Restraints System

GENERAL

GENERAL ERJB0010

The Supplemental Restraint System (SRS AIRBAG) is designed to supplement the seat belts to help reduce the risk or severity of injury to the driver and passenger by activating and deploying the driver, passenger and side airbag as well as the belt pretensioner in certain frontal or side collisions.

The SRS (Airbag) consists of : a driver airbag module located in the center of the steering wheel, which contains a folded cushion and an inflator unit ; a passenger airbag module located in the passenger side crash pad which contains a folded cushion together with an inflator unit ; side airbag modules located in the driver and passenger seat which contain folded cushions and inflator units; SRSCM located on the floor center console core which monitors the system,; an accelerometer which senses vehicle deceleration,; a spring interconnection (clock spring) located within the steering column; system wiring and wiring connectors; and a knee bolster located under the steering column. The impact sensing function of the SRSCM is carried out by the electronic accelerometer that continuously measures the vehicle's acceleration and delivers a corresponding signal through an amplifying and filtering circuit to the microprocessor. Deployment of the airbag is designed to occur in frontal or near-frontal side impacts of moderate to severe force.

Only authorized service personnel should work on or around SRS components. Those service personnel should read this manual carefully before doing any such work. Extreme care must be used when servicing the SRS to avoid injury to the service personnel (by inadvertent deployment of the airbag) or the driver (by rendering the SRS inoperative).

CUSTOMER CAUTIONS ERJB0020

Failure to carry out service operations in the correct sequence could cause the airbag system to unexpectedly deploy during servicing, possibly leading to serious injury.

Further, if a mistake is made in servicing the airbag system, it is possible that the airbag may fail to operate when required.

Before performing servicing (including removal or installation of parts, inspection or replacement), be sure to read the following items carefully.

1. Be sure to proceed with airbag related service only after approx. 30 seconds or longer from the time the ignition switch is turned to the LOCK position and the negative (-) terminal cable is disconnected from the battery. The airbag system is equipped with a back-up power source to assure the deployment of airbags when the battery cable is disconneted during an accident. The back-up power is available for approx. 150ms.

2. When the negative(-) terminal cable is disconnected from the battery, the clock and audio system's memory will be wiped out. So before starting work, make a record of the contents of the audio system's memory. When the work is finished, reset the audio system and adjust the clock.

3. Symptoms of malfunction of the airbag system are difficult to detect, so the diagnostic codes become the most important source of information when troubleshooting.

4. When troubleshooting the airbag system, always inspect the diagnostic codes before disconnecting the battery.

5. Never use airbag parts from another vehicle. When replacing parts, replace them with new parts.

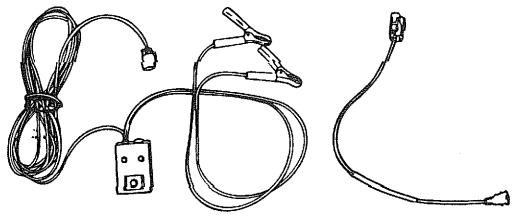
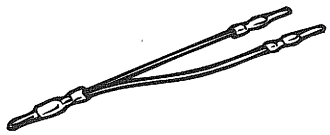
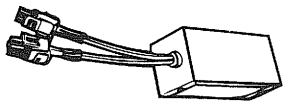
6. Never attempt to disassemble and repair the airbag modules (DAB, PAB, SAB, BPT), clock spring and wiring in order to reuse them.

7. If any component of SRS has been dropped, or if there are cracks, dents or other defects in the case, bracket or connector, replace them with new ones.

8. After work on the airbag system is completed, perform the SRS SRI check. The airbag indicator lamp can be triggered by faults in other circuit in some cases. Therefore if the airbag indicator lamp goes on, be sure to erase the DTC codes using Hi-scan just after repairing or replacing the troubled parts, including the fuse.

9. Especially when carring out body welding, never fail to disconnect the battery's negative (-) terminal.

SPECIAL SERVICE TOOL ERJB0030

Tool (Number and name)	Illustration	Use
0957A-34100A Deployment tool	 ERHA010A	Airbag deployment tool PAB, SAB : 0957A-38100 DAB, BPT : 0957A-38500
0957A-38000 Diagnosis checker	 ERHA010B	Wring harness checker for each module
0957A-38200 Dummy	 ERHA010C	Simulator to check the resistance of each wiring harness Dummy adapter PAB, SAB : 0957A-38300 DAB, BPT : 0957A-38400

* DAB : Driver Airbag

* PAB : Passenger Airbag

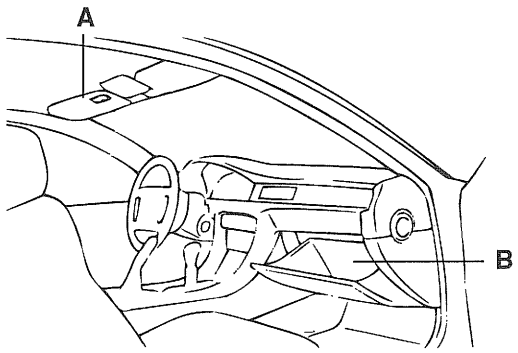
* SAB : Side Airbag

* BPT : Belt Pretensioner

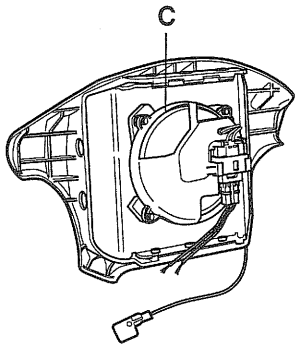
WARNING/CAUTION LABELS ERNC0035

A number of caution labels relating to the SRS are found in the vehicle, as shown in the following illustration. Follow label instructions when servicing the SRS.

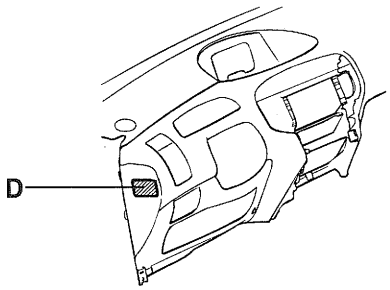
If labels are dirty or damaged, replace them with new ones.



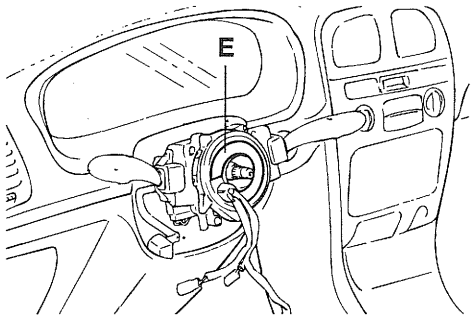
ERNC003A



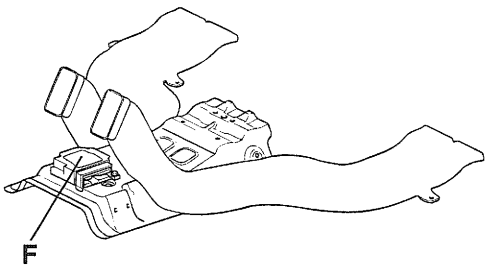
ERKB003A



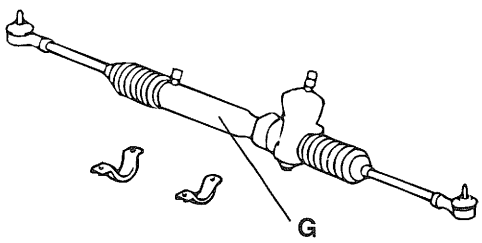
KRNB004A



ERA9001F



KRNB004B



ERA9001C

ERNC0040

A. DAB + PAB
CAUTION
TO AVOID SERIOUS INJURY :

- For maximum safety protection in all types of crashes, you must always wear your safety belt.
- Do not install rearward-facing child seats in any front passenger seat position.
- Do not sit or lean unnecessarily close to the airbag.
- Do not place any objects over the airbag or between the airbag and yourself.
- See the owner's manual for further information and explanation.

B. SUPPLEMENTAL RESTRAINT SYSTEM (AIRBAG) INFORMATION

The airbag is a Supplemental Restraint System (SRS). You must always wear the seat belts. The airbag system condition is normal when the "SRS" lamp in the cluster flashes approximately 6 times after the ignition key is turned on and then goes off.

If any of the following conditions occur, the system must be serviced.

1. "SRS" lamp does not light up when the key is turned on.
2. "SRS" lamp stays lit or flashes continuously.
3. The airbag has inflated.

The airbag system must be inspected by an authorized dealer ten years after the vehicle manufacture date shown on the certification label, located on left front door opening area.

WARNING

Failure to follow the above instructions may result in injury to you or other occupants in the vehicle. See the "SRS" section in Owner's Manual for more information about airbags.

C. WARNING :

Contents are poisonous and extremely flammable. Do not probe with electrical devices or otherwise tamper with item in any way. Servicing of this unit to be performed only by authorized personnel.

D. WARNING

This car is equipped with a side airbag for each front seat.

- Do not use any accessory seat covers.
- Use of other seat covers could reduce the effect of the system.
- Do not install any accessories on the side or near the side airbag.
- Do not use excessive force on the side of the seat.
- For further information, see the owner's manual.

E. CAUTION : SRS clock spring

This is not a repairable part. Do not disassemble or tamper. If defective, replace entire unit as per service manual instructions.
To re-center, rotate clockwise until tight. Then rotate in opposite direction approximately 3 turns and align →←
Failure to follow instructions may render SRS system inoperative possibly resulting in serious driver injury.

F. CAUTION : AIRBAG ESPS UNIT

Detach connector before unmounting. Assemble strictly according to manual instructions.

G. CAUTION : SRS

Before removal of steering gearbox, read service manual, center the front wheels and remove the ignition key.
Failure to do so may damage the SRS clock spring and render SRS system inoperative, possibly resulting in serious the injury to the driver.

ELECTRICAL SYSTEM ERHA0250

The SRS airbag system has sophisticated electrical and electronic components. Therefore the airbag operating components should be handled very carefully.

SRSCM (Supplement Restraint System Control Module)

The SRSCM will deploy the airbag modules by sensing the frontal impact sensed by the sensor built in to the SRSCM.

1. DC/DC convertor : The DC/DC converter in the power supply includes a step-up and a step-down converter, which provides the firing voltage for four firing circuits and the internal operating voltage. If the internal operating voltage falls below a defined threshold, a reset is executed.

2. Arming sensor/safing sensor : The arming/safing sensor built in to the airbag firing circuit has the function of arming the airbag circuit under all required deployment conditions and maintaining the airbag firing circuits unarmed under normal driving conditions. The safing sensor is a dual-contact electromechanical switch that closes if it experiences a deceleration exceeding a specified threshold.

3. Back-up power : The SRSCM reserves an energy reserve to provide deployment energy for a short period when the vehicle voltage is low or if lost in a vehicle frontal crash.

4. Malfunction detection : The SRSCM continuously monitors SRS operating status while the ignition key is turned on and detects possible malfunctions in the system. The malfunction can be displayed in the form of a diagnostic trouble codes using the Hi-Scan Pro.

5. MIL (Malfunction Indication Lamp) notification : If any fault is detected, the SRSCM sends a signal to the indicator lamp on the instrument cluster to warn the vehicle driver.
   The MIL indicator is the key item in notifying the driver of SRS faults. It verifies lamp and SRSCM operation by flashing 6 times when the ignition switch is first turned on.

6. Malfunction recording : Once a fault occurs in the system, the SRSCM records the fault in memory in the form of a DTC, which can only be erased by the Hi-Scan Pro.

7. Data link connector : SRSCM memory stored is linked through this connector located underneath the driver side crash pad to an external output device such as the Hi-Scan Pro.

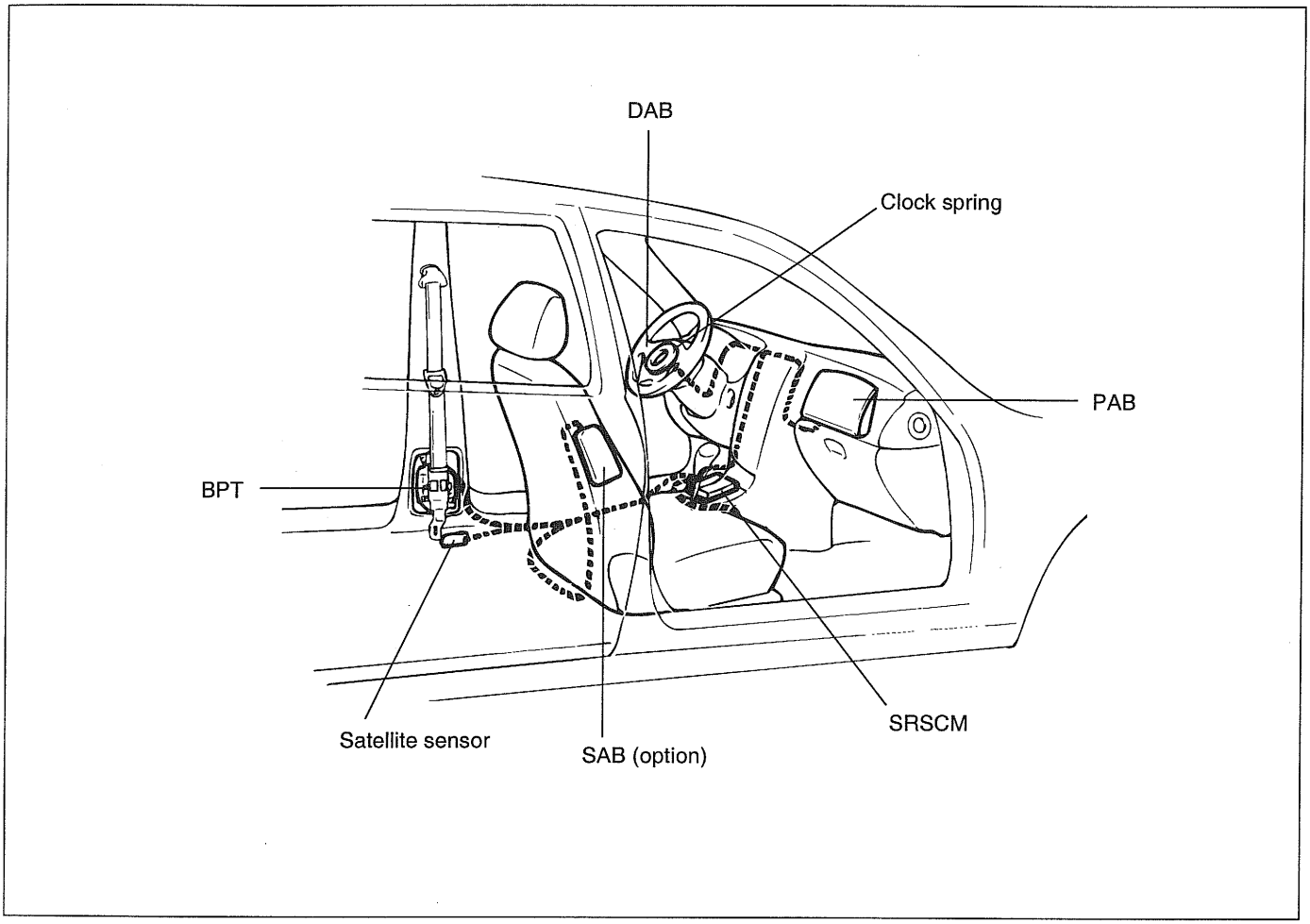
8. After firing the airbags once, the SRSCM cannot be used again and must be replaced.

9. Crash output
   The crash output is used to unlock the doors in case of a crash. The crash output is : 0-200 μA in OFF mode and 200mA in ON mode. During the unlock command, the switch is closed for 200 mS.

SRSCM (SUPPLEMENTAL RESTRAINTS SYSTEM CONTROL MODULE)

INFLATOR MODULE (DAB, PAB, SAB) ERJB0060

DAB (Driver airbag), PAB (Passenger airbag) module, DSAB (Driver side airbag), PSAB (Passenger side airbag) all consist of an inflator and cushion. The initiator (a gas generator igniting device) is port of the inflator. When the vehicle is in a frontal or side crash of sufficient force to close the sensor of the SRSCM, current flows through the deployment loop. This current ignites the material and inflates the airbag.



ERA9002A

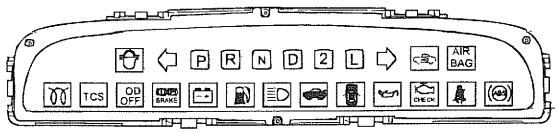
1. When removing the airbag module or handling a new airbag module, it should be placed with the pad top surface facing up. In this case, the twin-lock type connector lock lever should be in the locked state and care should be taken to place it so the conector will not be damaged. Do not store a steering wheel pad on top of another one. (Storing the pad with its metallic surface up may lead to a serious accident if the airbag should inflate accidentally.)
2. Never measure the resistance of the airbag squib. (This may cause the airbag to deploy, which is very dangerous.)
3. Store the airbag module where the ambient temperature remains below 93°C (200°F), without high humidity and away from electrical noise.
4. During electric welding, disconnect the airbag under the steering column near the MULTI-FUNCTION SWITCH connector before starting work.

SRS HARNESS ERNC0070

The SRS harness is wrapped in a yellow tube to be discriminated from other system harnesses. A shorting bar is included inside the wiring connectors of DAB, PAB, SAB and BPT inflator side. The shorting bar shorts the current flow the DAB, PAB, SAB and BPT module circuits when the connectors are disconnected. The circuits to the inflator module are shorted in this way to help prevent unwanted deployment of the airbag when servicing the airbag module.

SRSCM INDEPENDENT LAMP ACTIVATION

The SRS malfunction indicator lamp (MIL) is located in the cluster giving information of SRS operating conditions by control signals from the SRSCM.



KTNB001P

There are certain fault conditions in which the SRSCM (SRS Control Module) cannot function and thus cannot control the operation of the lamp. In these cases, the lamp is directly activated by appropriate circuitry that operates independently of the SRSCM, as follow :

1. Loss of ignition voltage supply to the SRSCM : lamp turned on continuously.
2. Loss of internal operating voltage : lamp turned on continuously.
3. SRSCM not connected : lamp turned on through shorting bar in wiring harness connector.

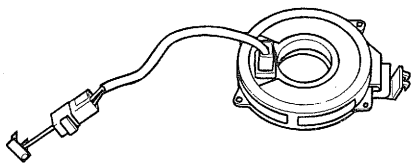
MIL OPERATING METHOD ERJB0080

	Operating situation	Operating method
RUNNING	o Return to normal from temporary fault	ON → OFF
	o Total faults frequency ≥ 5 o Active fault	Turn it on continuously
STARTING	o Normal	Blink 6 times
	o Total faults frequency ≤ 4	On to off after 6 seconds
	o Total faults frequency ≥ 5 o Active fault	Turn it on continuously

ERJB008A

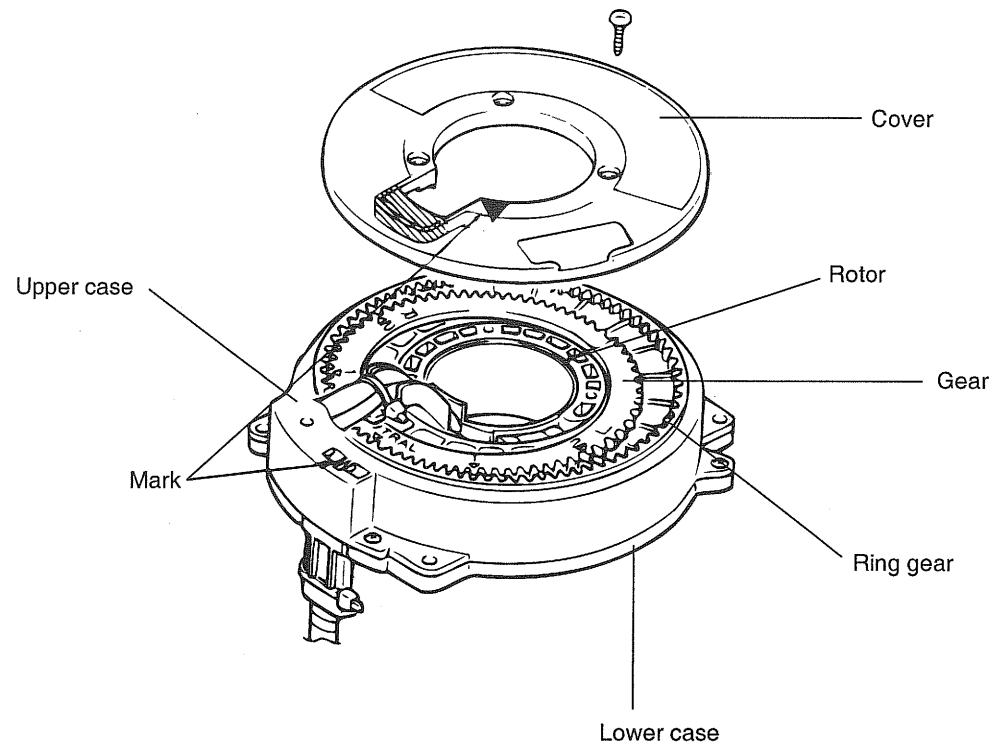
CLOCK SPRING ERJB0090

The clock spring (coil spring) consists of two current carrying coils. It is attached between the steering column and the steering wheel. It allows rotation of the steering wheel while maintaining continuous contact of the deployment loop through the inflator module.



ERJA010E

The steering wheel must be fitted correctly to the steering column with the clock spring at the neutral position, otherwise cable disconnection and other troubles may result.



When the rotor is rotated clockwise

ERLB002C

SATELLITE SENSOR ERKB0110

The release system for the side airbag consists of a SRSCM installed in the middle of the vehicle and two satellites - one on the left-hand side and one on the right. Only the SRSCM is capable of deploying the airbags or the seat-belt pretensioners systems in the vehicle. In the dialog between the SRSCM and the satellite, it is the SRSCM that makes the deployment decision.

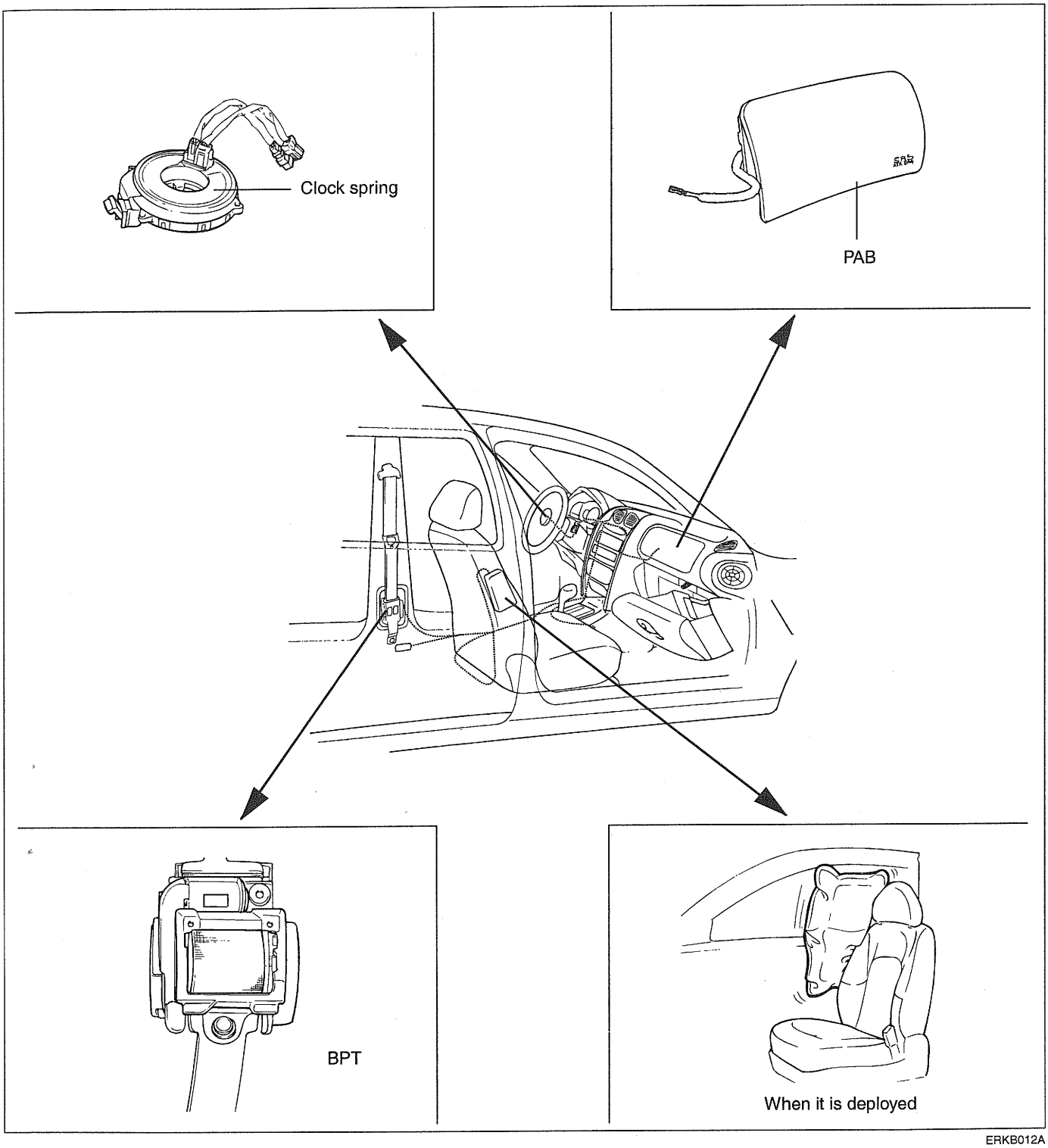
The SRSCM is supported with the side airbag function by two satellites, which act as intelligent acceleration sensors and as such back up the central airbag controller. Both the satellites continuously report the system status on the left and right-hand sides of the vehicle to the SRSCM.

It monitors the acceleration sensor continuously. The test results are reported to the SRSCM by means of periodic status signals.

NOTE

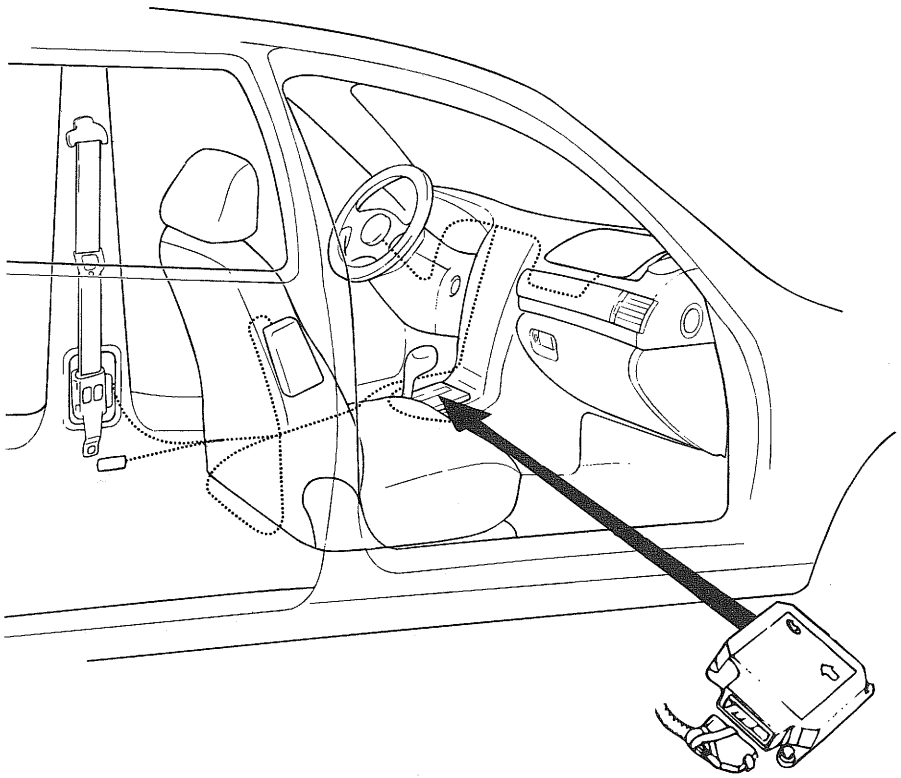
When the ignition is ON, never cause a sudden shock around the installation area of the satellite sensor by a hammer, etc. Otherwise it could cause the airbag system to unexpectedly deploy during servicing.

SYSTEM COMPONENT AND LAYOUT ERKB0120



ERKB012A

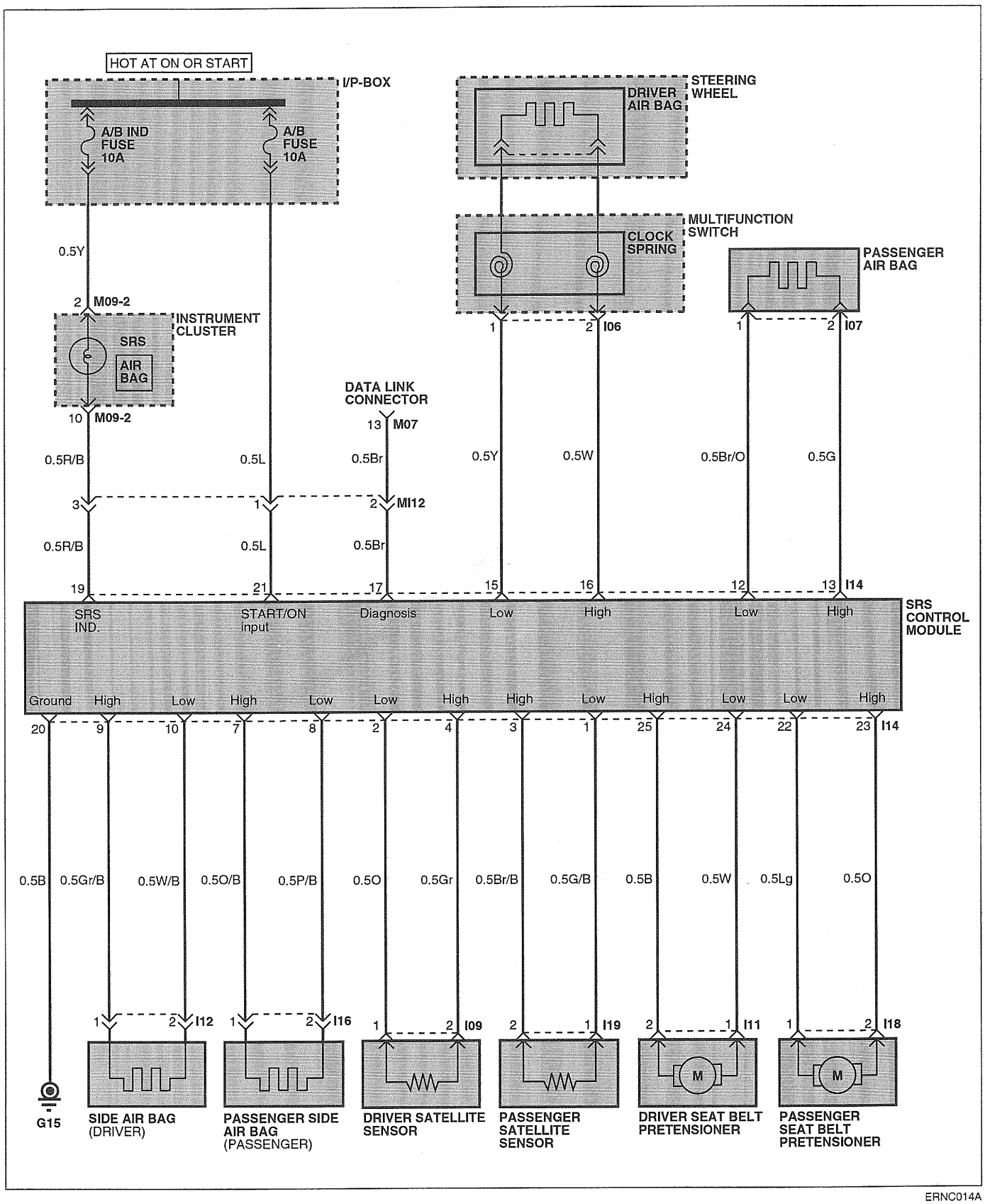
SRSCM (SRS CONTROL MODULE) ERJB0130



SRSCM

ERB9004A

AIRBAG SYSTEM (SRS) ERNC0140



ERNC014A

SRSCM CONNECTOR

DAB+PAB+SAB+BPT ERNC0160

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
●	●	●	●			●	●	●	●		●	●		●	●	●		●	●	●	●	●	●	●

26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

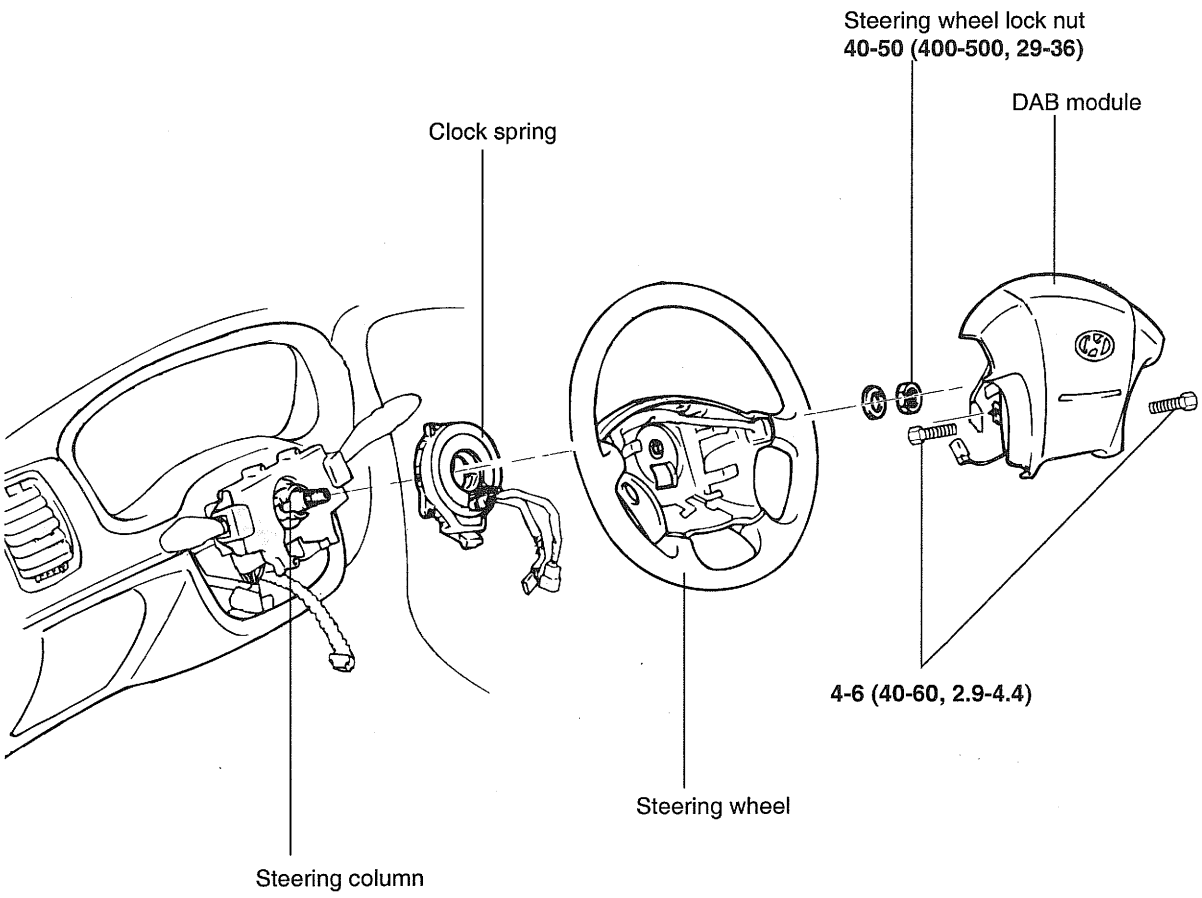
ERNB016A

PIN NO.	Function	Input/output
1	Passenger satellite sensor, Low	output
2	Driver satellite sensor, Low	output
3	Passenger satellite sensor, High	output
4	Driver satellite sensor, High	output
5	Not used	-
6	Not used	-
7	Passenger side airbag, Low	Output
8	Passenger side airbag, High	Output
9	Driver side airbag, Low	Output
10	Driver side airbag, High	Output
11	Not used	-
12	Passenger airbag, Low	Output
13	Passenger airbag, High	Output
14	Not used	-
15	Driver airbag, Low	Output
16	Driver airbag, High	Output
17	K-diagnostic line	Input/output
18	Not used	-
19	Warning lamp	Output
20	GND	Input
21	Battery supply	Input
22	Passenger belt pretensioner, Low	Output
23	Passenger belt pretensioner, High	Output
24	Driver belt pretensioner, Low	Output
25	Driver belt pretensioner, High	Output
26	Not used	-
27	Not used	-
28	Not used	-
29	Not used	-
30	Not used	-

PIN NO.	Function	Input/output
31	Not used	-
32-33	Shorting bar	-
34-35	Shorting bar	-
36	Not used	-
37-38	Shorting bar	-
39	Not used	-
40-41	Shorting bar	-
42	Not used	-
43	Not used	-
44-45	Shorting bar	-
46	Not used	-
47-48	Shorting bar	-
49-50	Shorting bar	-

AIR BAG MODULE (DRIVE SIDE) AND CLOCK SPRING

COMPONENTS ERJB0200



TORQUE : Nm (kg.cm, lb.ft)

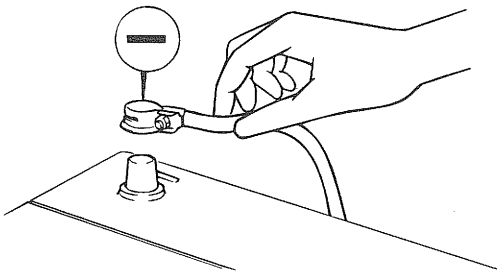
ERJB020A

REMOVAL ERKB0210

1. Disconnect the negative battery cable and keep secure from battery.

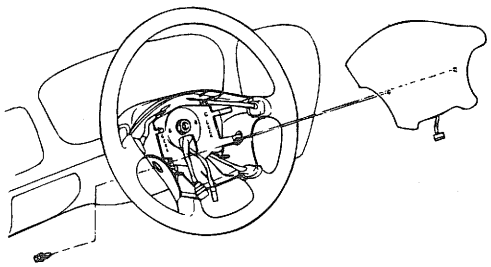
⚠ CAUTION

Wait at least 30 seconds after disconnecting the battery cable before doing any further work.



EADA011A

2. Remove the side protect cover of steering wheel and airbag module mounting bolts using a hexagonal wrench.

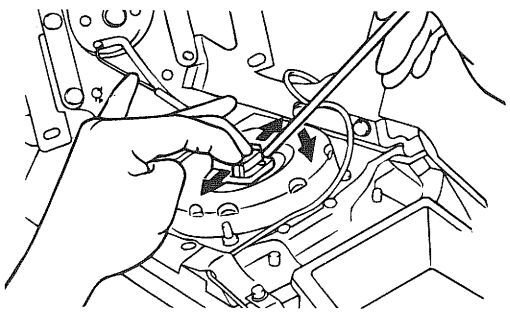


ERB9005A

3. When disconnecting the connector of the clock spring from the airbag module, pull the airbag's lock toward the outer side to spread it open.

⚠ CAUTION

When disconnecting the airbag module-clock spring connector, take care not to apply excessive force to it.

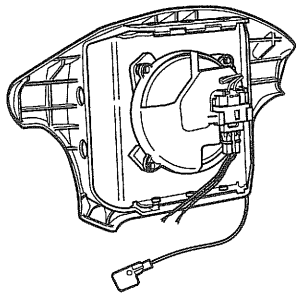


ERA9007C

4. Remove the drive airbag module.

⚠ CAUTION

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

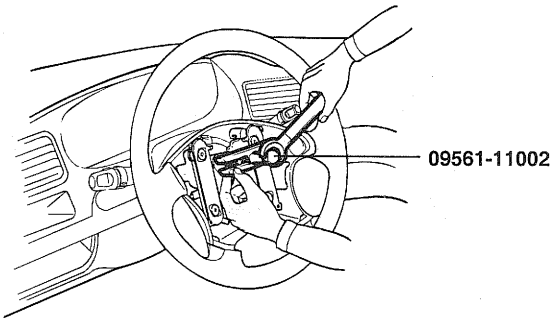


KFWE001A

5. Remove the steering wheel using SST (09561–11002).

⚠ CAUTION

Do not hammer on the steering wheel. Doing so may damage the collapsible column mechanism.



KPKA014A

INSPECTION ERKB0220

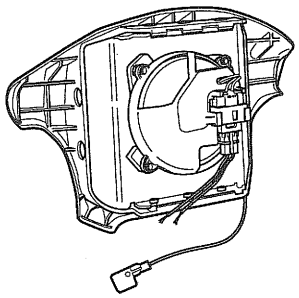
AIRBAG MODULE

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

Dispose the old one according to the specified procedure.

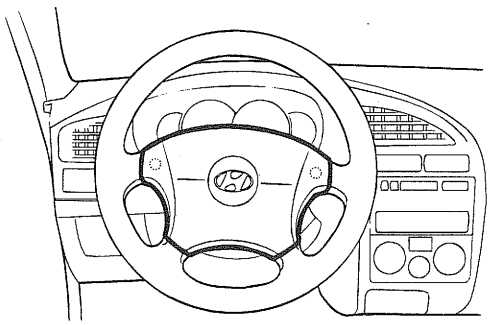
> ⚠ ***CAUTION***
>
> ***Never attempt to measure the circuit resistance of the airbag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental airbag deployment will result in serious personal injury.***

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.



KFWE001A

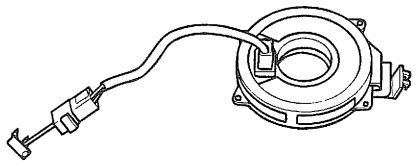
5. Install the airbag module to the steering wheel to check for fit or alignment with the wheel.



KPKA012A

CLOCK SPRING

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



ERJA010E

AIR BAG MODULE (PASSENGER SIDE)

AIR BAG MODULE (PASSENGER)

REMOVAL ERKB0250

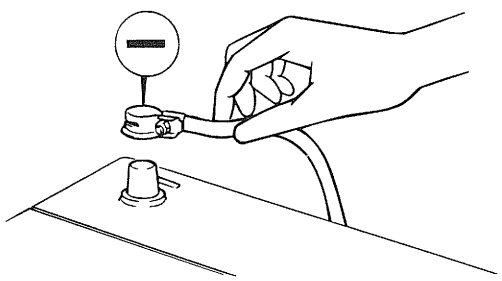
NOTE

1. *Never attempt to disassemble or repair the airbag module.*
2. *Do not drop the airbag module or allow contact with water, grease or oil. Replace it if a dent, crack, deformation or rust are detected.*
3. *The airbag module should be stored on a flat surface and placed so that the pad surface is facing upward. Do not place anything on top of it.*
4. *Do not expose the airbag module to temperature over 93°C (200°F)*
5. *An undeployed airbag module should only be disposed in accordance with the procedures.*
6. *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.*
7. *Whenever the PAB is deployed it should be replaced with a new one assembled with an extension wire. The squib is melt down if the PAB is deployed making the extension wire useless.*

1. Disconnect the battery negative (-) terminal cable.

CAUTION

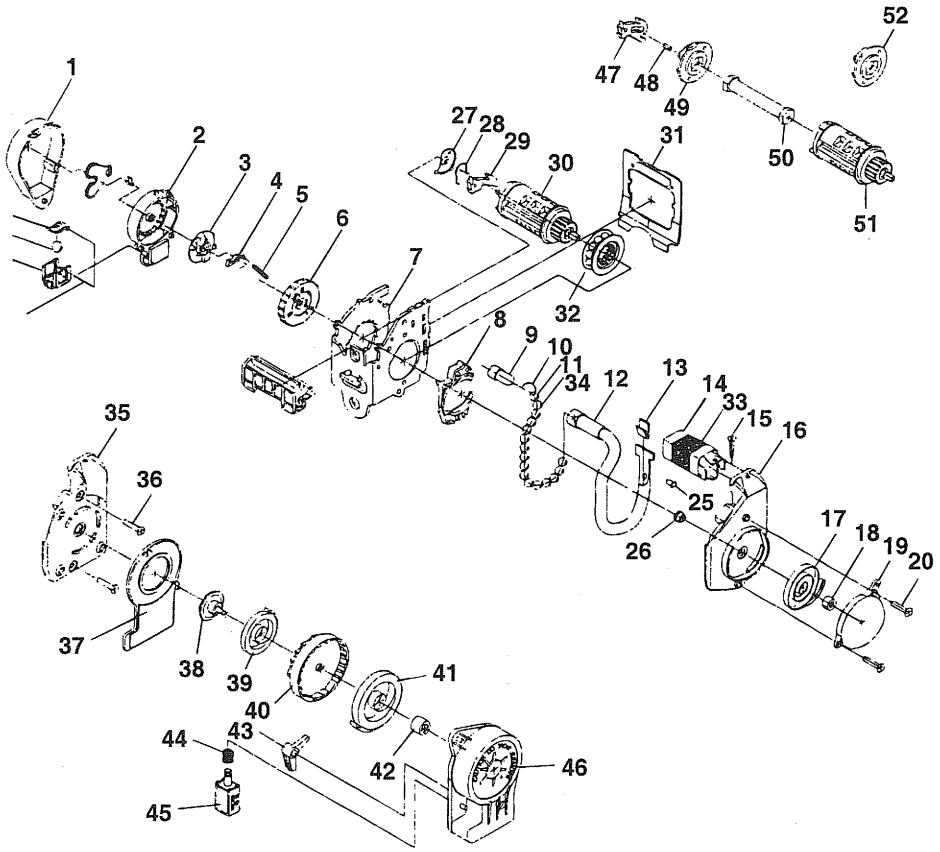
Wait at least 30 seconds.



EADA011A

2. Remove the glove box.
3. Disconnect the PAB module connector.
4. Remove the crash pad assembly and then undo the PAB module. (Refer to the BD section)
5. The skin of the passenger airbag module is integrated with the crash pad, therefore, the crash pad must be replaced if the PAB deploys.

COMPONENTS ERJB0260



1. COVER-L/RH
2. BEARING PLATE-L/RH
3. INTERTIA MASS
4. WEB SENSOR PAWL
5. WEB SENSOR SPRING
6. STEERING DISC-L/RH
7. BASE L/RH
8. BALL L/RH
9. GAS GENERATOR
10. TUBE SPRING
11. PISTON
12. TUBE-L/RH
13. BALL STOPPING SPRING
14. BALL TRAP-L/RH
15. SCREW
16. TUBE COVER-L/RH
17. REWINDING SPRING
18. SPRING CORE-L/RH
19. SPRING COVER-L/RH
20. RIVET
27. RETAINING WASHER-L/RH
28. LOCK DISC SPRING
29. LOCKING ELEMENT-L/RH
30. SPINDLE-L/RH
31. DISTANCE SHEET
32. PINION GEAR
33. LABEL
34. BALL ALUMINUM
35. TUB COVER (T/R)-L/RH
36. RIVET (T/R)
37. RETAINER-L/RH
38. BUSH SHAFT
39. REDUCE SPRING
40. HOLDER-L/RH
41. NORMAL SPRING
42. STAY SHAFT
43. SOLENOID ASSY
44. RETURN SPRING
45. SOLENOID LEVER-L/RH
46. T/R COVER-L/RH
47. LOCK G ELEMENT (L/L)-L/RH
48. NECK
49. TREAD HEAD (W/STOP)-L/RH
50. TORSION BAR-5.5kN
51. SPINDLE (L/L)-L/RH
52. TREAD HEAD (W/OUT STOP)-L/RH

KFWE004A

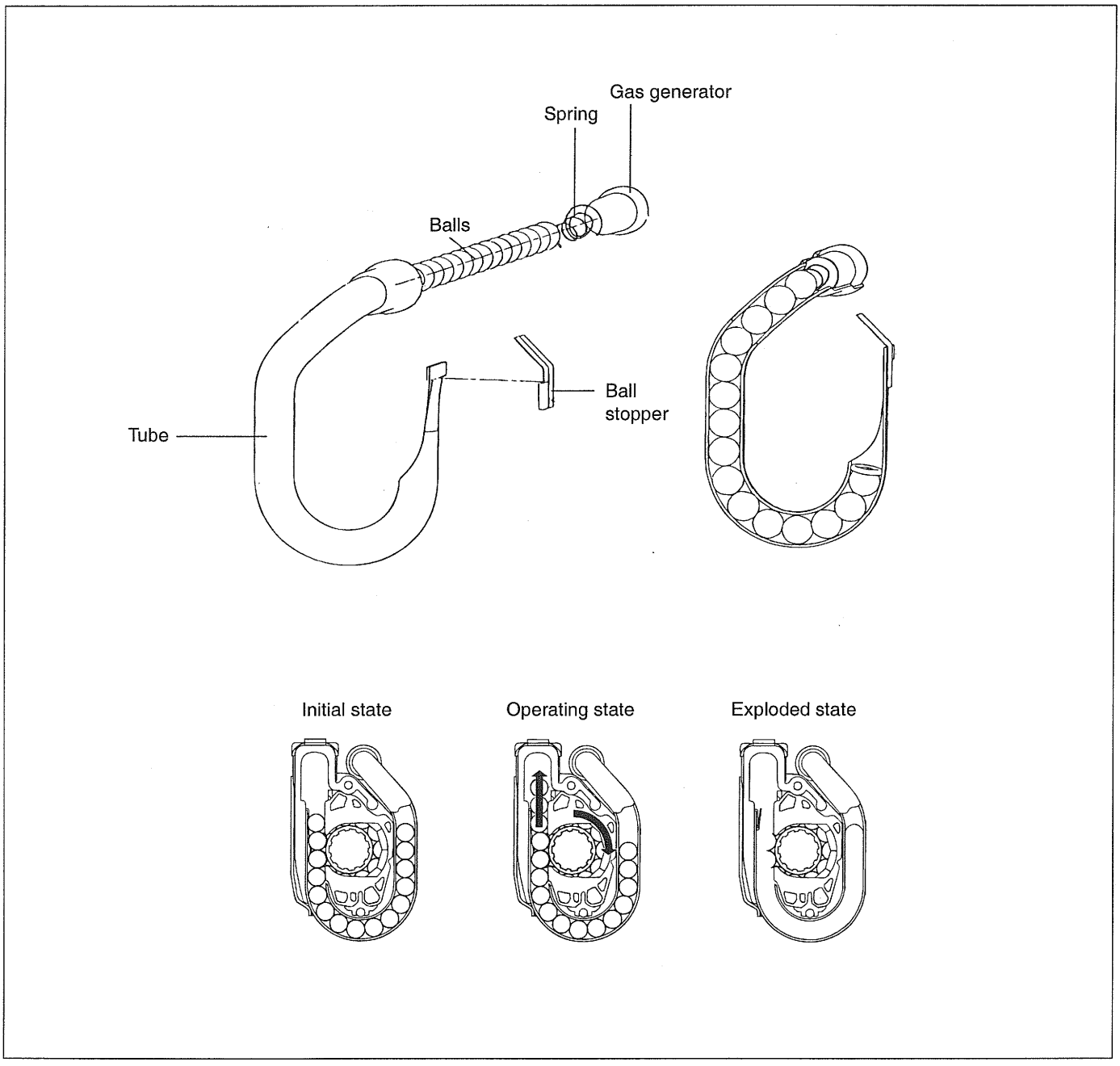
FUNCTION OF PRETENSIONER ERHA0900

When a vehicle crashes with a certain degree of frontal impact, the gas generator will ignited an electrical firing signal from the SRSCM (Supplemental Restraint System Control Module).

Gas from the gas generator causes movement of the piston in the manifold case (cylinder), which operates the rack gear.

The rack gear, rotates a piston gear and a pinion rotates the planet gears.

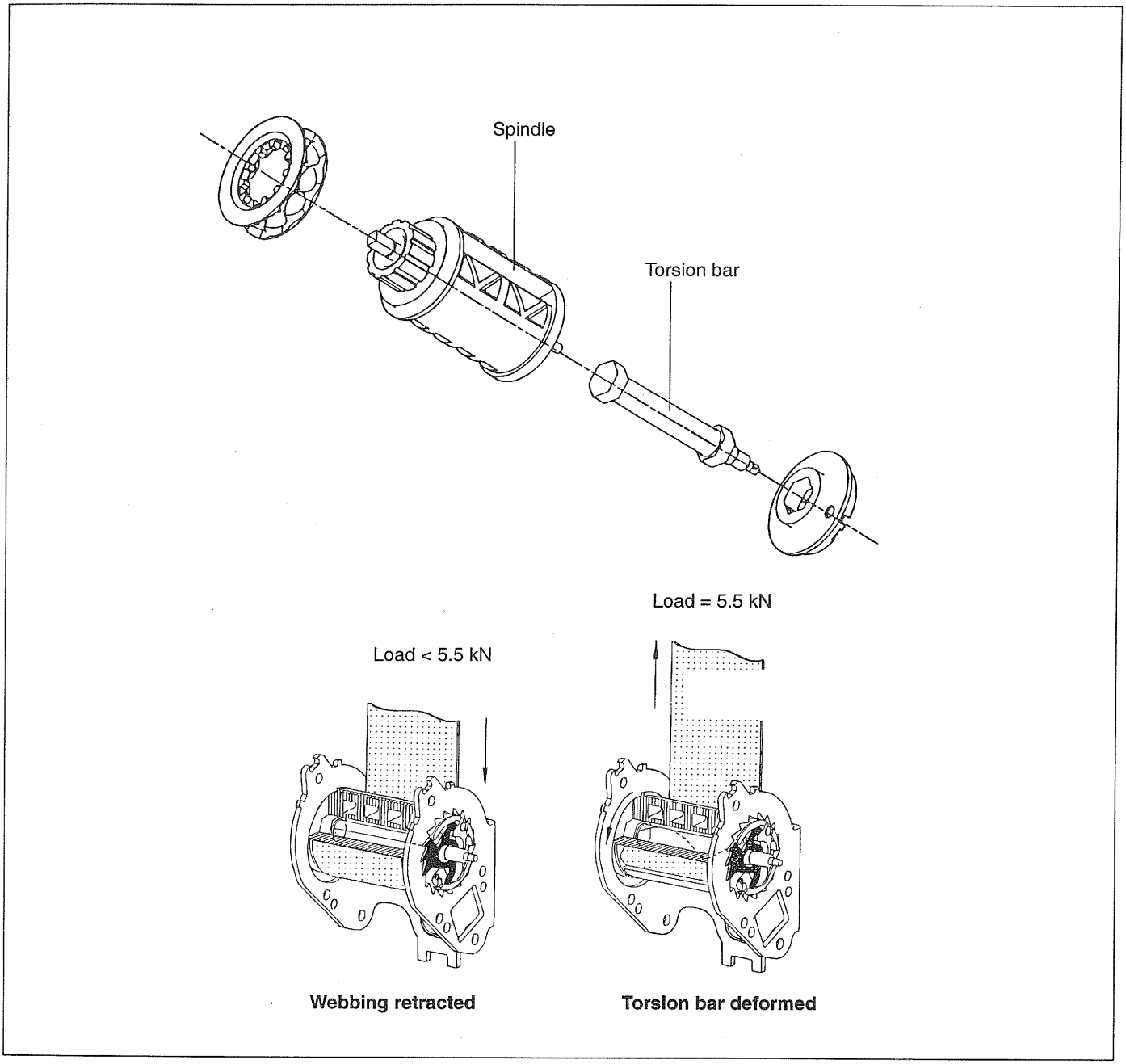
Finally, the webbing is retracted by the rotation of the spool. Therefore, the pretensioner seat belt helps to reduce the severity of injury to the front seat occupant by retracting the seat belt webbing. This prevents the occupant from thrusting forward and hitting the steering wheel or the instrument panel when the vehicle crashes.



KFWE005A

LOAD LIMITER

The load limiter is designed to relieve the impact force to an occupant chest's of the seat belt webbing when the occupant is restrained by the seat belt during a crash. If the crash force reaches a certain value, the torsion bar in the pretensioned seat belt will deform and cause the webbing to extracted from the seat belt, thus, relieving the impact force.



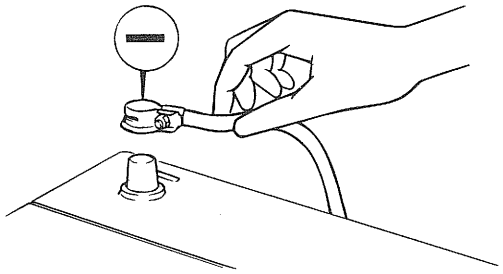
KFWE006A

REMOVAL ERNC0290

1. Disconnect the battery negative (-) terminal.

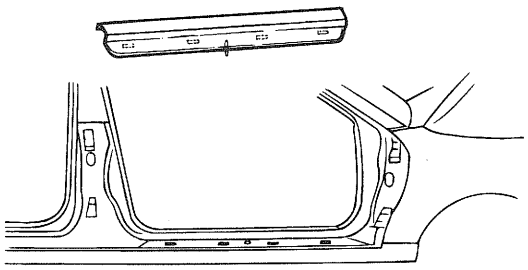
⚠ ***CAUTION***

Wait at least 30 seconds.



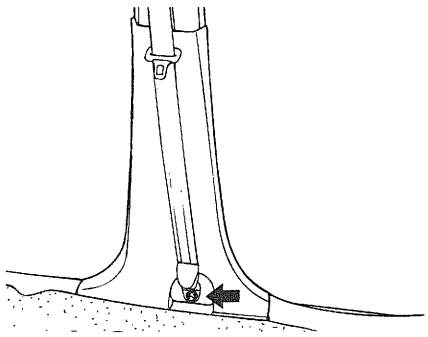
EADA011A

2. Remove the door scuff trim.



KRKB025A

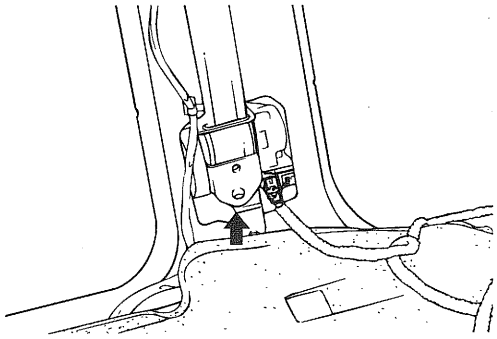
3. Remove the center pillar lower trim after removing seat belt lower anchor bolt.



ESJA050D

4. Remove the upper anchor plate cover and upper anchor plate.

5. Remove the lower anchor plate and front seat belt.



ESHA040J

⚠ ***CAUTION***

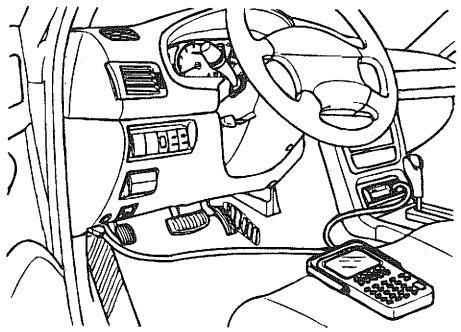
1. ***Never attempt to disassemble or repair the BPT.***
2. ***Do not drop the BPT or allow contact with water, grease, oil.***
   Replace it if a dent, crack, deformation or rust are detected.
3. ***Do not place anything on the BPT.***
4. ***Do not expose the BPT to temperature over 93°C(200°F).***
5. ***BPT functions one time only. Be sure to replace the BPT after it is deployed.***
6. ***Be sure to wear gloves and safety goggles when handling the deployed BPT.***

TROUBLESHOOTING

DIAGNOSIS WITH SCAN TOOL ERKB0300

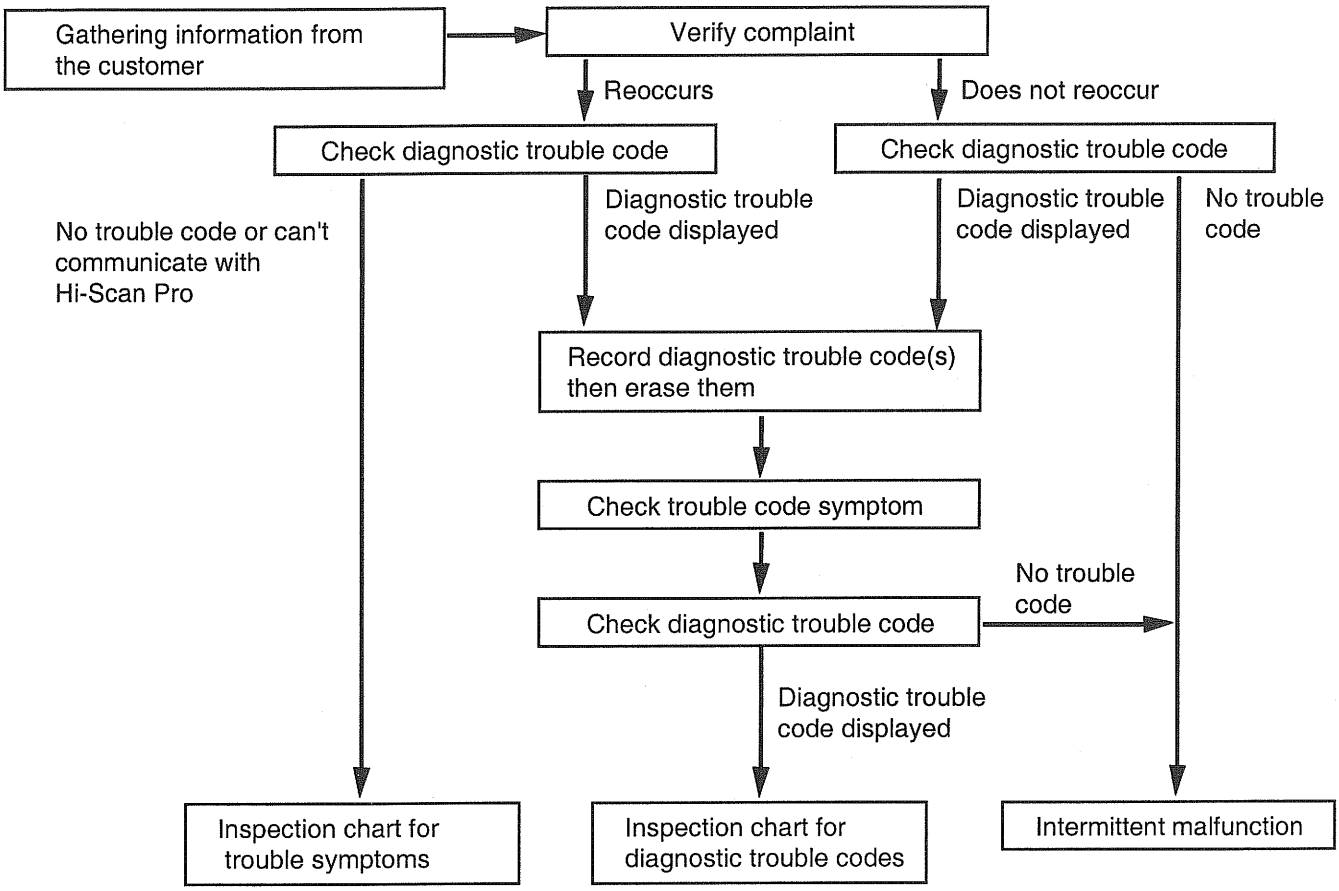
CHECK PROCEDURES

1. Connect the Hi-Scan Pro DLC to the vehicle's data link connector located underneath the dash panel.
2. Turn the ignition key to the "ON" position and turn the Hi-Scan Pro ON.
3. Perform the SRS diagnosis according to the vehicle model configuration.
4. If a fault code is assured, then replace the component. Never attempt to repair the component.
5. If the Hi-Scan Pro finds that a component of the system is faulty, there is a possibility that the fault is not in the component, but in SRS wiring or connector.



ERLB005D

DIAGNOSTIC TROUBLESHOOTING FLOW ERNC0310



ERA9035A

AIRBAG SQUIB RESISTANCE LIMITS

DAB

$R \leq 0.83\Omega$	Resistance too low	Fault definitely detected
$1.47\Omega \leq R \leq 3.89\Omega$	Resistance whithin tolerance	Definitely no fault detected
$R \geq 5.44\Omega$	Resistance too high	Fault definitely detected
$0.83\Omega < R < 1.47\Omega$ $3.89\Omega < R < 5.44\Omega$	Tolerance band	Fault may or may not be detected

PAB, SAB, BPT

$R \leq 0.83\Omega$	Resistance too low	Fault definitely detected
$1.47\Omega \leq R \leq 2.83\Omega$	Resistance whithin tolerance	Definitely no fault detected
$R \geq 4.31\Omega$	Resistance too high	Fault definitely detected
$0.83\Omega < R < 1.47\Omega$ $2.83\Omega < R < 4.31\Omega$	Tolerance band	Fault may or may not be detected

INSPECTION CHART FOR DIAGNOSTIC TROUBLE CODE ERNC0330

OPTIONS : DAB + PAB + SAB + BPT

DTC No.	Fault description
B1111	Battery voltage too high
B1112	Battery voltage too low
B1345	Driver airbag (DAB), open circuit
B1346	Driver airbag (DAB), Resistance too high
B1347	Driver airbag (DAB), Resistance too low
B1348	Driver airbag (DAB), Short to GND
B1349	Driver airbag (DAB), Short to Battery
B1351	Passenger airbag (PAB), open circuit
B1352	Passenger airbag (PAB), Resistance too high
B1353	Passenger airbag (PAB), Resistance too low
B1354	Passenger airbag (PAB), Short to GND
B1355	Passenger airbag (PAB), Short to Battery
B1360	Driver seat belt pretensioner (DBPT), open circuit
B1361	Driver seat belt pretensioner (DBPT), Resistance too high
B1362	Driver seat belt pretensioner (DBPT), Resistance too low
B1363	Driver seat belt pretensioner (DBPT), Short to GND
B1364	Driver seat belt pretensioner (DBPT), Short Battery
B1366	Passenger seat belt pretensioner (PBPT), open circuit
B1367	Passenger seat belt prestensioner (PBPT), Resistance too high
B1368	Passenger seat belt prestensioner (PBPT), Resistance too low
B1369	Passenger seat belt prestensioner (PBPT), Short to GND
B1370	Passenger seat belt prestensioner (PBPT), Short to Battery
B1377	Driver side airbag (DSAB), open circuit
B1378	Driver side airbag (DSAB), Resistance too High
B1379	Driver side airbag (DSAB), Resistance t0o Low
B1380	Driver side airbag (DSAB), Short to GND
B1381	Driver side airbag (DSAB), Short to Battery
B1382	Passenger side airbag (PSAB), Resistance too high
B1383	Passenger side airbag (PSAB), Resistance too low
B1384	Passenger side airbag (PSAB), Short to GND
B1385	Passenger side airbag (PSAB), Short to Battery
B1386	Passenger side airbag (PSAB), Open circuit
B1400	Satellite left side sensor defect
B1403	Satellite right side sensor defect
B1409	Satellite left side sensor communication error

DTC No.	Fault description
B1410	Satellite right side sensor communication error
B1414	Satellite left side sensor wrong ID
B1415	Satellite right side sensor wrong ID
B1620	Airbag unit internal failure
B1651	Crash redcorded driver side airbag
B1652	Crash recorded passenger side airbag
B1658	Belt pretensioner 6 times deployment
B1660	Crash recorded driver airbag
B1662	Driver belt pretensioner deployment commanded
B1663	Crash recorded passenger airbag
B1664	Passenger belt pretensioner deployment commanded
B2503	Warning indicator circuit open or short to GND
B2504	Warning indicator circuit short to battery.

NOTE

- *The DAB is located in the steering wheel.*
- *The PAB is located in the crash pad.*
- *The DSAB is located in the left side of driver's seat.*
- *The PSAB is located in the right side of passenger's seat.*

ERKB0400

CIRCUIT INSPECTION

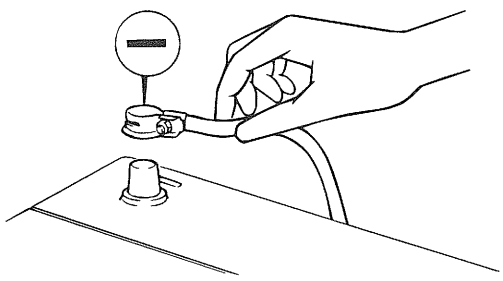
DTC	B1111	Battery voltage too high
	B1112	Battery voltage too low

CIRCUIT DESCRIPTION

The SRS is equipped with a voltage-increase or decrease circuit (DC-DC converter) in the SRSCM in case the source voltage goes down or up. When the battery voltage is down or up the voltage-increase or decrease circuit (DC-DC converter) function will increase or decrease the voltage of the SRS to normal voltage. The diagnosis system malfunction display for this circuit is different to other circuits. When the SRS warning lamp remains lit up and the DTC is a B1111 or B1112 code, battery voltage too high or low is indicated. When voltage returns to normal, the SRS warning light automatically goes off and a malfunction is no longer indicated.

INSPECTION PROCEDURE

1. Preparation
   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.
   2) Remove the DAB module.
   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.
   4) Disconnect the SRSCM connector.

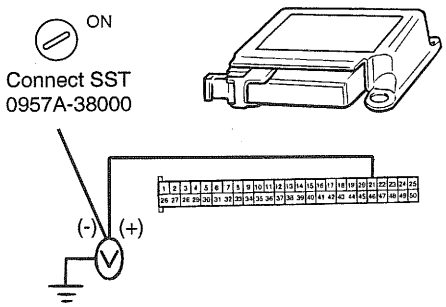


EADA011A

⚠ *CAUTION*

Place the DAB with the front surface facing upward.

2. Check source voltage.
   1) Connect the negative (-) terminal cable to the battery.
   2) Turn the ignition switch ON.



ERKB002B

[CHECK]

Measure voltage between the battery supply terminal 21 of the SRS connector and body ground.

LIMIT : 10-16.5V

NG → Check the harness between the battery and the SRSCM. Check the battery and charging system

OK ↓

ERJB040A

3. Does the SRS warning light turn off ?
[PREPARATION]

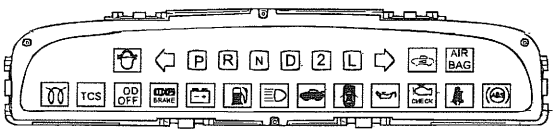
1) Turn the ignition switch to LOCK.

2) Connect the DAB module.

3) Connect the PAB connector, left and right side airbag, belt pretensioner and satellite connectors.

4) Connect the SRSCM connector.

5) Turn the ignition switch ON.



KTNB001P

[CHECK]

Check that the SRS warning light goes off.

NG → Check for DTCs. If a DTC is output, perform troubleshooting for the DTC. If B1111 or B1112 is output, replace the SRSCM.

OK ↓

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB040B

ERNC0410

CIRCUIT INSPECTION

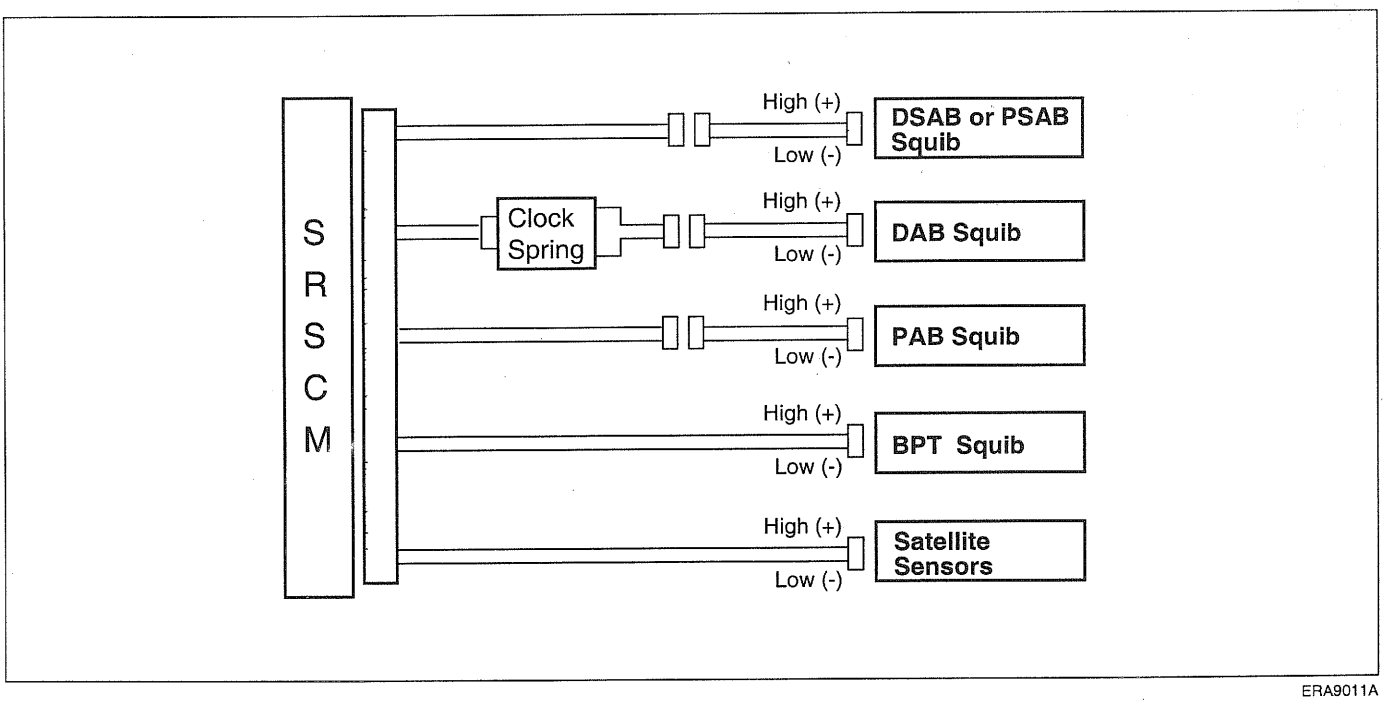
DTC	B1348	DAB Short to ground
	B1354	PAB Short to ground
	B1363	DBPT Short to ground
	B1369	PBPT Short to ground
	B1380	DSAB Short to ground
	B1384	PSAB Short to ground

CIRCUIT DESCRIPTION

The squib circuit consists of the SRSCM, clock spring, DAB, PAB, SAB, BPT, and satellite sensors. It causes the SRS to deploy when the SRS deployment conditions are satisfied. The above DTCs are recorded when a short to ground is detected in the squib circuit.

DTC Detecting Condition	Trouble Area
• Short circuit in squib wire harness (to ground) • Squib malfunction • Clock spring malfunction • SRSCM malfunction	• DAB squib • PAB squib • DSAB squib • PSAB squib • BPT squib • Clock spring • SRSCM • Wire harness

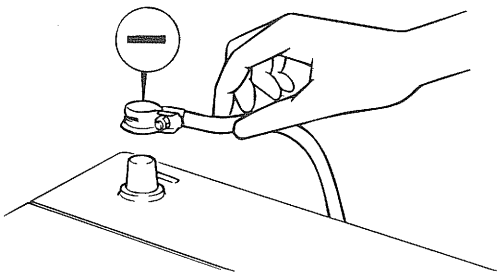
WIRING DIAGRAM



ERA9011A

INSPECTION PROCEDURE

1. Preparation
   Preparation
   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.
   2) Remove the DAB module.
   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.
   4) Disconnect the SRSCM connector.

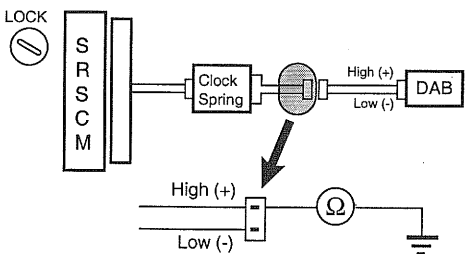


EADA011A

⚠ ***CAUTION***

Place the DAB with the front surface facing upward.

2. Check DAB squib circuit.



ERA9011B

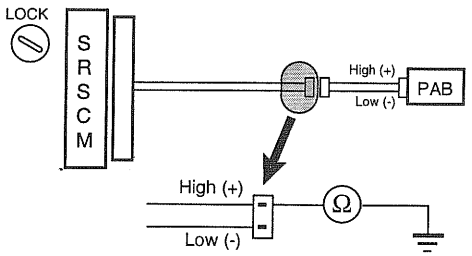
[CHECK]
For the connector (on the clock spring side) between the clock spring and the DAB, measure the resistance between the DAB high and body ground.
Resistance : ∞

NG ➔ Go to step "11"

OK
↓
Go to step "7"

ERKB041A

3. Check the PAB squib circuit.



ERA9011C

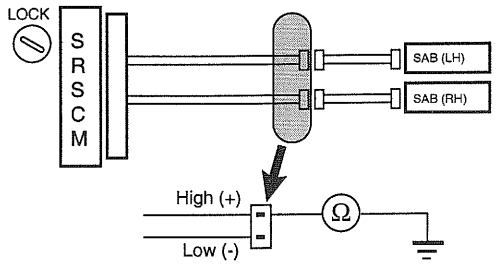
[CHECK]
For the connector (on the SRSCM side) between the SRSCM and the PAB, measure the resistance between the PAB high and body ground.
Resistance : ∞

NG ➔ Repair or replace the harness or the connector between the SRSCM and the PAB.

OK
↓
Go to step "8"

ERKB041B

4. Check the PSAB and DSAB squib circuit.



ERA9011D

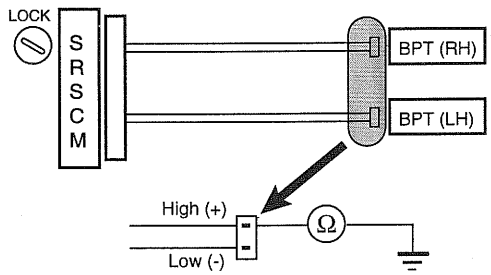
[CHECK]
For the connector (on the SRSCM side) between the SRSCM and the SAB, measure the resistance between the SAB high and body ground.
Resistance : ∞

NG → Repair or replace the harness between the SRSCM and the SAB.

OK ↓
Go to step "9"

ERKB041C

5. Check the BPT squib circuit.



ERA9011E

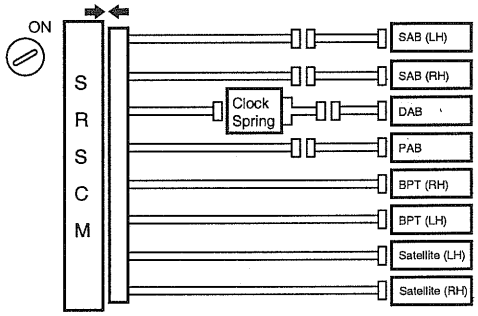
[CHECK]
For the connector (on the SRSCM side) between the SRSCM and the BPT, measure the resistance between the BPT high and body ground.
Resistance : ∞

NG → Repair or replace the harness between the SRSCM and the BPT.

OK ↓
Go to step "10"

ERKB041D

6. Check the SRSCM.
[PREPARATION]
1. Connect the connector to the SRSCM.
2. Using a service wire, connect the DAB high and the DAB low to the clock spring side connector between the clock spring and the DAB.
3. Using a service wire, connect the PAB high and low on the SRSCM side of the connector between the SRSCM and the PAB.
4. Connect the SAB and the BPT by the same method.
5. Connect the negative (-) terminal cable to the battery, and wait least 30 seconds.



ERA9011G

[CHECK]
1. Turn the ignition switch to ON, and wait at least 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using Hi-Sacn Pro, check the DTC.
There is no DTC.

[HINT]
Codes other than these ones may be output at this time, but they are not relevant to this check.

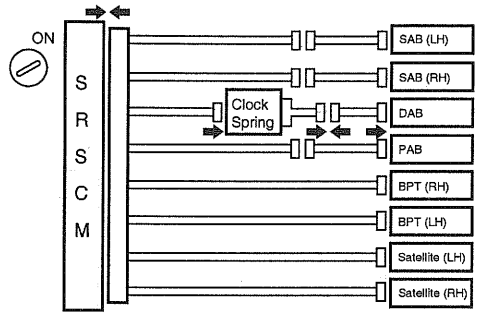
NG → Replace the SRSCM.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041F

7. Check the DAB squib.
[PREPARATION]
1. Turn the ignition switch to LOCK.
2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
3. Connect the the DAB connector.
4. Connect the negative (-) terminal cable to the battery, and wait for 30 seconds.



ERA9011I

[CHECK]
1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using the Hi-scan, check the DTC.
There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

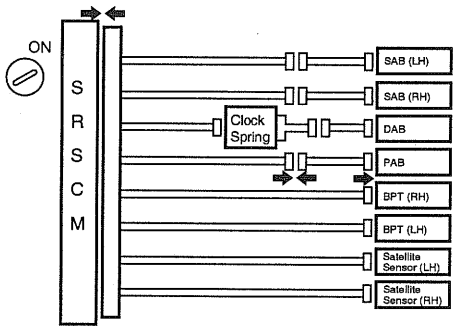
NG → Replace the DAB.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041G

8. Check the PAB squib.
[PREPARATION]
1. Turn the ignition switch to LOCK.
2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
3. Connect the the PAB connector.
4. Connect the negative (-) terminal cable from the battery, and wait for 30 seconds.



ERA9011J

[CHECK]
1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using the Hi-Sacn Pro, check the DTC.
There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

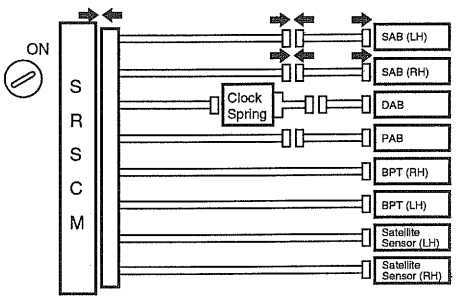
NG → Replace the PAB.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041H

9. Check the SAB squib.
   [PREPARATION]
   1. Turn the ignition switch to LOCK.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
   3. Connect the the SAB connector.
   4. Connect the negative (-) terminal cable from the battery, and wait for 30 seconds.



ERNC041A

   [CHECK]
   1. Turn the ignition switch to ON, and wait for at least 30 seconds.
   2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
   3. Turn the ignition switch to LOCK, and wait for 30 seconds.
   4. Turn the ignition switch ON, and wait for 30 seconds.
   5. Using the Hi-Sacn Pro, check the DTC.
      There is no DTC.

   [HINT]
   Codes other than these may be output at this time, but they are not relevant to this procedure.

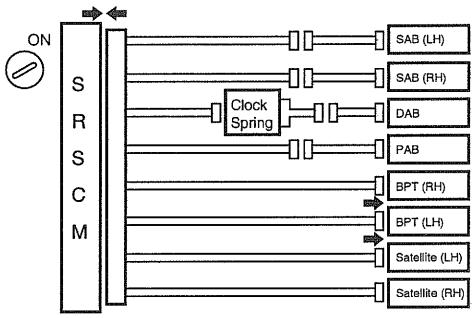
NG → Replace the SAB.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041I

10. Check the BPT squib.
    [PREPARATION]
    1. Turn the ignition swich to LOCK.
    2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
    3. Connect the BPT connector.
    4. Connect the negative (-) terminal cable from the battery, and wait for 30 seconds.



ERA9011K

    [CHECK]
    1. Turn the ignition switch to ON, and wait for 30 seconds.
    2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
    3. Turn the ignition switch to LOCK, and wait for 30 seconds.
    4. Turn the ignition switch to ON, and wait for 30 seconds.
    5. Using the Hi-Scan Pro, check the DTC.
       There is no DTC.

    [HINT]
    Codes other than these may be output at this time, but they are not relevant to this procedure.

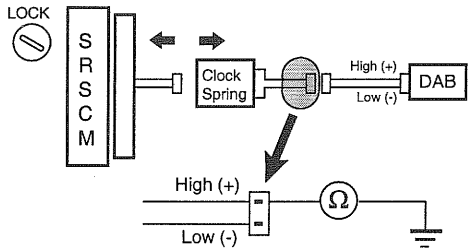
NG ➔ Replace the BPT.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041J

11. Check the clock spring circuit.
[PREPARATION]
Disconnect the connector between the SRSCM and the clock spring.



ERKB010B

[CHECK]
Measure the resistance between the DAB high on the clock spring side of the connector between the clock spring and the DAB and body ground.
Resistance : ∞

NG ➔ Replace the clock spring.

OK

Repair or replace the harness or the connector between the SRSCM and the clock spring.

ERDA027R

ERNC0420

CIRCUIT INSPECTION

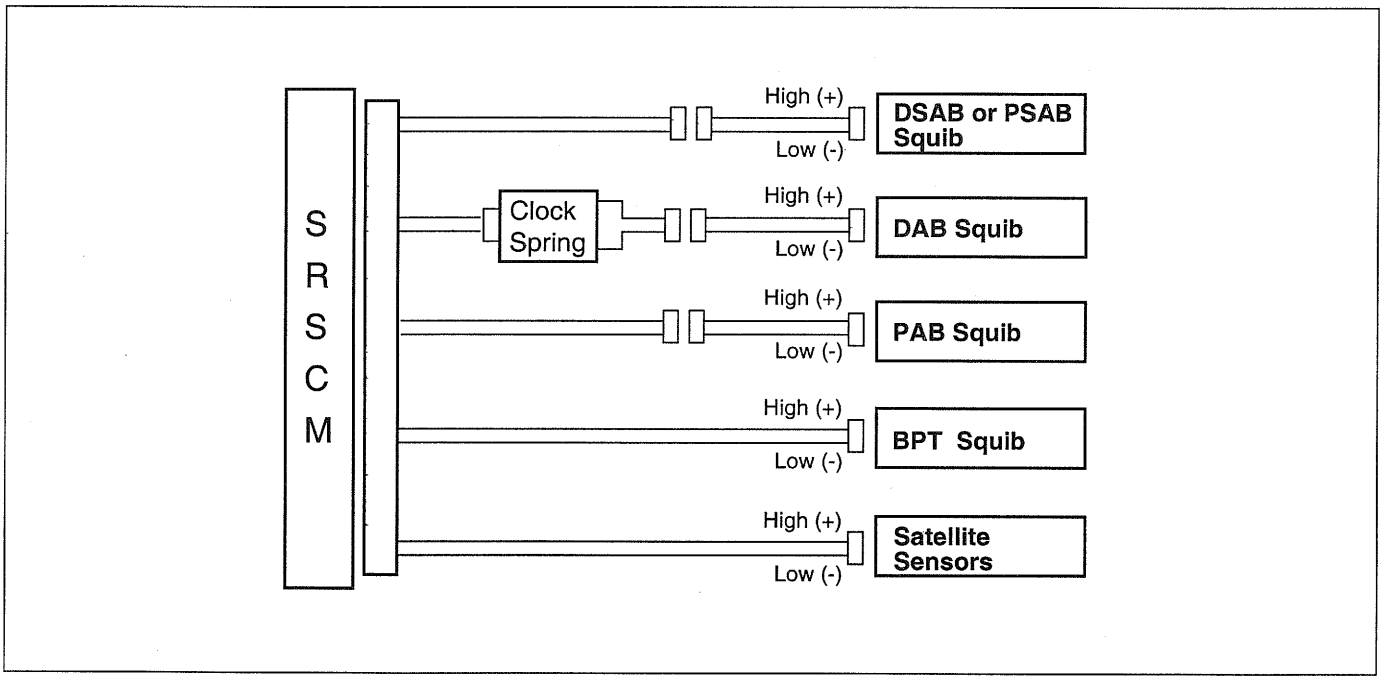
DTC	B1349	DAB Short to battery
	B1355	PAB Short to battery
	B1364	BPT (Driver) Short to battery
	B1370	BPT (Passenger) Short to battery
	B1381	SAB (Driver) short to battery
	B1385	SAB (Passenger) short to battery

CIRCUIT DESCRIPTION

The squib circuit consists of the SRSCM, clock spring, DAB, PAB, SAB, BPT and satellite sensor. It causes the SRS to deploy when the SRS deployment conditions are satisfied. The above DTCs are recorded when a B+ short is detected in the squib circuit.

DTC Detecting Condition	Trouble Area
• Short circuit in squib wire harness (to B+) • Squib malfunction • Spiral cable malfunction • SRSCM malfunction	• DAB squib • PAB squib • DSAB or PSAB squib • BPT squib • Wire harness

WIRING DIAGRAM



ERA9011A

INSPECTION PROCEDURE

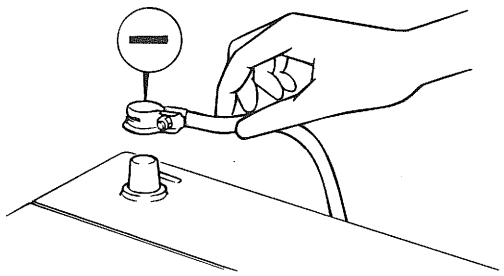
1. Preparation

   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.

   2) Remove the DAB module.

   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.

   4) Disconnect the SRSCM connector.

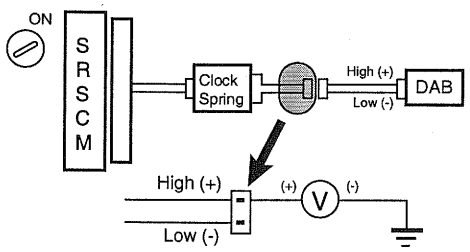


EADA011A

⚠ ***CAUTION***

Place the DAB with the front surface facing upward.

2. Check the DAB squib circuit.



ERA9011O

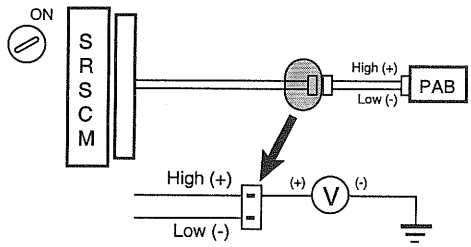
[CHECK]
For the connector (on the clock spring side) between the clock spring and the DAB, measure the voltage between the DAB high and body ground.
Voltage : 0 V

NG ➔ Go to step "11"

OK
↓
Go to step "7"

ERKB041A

3. Check the PAB squib circuit.



ERA9011P

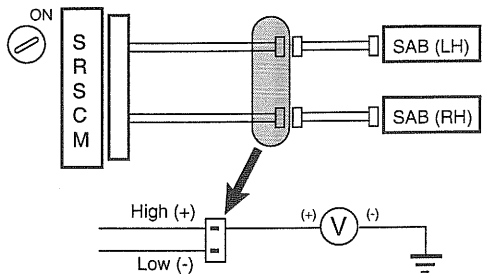
[CHECK]
For the connector (on the SRSCM side) between the SRSCM and the PAB, measure the voltage between the PAB high and body ground.
Voltage : 0 V

NG ➔ Repair or replace the harness between the SRSCM and the PAB.

OK
↓
Go to step "8"

ERKB042A

4. Check the SAB squib circuit.



ERA9011Q

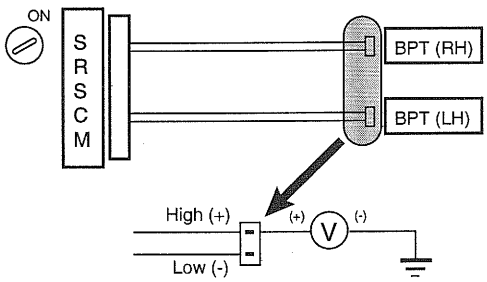
[CHECK]
For the connector (on the SRSCM side) between the SRSCM and the SAB, measure the voltage between the SAB high and body ground.
Voltage : 0 V

NG → Repair or replace the harness between the SRSCM and the SAB.

OK ↓
Go to step "9"

ERKB041C

5. Check the BPT squib circuit.



ERA9011R

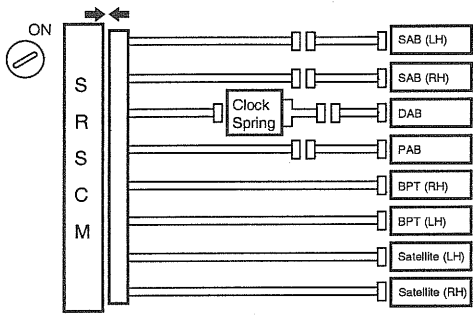
[CHECK]
For the connector between the SRSCM and the BPT, measure the voltage between the BPT high and body ground.
Voltage : 0 V

NG → Repair or replace the harness between the SRSCM and the BPT.

OK ↓
Go to step "10"

ERKB041D

6. Check the SRSCM.



ERA9011G

[PREPARATION]
1. Connect the connector to the SRSCM.
2. Using a service wire, connect the DAB high and low on the clock spring side of the connector between the clock spring and the DAB.
3. Using a service wire, connect the PAB high and low on the SRSCM side of the connector between the SRSCM and the PAB.
4. Using a service wire, connect the SAB high and low on the SRSCM side connector between the SRSCM and the SAB.
5. Using a service wire, connect the BPT high and low on the SRSCM side connector between the SRSCM and the BPT.
6. Using a service wire, connect the satellite high and low on the SRSCM side connector between the SRSCM and the satellite sensor.
7. Connect negative (-) battery cable to the battery, and wait at least 30 seconds.

[CHECK]
1. Turn the ignition switch to ON, and wait at least 30 seconds.
2. Clear the malfunction code stored in memory with Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait at least 30 seconds.
4. Turn the ignition switch to ON, and wait at least 30 seconds.
5. Using Hi-Scan Pro, check the DTC.
   There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this check.

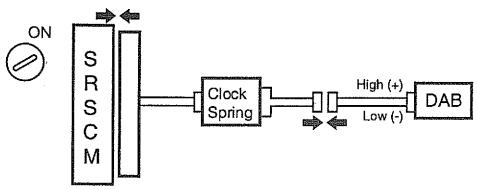
NG → Replace the SRSCM.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041F

7. Check the DAB squib.
[PREPARATION]
1. Turn the ignition switch to LOCK.
2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
3. Connect the DAB connector.
4. Connect the negative (-) terminal cable to the battery, and wait for 30 seconds.



ERA9011U

[CHECK]
1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using Hi-Scan Pro, check the DTC.
There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

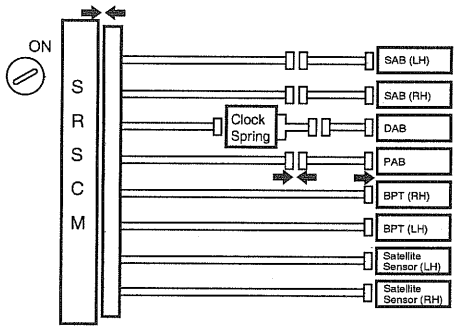
NG → Replace the DAB.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041G

8. Check the PAB squib.
[PREPARATION]
1. Turn the ignition switch to LOCK.
2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
3. Connect the the PAB connector.
4. Connect the negative (-) terminal cable from the battery, and wait for 30 seconds.



ERA9011J

[CHECK]
1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch ON, and wait for 30 seconds.
5. Using the Hi-Sacn Pro, check the DTC.
DTC is not output.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

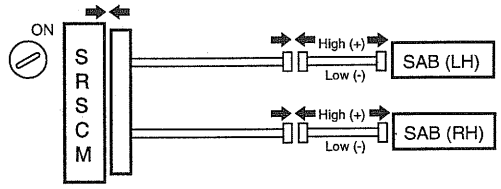
NG → Replace the PAB.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041H

9. Check the SAB squib.
[PREPARATION]
1. Turn the ignition switch to LOCK.
2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
3. Connect the SAB connector.
4. Connect the negative (-) terminal cable from the battery, and wait for 30 seconds.



ERA9011W

[CHECK]
1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch ON, and wait for 30 seconds.
5. Using the Hi-Sacn Pro, check the DTC.
There is no DTC.

[HINT]
Codes other than these ones may be output at this time, but they are not relevant to this checking procedure.

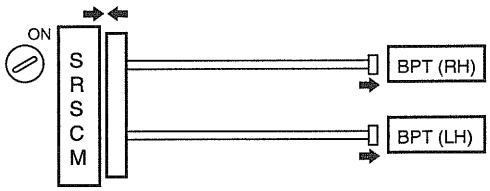
NG → Replace the SAB.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041I

10. Check the BPT squib.
[PREPARATION]
1. Turn the ignition swich to LOCK.
2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
3. Connect the the BPT connector.
4. Connect the negative (-) terminal cable from the battery, and wait for 30 seconds.



ERA9011X

[CHECK]
1. Turn the ignition switch to ON, and wait for 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using the Hi-Scan Pro check the DTC.
There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

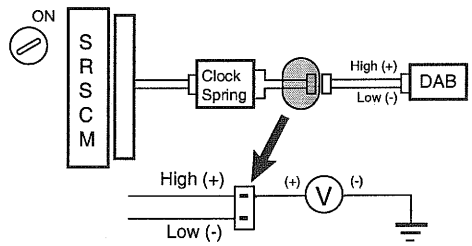
NG ➔ Replace the BPT.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041J

11. Check the clock spring.
[PREPARAION]
1. Turn the ignition switch to LOCK.
2. Disconnect the connector between the SRSCM and the clock spring.



ERA9011O

[CHECK]
Turn the ignition switch to ON, and measure voltage between the DAB high and body ground.
Voltage : 0V

NG ➔ Replace the clock spring.

OK

Repair or replace the harness or the connector between the SRSCM and the clock spring.

ERDA027R

ERNC0430

CIRCUIT INSPECTION

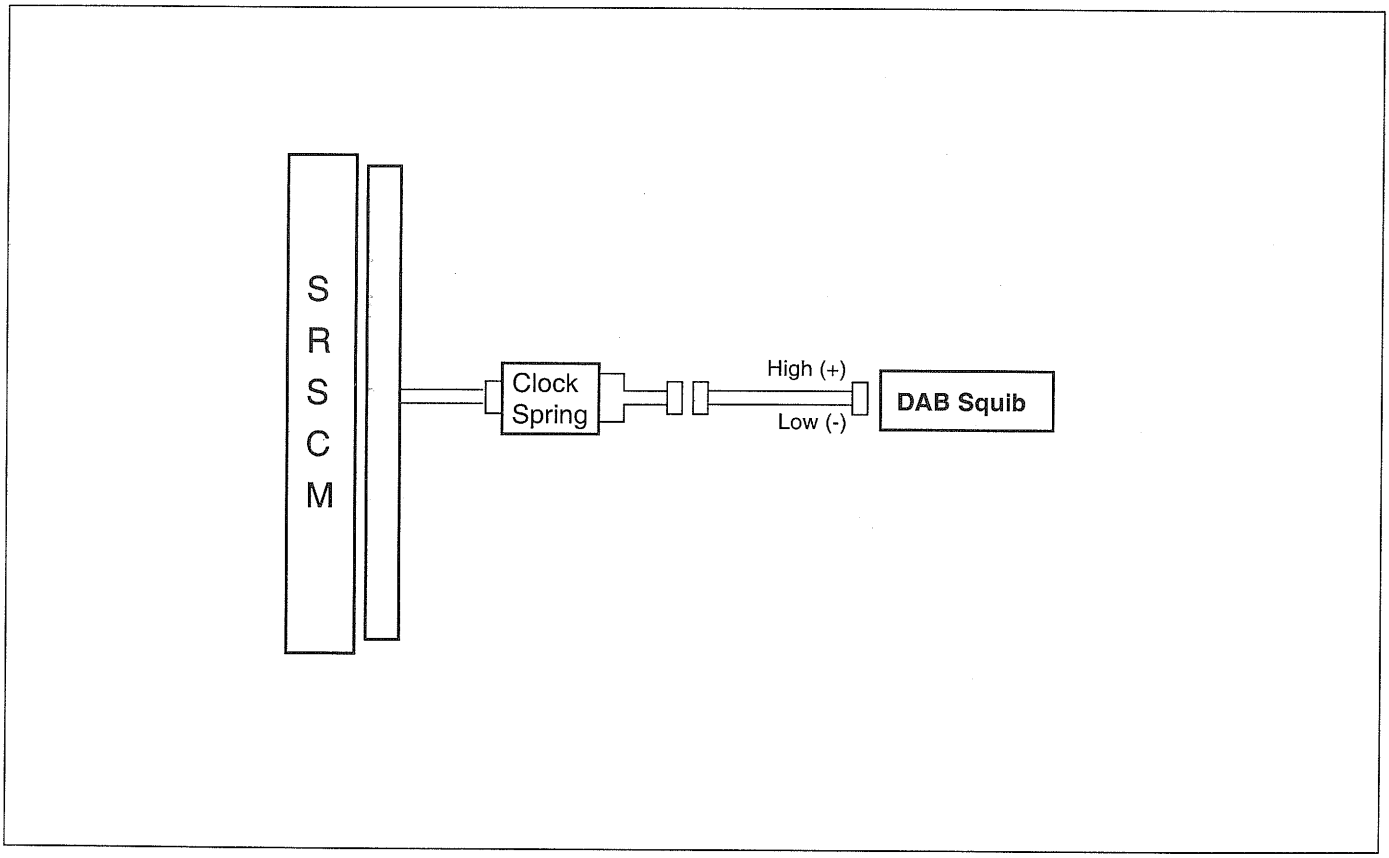
DTC	B1345	DAB open circuit (R = ∞)
	B1346	DAB resistance too high (R ≥ 5.44 Ω)
	B1347	DAB resistance too low (R ≤ 0.83 Ω)

CIRCUIT DESCRIPTION

The DAB squib circuit consists of the SRSCM, the clock spring, the DAB. It causes the airbag to deploy when the airbag deployment conditions are satisfied. The above DTCs are recorded when the DAB circuit is open or the DAB resistance too high or low is detected in the DAB squib circuit.

DTC Detecting Condition	Trouble Area
• Too high or low resistane between DAB high (+) wiring harness and DAB low (-) wiring harness of squib.	• DAB squib
• DAB malfunction • Clock spring malfunction • SRSCM malfunction	• Clock spring • SRSCM • Wire harness

WIRING DIAGRAM



ERA9012A

INSPECTION PROCEDURE

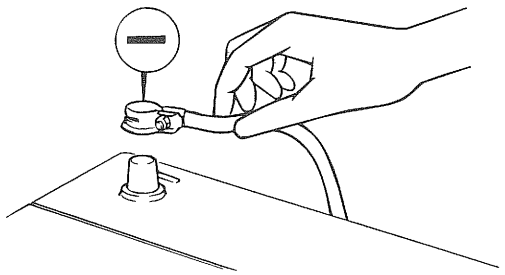
1. Preparation

   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.

   2) Remove the DAB module.

   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.

   4) Disconnect the SRSCM connector.



EADA011A

CAUTION

Place the DAB with the front surface facing upward.

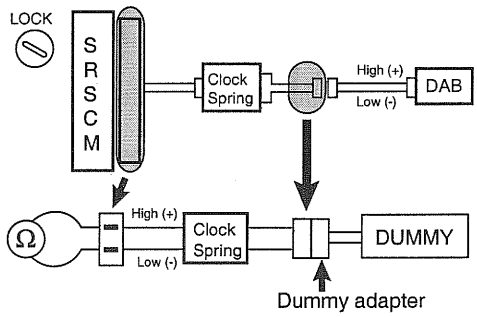
2. Check the DAB resistance.
   [PREPARATION]
   Release the airbag activation prevention mechanism on SRSCM side of airbag squib side. Connect the dummy (0957A-38200) and dummy adapter (0957A-38400) to the clock spring side connector.

CAUTION

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

NOTE

Before checking the resistance, you have to insert the shorting bar insert plastic that is attached to the diagnosis checker into the SRSCM connector.



ERKB010C

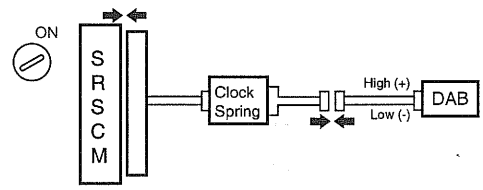
[CHECK]
Measure the resistance between the DAB high (+) and low (-).
1.47 Ω ≤ R ≤ 3.89 Ω

NG → Go to step "4"

OK

ERJB043A

3. Check the DAB squib.
   [PREPARATION]
   1. Turn the ignition switch to LOCK.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
   3. Connect the DAB connector.
   4. Connect the negative (-) terminal cable to the battery, and wait for 30 seconds.



ERA9011U

[CHECK]

1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using Hi-Scan Pro, check the DTC.
   There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

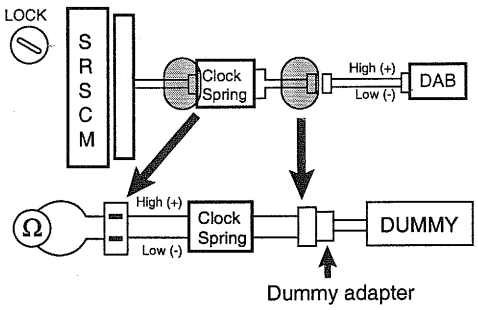
NG ➔ Replace the DAB.

OK
↓
From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041G

4. Check the clock spring.
   [PREPARAION]
   Disconnect the connector between the SRSCM clock spring, and connect the dummy connector (0957A-38200) and dummy adapter (0957A-38400) to the clock spring side connector.

   NOTE
   Before checking the resistance, you have to insert the shorting bar insert plastic that is attached to the diagnosis checker into the SRSCM connector.



ERKB010D

[CHECK]
Measure the resistance between the DAB high (+) and low (-).
1.47 Ω ≤ R ≤ 3.89 Ω

NG ➔ Replace the clock spring.

OK
↓
Repair or replace the harness or the connector between the SRSCM and the clock spring.

ERDA027R

ERNC0440

CIRCUIT INSPECTION

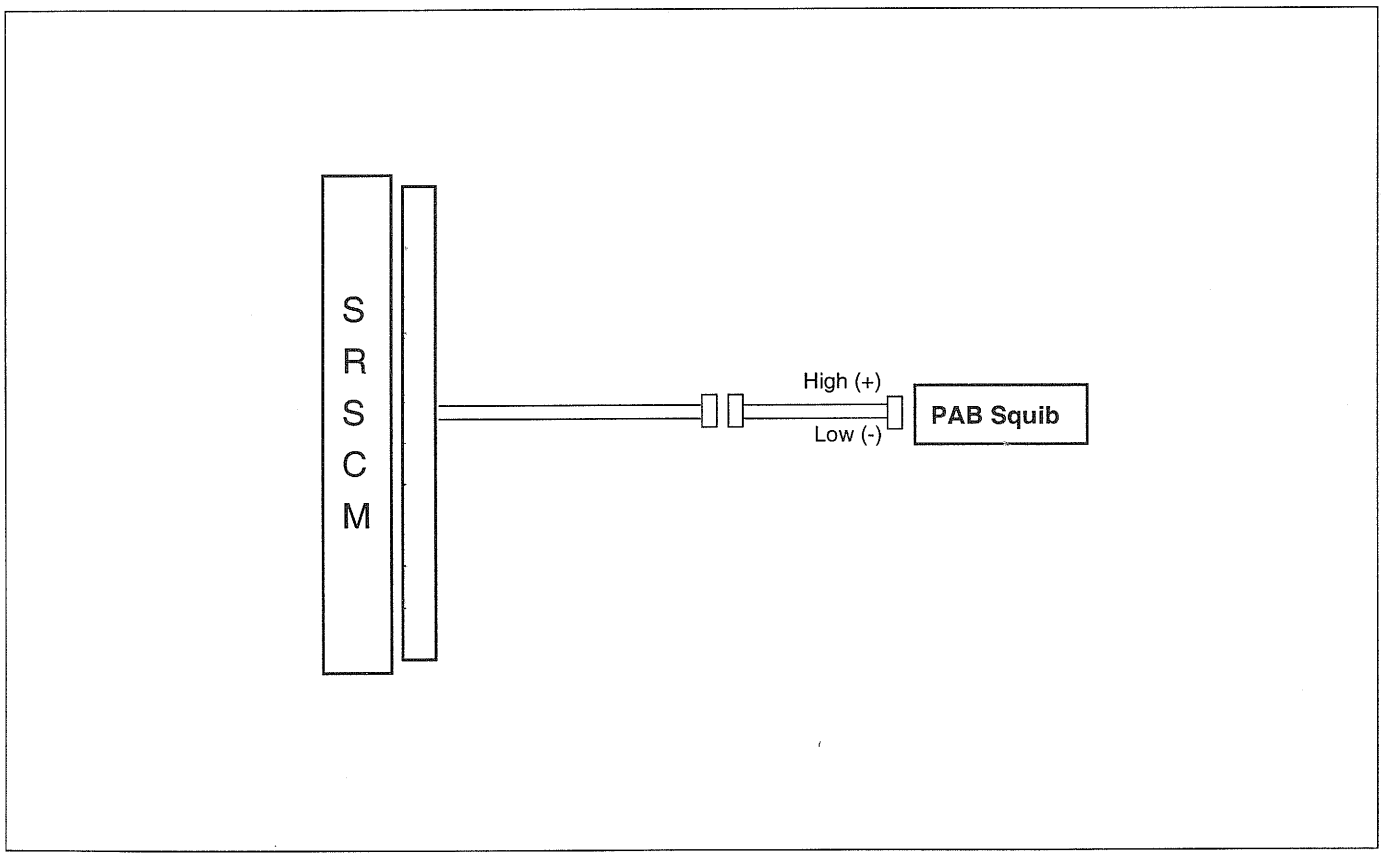
DTC	B1351	PAB open circuit (R = ∞)
	B1352	PAB resistance too high (R ≥ 4.31 Ω)
	B1353	PAB resistance too low (R ≤ 0.83 Ω)

CIRCUIT DESCRIPTION

The PAB squib circuit consists of the SRSCM and PAB. It causes the airbag to deploy when the airbag deployment conditions are satisfied. The above DTCs are recorded when the PAB circuit is open or the PAB resistance too high or low is detected in the PAB squib circuit.

DTC Detecting Condition	Trouble Area
• Too high or low resistance between PAB high (+) wiring harness and PAB low (-) wiring harness of squib.	• PAB squib
• PAB malfunction • SRSCM malfunction	• SRSCM • Wire harness

WIRING DIAGRAM



ERA9012E

INSPECTION PROCEDURE

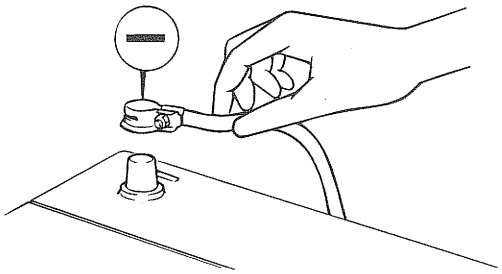
1. Preparation

   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.

   2) Remove the DAB module.

   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.

   4) Disconnect the SRSCM connector.



EADA011A

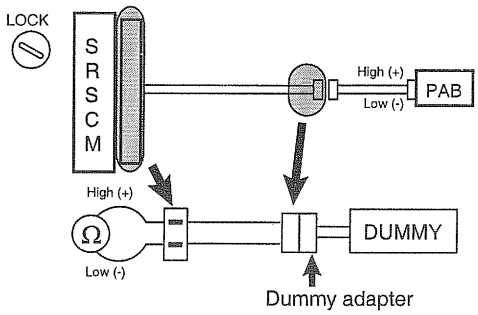
CAUTION

Place the DAB with the front surface facing upward.

2. Check the PAB resistance.
   [PREPARATION]
   Release the airbag activation prevention mechanism on the SRSCM side of the airbag squib side. Connect the dummy (0957A-38200) and dummy adapter (0957A-38300) to PAB connector of the SRSCM connector side.

NOTE

Before checking the resistance, you have to insert the shorting bar insert plastic that is attached to the diagnosis checker into the SRSCM connector.



ERKB010E

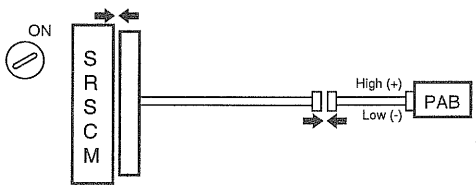
[CHECK]
Measure the resistance between the PAB high (+) and the PAB low (-).
1.47 Ω ≤ R ≤ 2.83 Ω

NG → Repair or replace the harness between the SRSCM and the PAB.

OK

ERJB044A

3. Check the PAB squib.
   [PREPARATION]
   1. Turn the ignition switch to LOCK.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
   3. Connect the PAB connector.
   4. Connect the negative (-) terminal cable to the battery, and wait for 30 seconds.



ERA9011V

[CHECK]

1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using Hi-Scan Pro, check the DTC.
   There is no DTC.

[HINT]

Codes other than these may be output at this time, but they are not relevant to this procedure.

NG → Replace the PAB.

OK

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041H

ERNC0450

CIRCUIT INSPECTION

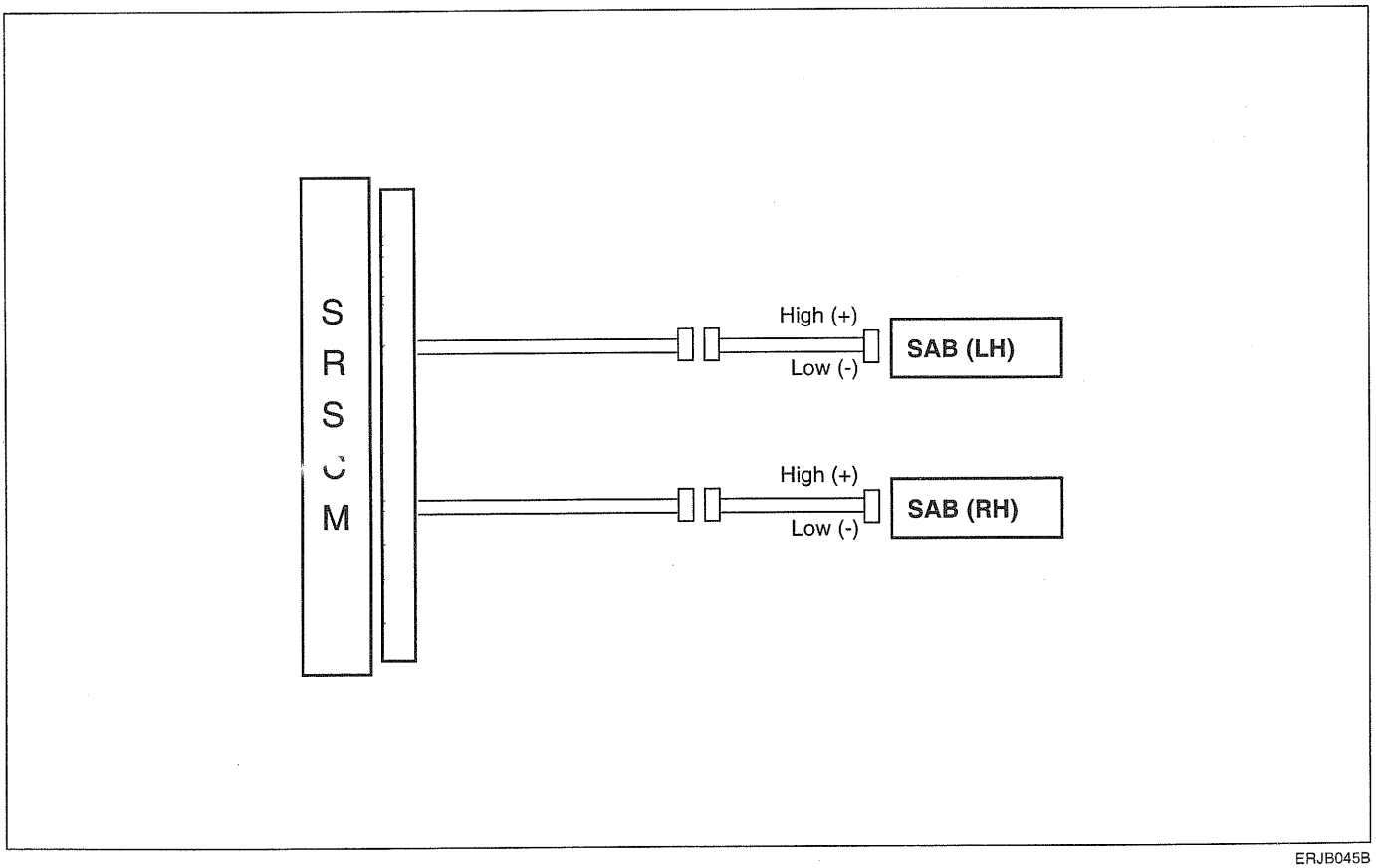
DTC	B1377	DSAB open circuit (R = ∞)
	B1378	DSAB Resistance too high (R ≥ 4.31 Ω)
	B1379	DSAB Resistance too low (R ≤ 0.83 Ω)
	B1382	PSAB Resistance too high (R ≥ 4.31 Ω)
	B1383	PSAB Resistance too low (R ≤ 0.83 Ω)
	B1386	PSAB open circuit (R = ∞)

CIRCUIT DESCRIPTION

The SAB squib circuit consists of the SRSCM and SAB. It causes the airbag to deploy when the airbag deployment conditions are satisfied. The above DTCs are recorded when the SAB circuit is open or the SAB resistance too high or low is detected in the SAB squib circuit.

DTC Detecting Condition	Trouble Area
• Too high or low resistane between SAB high (+) wiring harness and SAB low (-) wiring harness of squib.	• SAB squib
• SAB malfunction • SRSCM malfunction	• SRSCM • Wire harness

WIRING DIAGRAM



ERJB045B

INSPECTION PROCEDURE

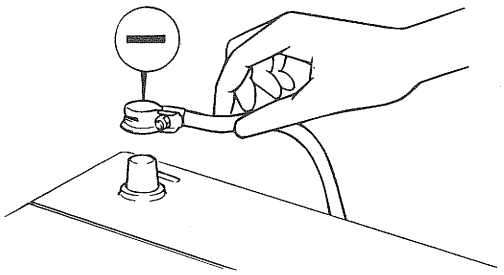
1. Preparation

   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.

   2) Remove the DAB module.

   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.

   4) Disconnect the SRSCM connector.

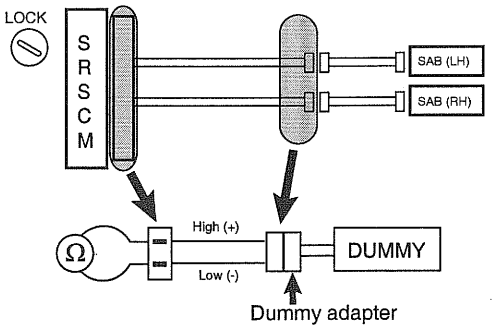


EADA011A

CAUTION

Place the DAB with the front surface facing upward.

2. Check the SAB resistance.
   [PREPARATION]
   Release the airbag activation prevention mechanism on the SRSCM side of the airbag squib side. Connect the dummy (0957A-38200) and dummy adapter (0957A-38300) to the SAB connector of the SRSCM connector side.



ERKB020A

NOTE

Before checking the resistance, you have to insert the shorting bar insert plastic that is attached to the diagnosis checker into the SRSCM connector.

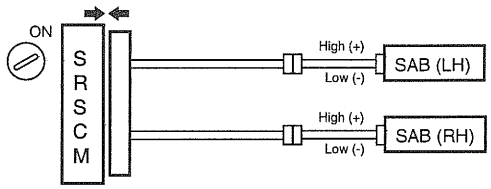
[CHECK]
Measure the resistance between the SAB high (+) and the SAB low (-).
1.47 Ω ≤ R ≤ 2.83 Ω

NG ➔ Repair or replace the harness between the SRSCM and the SAB.

OK ↓

ERJB045A

3. Check the SAB squib.
   [PREPARATION]
   1. Turn the ignition switch to LOCK.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
   3. Connect the SAB connector.
   4. Connect the negative (-) terminal cable to the battery, and wait for 30 seconds.



ERA9012K

[CHECK]
1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using Hi-Scan Pro, check the DTC.
   There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

NG → Replace the SAB.

OK
↓
From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041I

ERNC0460

CIRCUIT INSPECTION

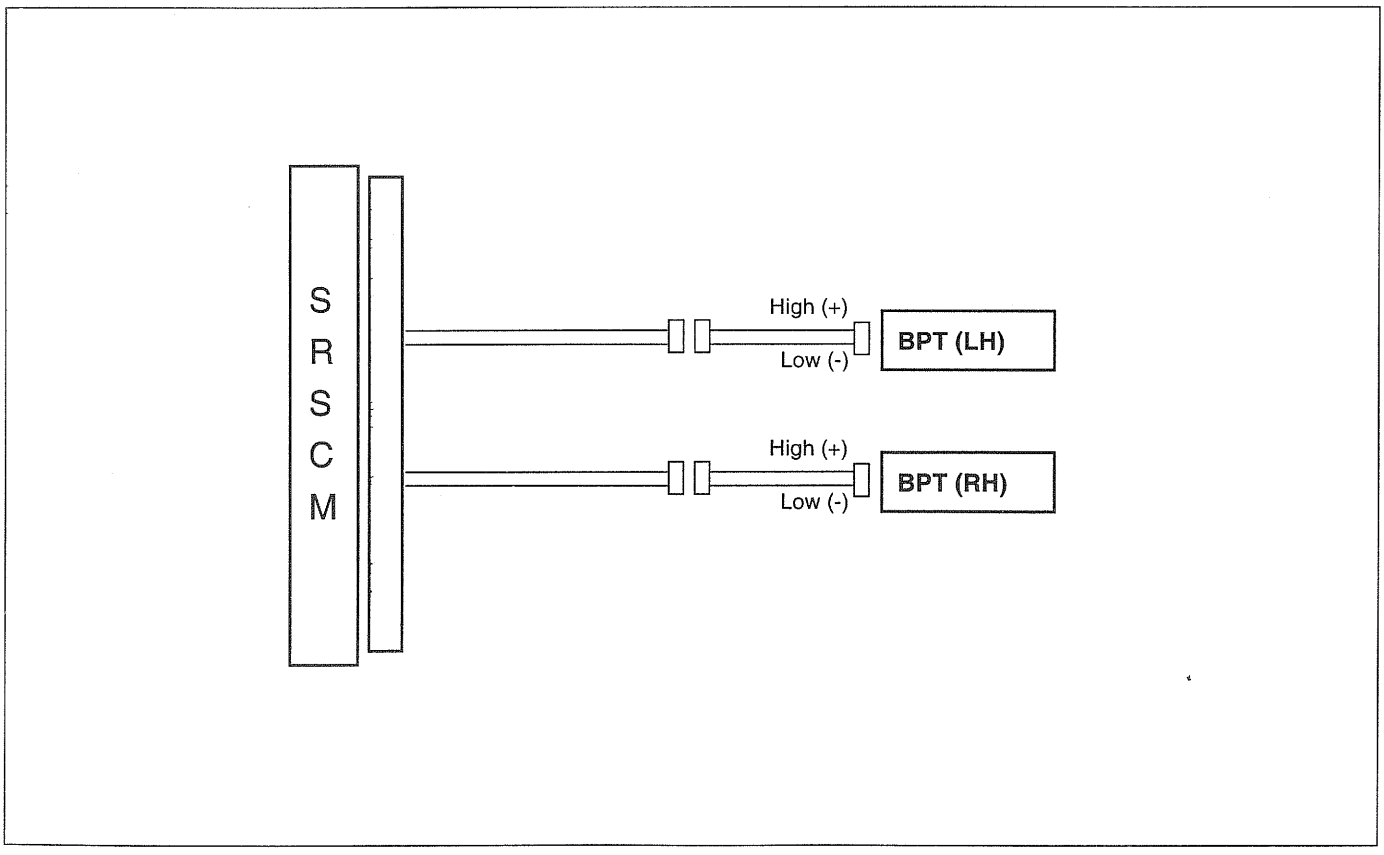
DTC	B1360	DBPT open circuit (R = ∞)
	B1361	DBPT Resistance too high (R ≥ 4.31 Ω)
	B1362	DBPT Resistance too low (R ≤ 0.83 Ω)
	B1366	PBPT open circuit (R = ∞)
	B1367	PBPT Resistance too high (R ≥ 4.31 Ω)
	B1368	PBPT Resistance too low (R ≤ 0.83 Ω)

CIRCUIT DESCRIPTION

The BPT squib circuit consists of the SRSCM and BPT. It causes the airbag to deploy when the airbag deployment conditions are satisfied. The above DTCs are recorded when the BPT circuit is open or the BPT resistance too high or low is detected in the BPT squib circuit.

DTC Detecting Condition	Trouble Area
• Too high or low resistane between BPT high (+) wiring harness and BPT low (-) wiring harness of squib.	• BPT squib
• BPT malfunction • SRSCM malfunction	• SRSCM • Wire harness

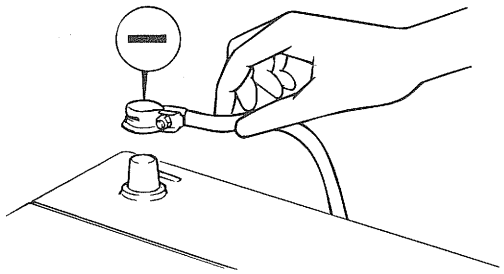
WIRING DIAGRAM



ERJB046A

INSPECTION PROCEDURE

1. Preparation
   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.
   2) Remove the DAB module.
   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.
   4) Disconnect the SRSCM connector.



EADA011A

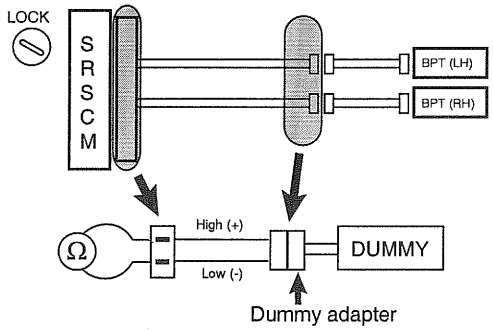
⚠ ***CAUTION***

Place the DAB with the front surface facing upward.

2. Check the BPT resistance.
   [PREPARATION]
   Release the airbag activation prevention mechanism on the SRSCM side of the airbag squib side. Connect the dummy (0957A-38200) and dummy adapter (0957A-38300) to the BPT connector of the SRSCM connector side.

📖 ***NOTE***

Before checking the resistance, you have to insert the shorting bar insert plastic that is attached to the diagnosis checker into the SRSCM connector.



ERJB046D

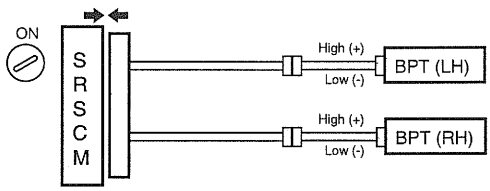
[CHECK]
Measure the resistance between the BPT high (+) and the BPT low (-).
1.47 Ω ≤ R ≤ 2.83 Ω

NG ➔ Repair or replace the harness between the SRSCM and the BPT.

OK ↓

ERJB046B

3. Check the BPT squib.
   [PREPARATION]
   1. Turn the ignition switch to LOCK.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
   3. Connect the BPT connector.
   4. Connect the negative (-) terminal cable to the battery, and wait for 30 seconds.



ERJB046C

[CHECK]

1. Turn the ignition switch to ON, and wait for at least 30 seconds.
2. Clear the malfunction code stored in the memory with the Hi-Scan Pro.
3. Turn the ignition switch to LOCK, and wait for 30 seconds.
4. Turn the ignition switch to ON, and wait for 30 seconds.
5. Using Hi-Scan Pro, check the DTC.
   There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this procedure.

NG → Replace the BPT.

OK
↓
From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041J

ERNC0470

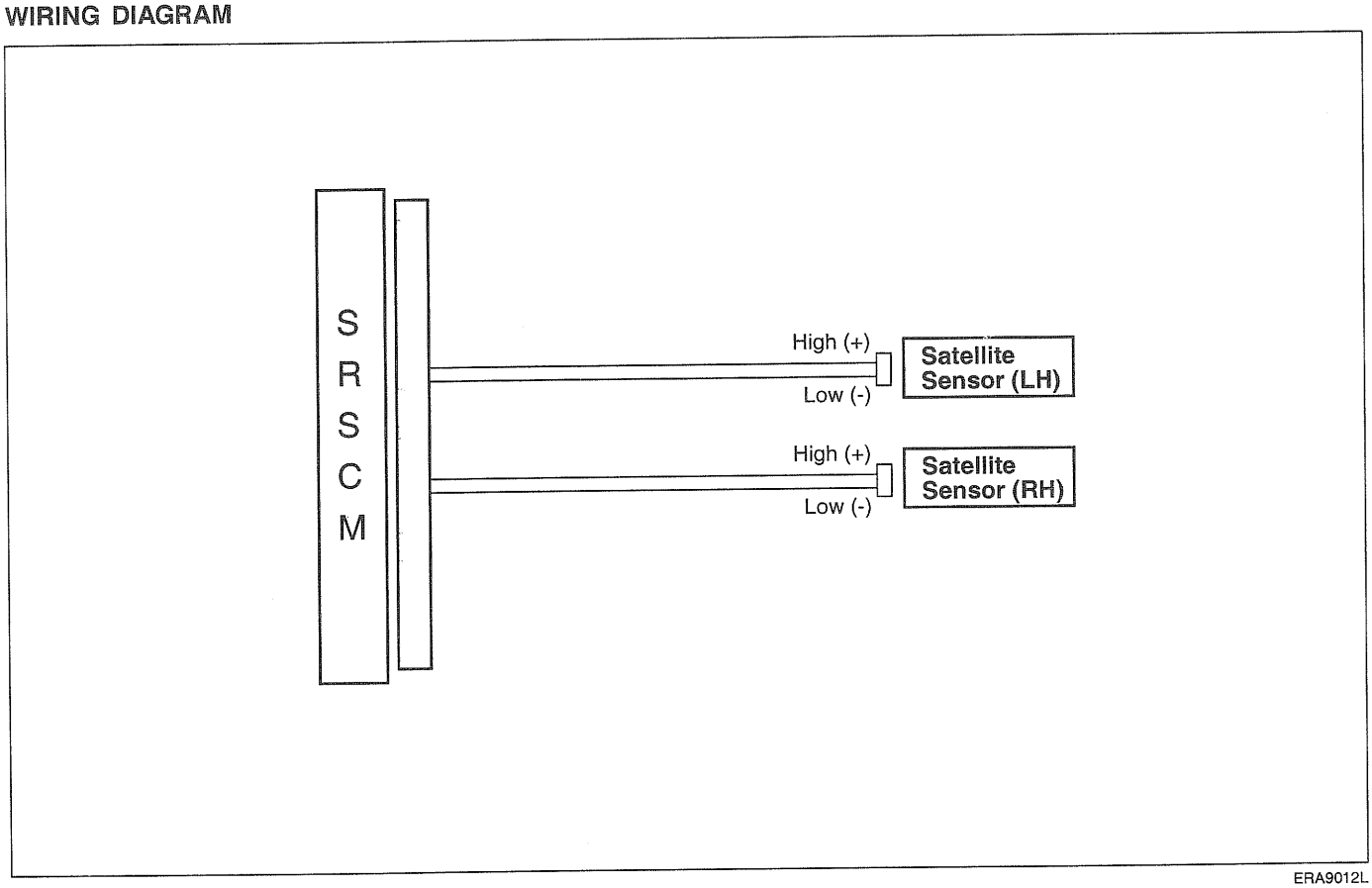
CIRCUIT INSPECTION

DTC	B1400	Satellite left side defect
	B1403	Satellite right side defect
	B1409	Satellite left communication error
	B1410	Satellite right communication error

CIRCUIT DESCRIPTION

The release system for the airbag consists of the SRSCM and two satellites - one on the left - hand side and one on the right. The above DTCs are recorded when a defect or communication error of the satellite is detected in the satellite circuit.

WIRING DIAGRAM



ERA9012L

INSPECTION PROCEDURE

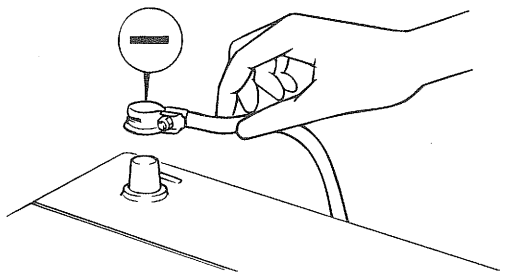
1. Preparation

   1) Disconnect the negative (-) terminal cable from the battery, and wait at least 30 seconds.

   2) Remove the DAB module.

   3) Disconnect the connectors of the PAB, left and right side airbags, belt pretensioners and satellite sensors.

   4) Disconnect the SRSCM connector.

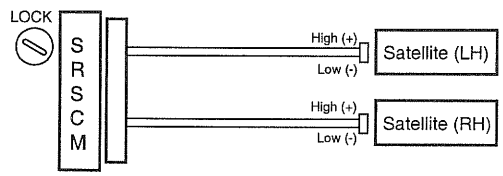


EADA011A

⚠ ***CAUTION***

Place the DAB with the front surface facing upward.

2. Check satellite circuit (communication error).



ERA9012M

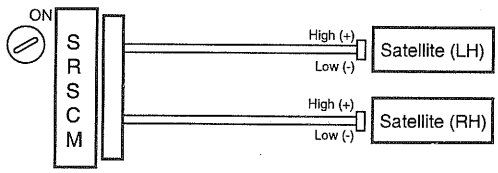
[PREPARATION]
Check continuity between the SRSCM connector and the satellite connector as high (+) and high, low (-) and low (-).
OK : Continuity

NG ➔ Repair or replace the harness between the SRSCM and the Satellite sensor.

OK ↓

ERJB047A

3. Check the satellite sensor (defect).
[PREPARATION]
   1. Turn the ignition switch to LOCK.
   2. Disconnect the negative (-) terminal cable from the battery, and wait for 30 seconds.
   3. Connect the satellite connector.
   4. Connect the negative (-) terminal cable to the battery, and wait for 30 seconds.



ERA9012N

[CHECK]
   1. Turn the ignition switch to ON, and wait for at least 30 seconds.
   2. Clear the malfunction code stored in the memory of the Hi-Scan Pro.
   3. Turn the ignition switch to LOCK, and wait for 30 seconds.
   4. Turn the ignition switch to ON, and wait for 30 seconds.
   5. Using the Hi-Scan Pro, check DTC.
      There is no DTC.

[HINT]
Codes other than these may be output at this time, but they are not relevant to this check.

NG ➔ Replace the Satellite sensor.

OK ↓

From the results of the above inspection, the malfunctioning part can now be considered normal.

ERJB041K

ERNC0490

CIRCUIT INSPECTION

DTC	B2503	Warning indicator circui5t open or short to GND
	B2504	Warning indicator circuit short to Battery

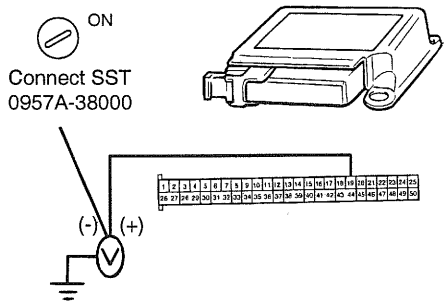
CIRCUIT DESCRIPTION

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

INSPECTION PROCEDURE

1. Check the fuse.
   [PREPARATION]
   1. Remove airbag fuse and airbag warning lamp fusefrom the junction block.
   2. Inspect the state of the fuses.
   3. Replace if necessary.

2. Check the SRS warning lamp circuit.
   [PREPARATION]
   1. Connect the negative (-) terminal cable to the battery.
   2. Turn the ignition switch to ON.



ERKB049A

[CHECK]
1. Measure voltage at the harness side connector of the SRSCM.
   Voltage : 10-16.5 V

NG ➔ Check the SRS warning light bulb/repair the SRS warning light circuit.

OK ↓

ERDA032A

2. Check the SRS SRI (Service Reminder Indicator).
   OK : SRS SRI ON

NG ➔ If no fault is found in wiring or connector, replace the SRSCM.

OK ↓

From the results of the above inspection, the part can now be considered to be normal.

ERDA032B

ERNC0500

CIRCUIT INSPECTION

DTC	B1414	Satellite left side sensor wrong ID
	B1415	Satellite right side sensor wrong ID
	B1620	Airbag unit internal failure
	B1651	Crash recorded driver side airbag
	B1652	Crash recorded passenger side airbag
	B1658	Belt pretensioner 6 times deployment
	B1660	Crash recorded driver airbag
	B1662	Driver belt pretensioner deployment commanded
	B1663	Crash recorded passenger airbag
	B1664	Belt pretensioner deployment commanded

CIRCUIT DESCRIPTION

SRSCM MALFUNCTION

The SRSCM shall also cyclically monitor the following :

1. Functional readiness of the firing circuit activation transistors.
2. Adequacy of deployment energy reserves.
3. Safing sensor integrity : detection of faulty closure.
4. Plausibility of accelerometer signal.
5. Operation of SRSCM components.

The timely completion of all tests is monitored by a separate hardware watchdog. During normal operation, the watch dog is triggered periodically by the SRSCM : If the SRSCM fails to trigger the watchdog, the watchdog will reset the SRSCM and activate the SRI (Service Reminder Indicator). The SRSCM must be replaced once the fault codes mentioned above are confirmed.

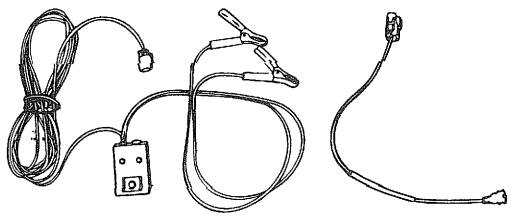
AIRBAG MODULE DISPOSAL

FIELD DEPLOYMENT PROCEDURES ERJB0600

⚠ *CAUTION*

When handling the deployed airbag be careful that not the dust enters your eyes and always wear gloves to avoid direct contact with the dust.

AIRBAG REMOTE DEPLOYMENT DEVICES

Tool, Number, Name	Use
Deployment tool (0957A-34100A) SRS DEPLOYMENT ADAPTER HARNESS DAB, BPT : 0957A-38500 PAB, SAB : 0957A-38100  ERDA034A	Deployment inside the vehicle (if the vehicle will no longer be driven)

AIRBAG MODULE DISPOSAL PROCEDURES

Before disposing of a vehicle equipped with an airbag, or prior to disposing of the airbag module, be sure to first follow the procedures described below to deploy the airbag.

DISPOSAL PLAN

Take the following disposal steps.

CASE		DISPOSAL PLAN
Abnormal problems in airbag module		Deploy and discard
Car scrapping	DAB, PAB, BPT	Deploy the airbag module with the SST
Crash (Deployed)		Discard

UNDEPLOYED AIRBAG MODULE DISPOSAL ERKB0610

⚠ *CAUTION*

1. *If the vehicle is to be scrapped, junked, or otherwise disposed of, deploy the airbag inside the vehicle.*
2. *Since there is a loud noise when the airbag is deployed, avoid residential areas whenever possible. If anyone is nearby, give warning of the impending noise.*
3. *Since a large amount of smoke is produced when the airbag is deployed, select a well-ventilated site. Moreover, never attempt the test near a fire or smoke sensor.*

DEPLOYMENT INSIDE THE VEHICLE

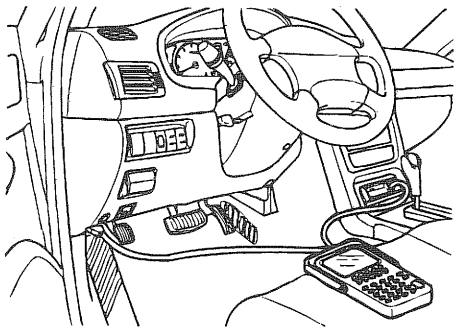
when vehicle will no longer be driven

1. Open all windows and doors of the vehicle. Move the vehicle to an isolated spot.
2. Disconnect the negative (-) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle

⚠ *CAUTION*

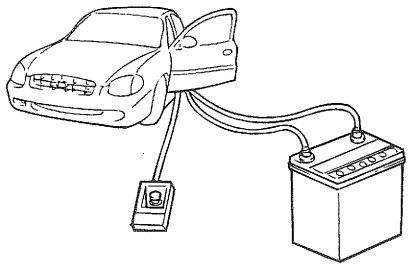
Wait at least 30 seconds after disconnecting the battery cable before doing any further work.

3. Remove the center crash pad side cover.
4. Remove Airbag SRSCM connector.
5. Connect deployment tool to the connector of each module.



ERLB005D

6. At location as far away from the vehicle as possible, press the push button (removed from the vehicle) to deploy the airbag.



ERA9009B

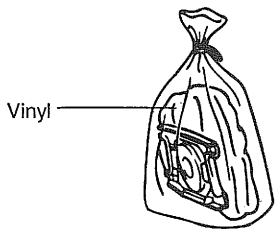
⚠ *CAUTION*

1. *Before deploying the airbag in this manner, first check to be sure that there is no one in or near the vehicle. Wear safety glasses.*
2. *The inflator will be quite hot immediately following the deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from airbag deployment. See Deployed Airbag Module Disposal Procedures for post-deployment handling instructions.*
3. *If the airbag fails to deploy when the procedures above are followed, do not go near the module. Contact your local distributor.*

DEPLOYED AIRBAG MODULE DISPOSAL PROCEDURES ERJB0620

After deployment, the airbag module should be disposed of in the same manner as any other scrap part, except that the following points should be carefully noted during disposal.

1. The inflator will be quite hot immediately following deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it.
2. Do not put water or oil on the airbag after deployment.
3. There may be adhered to the deployed airbag module, material that could irritate the eyes and/or skin, so wear gloves and safety glasses when handling a deployed airbag module. If despite these precautions, the material does get into your eyes or on your skin, immediately rinse the affected area with a large amount of clean water. If any irritation develops, seek medical attention.
4. Tightly seal the airbag module in a strong vinyl bag for disposal.



ERA9009C

5. Be sure to always wash your hands after completing this operation.