>SRS</u> <u>Component Connectors</u>".

#### **CAUTION:**

- When servicing the SRS, do not work from directly in front of air bag module.
- Always place air bag module with pad side facing upward.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or connectors.
- Do not disassemble air bag module.
- Do not expose the air bag module to temperatures exceeding 90°C (194°F).



А

В

С

L

Μ

- Replace the air bag module if it has been dropped or sustained an impact.
- Do not allow oil, grease or water to come in contact with the air bag module.



#### INSTALLATION

Installation is in the reverse order of removal.

- If driver air bag module is being replaced due to deployment, spiral cable must also be replaced. Refer to <u>SRS-40, "SPIRAL CABLE"</u>.
- For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7, "Direct-connect SRS Component Connectors"</u>.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-22, "SRS Operation Check"</u>.

## SPIRAL CABLE

## **SPIRAL CABLE**

PFP:25554

EHS0018A

#### **Removal and Installation**



- 4. Spiral cable
- 7. Steering column assembly

- 5. Driver air bag module connectors
- 8. Column cover lower
- 6. Column cover upper
- 9. Screw (Do not remove)

10. Screw

#### REMOVAL

#### **CAUTION:**

- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at • least 3 minutes.
- When servicing the SRS, do not work from directly in front of air bag module. •
- Disconnect both the negative and positive battery cables, then wait at least 3 minutes. 1.
- 2. Set the front wheels in the straight-ahead position.
- 3. Remove the steering wheel. Refer to PS-9, "REMOVAL".
- 4. Remove the column cover upper and lower.
- 5. Disconnect wiper and washer switch connector. Then while pressing tabs, pull wiper and washer switch away from spiral cable to remove.



6. Disconnect lighting and turn signal switch connector. Then while pressing tabs, pull lighting and turn signal switch toward driver door to remove.

7. Remove the screws. Then while pressing the tab, pull the spiral cable away from steering column assembly.

#### CAUTION:

- Do not disassemble spiral cable.
- Do not apply lubricant to the spiral cable.



Tab

Tab

Lighting & turn-

signal switch

7

Tab

Connectors -

8. Disconnect the spiral cable connectors.

#### CAUTION:

With the steering linkage disconnected, the spiral cable may snap by turning the steering wheel beyond the limited number of turns. The spiral cable can be turned counterclockwise about 2.5 turns from the neutral position.

#### INSTALLATION

Installation is in the reverse order of removal.

- Align spiral cable correctly when installing steering wheel, refer to PS-9, "INSTALLATION" . Make sure that the spiral cable is in the neutral position. The neutral position is detected by turning left 2.6 revolutions from the right end position and ending with the locating pin at the top.
- Reset the steering angle sensor calibration after installing spiral cable. Refer to BRC-145, "Adjustment of Steering Angle Sensor Neutral Position" .
- After the work is completed, perform self-diagnosis to make sure no malfunction is detected. Refer to SRS-22, "SRS Operation Check".

#### **CAUTION:**

- The spiral cable may snap due to steering operation if the cable is not installed in the correct position.
- With the steering linkage disconnected, the cable may snap by turning the steering wheel beyond the limited number of turns. The spiral cable can be turned counterclockwise about 2.5 turns from the neutral position.

**SRS-41** 





А

LHIA0035E

cable

LHIA0088E

Κ

L

## FRONT PASSENGER AIR BAG MODULE

## **Removal and Installation**

The passenger air bag module originally installed in the vehicle uses direct-connect style harness connectors. Service replacement passenger air bag modules use tab-locking style harness connectors. If the passenger air bag module is replaced or if the direct-connect harness connectors are damaged, the vehicle wiring harness must be modified to allow connection of the service replacement passenger air bag module. Refer to SRS-44, "WIRING HARNESS MODIFICATION" for wiring harness modification procedure.

#### REMOVAL

#### **CAUTION:**

- Do not attempt to repair or replace damaged direct-connect front passenger air bag module connectors. If a direct-connect harness connector is damaged, the front passenger air bag must be replaced and the wiring harness modified.
- Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- Always work from the side of or under front passenger air bag module.
- 1. Disconnect both the negative and positive battery cables, then wait at least 3 minutes.
- 2. Remove the glove box. Refer to IP-14, "LOWER INSTRUMENT PANEL RH AND LOWER GLOVE BOX" .
- 3. Remove 2 bolts (through glove box opening) retaining front passenger air bag module to the steering member.
- 4. Disconnect the passenger air bag module connectors.
  - For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7</u>, "Direct-connect <u>SRS</u> Component <u>Connectors</u>".
- 5. Remove the instrument panel assembly from the vehicle. Refer to <u>IP-10, "INSTRUMENT PANEL ASSEMBLY"</u>.



6. Remove front passenger air bag module screws then remove passenger air bag module from instrument panel assembly.



PFP:K8515

#### **CAUTION:**

- When servicing the SRS, do not work from directly in front of air bag module.
- Always place front passenger air bag module with caution label side facing upward.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or harness connectors.
- Do not disassemble air bag module.
- Do not use old nuts after removal; replace with new nuts.
- Do not expose the front passenger air bag module to temperatures exceeding 90°C (194°F).
- Replace the air bag module if it has been dropped or sustained an impact.
- Do not allow oil, grease or water to come in contact with the air bag module.
- For removal/installation of the direct-connect SRS connectors, refer to SRS-7, "Direct-connect SRS Component Connectors".





#### INSTALLATION

#### Original Passenger Air Bag Module

Installation is in the reverse order of removal.

For removal/installation of the direct-connect SRS connectors, refer to SRS-7, "Direct-connect SRS Component Connectors".

#### CAUTION:

- Always work from the side of or under front passenger air bag module.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-22, "SRS Operation Check".

#### Service Replacement Passenger Air Bag Module

1. Install the front passenger air bag module to the instrument panel pad assembly.



- 2. Install the instrument panel assembly. Refer to IP-10, "INSTRUMENT PANEL ASSEMBLY" .
- 3. Connect the front passenger air bag module harness connector to yellow 4-pin service replacement air bag connector and fasten connector to mounting bracket.

#### **CAUTION:**

- Always work from the side of or under front passenger air bag module.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-22, "SRS Operation Check" .

Κ

L

Μ

Е

F

#### WIRING HARNESS MODIFICATION

The passenger air bag module originally installed in the vehicle uses direct-connect style harness connectors. Service replacement passenger air bag modules use tab-locking style harness connectors. If the passenger air bag module is replaced or if the direct-connect harness connectors are damaged, the vehicle wiring harness must be modified to allow connection of the service replacement passenger air bag module.

#### NOTE:

The wiring harness modification is to be performed only if the vehicle is equipped with the original passenger air bag which uses direct-connect harness connectors. If the passenger air bag is to be replaced in a vehicle that has already had the service replacement passenger air bag installed, the wiring harness modification is not required.

#### CAUTION:

- Do not attempt to repair or replace damaged direct-connect front passenger air bag module connectors. If a direct-connect harness connector is damaged, the front passenger air bag must be replaced and the wiring harness modified.
- Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- Always work from the side of or under front passenger air bag module.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-22, "SRS Operation Check"</u>.
- 1. Locate the yellow and orange direct-connect passenger air bag module harness connectors.
- 2. Use wire cutters to cut back both previously used direct-connect passenger air bag module harness connectors from the vehicle wiring harness approximately 50 mm (1.9 in) from the connectors.
- 3. Remove approximately 150 mm (5.9 in) of the vehicle harness covering from the cut end.
- 4. Slide a piece of dual-wall heat shrink tubing (provided in the passenger air bag service kit) onto each wire of the previously used vehicle wiring harness.



5. Fold each wire back and insert into the end of the heat shrink tubing so that the end of the wire is approximately centered in the heat shrink tubing.



- 6. Use a heat gun to shrink the heat shrink tubing and seal the wire.
- 7. Use electrical tape to secure the modified circuits to the outside of the wiring harness.

## FRONT PASSENGER AIR BAG MODULE

8. Locate the front passenger air bag service replacement connector that is taped back to the main harness. Unwrap the tape to access the yellow service replacement connector and remove the dust cover from the connector.



I

J

Κ

L

Μ

А

В

С

D

Ε

F

G

## SIDE CURTAIN AIR BAG MODULE

## SIDE CURTAIN AIR BAG MODULE

PFP:985P0

## **Removal and Installation**





1. Side curtain air bag module connector

#### REMOVAL

#### **CAUTION:**

- Do not attempt to repair or replace damaged direct-connect SRS component connectors. If a direct-connect harness connector is damaged, the harness must be replaced.
- Before servicing the SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- When servicing the SRS, do not work from directly in front of air bag module. •
- 1. Remove headlining. Refer to EI-42, "HEADLINING" .
- Disconnect side curtain air bag module connectors.
  - For removal/installation of the direct-connect SRS connectors, refer to SRS-7, "Direct-connect SRS Component Connectors" .
- Remove the bolts in order starting at the front or rear, and remove the side curtain air bag module. 3.

#### **CAUTION:**

- When servicing the SRS, do not work from directly in front of air bag module.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or harness connectors.
- Do not disassemble air bag module.
- Do not expose the air bag module to temperatures exceeding 90°C (194°F).
- Replace side curtain air bag module if it has been dropped or sustained an impact.
- Do not allow oil, grease or water to come in contact with the air bag module.



#### INSTALLATION

Installation is in the reverse order of removal.

## SIDE CURTAIN AIR BAG MODULE

datacted Rafe	or to SPS-22 "SPS	Operation Cher	, penonn sei v		
delected. Rele	10 <u>3N3-22, 3N3</u>	Operation Chec	<u>.</u> .		

## **CRASH ZONE SENSOR**

# Removal and Installation REMOVAL

#### **CAUTION:**

- Before servicing the SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- 1. Disconnect both the negative and positive battery cables, then wait at least 3 minutes.
- 2. Remove crash zone sensor nuts and shield from support member.
- 3. Disconnect the crash zone sensor harness connector.
- 4. Remove crash zone sensor.



#### **CAUTION:**

- Replace crash zone sensor if it has been dropped or sustained an impact.
- Do not disassemble crash zone sensor.

#### INSTALLATION

Installation is in the reverse order of removal.

After the work is complete, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-22, "SRS Operation Check"</u>.

PFP:98531

EHS0018E

## SIDE AIR BAG (SATELLITE) SENSOR

SIDE AIR BAG (SATELLITE) SENSOR	PFP:98830		
Removal and Installation			
<ul> <li>REMOVAL</li> <li>CAUTION:</li> <li>Before servicing the SRS, turn the ignition switch off, disconnect both battery cables an least 2 minutes</li> </ul>	nd wait at B		
<ol> <li>Disconnect both the negative and positive battery cables, then wait at least 3 minutes.</li> <li>Remove front door sill finisher and lift carpet.</li> </ol>	С		
SEC. 988 1 2 3 3 5 4 2 1.9 (1.2, 8.8)	D F G		
Always replace after every disassembly.	WHIA0227E		
1.Front seat finisher2.Side air bag (satellite) sensor3.Clip4.Bolts5.Side air bag (Satellite) sensor connector	J		
<ol> <li>Remove side air bag (satellite) sensor bolts and release the clip.</li> <li>Disconnect the side air bag (satellite) sensor connector.</li> </ol>	K		
<ul> <li>CAUTION:</li> <li>Do not use old bolts after removal; replace with new bolts.</li> <li>Check side air bag (satellite) sensor to ensure it is free of deformities, dents, cracks or shows any visible signs of damage, replace it with new one.</li> </ul>	<sup>.</sup> rust. If it		
<ul> <li>Do not disassemble side air bag (satellite) sensor.</li> <li>Replace side air bag (satellite) sensor if it has been dropped or sustained an impact.</li> </ul>	Μ		

#### INSTALLATION

Installation is in the reverse order of removal.

• After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-22, "SRS Operation Check"</u>.

## FRONT SEAT BELT PRE-TENSIONER

## FRONT SEAT BELT PRE-TENSIONER

## **Removal and Installation**

For removal and installation procedures, refer to <u>SB-3, "SEAT BELTS"</u>.

PFP:86884

EHS0018G

## **DIAGNOSIS SENSOR UNIT**

## **DIAGNOSIS SENSOR UNIT**

## Removal and Installation REMOVAL



1. Diagnosis sensor unit connectors 2. Diagnosis sensor unit

#### **CAUTION:**

- Before servicing the SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- 1. Disconnect both the negative and positive battery cables, then wait at least 3 minutes.
- 2. Disconnect the connectors for each air bag module and seat belt pre-tensioner.
- 3. Remove center console. Refer to IP-14, "CENTER CONSOLE" .
- 4. Disconnect diagnosis sensor unit connectors.
- 5. Remove bolts from the diagnosis sensor unit.

#### **CAUTION:**

- Do not use old bolts; replace with new bolts.
- Check diagnosis sensor unit bracket to ensure it is free of deformities, dents, cracks or rust. If it shows any visible signs of damage, replace with new one.
- Replace diagnosis sensor unit if it has been dropped or sustained an impact.

#### INSTALLATION

Installation is in the reverse order of removal.

 After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-22, "SRS Operation Check"</u>.

#### **CAUTION:**

• The diagnosis sensor unit must always be installed with the arrow mark "
"
" pointing toward the front of the vehicle for proper operation.

#### ECU DISCRIMINATED NO.

After replacing the diagnosis sensor unit, confirm that the diagnosis sensor unit identification is correct for the vehicle as equipped. Refer to <u>SRS-20, "CONSULT-II Function (AIR BAG)"</u>.

Κ

Μ

PFP:28556

FHS0018H

А

## **OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT**

## **OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT**

#### **Removal and Installation**

The occupant classification control unit, occupant classification (pressure) sensor, and bladder are an integral part of the front passenger seat cushion and are replaced as an assembly. Refer to <u>SE-24, "REMOVAL"</u> to remove the seat, and <u>SE-25, "Seat Cushion Trim and Pad"</u> to replace the seat cushion.

PFP:98852

EHS0018I

## **COLLISION DIAGNOSIS**

## **For Frontal Collision**

Check the SRS components using the following table.

 After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-22, "SRS Operation Check"</u>.

## SRS INSPECTION (FOR FRONTAL COLLISION)

Part	SRS is activated	SRS is NOT activated	С
Driver air bag module	If the driver air bag	If the driver air bag has NOT been activated:	
	has deployed: REPLACE	<ol> <li>Remove driver air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.</li> </ol>	D
	teners.	2. Install driver air bag module into the steering wheel to check fit and alignment with the wheel.	_
		3. If no damage is found, reinstall with new fasteners.	E
		4. If damaged—REPLACE. Install driver air bag modules with new fasteners.	
Front passenger air	If the front passenger	If the front passenger air bag has NOT been activated:	E
bag module	air bag has deployed: REPLACE	1. Remove front passenger air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.	Г
	teners.	2. Install front passenger air bag module into the instrument panel to check fit with the instrument panel.	G
		3. If no damage is found, reinstall with new fasteners.	
		4. If damaged—REPLACE. Install front passenger air bag modules with new fasteners.	SR
Crash zone sensor	If any of the front air	If the front air bags or seat belt pre-tensioners have NOT been activated:	
	bags or seat belt pre- tensioners* have	1. Remove the crash zone sensor. Check harness connectors for damage, terminals for deformities, and harness for binding.	I
	REPLACE the crash	2. Check for visible signs of damage (dents, cracks, deformation) of the crash zone sensor and bracket.	
	bracket with new fas-	3. Install the crash zone sensor to check fit.	J
	teners.	4. If no damage is found, reinstall with new fasteners.	
	*: Confirm seat belt	5. If damaged—REPLACE the crash zone sensor and bracket with new fasteners.	
	pre-tensioner activa- tion using CONSULT- II only.		K
Seat belt pre-ten-	If either the driver or	If the pre-tensioners have NOT been activated:	L
sioner assemblies (All applicable loca- tions: buckle, reel, lap	passenger seat belt pre-tensioner* has been activated:	1. Remove seat belt pre-tensioners. Check harness cover and connectors for damage, terminals for deformities, and	
outer)	REPLACE all seat	2 Check helts for damage and anchors for loose mounting	M
	belt pre-tensioner	3 Check retractor for smooth operation	
	fasteners.	4. Check seat belt adjuster for damage.	
		5. Check for deformities of the center pillar inner.	
	*: Confirm seat belt pre-tensioner activa- tion using CONSULT-	6. If the center pillar inner has no damage, REPLACE the seat belt pre-tensioner assembly.	
	Il only.	7. If no damage is found, reinstall seat belt pre-tensioner assembly.	
		8. If damaged—REPLACE. Install the seat belt pre-tensioners with new fasteners.	
Diagnosis sensor unit	If any of the SRS	If none of the SRS components have been activated:	
	components have	1. Check case for dents, cracks or deformities.	
	REPLACE the diag-	2. Check connectors for damage, and terminals for deformities.	
	nosis sensor unit.	3. If no damage is found, reinstall with new fasteners.	
	Install with new fas- teners.	4. If damaged—REPLACE. Install diagnosis sensor unit with new fasteners.	

PFP:00015

EHS001SC

А

Part	SRS is activated	SRS is NOT activated	
Steering wheel	1. Visually check steering wheel for deformities.		
	2. Check harness (built into steering wheel) and connectors for damage, and terminals for deformities.		
	3. Install driver air bag module into the steering wheel to check fit and alignment with the wheel.		
	4. Check steering whee	el for excessive free play.	
	5. If no damage is found, reinstall.		
	6. If damaged—REPLA	NCE.	
Spiral cable	If the driver front air	If the driver front air bag has not deployed:	
	bag has deployed:	1. Visually check spiral cable and combination switch for damage.	
	cable.	2. Check connectors and protective tape for damage.	
		3. Check steering wheel for noise, binding or heavy operation.	
		4. If no damage is found, reinstall.	
		5. If damaged—REPLACE.	
Occupant classifica-	1. Remove passenger seat.		
tion system (Passen-	2. Check control unit ca	ase for dents, cracks of deformities.	
ger seat)	3. Check connectors and pressure sensor tube for damage, and terminals for deformities.		
	4. Check seat frame and cushion pan for dents or deformities.		
	5. If no damage is found, reinstall seat with new fasteners.		
	6. If damaged — REPLACE seat cushion assembly with new fasteners.		
Harness and connec-	1. Check connectors for poor connection, damage, and terminals for deformities.		
tors	2. Check harness for b	inding, chafing, cuts, or deformities.	
	3. If no damage is found, reinstall the harness and connectors.		
	4. If damaged—REPLA	CE the damaged harness. Do not attempt to repair, splice or modify any SRS harness.	
Instrument panel	If the passenger front	If the passenger front air bag has NOT deployed:	
	air bag has deployed: REPLACE the instru-	1. Visually check instrument panel for damage.	
		2. If no damage is found, reinstall the instrument panel.	
	ment parlor accombly.	3. If damaged—REPLACE the instrument panel.	

## For Side and Rollover Collision

EHS001SD

Check the SRS components using the following table.

 After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-22, "SRS Operation Check"</u>.

#### WHEN SRS IS ACTIVATED IN THE SIDE OR ROLLOVER COLLISION

- 1. Replace the following components:
- Front seat back assembly (on the side on which side air bag is activated)
- Diagnosis sensor unit
- (LH or RH) side air bag (satellite) sensor (on the side on which side air bag is activated)
- 2. Check the SRS components and the related parts using the following table.
- Replace any SRS components and the related parts showing visible signs of damage (dents, cracks, deformation).
- 3. Conduct self-diagnosis using CONSULT-II and "AIR BAG" warning lamp. Refer to <u>SRS-22, "SRS Opera-</u> tion Check" for details. Ensure entire SRS operates properly.

#### WHEN SRS IS NOT ACTIVATED IN THE SIDE OR ROLLOVER COLLISION

- 1. Check the SRS components and the related parts using the following table.
- If the front seat back assembly is damaged, the front seat back assembly must be replaced.
- 2. Conduct self-diagnosis using CONSULT-II and "AIR BAG" warning lamp. Refer to <u>SRS-22, "SRS Opera-</u> tion Check" for details. Ensure entire SRS operates properly.

Part	SRS is activated	SRS is NOT activated	A
LH side curtain air bag module BEPLACE the LH		If the LH side curtain air bag has NOT deployed: 1. Check for visible signs of damage (dents, tears, deformation) of the center pillar on the collision side	В
	side curtain air bag	the collision side.	
	module. (Repair the center pillar inner, etc.	<ol> <li>Check for visible signs of damaged (tears etc.) of the LH side curtain air bag mod- ule.</li> </ol>	С
	one if damaged.)	4. Check harness and connectors for damage, and terminals for deformities.	
		5. If no damage is found, reinstall the LH side curtain air bag module with new fasten- ers.	D
		6. If damaged—REPLACE the LH side curtain air bag module with new fasteners.	
RH side curtain air	If the RH side curtain	If the RH side curtain air bag has NOT deployed:	
bag module	air bag has deployed: REPLACE the RH	1. Check for visible signs of damage (dents, tears, deformation) of the center pillar on the collision side.	E
	module. (Repair the	2. If damaged—Remove the RH side curtain air bag module.	
	center pillar inner, etc. before installing new	3. Check for visible signs of damaged (tears etc.) of the RH side curtain air bag mod- ule.	F
	one if damaged.)	4. Check harness and connectors for damage, and terminals for deformities.	
		5. If no damage is found, reinstall the RH side curtain air bag module with new fasteners.	G
		6. If damaged—REPLACE the RH side curtain air bag module with new fasteners.	
Front LH side air bag	If the front LH side air	If the front LH side air bag has NOT deployed:	SR
module bag has deployed: REPLACE front LH	bag has deployed: REPLACE front LH	1. Check for visible signs of damage (dents, tears, deformation) of the seat back on the collision side.	
	Scalback assembly.	2. Check harness and connectors for damage, and terminals for deformities.	
		3. If damaged—REPLACE the front LH seatback assembly.	
Front RH side air bag	If the front RH side air	If the front RH side air bag has NOT deployed:	
module	REPLACE front RH seatback assembly.	1. Check for visible signs of damage (dents, tears, deformation) of the seat back on the collision side.	J
		2. Check harness and connectors for damage, and terminals for deformities.	
		3. If damaged—REPLACE the front RH seatback assembly.	Κ
(LH or RH) side air	If any of the SRS	If none of the SRS components have been activated:	
bag (satellite) sensor	deployed: REPLACE the side	1. Remove the side air bag (satellite) sensor on the collision side. Check harness connectors for damage, terminals for deformities, and harness for binding.	L
	air bag (satellite) sen- sor on the collision	2. Check for visible signs of damage (dents, cracks, deformation) of the side air bag (satellite) sensor.	
	side with new fasten-	3. Install the side air bag (satellite) sensor to check fit.	M
	ers. (Repair the cen- ter pillar inner, etc.	4. If no damage is found, reinstall the side sir bag (satellite) sensor with new fasten- ers.	
	one if damaged.)	5. If damaged—REPLACE the side air bag (satellite) sensor with new fasteners.	
Diagnosis sensor unit	If any of the SRS	If none of the SRS components have been activated:	
	deployed:	1. Check case and bracket for dents, cracks or deformities.	
	REPLACE the diag-	2. Check connectors for damage, and terminals for deformities.	
	nosis sensor unit with	3. It no damage is found, reinstall the diagnosis sensor unit with new fasteners.	
	new lasteriers.	4. If damaged—REPLACE the diagnosis sensor unit with new fasteners.	

#### SRS INSPECTION (FOR SIDE AND ROLLOVER COLLISION)

	0001 / / /			
Part	SRS is activated	SRS is NOT activated		
Seat belt pre-ten-	Seat belt pre-ten- If either the driver or	If the pre-tensioners have NOT been activated:		
sioner assemblies pass (All applicable loca- tions: buckle, reel, lap beer	passenger seat belt pre-tensioner* has been activated:	<ol> <li>Remove seat belt pre-tensioners. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.</li> </ol>		
outer)	helt pre-tensioner	2. Check belts for damage and anchors for loose mounting.		
	assemblies with new	3. Check retractor for smooth operation.		
	fasteners.	4. Check seat belt adjuster for damage.		
	*: Confirm soat holt	5. Check for deformities of the center pillar inner.		
pre-tension tion using C	pre-tensioner activa- tion using CONSULT-	<ol><li>If the center pillar inner has no damage, REPLACE the seat belt pre-tensioner assembly.</li></ol>		
	Il only.	7. If no damage is found, reinstall seat belt pre-tensioner assembly.		
		8. If damaged—REPLACE. Install the seat belt pre-tensioners with new fasteners.		
Seat (with front side	If either the front LH	If the front LH or front RH side air bag modules have NOT deployed:		
air bag)	or front RH side air bag modules has been deployed: REPLACE front seat- back assembly on the deployed side.	1. Visually check the seat on the collision side.		
		<ol><li>Remove the seat on the collision side and check the following for damage and deformities.</li></ol>		
		<ul> <li>Harness, connectors and terminals</li> </ul>		
		<ul> <li>Frame and recliner (for front and rear seat), and also adjuster and slides (for front seat)</li> </ul>		
		3. If no damage is found, reinstall the seat.		
		<ol> <li>If damaged—REPLACE the damaged seat parts using new fasteners. If the front seat back is damaged, the front seat back assembly must be replaced.</li> </ol>		
Center inner pillar	1. Check the center inr	her pillar on the collision side for damage (dents, cracks, deformation).		
	2. If damaged—REPAI	R the center inner pillar.		
Trim/headlining	1. Check for visible sig	ns of damage (dents, cracks, deformation) of the interior trim on the collision side.		
	2. If damaged—REPLACE the damaged trim parts.			