

SUPPLEMENTAL RESTRAINT SYSTEM

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GENERAL DESCRIPTION

The TACOMA is equipped with an SRS (Supplemental Restraint System), which comprises a driver airbag. Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deploy during servicing, possibly leading to a serious accident. Further, if a mistake is made in servicing the SRS, it is possible the SRS may fail to operate when required. Before performing services (including removal or installation of parts, inspection or replacement), be sure to read the following items carefully, then follow the correct procedure described in the repair manual.

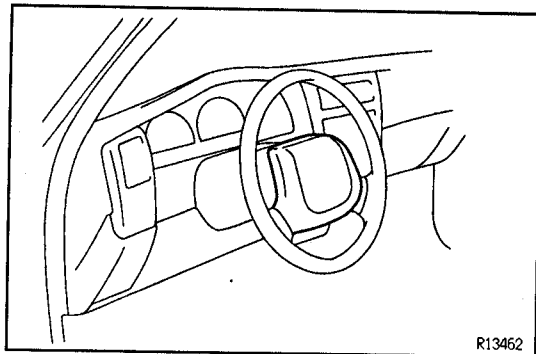
1. Malfunction symptoms of the SRS are difficult to confirm, so the DTCs become the most important source of information when troubleshooting. When troubleshooting the SRS, always inspect the DTCs before disconnecting the battery. (See page RS-26)
2. **Work must be started after 90 seconds from the time the ignition switch is turned to the "LOCK" position and the negative (—) terminal cable is disconnected from the battery.** (The SRS is equipped with a back-up power source so that if work is started within 90 seconds of disconnecting the negative (—) terminal cable from the battery, the SRS may deploy.)

When the negative (—) terminal cable is disconnected from the battery, the memory of the clock and audio system will be canceled. So before starting work, make a record of the contents memorized by the audio memory system. When work is finished, reset the audio systems as before and adjust the clock. To avoid erasing the memory of each memory system, never use a back-up power supply from outside the vehicle.

3. Even in cases of a minor collision where the SRS does not deploy, the steering wheel pad and airbag sensor assembly should be inspected. (See pages RS-8 and 17)
4. Never use SRS parts from another vehicle. When replacing parts, replace them with new parts.
5. Before repairs, remove the airbag sensor if shocks are likely to be applied to the sensor during repairs.
6. Never disassemble and repair the steering wheel pad or airbag sensor assembly in order to reuse it.
7. If the steering wheel pad or airbag sensor assembly has been dropped, or if there are cracks, dents or other defects in the case, bracket or connector, replace them with new ones.
8. Do not expose the steering wheel pad or airbag sensor assembly directly to hot air or flames.
9. Use a volt/ohmmeter with high impedance (10 k Ω /V minimum) for troubleshooting the system's electrical circuits.
10. Information labels are attached to the periphery of the SRS components. Follow the instructions on the notices.
11. After work on the SRS is completed, check the SRS warning light. (See page RS-26)
12. If the vehicle is equipped with a mobile communication system, refer to the precaution in the IN section.

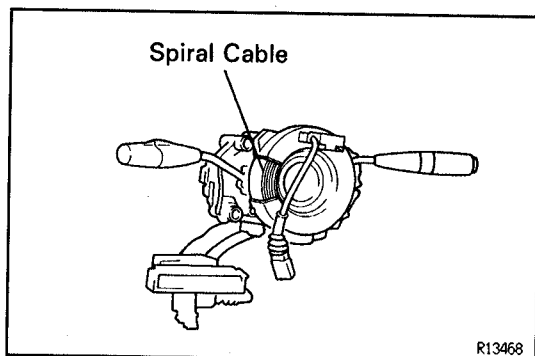
R80AN-01

OPERATION FUNCTION OF COMPONENTS



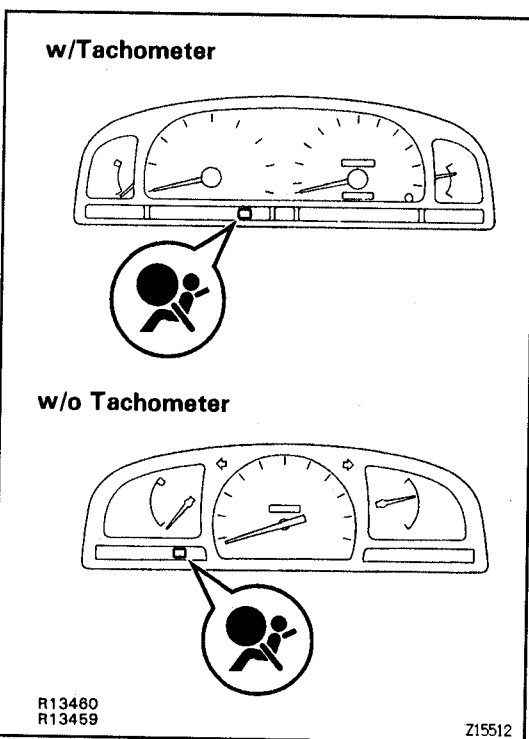
1. STEERING WHEEL PAD (with AIRBAG)

The inflator and bag of the SRS are stored in the steering wheel pad and cannot be disassembled. The inflator contains a squib, igniter charge, gas generator, etc., and inflates the bag when instructed by the airbag sensor assembly.



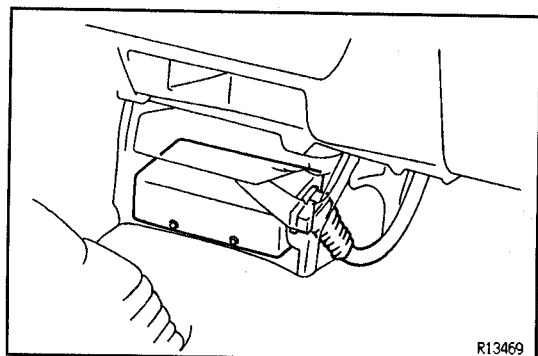
2. SPIRAL CABLE (in COMBINATION SWITCH)

A spiral cable is used as an electrical joint from the vehicle body side to the steering wheel.



3. SRS WARNING LIGHT

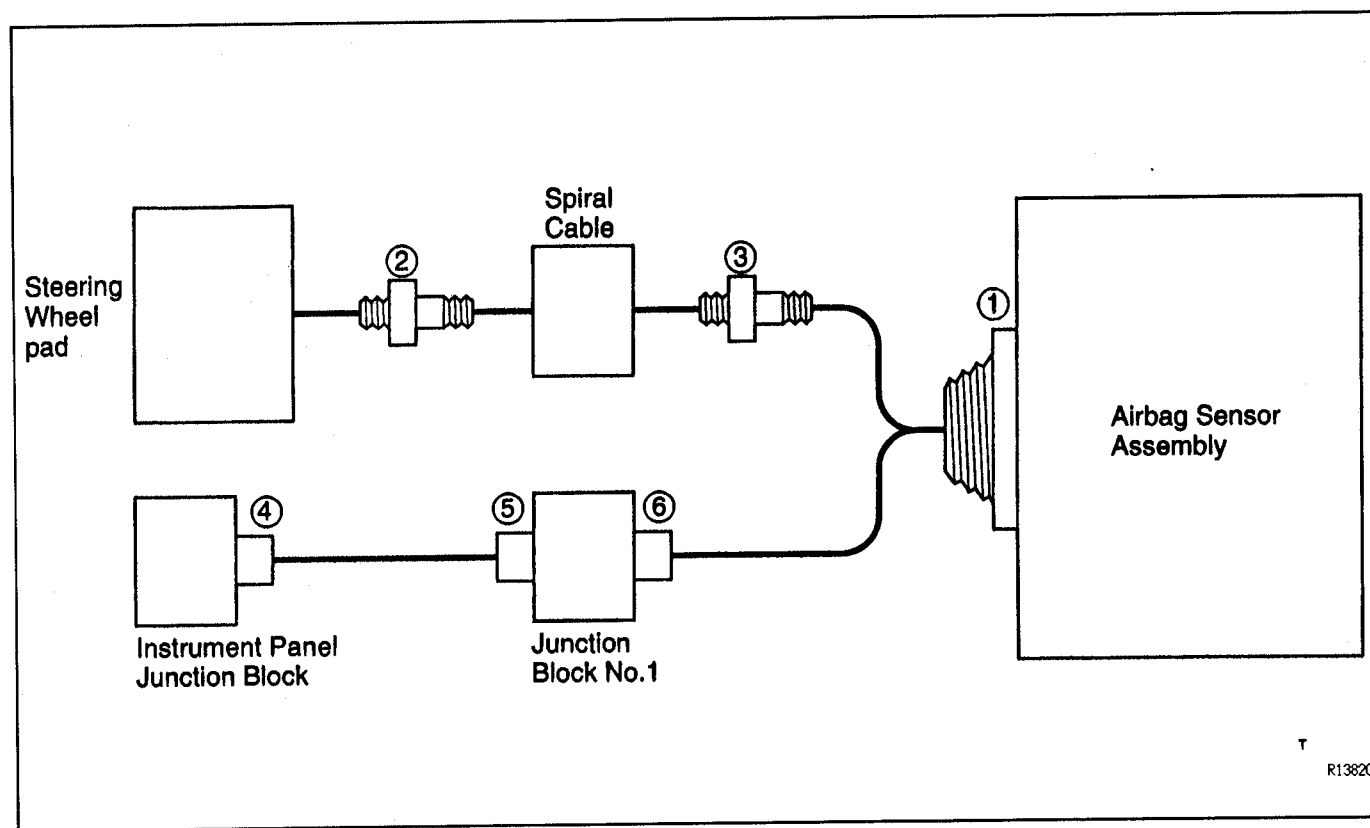
The SRS warning light is located on the combination meter. It goes on to alert the driver of trouble in the system when a malfunction is detected in the airbag sensor assembly. In normal operating condition, when the ignition switch is turned to the ACC or ON position, the light goes on for about 6 seconds and then goes off.



4. AIRBAG SENSOR ASSEMBLY

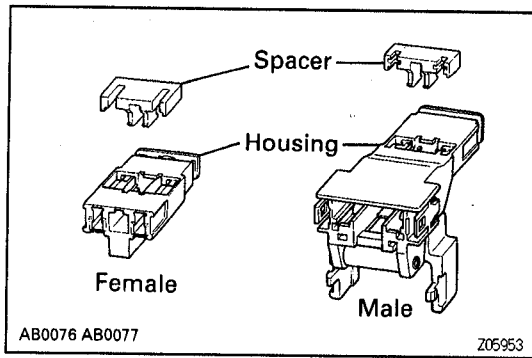
The airbag sensor assembly is mounted on the floor inside the airbag sensor cover. The airbag sensor assembly consists of a airbag sensor, safing sensor, diagnosis circuit and ignition control, drive circuit, etc. It receives signals from the airbag sensor and judges whether the SRS must be activated or not.

5. SRS CONNECTORS



No.	Item	Application
(1)	Terminal Twin-lock Mechanism	Connectors ①, ②, ③, ④, ⑤, ⑥
(2)	Airbag Activation Prevention Mechanism	Connectors ②, ③
(3)	Electrical Connection Check Mechanism	Connectors ①
(4)	Connector Twin-lock Mechanism	Connectors ②, ③

All connectors in the SRS are colored yellow to distinguish them from other connectors. Connectors having special functions and specifically designed for the SRS are used in the locations shown above to ensure high reliability. These connectors use durable gold-plated terminals.

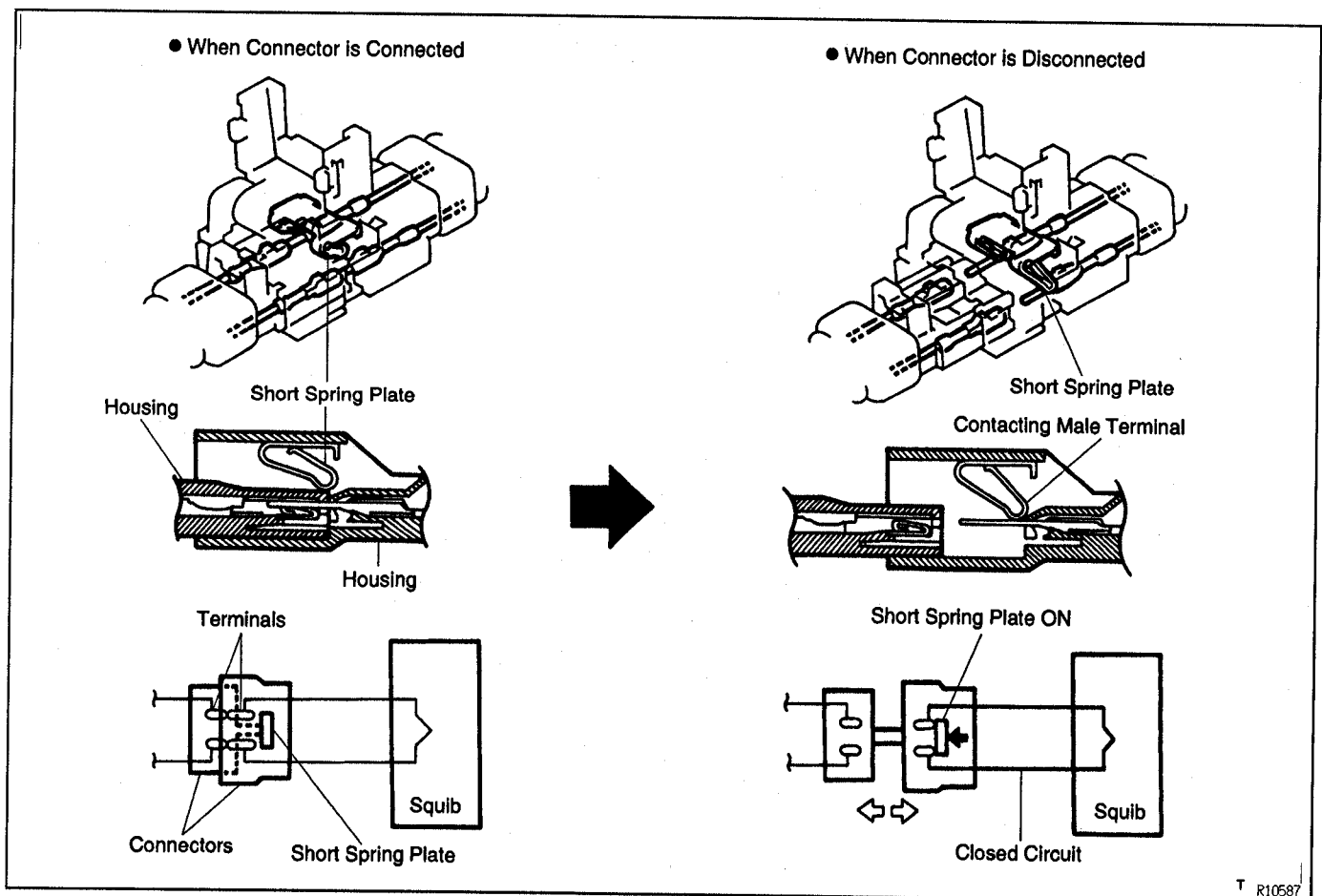


(1) Terminal Twin—Lock Mechanism

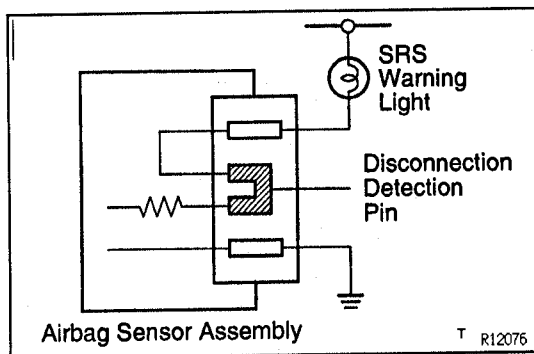
Each connector has a two-piece construction consisting of a housing and a spacer. This design secures the locking of the terminal by two locking devices (the retainer and the lance) to prevent terminals from coming out.

(2) Airbag Activation Prevention Mechanism

Each connector contains a short spring plate. When the connector is disconnected, the short spring plate automatically connects the power source and grounding terminals of the squib.

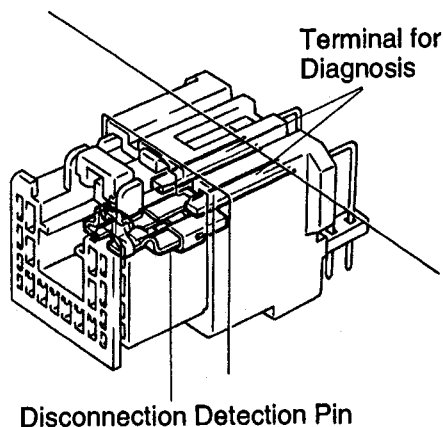


HINT: The type of connector shown above is used for connectors ② and ③, in the diagram on the preceding page.

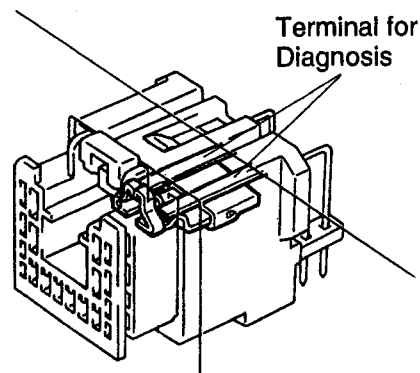


- (3) **Electrical Connection Check Mechanism**
This mechanism electrically checks if connectors are connected correctly and completely. The electrical connection check mechanism is designed so that the disconnection detection pin connects with the diagnosis terminals when the connector housing lock is locked.

● Half Connection



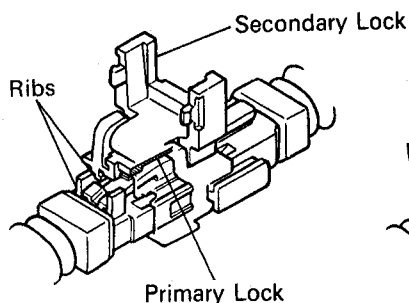
● Complete Connection



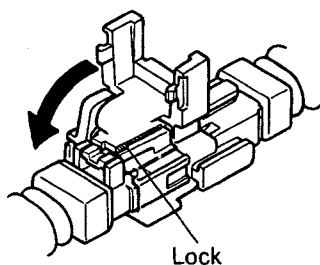
R13061

HINT: The illustration shows connector ①.

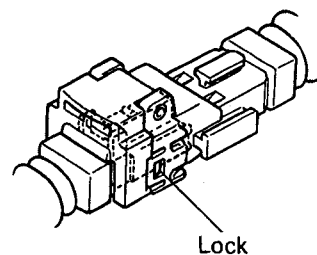
- (4) **Connector Twin—Lock Mechanism**
With this mechanism, connectors (male and female connectors) are locked by 2 locking devices to increase connection reliability. If the primary lock is incomplete, ribs interfere and prevent the secondary lock.



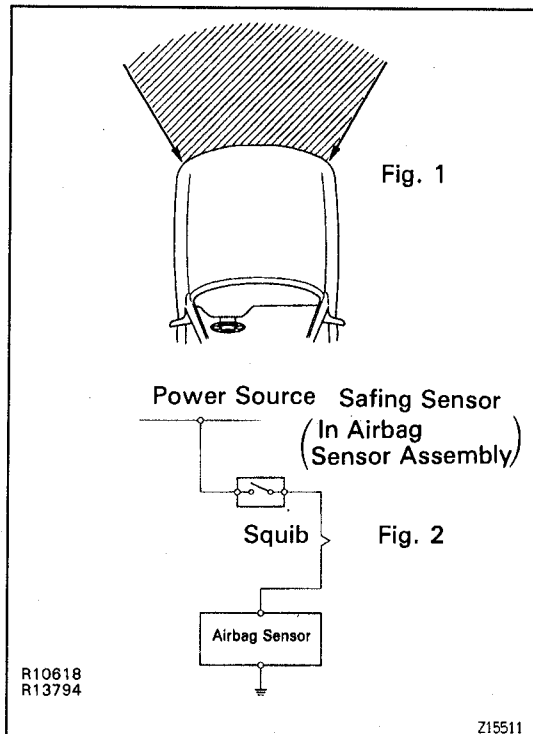
- Primary Lock Incomplete
(Secondary Lock Prevented)



- Primary Lock Complete
(Secondary Lock Permitted)



- Twin-Lock Completed



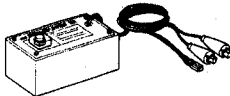
When the vehicle is involved in a frontal collision in the hatched area (Fig. 1) and the shock is larger than a predetermined level, the SRS is activated automatically. A safing sensor is designed to go on at a smaller deceleration rate than the airbag sensor. As illustrated in Fig. 2, ignition is caused when current flows to the squib, which happens when a safing sensor and the airbag sensor go on simultaneously. When a deceleration force acts on the sensor, squib in the driver airbag and ignite and generate gas. The gas discharging into the driver airbag and rapidly increases the pressure inside the bag, breaking open the steering wheel pad and instrument panel door.

Bag inflation then ends, and the bag deflates as the gas is discharged through discharge holes at the bag rear or side.

PREPARATION

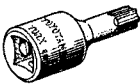
SST (SPECIAL SERVICE TOOLS)

R800X-OJ

	09082-00700 SRS Airbag Deployment Tool	
	09843-18020 Diagnosis Check Wire	

RECOMMENDED TOOLS

R800Y-OP

	09042-00020 Torx Socket T40 .	Airbag sensor assembly
	09082-00050 TOYOTA Electrical Tester Set.	

EQUIPMENT

Torque wrench	
Bolt: Length: 35 mm (1.38 in.) Pitch: 1.0 mm (0.039 in.) Diam.: 6.0 mm (0.236 in.)	Airbag disposal
Tire Width: 185 mm (7.28 in.) Inner diam.: 360 mm (14.17 in.)	Airbag disposal
Tire with disc wheel Width: 185 mm (7.28 in.) Inner diam.: 360 mm (14.17 in.)	Airbag disposal
Vinyl bag	Airbag disposal

STEERING WHEEL PAD AND SPIRAL CABLE

RB01Z-0G

INSPECTION ITEMS

1. VEHICLES NOT INVOLVED IN A COLLISION

- Do a diagnostic system check. (See page RS-26)
- Do a visual check which includes the following items with the steering wheel pad (with airbag) installed in the vehicle.
 - Check for cuts, minute cracks or marked discoloration of the steering wheel pad top surface and grooved portion.

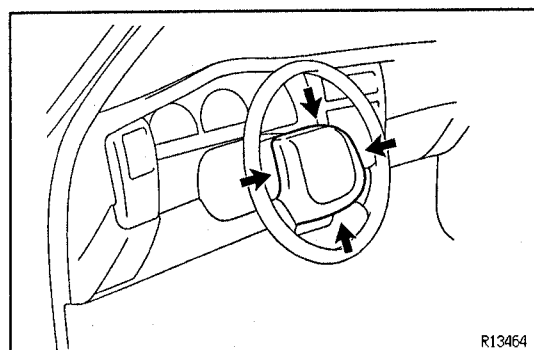
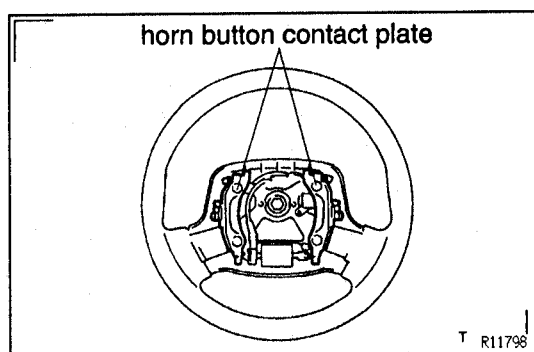
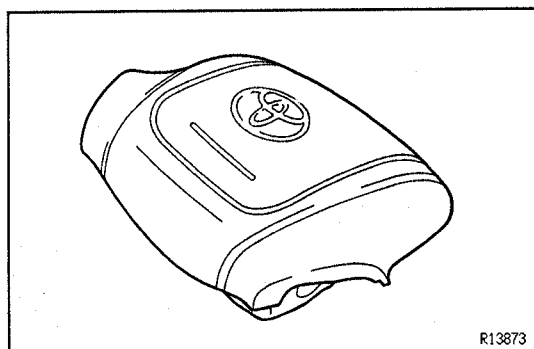
2. VEHICLES INVOLVED IN A COLLISION IF THE AIRBAG IS NOT DEPLOYED

- Do a diagnostic system check. (See page RS-26)
- Do a visual check which includes the following items with the steering wheel pad (with airbag) removed from the vehicle.
 - Check for cuts and cracks in, or marked discoloration of, the steering wheel pad top surface and its grooved portion.
 - Check for cuts and cracks in wire harnesses, and for chipping in connectors.
 - Check for deformation of the horn button contact plate of the steering wheel.

HINT:

- If the horn button contact plate of the steering wheel is deformed, never repair it. Always replace the steering wheel assembly with a new one.
- There should be no interference between the steering wheel pad and the steering wheel, and the clearance should be uniform all the way around when the new steering wheel pad is installed on the steering wheel.

CAUTION: For removal and installation of the steering wheel pad, see the SR section and be sure to follow the correct procedure.



IF THE AIRBAG IS DEPLOYED

- (a) Do a diagnostic system check. (See page RS-26)
- (b) Do a visual check which includes the following items with the steering wheel pad (with airbag) removed from the vehicle.
 - Check for deformation of the horn button contact plate of the steering wheel.
 - Check for damage to the spiral cable connector and wire harness.

HINT:

- If the horn button contact plate of the steering wheel is deformed, never repair it. Always replace the steering wheel assembly with a new one.
- There should be no interference between the steering wheel pad and the steering wheel, and the clearance should be uniform all the way around when the new steering wheel pad is installed on the steering wheel.

REPLACEMENT REQUIREMENTS

R9011-OJ

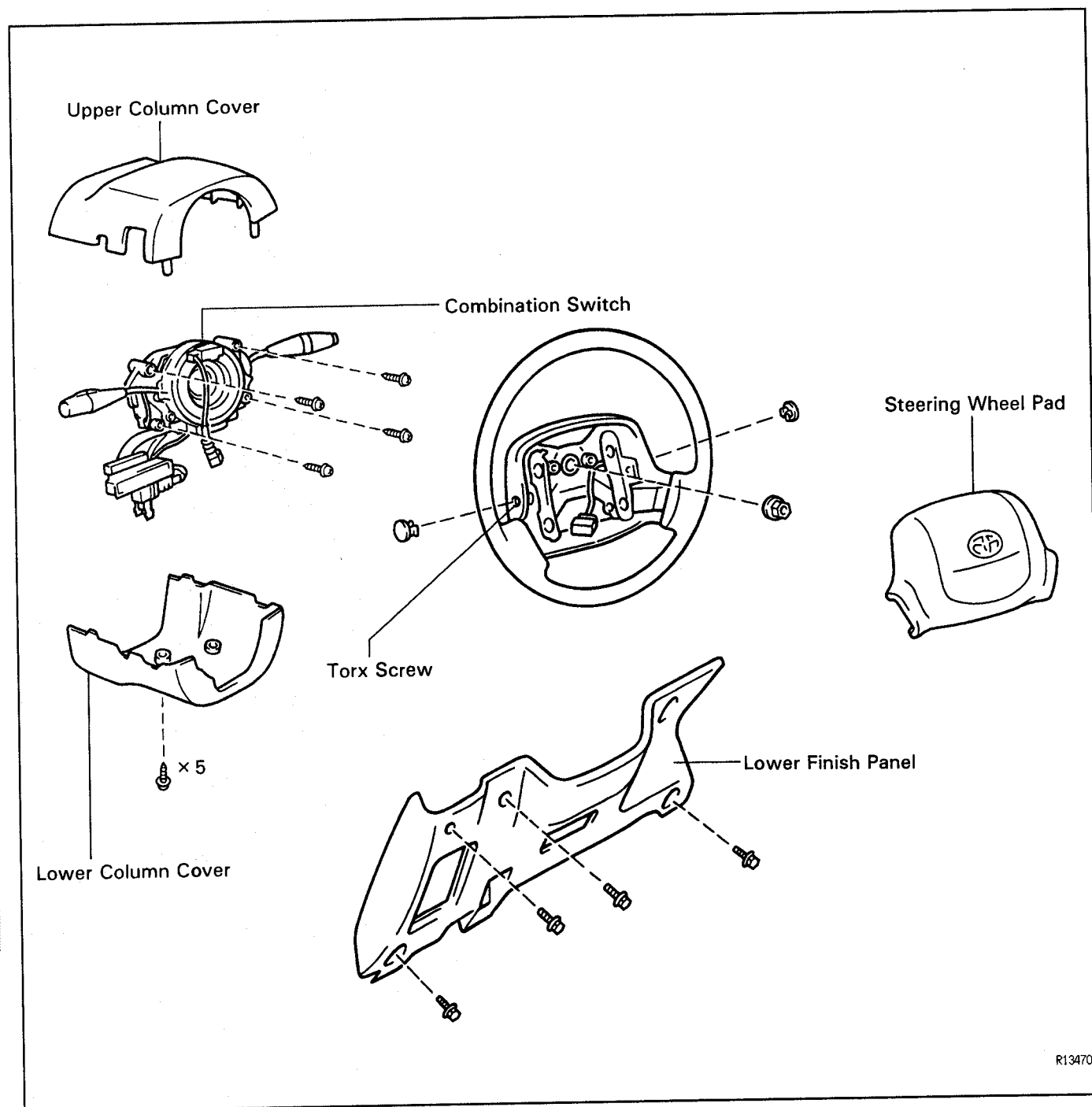
In the following cases, replace the steering wheel pad, steering wheel or spiral cable.

- If the airbag has been deployed.
- If the steering wheel pad or spiral cable has been found to be faulty in troubleshooting.
- If the steering wheel pad, steering wheel or spiral cable has been found to be faulty during the check in items 1-(b) or 2-(b).
- If the steering wheel pad has been dropped.

CAUTION: For replacement of the steering wheel pad, see the SR section and be sure to follow the correct procedure.

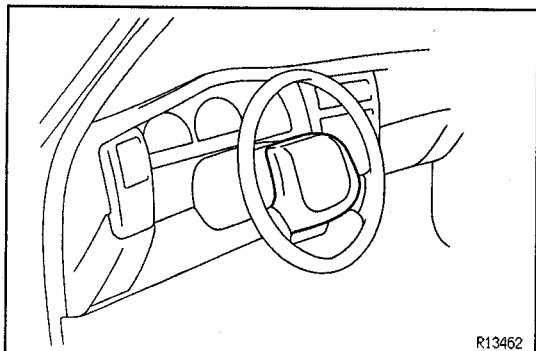
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COMPONENTS

STEERING WHEEL PAD AND SPIRAL
CABLE REMOVAL AND INSTALLATION

(See SR section)

R80AP-01



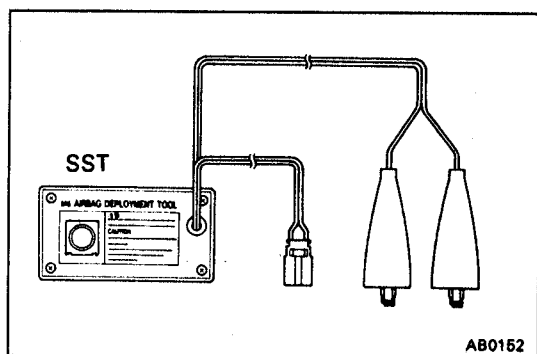
STEERING WHEEL PAD (WITH AIRBAG) DISPOSAL

When scrapping vehicles equipped with an SRS or disposing of a steering wheel pad (with airbag), always first deploy the airbag in accordance with the procedure described below.

If any abnormality occurs with the airbag deployment, contact the SERVICE DEPT. of TOYOTA MOTOR SALES, U.S.A., INC..

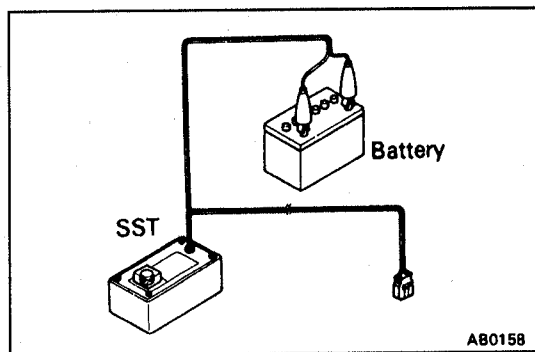
Never dispose of a steering wheel pad which has an undeployed airbag.

When disposing of a steering wheel pad with an airbag deployed in a collision, follow the same procedure given under "When scrapping vehicle, step 4. DISPOSAL OF STEERING WHEEL PAD (WITH AIRBAG)" (See page RS-13).



PRECAUTIONS FOR AIRBAG DEPLOYMENT

- The airbag produces a sizeable exploding sound when it deploys, so do the operation out-of-doors and where it will not create a nuisance to nearby residents.
- When deploying the airbag, always use the specified SST: SRS AIRBAG DEPLOYMENT TOOL (SST 09082-00700). Carry out the operation in a place away from electrical noise.
- When deploying an airbag, do it at least 10 m (33 ft) away from the steering wheel pad.
- The steering wheel pad is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a steering wheel pad with a deployed airbag.
- Do not apply water, etc. to a steering wheel pad with a deployed airbag.
- Always wash your hands with water after completing the operation.



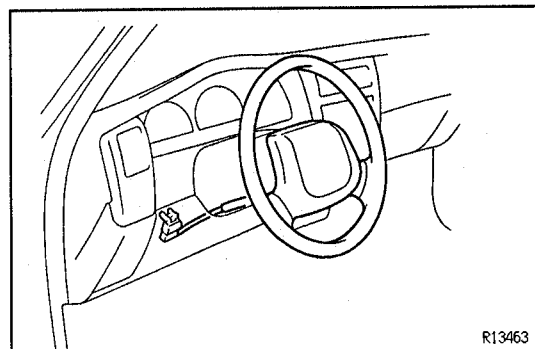
When scrapping vehicle

HINT: Have a battery ready as the power source to deploy the airbag.

1. CONFIRM FUNCTIONING OF SST

(See page RS-17)

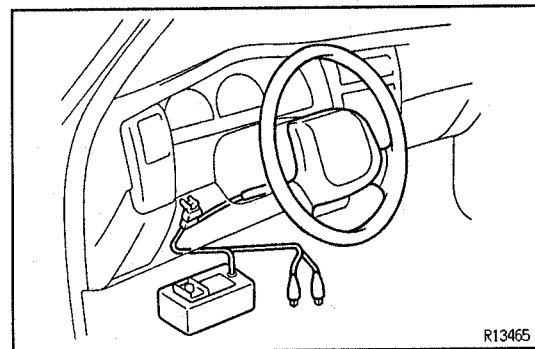
SST 09082-00700



2. INSTALL SST

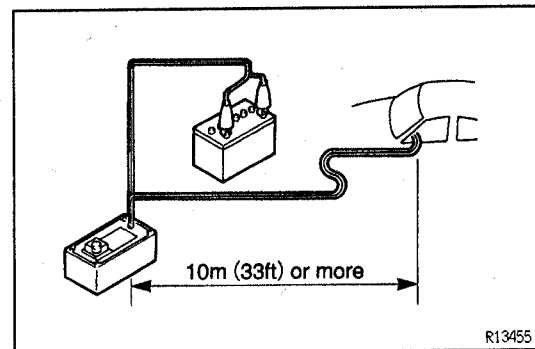
CAUTION: Check that there is no looseness in the steering wheel and steering wheel pad.

- (a) Remove the under cover No.1.
- (b) Disconnect the airbag connector of the spiral cable.



- (c) Connect the SST connector to the airbag connector of the spiral cable.

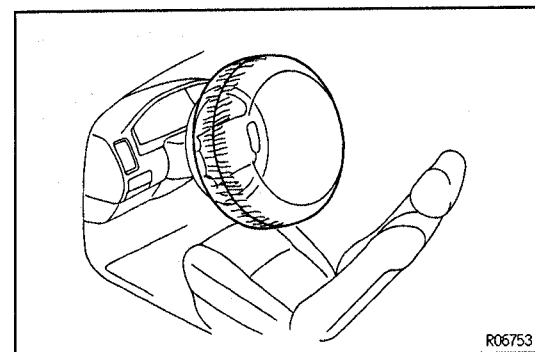
SST 09082-00700



- (d) Move the SST to at least 10 m (33 ft) away from the front of the vehicle.
- (e) Close all the doors and windows of the vehicle.
- NOTICE:** Take care not to damage the SST wire harness.
- (f) Connect the SST red clip to the battery positive (+) terminal and the black clip to the battery negative (-) terminal.

3. DEPLOY AIRBAG

- (a) Confirm that no-one is inside the vehicle or within 10 m (33 ft) of the vehicle.
- (b) Press the SST activation switch and deploy the airbag.
HINT: The airbag deploys simultaneously as the LED of the SST activation switch lights up.



4. DISPOSAL OF STEERING WHEEL PAD (WITH AIRBAG)

CAUTION:

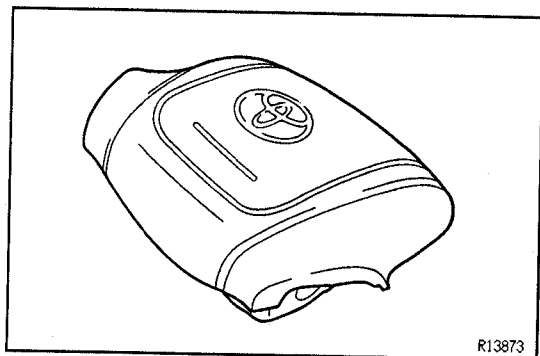
- The steering wheel pad is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.
 - Use gloves and safety glasses when handling a steering wheel pad with a deployed airbag.
 - Do not apply water, etc. to a steering wheel pad with a deployed airbag.
 - Always wash your hands with water after completing the operation.
- (a) When scrapping a vehicle, deploy the airbag and scrap the vehicle with the steering wheel pad still installed.
 - (b) When moving a vehicle for scrapping which has a steering wheel pad with a deployed airbag, use gloves and safety glasses.

When disposing of steering wheel pad only

When disposing of the steering wheel pad (with airbag) only, never use the customer's vehicle to deploy the airbag.

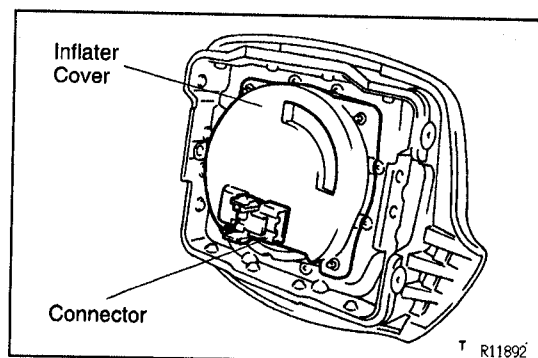
Remove the steering wheel pad from the vehicle and be sure to follow the procedure given below when deploying the airbag.

HINT: Have a battery ready as the power source to deploy the airbag.

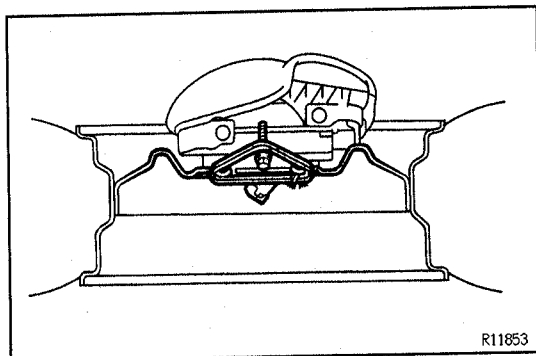
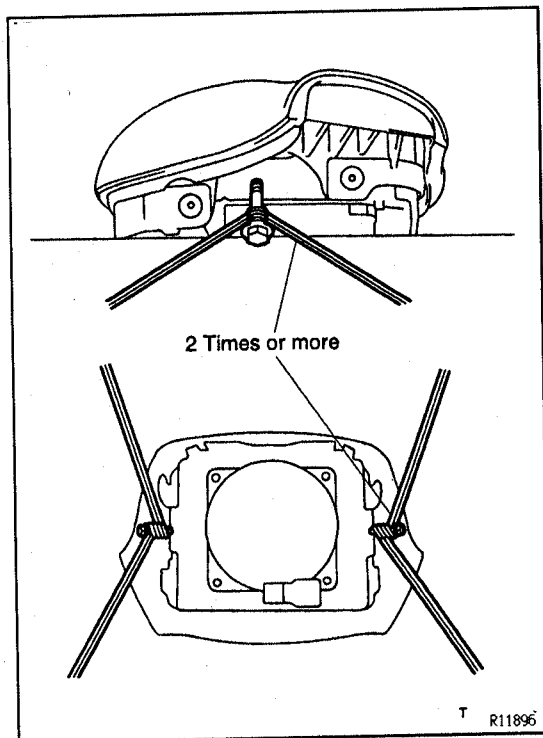
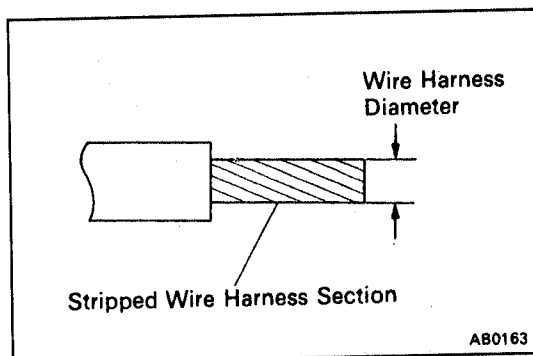
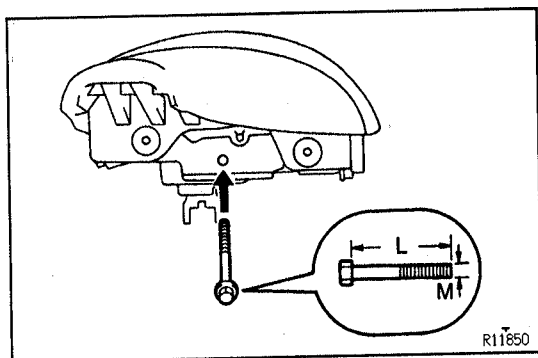


1. **REMOVE STEERING WHEEL PAD (See SR section)**
CAUTION: When storing the steering wheel pad, keep the upper surface of the pad facing upward.

RS



2. **REMOVE STEERING WHEEL PAD CONNECTOR**
 Remove the connector on the steering wheel pad rear surface from the inflator cover.



3. FIX STEERING WHEEL PAD TO DISC WHEEL WITH TIRE

- (a) Install the 2 bolts with washer in the 2 bolt holes in the steering wheel pad.

Bolt:

L 35.0 mm (1.378 in.)

M 6.0 mm (0.236 in.)

Pitch 1.0 mm (0.039 in.)

NOTICE:

- Tighten the bolts by hand until the bolts become difficult to turn.
 - Do not tighten the bolts too much.
- (b) Using a service—purpose wire harness for the vehicle, tie down the steering wheel pad to the disc wheel.
- Wire harness: Stripped wire harness section**
1.25 mm² or more (0.0019 in² or more)

HINT: To calculate the square of the stripped wire harness section —

Square = 3.14 x (Diameter)² divided by 4

CAUTION: If a wire harness which is too thin or some other thing is used to tie down the steering wheel pad, it may be snapped by the shock when the airbag is deployed. This is highly dangerous. Always use a wire harness for vehicle use which is at least 1.25 mm² (0.0019 in²).

- (c) Using 3 wire harnesses, wrap the wire harnesses at least 2 times each around the bolts installed on the left and right sides of the steering wheel pad.

CAUTION:

- Tightly wind the wire harness around the bolts so that there is no slack.
- If there is slackness in the wire harness, the steering wheel pad may come loose due to the shock when the airbag is deployed. This is highly dangerous.

- (d) Face the upper surface of the steering wheel pad upward.

- (e) Separately tie the left and right sides of the steering wheel pad to the disc wheel through the hub nut holes.

- (f) Position the steering wheel pad connector so that it hangs downward through a hub hole in the disc wheel.

CAUTION:

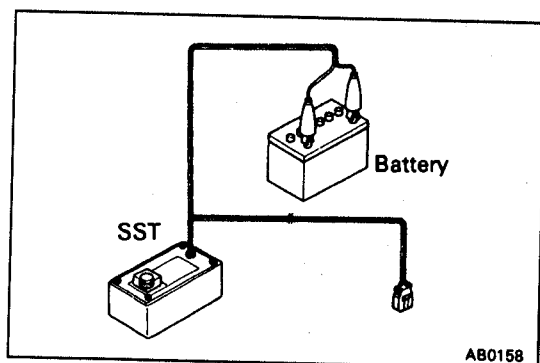
- Make sure that the wire harness is tight. It is very dangerous if looseness in the wire harness results in the steering wheel pad coming free through the shock of the airbag deploying.
- Always tie down the steering wheel pad with the pad side facing upward. It is very dangerous if the steering wheel pad is tied down with the metal surface facing upward as the wire harness will be cut by the shock of the airbag deploying and the steering wheel pad will be thrown into the air.

HINT: The disc wheel will be marked by airbag deployment, so use a redundant disc wheel.

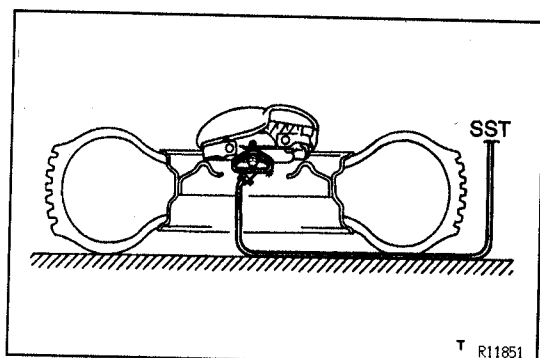
4. CONFIRM FUNCTIONING OF SST

(See page RS-17)

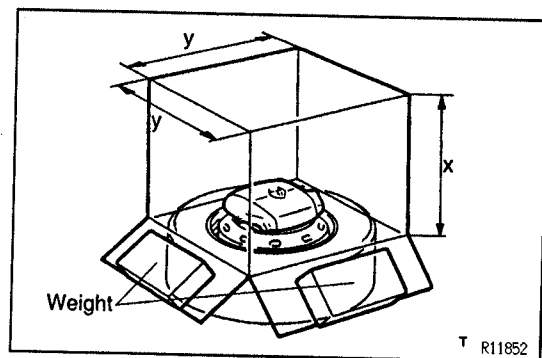
SST 09082-00070



AB0158



T R11851



T R11852

5. INSTALL SST

CAUTION: Place the disc wheel on level ground.

- (a) Connect the SST connector to the steering wheel pad connector.

SST 09082-00700

NOTICE: To avoid damaging the SST connector and wire harness, do not lock the secondary lock of the twin lock. Also, provide some slack for the SST wire harness inside the disc wheel.

- (b) Move the SST to at least 10 m (33 ft) away from the steering wheel pad tied down on the disc wheel.

6. COVER STEERING WHEEL PAD WITH CARDBOARD BOX OR TIRES

(Covering Method Using Cardboard Box)

Cover the steering wheel pad with the cardboard box and weigh the cardboard box down in 4 places with at least 196 N (20 kg, 44 lb).

Size of cardboard box:

Must exceed the following dimensions—

x = 460 mm (18.11 in.)

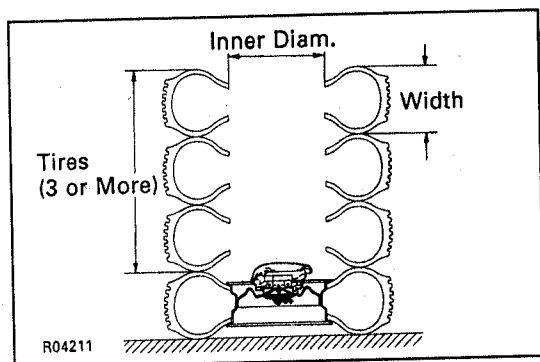
When dimension of the cardboard box exceeds the diameter of the disc wheel with tire, the steering wheel pad is tied to —

x = 460 mm (18.11 in.) + width of tire

y = 650 mm (25.59 in.)

NOTICE: If a cardboard box smaller than the size specified is used, the cardboard box will be broken by the shock of the airbag deployment.

RS

**Covering Method Using Tires:**

Place at least 3 tires without disc wheel on top of the disc wheel with tire to which the steering wheel pad is tied.

Tire size: Must exceed the following dimensions—

Width 185 mm (7.28 in.)

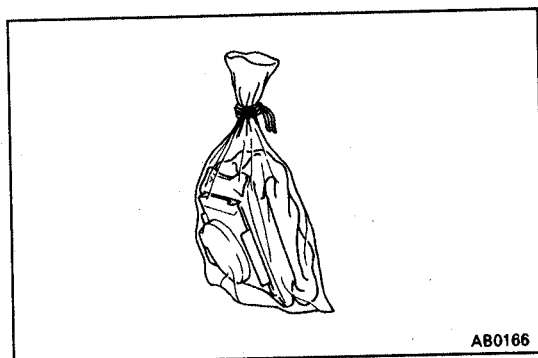
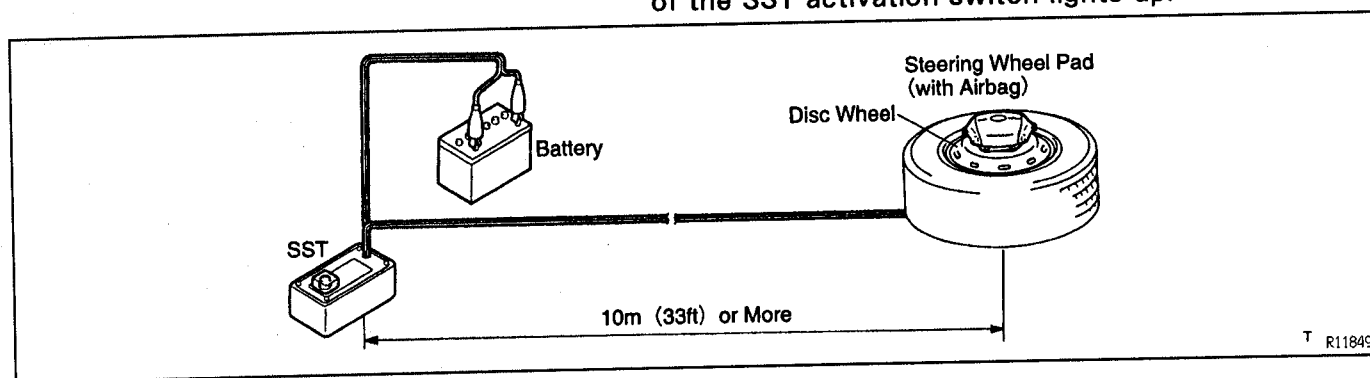
Inner diam 360 mm (14.17 in.)

CAUTION: Do not use tires with disc wheels.

NOTICE: The tires may be marked by the airbag deployment, so use redundant tires.

7. AIRBAG DEPLOYMENT

- (a) Connect the SST red clip to the battery positive (+) terminal and the black clip to the battery negative (–) terminal.
- (b) Confirm that no one is within 10 m (33 ft) of the disc wheel which the steering wheel pad is tied to.
- (c) Press the SST activation switch and deploy the airbag.
HINT: The airbag deploys simultaneously as the LED of the SST activation switch lights up.

**8. DISPOSAL OF STEERING WHEEL PAD (WITH AIRBAG)****CAUTION:**

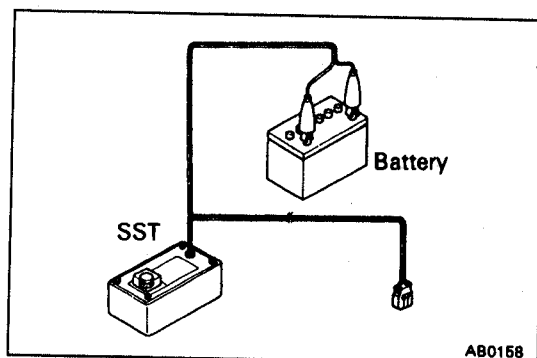
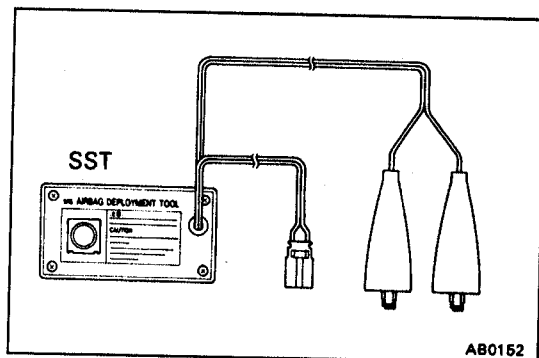
- The steering wheel pad is very hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.
- Use gloves and safety glasses when handling a steering wheel pad with a deployed airbag.
- Do not apply water, etc. to a steering wheel pad with a deployed airbag.
- Always wash your hands with water after completing the operation.

- (a) Remove the steering wheel pad from the disc wheel.
- (b) Place the steering wheel pad in a vinyl bag, tie the end tightly and dispose of it in the same way as other general parts.

R8014-00

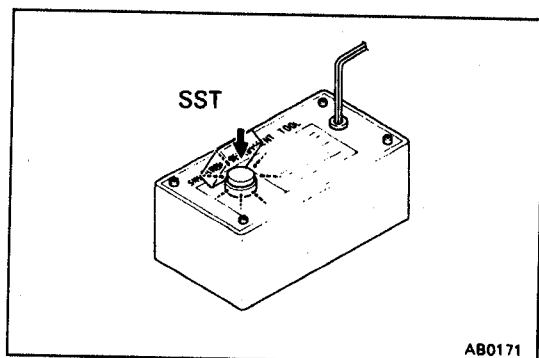
CONFIRM FUNCTIONING OF SST

When deploying the airbag, always use the specified SST: SRS AIRBAG DEPLOYMENT TOOL.
SST 09082-00700

**1. CONNECT SST TO BATTERY**

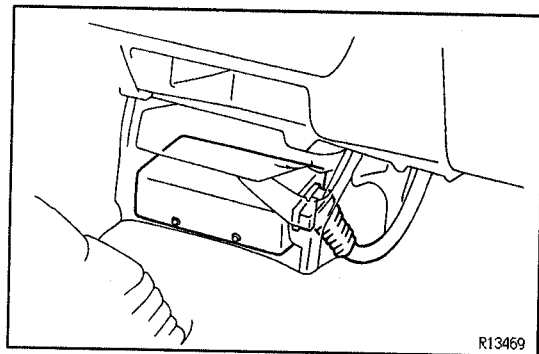
Connect the red clip of the SST to the battery positive (+) terminal and the black clip to the battery negative (-) terminal.

HINT: Do not connect the yellow connector which connects with the supplemental restraint system.

**2. CONFIRM FUNCTIONING OF SST**

Press the SST activation switch, and confirm the LED of the SST activation switch lights up.

CAUTION: If the LED lights up when the activation switch is not being pressed, SST malfunction is probable, so definitely do not use the SST.

**AIRBAG SENSOR ASSEMBLY INSPECTION ITEMS**

R802D-00

1. VEHICLES NOT INVOLVED IN A COLLISION

Do a diagnostic system check. (See page RS-26)

**2. VEHICLES INVOLVED IN A COLLISION
IF THE SRS IS NOT DEPLOYED**

Do a diagnostic system check. (See page RS-26)

IF THE SRS IS DEPLOYED

Replace the airbag sensor assembly.

RS

REPLACEMENT REQUIREMENTS

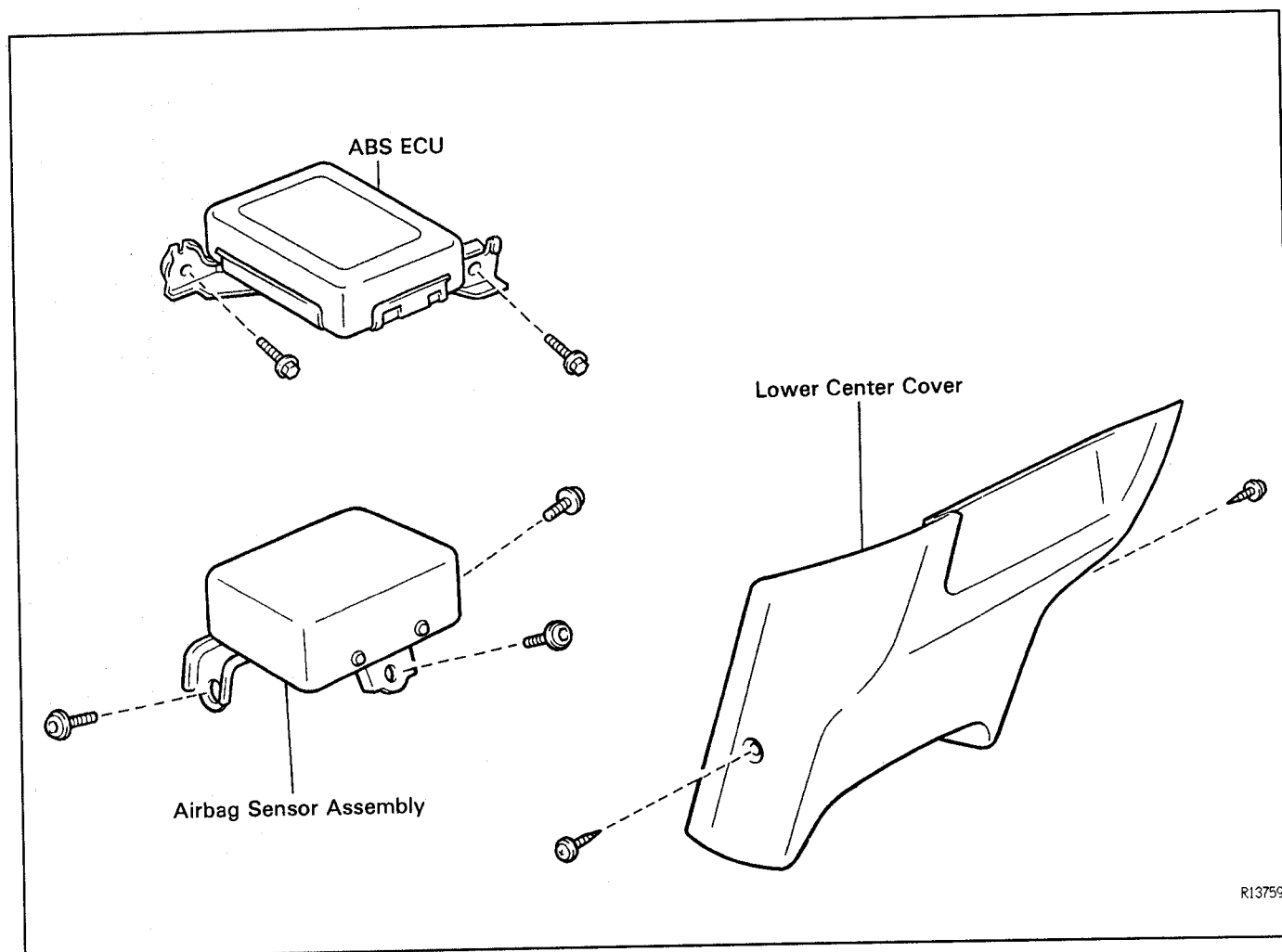
In the following cases, replace the airbag sensor assembly.

NOTICE: For replacement of the airbag sensor assembly, see page RS-19, "AIRBAG SENSOR ASSEMBLY REMOVAL AND INSTALLATION" and be sure to follow the correct procedure.

- If the SRS has been deployed in a collision.
- If the airbag sensor assembly has been found to be faulty in troubleshooting.
- If the airbag sensor assembly has been dropped.

RB02E-0A

COMPONENTS



AIRBAG SENSOR ASSEMBLY REMOVAL AND INSTALLATION

NOTICE:

- Do not open the cover or the case of the ECU and various computers unless absolutely necessary. (If the IC terminals are touched, the IC may be destroyed by static electricity.)
- Never use SRS parts from another vehicle. When replacing parts, replace with new parts.
- Never reuse the airbag sensor assembly involved in a collision when the airbag has deployed.
- Never repair a sensor in order to reuse it.

1. REMOVE THESE PARTS:

- (a) Lower center cover
- (b) ABS ECU

2. REMOVE AIRBAG SENSOR ASSEMBLY

- (a) Disconnect the connector.

NOTICE: Removal of the connector is done with the sensor assembly installed.

- (b) Using a torx wrench, remove the 3 screws and the airbag sensor assembly.

Torx wrench: T40 (Part No. 09042-00020 or locally manufactured tool)

3. INSTALL AIRBAG SENSOR ASSEMBLY

- (a) Using a torx wrench, install the airbag sensor assembly with the 3 screws.

Torx wrench: T40 (Part No. 09042-00020 or locally manufactured tool)

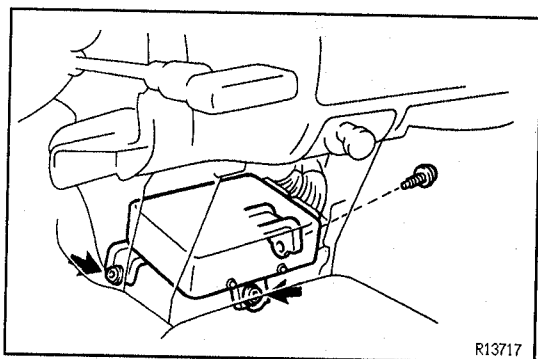
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

- (b) Connect the connector.

NOTICE:

- Installation of the connector is done with the sensor assembly installed.
- Make sure the sensor assembly is installed to the specified torque.
- If the sensor assembly has been dropped, or there are cracks, dents or other defects in the case, bracket or connector, replace the sensor assembly with a new one.
- When installing the sensor assembly, take care that the SRS wiring does not interfere with other parts and is not pinched between other parts.
- After installation, shake the sensor assembly to check that there is no looseness.

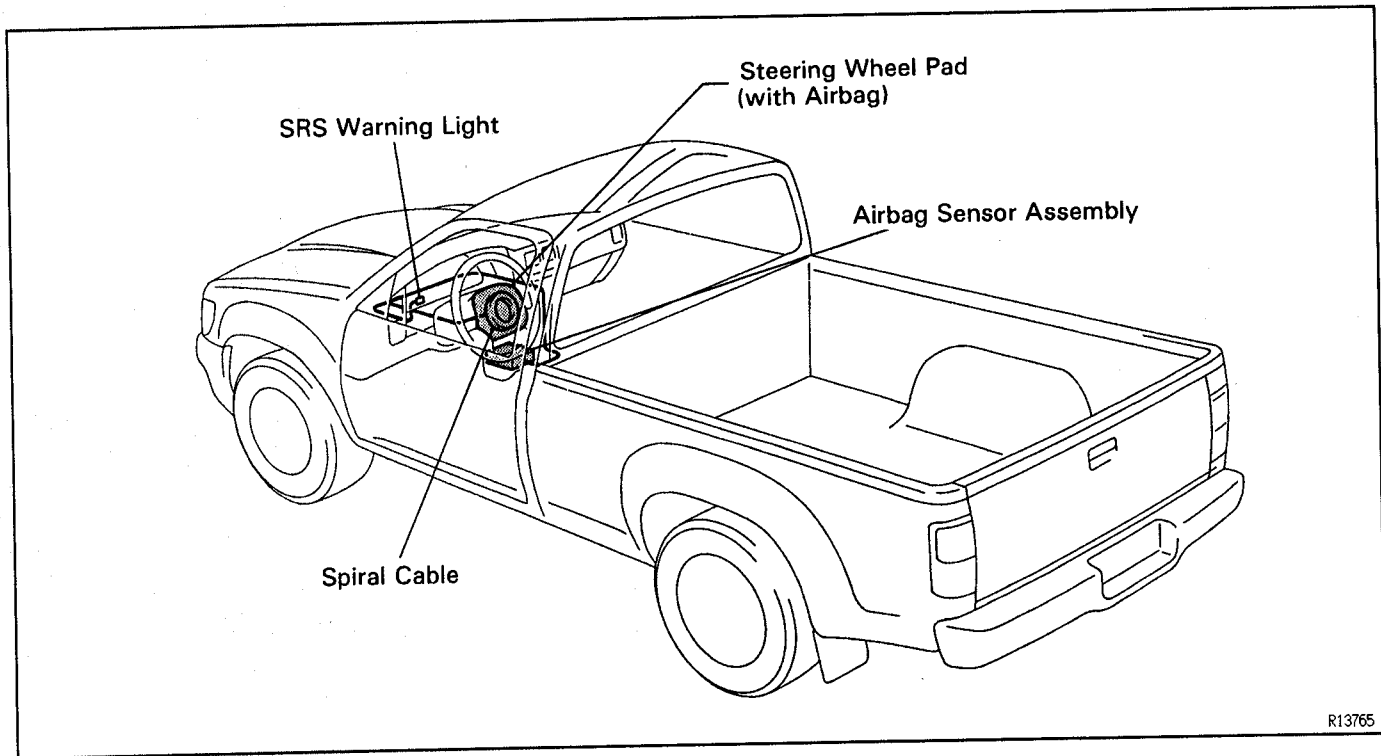
4. INSTALL THE REMOVED PARTS



WIRE HARNESS AND CONNECTOR

RS01B-OL
HINT: The SRS wire harness is integrated with the cowl wire harness assembly.

The wires for the SRS wire harness are encased in a yellow corrugated tube and all the connectors in the system are a standard yellow color.



RB01G-0Y

INSPECTION ITEMS

1. **VEHICLES NOT INVOLVED IN A COLLISION**
Do a diagnostic system check. (See page RS-26)
2. **VEHICLES INVOLVED IN A COLLISION**
 - (a) Do a diagnostic system check. (See page RS-26)
 - (b) Check for breaks in all wires of the SRS wire harness, and for exposed conductors.
 - (c) Check to see if the SRS wire harness connectors are cracked or chipped.

REPLACEMENT REQUIREMENTS

In the following cases, replace the wire harness or connector.

- If any part of the SRS wire harness or any connector has been found to be faulty in troubleshooting.
- If any part of the SRS wire harness or any connector has been found to be faulty during the check in items 2—(b) or (c).

NOTICE:

- If the wire harness used in the SRS is damaged, replace the whole wire harness assembly.

RS-22

SUPPLEMENTAL RESTRAINT SYSTEM — WIRE HARNESS AND CONNECTOR

— MEMO —

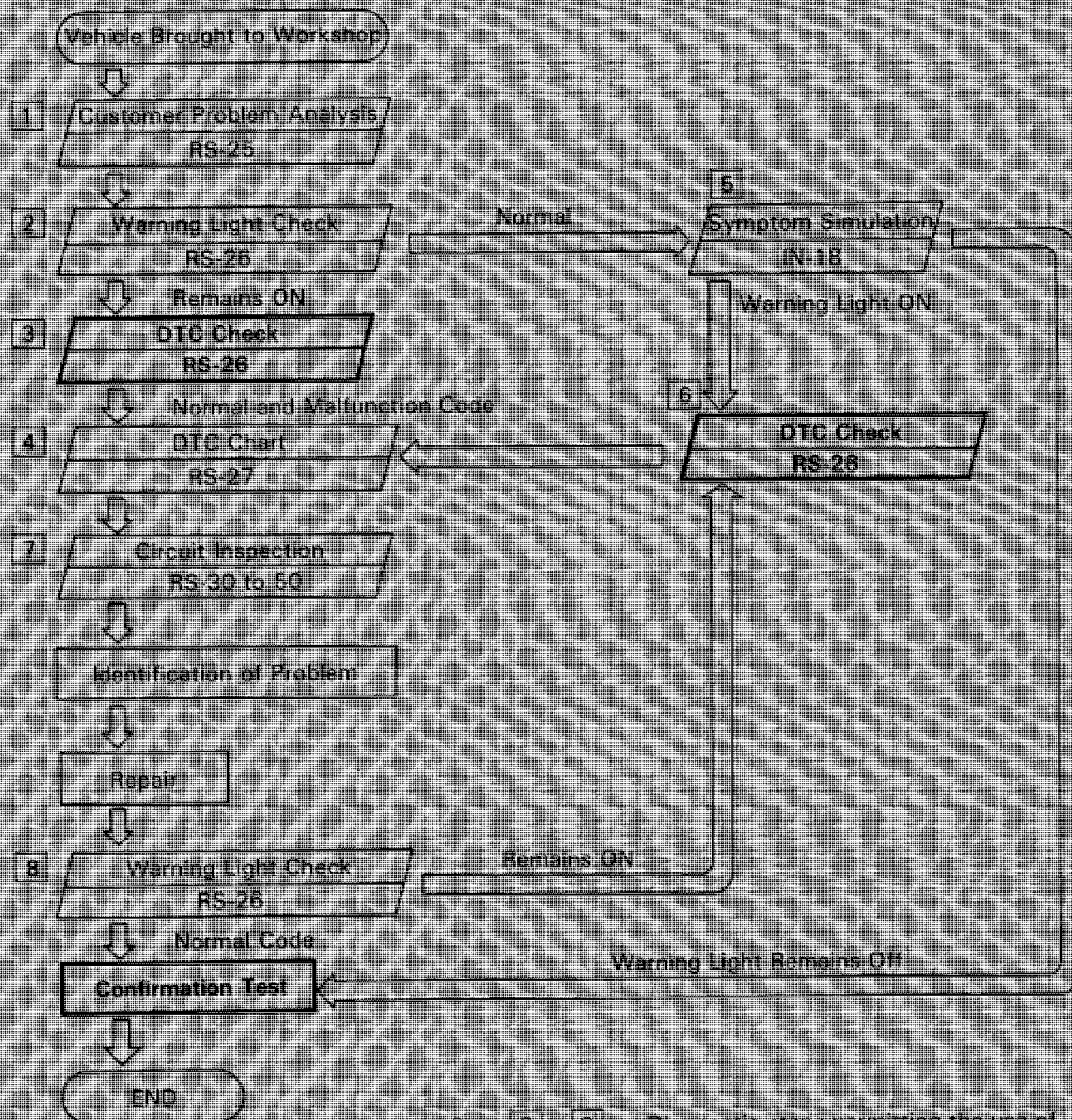
RS

TROUBLESHOOTING

HOW TO PROCEED WITH TROUBLESHOOTING	RS-24
CUSTOMER PROBLEM ANALYSIS CHECK SHEET	RS-25
DIAGNOSIS INSPECTION	RS-26
PROBLEM SYMPTOM CHART	RS-28
AIRBAG SENSOR ASSEMBLY CONNECTOR	RS-29
CIRCUIT INSPECTION	RS-30
DTC (Normal)	RS-30
DTC 11	RS-32
DTC 12	RS-35
DTC 14	RS-38
DTC 31	RS-41
SRS Warning Light System Malfunction (Always lit up when ignition switch is in LOCK position.)	RS-43
SRS Warning Light System Malfunction (Does not light up when ignition switch is turned to ACC or ON.)	RS-44
Tc Terminal Circuit	RS-47

HOW TO PROCEED WITH TROUBLESHOOTING

Perform troubleshooting in accordance with the procedure on the following pages.



Step [3] / [6] : Diagnostic steps permitting the use of the TOYOTA hand-held tester.

CUSTOMER PROBLEM ANALYSIS CHECK SHEET

Supplemental Restraint System Check Sheet

Inspector's
Name :

Customer's Name		Registration No.	
		Registration Year	/ /
		Frame No.	
Date Vehicle Brought In	/ /	Odometer Reading	km Miles

Date Problem First Occurred	/ /
Weather	☐ Fine ☐ Cloudy ☐ Rainy ☐ Snowy ☐ Other _____
Temperature	Approx. °C (°F)

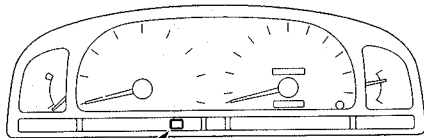
Vehicle Operation	☐ Starting ☐ Idling ☐ Driving [☐ Constant speed ☐ Acceleration ☐ Deceleration ☐ Other _____]
Road Conditions	
Details of Problem	

Vehicle Inspection, Repair History Prior to Occurrence of Malfunction (Including Supplemental Restraint System)	
--	--

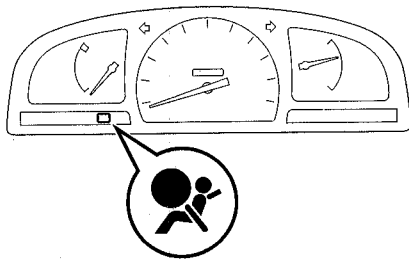
Diagnosis System Inspection

SRS Warning Light Inspection	1st Time	☐ Remains ON ☐ Sometimes Lights Up ☐ Does Not Light Up
	2nd Time	☐ Remains ON ☐ Sometimes Lights Up ☐ Does Not Light Up
Diagnostic Trouble Code Inspection	1st Time	☐ Normal Code ☐ Malfunction Code [Code.]
	2nd Time	☐ Normal Code ☐ Malfunction Code [Code.]

w/ Tachometer



w/o Tachometer

R13460
R13459

DIAGNOSIS INSPECTION

SRS warning light check

- Turn the ignition switch to ACC or ON and check that the SRS warning light lights up.
- Check that the SRS warning light goes out after approx. 6 seconds.

HINT:

- When the ignition switch is at ACC or ON and the SRS warning light remains on or flashes, the airbag sensor assembly has detected a malfunction code.
- If, after approx. 6 seconds have elapsed, the SRS warning light sometimes lights up or the SRS warning light lights up even when the ignition switch is OFF, a short in the SRS warning light circuit can be considered likely. Proceed to "SRS warning light system malfunction" on page RS-43, 44.

DTC check

Using diagnosis check wire:

1. OUTPUT DTC

- Turn the ignition switch to ACC or ON position and wait approx. 20 seconds.
- Using SST, connect terminals Tc and E₁ of the DLC1.
SST 09843-18020

NOTICE: Never make a mistake with the terminal connection position as this will cause a malfunction.

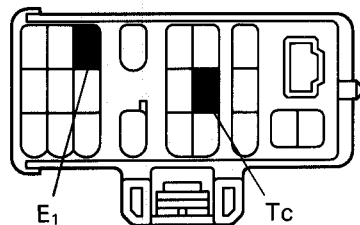
2. READ DTC

Read the 2-digit DTC as indicated by the number of times the SRS warning light blinks. As an example, the blinking patterns, normal, 11 and 31 are as shown on the illustration.

- Normal code indication**
The light will blink 2 times per second.
- Malfunction code indication**
The first blinking output indicates the first digit of a 2-digit DTC. After a 1.5 second pause, the second blinking output will indicate the second digit. If there are 2 or more codes, there will be a 2.5 second pause between each code. After all the codes have been output, there will be a 4.0 second pause and they will all be repeated.

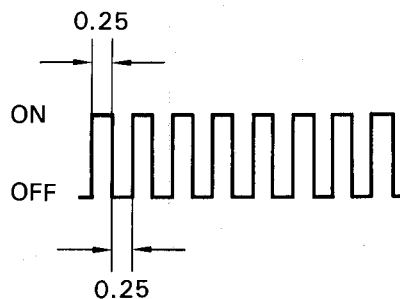
HINT:

- In the event of a number of trouble codes, indication will begin from the smallest numbered code.
- If it does not output a DTC or outputs a DTC without terminal connection, proceed to the Tc terminal circuit inspection on page RS-47.



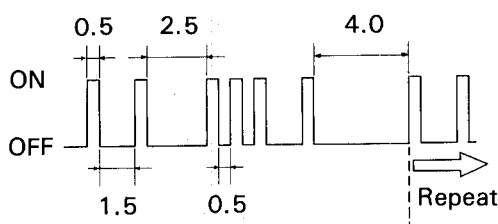
lei-23-1-A

Normal Code

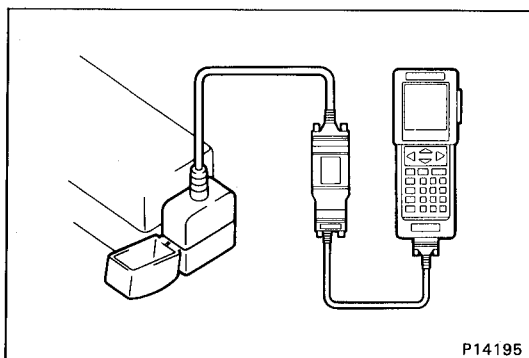


AT0716

Code 11 and 31



AB0056

**Using TOYOTA hand-held tester:**

- Hook up the TOYOTA hand-held tester to the DLC1.
- Read the DTCs by following the prompts on the tester screen.

HINT: Please refer to the TOYOTA hand-held tester operator's manual for further details.

DTC clearance

When the ignition switch is turned OFF, the DTC is cleared.

DTC CHART

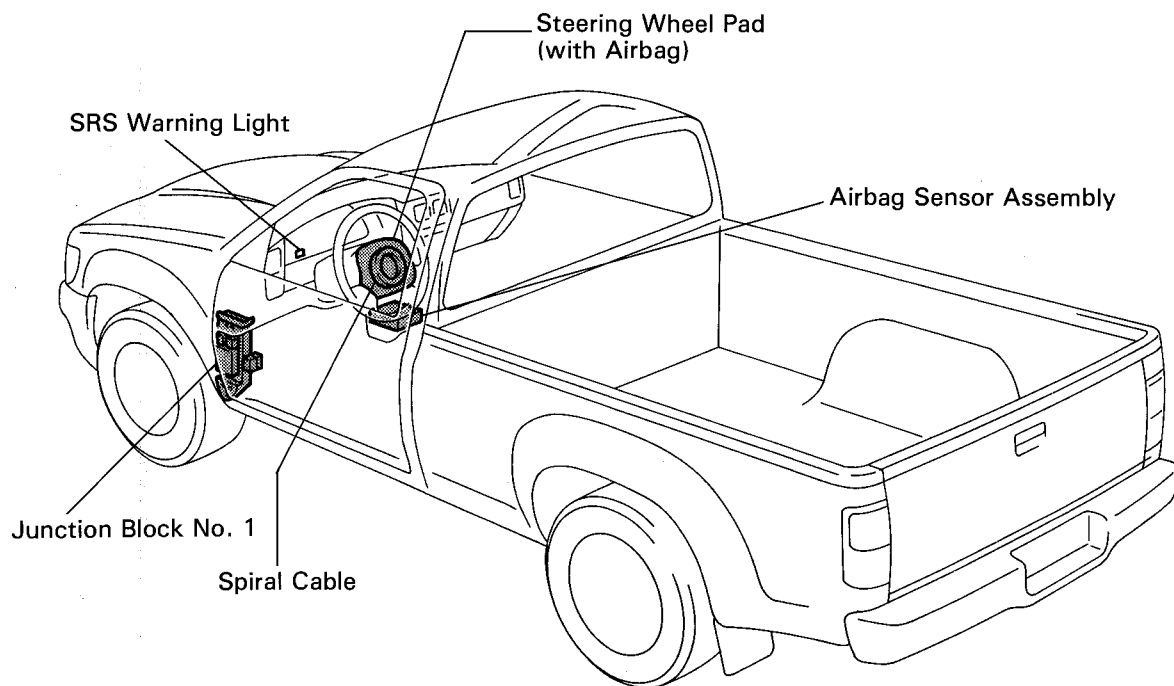
If a multifunction code is displayed during the DTC check, check the circuit listed for that code in the table below (Proceed to the page given for that circuit).

DTC No. (See page)	Detection Item	Trouble Area	SRS Warning Light
(Normal) (RS-30)	• System normal	—	OFF
	• Source voltage drop	• Battery • Airbag sensor assembly	ON
11 (RS-32)	• Short in D squib circuit (to ground)	• Steering wheel pad (D squib) • Spiral cable • Airbag sensor assembly • Wire harness	ON
12 (RS-35)	• Short in D squib circuit (to B +)	• Steering wheel pad (D squib) • Spiral cable • Airbag sensor assembly • Wire harness	ON
14 (RS-38)	• Open in D squib circuit	• Steering wheel pad (D squib) • Spiral cable • Airbag sensor assembly • Wire harness	ON
31 (RS-41)	• Airbag sensor assembly malfunction	• Airbag sensor assembly	ON

HINT:

- When the SRS warning light remains lit up and the DTC is the normal code, this means a source voltage drop.
This malfunction is not stored in memory by the airbag sensor assembly and if the power source voltage returns to normal, the SRS warning light will automatically go out.
- When 2 or more codes are indicated, the codes will be displayed in numeral order starting from the lowest numbered code.
- If a code not listed on the chart is displayed, the airbag sensor assembly is faulty.

PARTS LOCATION



R13764

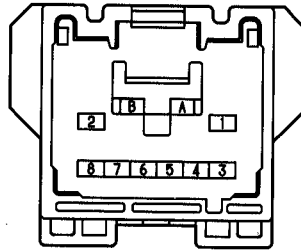
RS

PROBLEM SYMPTOM CHART

Proceed with troubleshooting of each circuit in the table below.

Problem Symptom	Inspection Item	Page
- With the ignition switch at ACC or ON, the SRS warning light sometimes lights up after approx. 6 seconds have elapsed. - SRS warning light is always lit up even when ignition switch is in the LOCK position.	SRS warning light system malfunction (Always lit up when ignition switch is in LOCK position)	RS-43
With the ignition switch at ACC or ON, the SRS warning light does not light up.	SRS warning light system malfunction (Does not light up, when ignition switch is turned to ACC or ON.)	RS-44
- DTC not displayed. - SRS warning light is always lit up with a DTC check procedure. - DTC displayed without Tc and E₁ terminal connection.	Tc terminal circuit	RS-47

AIRBAG SENSOR ASSEMBLY CONNECTOR



h-8-2-F

No.	Symbol	Terminal Name
A	—	Electrical Connection Check Mechanism
B	—	Electrical Connection Check Mechanism
1	D ⁻	D squib ⊖
2	D ⁺	D squib ⊕
3	E ₁	Ground
4	E ₂	Ground
5	T _c	Diagnosis
6	LA	SRS Warning Light
7	IG2	Power Source (IGN Fuse)
8	ACC	Power Source (CIG Fuse)

DTC**(Normal)****Source Voltage Drop****CIRCUIT DESCRIPTION**

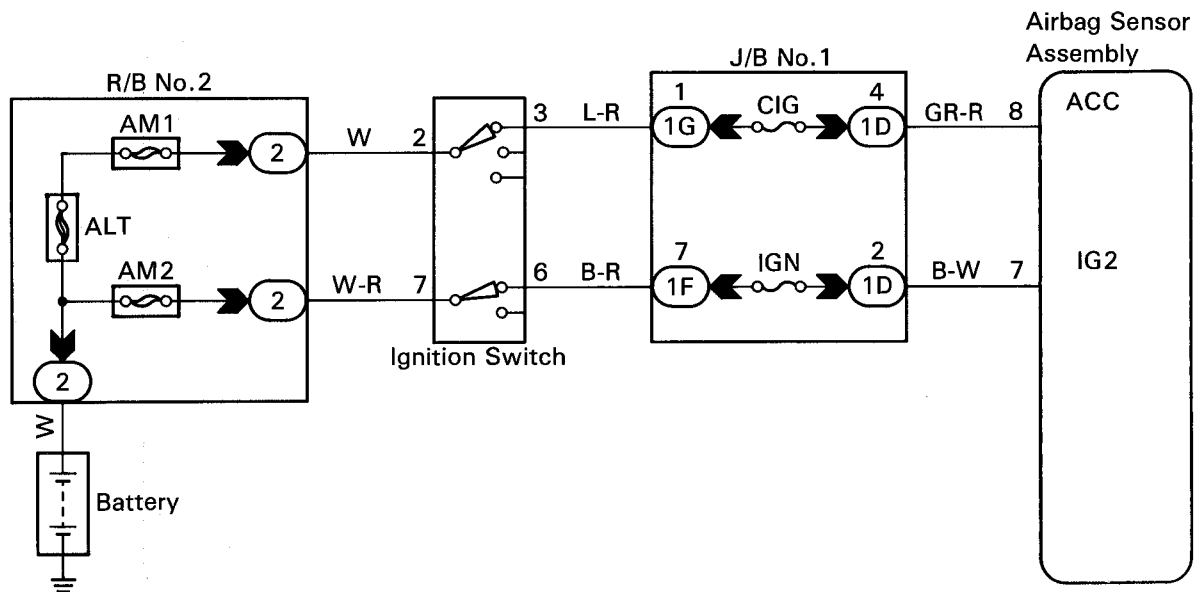
The SRS is equipped with a voltage-increase circuit (DC-DC converter) in the airbag sensor assembly in case the source voltage drops.

When the battery voltage drops, the voltage-increase circuit (DC-DC converter) functions to increase the voltage of the SRS to normal voltage.

The diagnostic system malfunction display for this circuit is different to other circuits – when the SRS warning light remains lit up and the DTC is a normal code, source voltage drop is indicated.

Malfunction in this circuit is not recorded in the airbag sensor assembly, and the source voltage returns to normal, after approx. 10 seconds the SRS warning light automatically goes off.

DTC No.	DTC Detecting Condition	Trouble area
(Normal)	Source voltage drop.	• Battery • Airbag sensor assembly

WIRING DIAGRAM

INSPECTION PROCEDURES

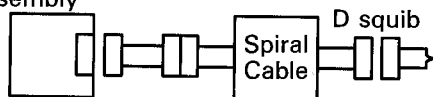
1

Preparation.

LOCK



Airbag Sensor Assembly

AB0117
W00369

- P** (1) Disconnect negative (–) terminal cable from the battery, and wait at least 90 seconds.
 (2) Remove steering wheel pad. (See SR section)
 (3) Disconnect connector of airbag sensor assembly. (See page RS-19)

Caution

Store the steering wheel pad with the front surface facing upward.

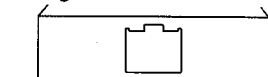
2

Check source voltage.

ON



Airbag Sensor Assembly

ACC IG₂AB0119
R14285

- P** (1) Connect negative (–) terminal cable to battery.
 (2) Turn ignition switch ON.

- C** Measure voltage at IG₂ or ACC on sensor and operate electric system. (defogger, wiper, headlight, heater blower, etc.)

OK Voltage: 8 – 14 V

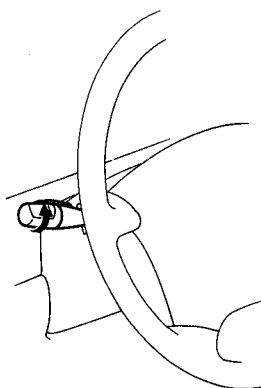
OK

NG Check the harness between battery and airbag sensor assembly, and check the battery and charging system.

3

Does SRS warning light turn off?

ON

AB0119
AB0234

- P** (1) Turn ignition switch to LOCK.
 (2) Connect steering wheel pad connector.
 (3) Connect airbag sensor assembly connector.
 (4) Turn ignition switch ON.

- C** Operate electric system checked in **2** **C** and check that SRS warning light goes off.

YES

NO

Check DTC, and if a malfunction code is output, perform troubleshooting according to malfunction code. If a normal code is output, replace airbag sensor assembly.

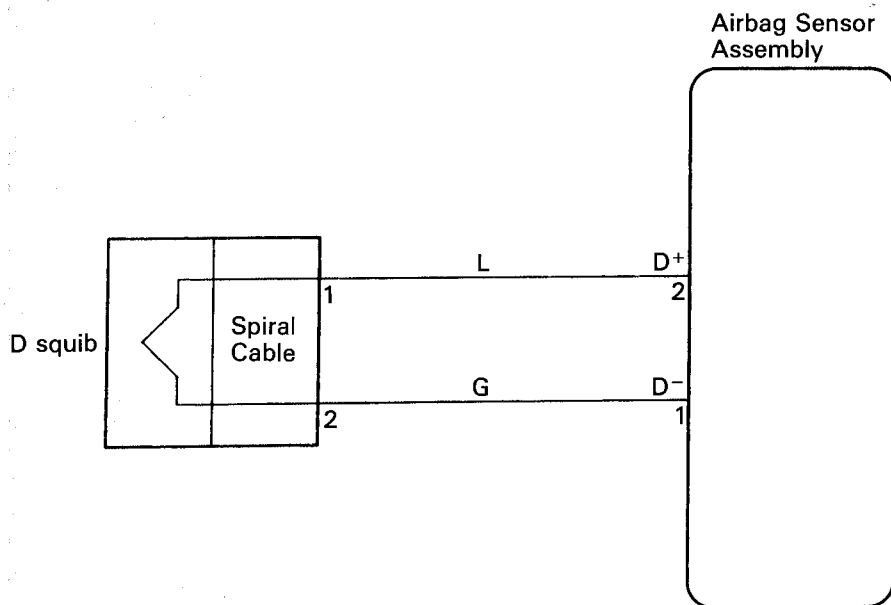
From the results of the above inspection, the malfunctioning part can now be considered normal. To make sure of this, use the simulation method to check.

DTC**11****Short in D Squib Circuit (to Ground)****CIRCUIT DESCRIPTION**

The D squib circuit consists of the airbag sensor assembly, spiral cable, steering wheel pad. It causes the SRS to deploy when the SRS deployment conditions are satisfied.

For details of the function of each component, see FUNCTION OF COMPONENTS on page RS-3. DTC 11 is recorded when ground short is detected in the D squib circuit.

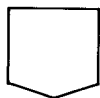
DTC No.	DTC Detecting Condition	Trouble area
11	• Short circuit in squib wire harness (to ground). • Squib malfunction. • Spiral cable malfunction. • Airbag sensor assembly malfunction.	• Steering wheel pad (D squib) • Spiral cable • Airbag sensor assembly • Wire harness

WIRING DIAGRAM

INSPECTION PROCEDURES

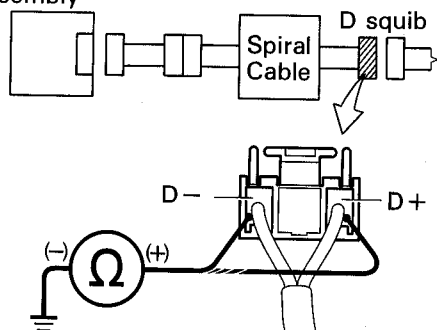
1

Preparation. (See step 1 on page RS-31)



2

Check D squib circuit.

Airbag Sensor
AssemblyAB0072
R14290

C

For the connector (on the spiral cable side) between the spiral cable and steering wheel pad, measure the resistance between D⁺, D⁻ and body ground.

OK

Resistance: 1 MΩ or higher

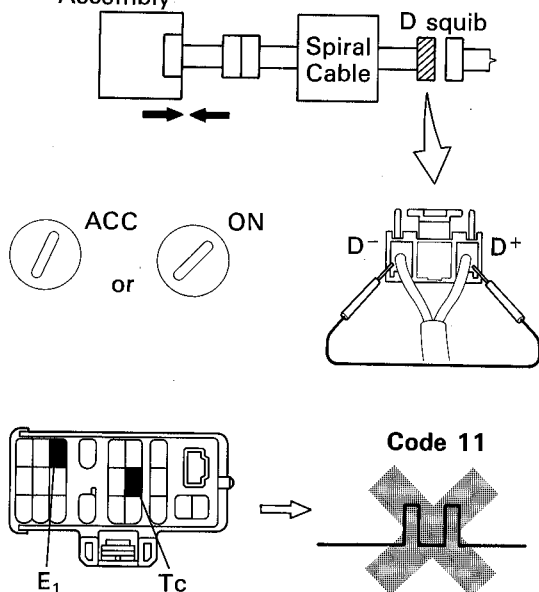
OK

NG

Go to step 5.

3

Check airbag sensor assembly.

Airbag Sensor
AssemblyAB0074
AB0069
AB0118 AB0119
1el-23-1-A AB0057

P

- (1) Connect connector to airbag sensor assembly.
- (2) Using a service wire, connect D⁺ and D⁻ on spiral cable side of connector between spiral cable and steering wheel pad.
- (3) Connect negative (—) terminal cable to battery, and wait at least 2 seconds.

C

- (1) Turn ignition switch to ACC or ON and wait at least 20 seconds.
- (2) Clear malfunction code stored in memory. (See page RS-27)
- (3) Turn ignition switch to LOCK, and wait at least 20 seconds.
- (4) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
- (5) Using SST, connect terminals Tc and E₁ of DLC1.
- (6) Check DTC.

SST 09843-18020

OK

DTC 11 is not output.

Hint

Codes other than code 11 may be output at this time, but they are not relevant to this check.

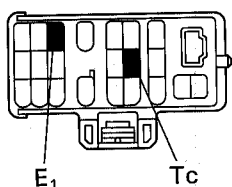
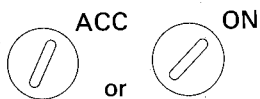
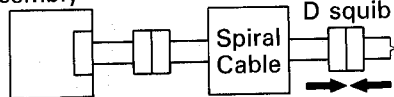
OK

NG

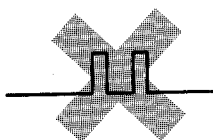
Replace airbag sensor assembly.

4

Check D squib.

Airbag Sensor
Assembly

Code 11

AB0075
AB0118 AB0119
lei-23-1-A AB0057

OK

P

- (1) Turn ignition switch to LOCK.
- (2) Disconnect negative (–) terminal cable from the battery, and wait at least 90 seconds.
- (3) Connect steering wheel pad connector.
- (4) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.

C

- (1) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
- (2) Clear malfunction code stored in memory. (See page RS-27)
- (3) Turn ignition switch to LOCK, and wait at least 20 seconds.
- (4) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
- (5) Using SST, connect terminals Tc and E₁ of DLC1.
- (6) Check DTC.

SST 09843-18020

OK

DTC 11 is not output.

Hint

Codes other than code 11 may be output at this time, but they are not relevant to this check.

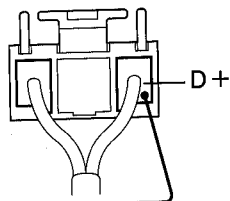
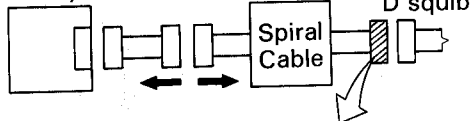
NG

Replace steering wheel pad.

From the results of the above inspection, the malfunctioning part can now be considered normal. To make sure of this, use the simulation method to check. If the malfunctioning part can not be detected by the simulation method, replace all SRS components including the wire harness.

5

Check spiral cable.

Airbag Sensor
AssemblyAB0071
R14301

OK

P

Disconnect connector between airbag sensor assembly and spiral cable.

C

Measure resistance between D⁺ on spiral cable side of connector between spiral cable and steering wheel pad and body ground.

OK

Resistance: 1 MΩ or higher

NG

Repair or replace spiral cable.

Repair or replace harness or connector between airbag sensor assembly and spiral cable.

DTC**12****Short in D Squib Circuit (to B+)****CIRCUIT DESCRIPTION**

The D squib circuit consists of the airbag sensor assembly, spiral cable and steering wheel pad. It causes the SRS to deploy when the SRS deployment conditions are satisfied.

For details of the function of each component, see FUNCTION OF COMPONENTS on page RS-3. DTC 12 is recorded when a B+ short is detected in the D squib circuit.

DTC No.	DTC Detecting Condition	Trouble area
12	• Short circuit in squib wire harness (to B+). • Squib malfunction. • Spiral cable malfunction. • Airbag sensor assembly malfunction.	• Steering wheel pad (D squib) • Spiral cable • Airbag sensor assembly • Wire harness

WIRING DIAGRAM

Refer to page RS-31 for the WIRING DIAGRAM

INSPECTION PROCEDURES**1**

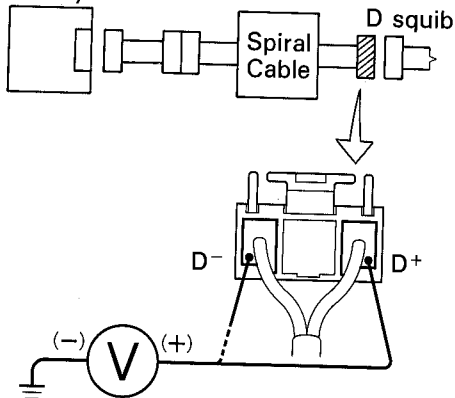
Preparation. (See step **1** on page RS-31)

**2**

Check D squib circuit.



Airbag Sensor Assembly



AB0119
AB0072
R14300

C For the connector (on the spiral cable side) between the spiral cable and steering wheel pad, measure the voltage between D⁺, D⁻ and body ground.

OK Voltage: 0 V

OK

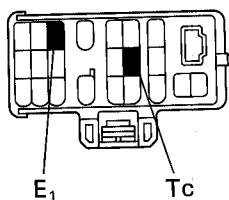
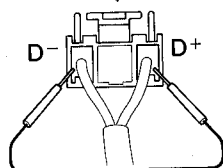
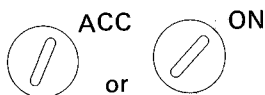
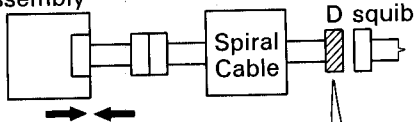
NG Go to step **5**.

RS

3

Check airbag sensor assembly.

Airbag Sensor Assembly



Code 12



P

- (1) Connect connector to airbag sensor assembly.
- (2) Using a service wire, connect D⁺ and D⁻ on spiral cable side of connector between spiral cable and steering wheel pad.
- (3) Connect negative (-) terminal cable to battery, and wait at least 2 seconds.

C

- (1) Turn ignition switch to ACC or ON and wait at least 20 seconds.
- (2) Clear malfunction code stored in memory. (See page RS-27)
- (3) Turn ignition switch to LOCK, and wait at least 20 seconds.
- (4) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
- (5) Using SST, connect terminals Tc and E₁ of DLC1.
SST 09843-18020
- (6) Check DTC.

OK

DTC 12 is not output.

Hint

Codes other than code 12 may be output at this time, but they are not relevant to this check.

AB0074
AB0069
AB0118 AB0119
lei-23-1-A FI1389

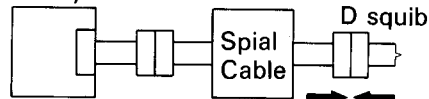
OK

NG

Replace airbag sensor assembly.

4 Check D squib.

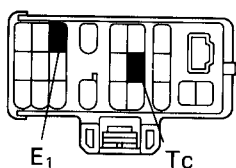
Airbag Sensor
Assembly



ACC ON



or



Code 12



AB0075
AB0118 AB0119
Iei-23-1-A FI1389

- P**
- (1) Turn ignition switch to LOCK.
 - (2) Disconnect negative (—) terminal cable from the battery, and wait at least 90 seconds.
 - (3) Connect steering wheel pad connector.
 - (4) Connect negative (—) terminal cable to battery, and wait at least 2 seconds.

- C**
- (1) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
 - (2) Clear malfunction code stored in memory. (See page RS-27)
 - (3) Turn ignition switch to LOCK, and wait at least 20 seconds.
 - (4) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
 - (5) Using SST, connect terminals Tc and E₁ of DLC1.
 - (6) Check DTC.

OK DTC 12 is not output.

Hint Codes other than code 12 may be output at this time, but they are not relevant to this check.

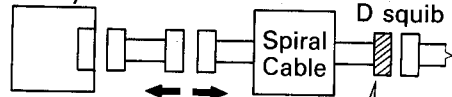
OK

NG Replace steering wheel pad.

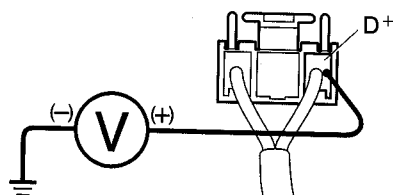
Form the results of the above inspection, the malfunctioning part can now be considered normal. To make sure of this, use the simulation method to check.

5 Check spiral cable.

Airbag Sensor
Assembly



ON



AB0071
AB0119
R14288

- P**
- (1) Turn ignition switch to LOCK.
 - (2) Disconnect connector between airbag sensor assembly and spiral cable.
 - (3) Turn ignition switch ON.

- C**
- Measure voltage at D⁺ on spiral cable side of connector between spiral cable and steering wheel pad.

OK Voltage: 0 V

OK

NG Repair or replace spiral cable.

Repair or replace harness or connector between airbag sensor assembly and spiral cable.

RS

DTC**14****Open in D Squib Circuit****CIRCUIT DESCRIPTION**

The D squib circuit consists of the airbag sensor assembly, spiral cable and steering wheel pad. It causes the airbag to deploy when the airbag deployment conditions are satisfied. For details of the function of each component, see FUNCTION OF COMPONENTS on page RS-3. DTC 14 is recorded when an open is detected in the D squib circuit.

DTC No.	DTC Detecting Condition	Trouble area
14	- Open circuit in D⁺ wire harness or D⁻ wire harness of squib. - D Squib malfunction. - Spiral cable malfunction. - Airbag sensor assembly malfunction.	- Steering wheel pad (D squib) - Spiral cable - Airbag sensor assembly - Wire harness

WIRING DIAGRAM

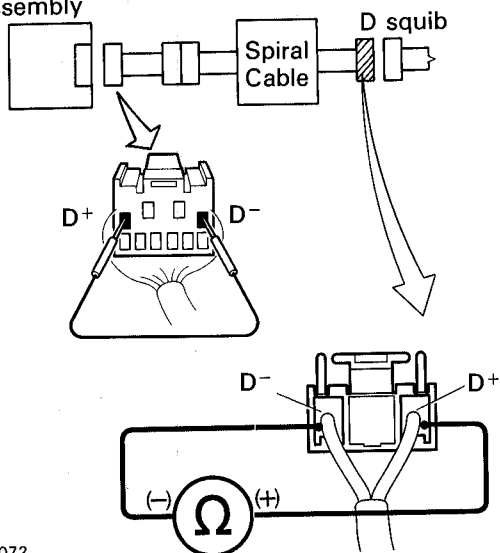
Refer to page RS-31 for the WIRING DIAGRAM

INSPECTION PROCEDURES

1 Preparation. (See step **1** on page RS-31)

2 Check D squib circuit.

Airbag Sensor Assembly



P Using a service wire, connect D⁺ and D⁻ on airbag sensor assembly side connector.

C For the connector (on the spiral cable side) between the spiral cable and steering wheel pad, measure the resistance between D⁺ and D⁻.

OK Resistance: Below 1 Ω

NG

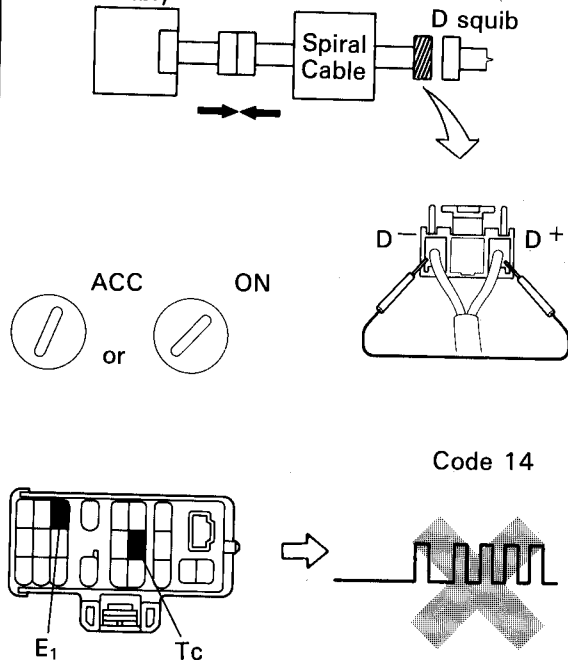
Go to step **5**.

OK

AB0072
R13831
R14286

3**Check airbag sensor assembly.**

Airbag Sensor Assembly



AB0074
AB0069
AB0118 AB0119
Iei-23-1-A FI1391

OK**P**

- (1) Connect connector to airbag sensor assembly.
- (2) Using a service wire, connect D⁺ and D⁻ on spiral cable side of connector between spiral cable and steering wheel pad.
- (3) Connect negative (-) terminal cable to battery, and wait at least 2 seconds.

C

- (1) Turn ignition switch to ACC or ON and wait at least 20 seconds.
- (2) Clear malfunction code stored in memory. (See page RS-27)
- (3) Turn ignition switch to LOCK, and wait at least 20 seconds.
- (4) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
- (5) Using SST, connect terminals Tc and E₁ of DLC1.
SST 09843-18020
- (6) Check DTC.

OK**DTC 14 is not output.****Hint**

Codes other than code 14 may be output at this time, but they are not relevant to this check.

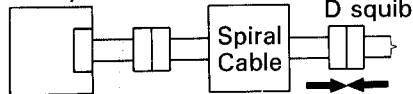
NG**Replace airbag sensor assembly.**

RS

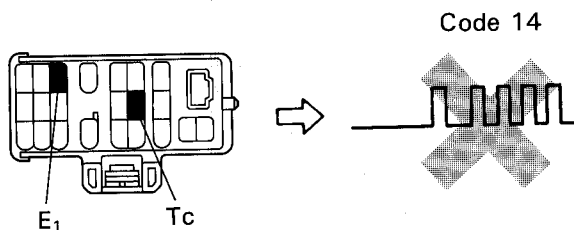
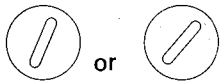
4

Check D squib.

Airbag Sensor Assembly



ACC or ON



AB0075
AB0118 AB0119
lei-23-1-A FI1391

OK

P

- (1) Turn ignition switch to LOCK.
- (2) Disconnect negative (—) terminal cable from the battery, and wait at least 90 seconds.
- (3) Connect steering wheel pad (squib) connector.
- (4) Connect negative (—) terminal cable to battery, and wait at least 2 seconds.

C

- (1) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
- (2) Clear malfunction code stored in memory. (See page RS-27)
- (3) Turn ignition switch to LOCK, and wait at least 20 seconds.
- (4) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
- (5) Using SST, connect terminals Tc and E₁ of DLC1.
SST 09843-18020
- (6) Check DTC.

OK

DTC 14 is not output.

Hint

Codes other than code 14 may be output at this time, but they are not relevant to this check.

NG

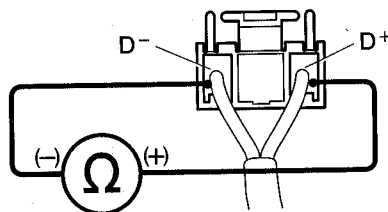
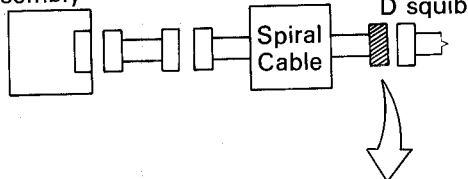
Replace steering wheel pad.

From the results of the above inspection, the malfunctioning part can now be considered normal. To make sure of this, use the simulation method to check.

5

Check spiral cable.

Airbag Sensor Assembly



AB0071
R14286

OK

P

Disconnect connector between airbag sensor assembly and spiral cable.

C

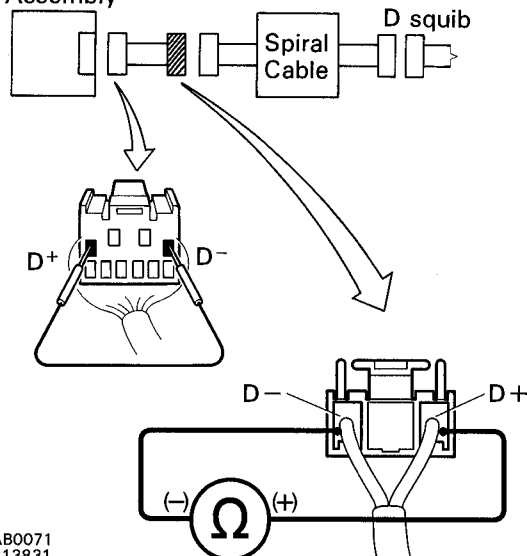
For the connector (on the spiral cable side) between the spiral cable and steering wheel pad, measure the resistance between D⁺ and D⁻.

OK

Resistance: Below 1 Ω

NG

Repair or replace spiral cable.

6**Check harness between airbag sensor assembly and spiral cable.****Airbag Sensor Assembly**

P Using a service wire, connect D⁺ and D⁻ on airbag sensor assembly side connector.

C For the connector (on the airbag sensor assembly side) between the airbag sensor assembly and spiral cable, measure the resistance between D⁺ and D⁻.

OK Resistance: Below 1 Ω

OK

NG Repair or replace harness or connector between airbag sensor assembly and spiral cable.

From the results of the above inspection, the malfunctioning part can now be considered normal. To make sure of this, use the simulation method to check.

DTC**31****Airbag Sensor Assembly Malfunction****CIRCUIT DESCRIPTION**

The airbag sensor assembly consists of a airbag sensor, safing sensor, drive circuit, diagnosis circuit and ignition control, etc.

It receives signals from the airbag sensors, judges whether or not the SRS must be activated, and diagnostic system malfunction.

DTC 31 is recorded when occurrence of a malfunction in the airbag sensor assembly is detected.

DTC No.	DTC Detecting Condition	Trouble area
31	Airbag sensor assembly malfunction	Airbag sensor assembly

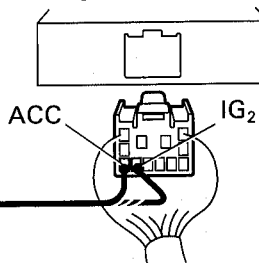
INSPECTION PROCEDURES

HINT: When a malfunction code other than code 31 is displayed at the same time, first repair the malfunction indicated by the malfunction code other than code 31.

1**Preparation. (See step 1 on page RS-31)**

2**Check voltage at IG2 and ACC of airbag sensor assembly.**

Airbag Sensor Assembly

AB0119
R14285

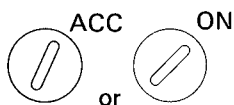
- P** (1) Connect negative (–) terminal cable to battery.
(2) Turn ignition switch ON.

- C** Measure voltage between terminals IG2 and ACC of airbag sensor assembly and body ground.

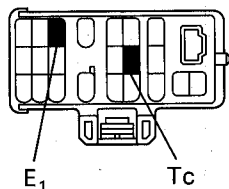
OK Voltage: Below 16 V

OK**NG**

Check battery and charging system.
(See charging system section)

3**Is DTC 31 output again?**

Code 31

AB0118 AB0119
lei-23-1-A FI1394

- P** Clear malfunction code.

- C** (1) Turn ignition switch to LOCK, and wait at least 20 seconds.
(2) Turn ignition switch to ACC or ON, and wait at least 20 seconds.
(3) Repeat operation in step (1) and (2) at least 5 times.
(4) Using SST, connect terminals Tc and E₁ of DLC1.
SST 09843–18020
(5) Check DTC.

YES**NO**

Using simulation method, reproduce malfunction symptoms (See INTRODUCTION).

Replace airbag sensor assembly.

SRS Warning Light System Malfunction (Always lit up when ignition switch is in LOCK position.)

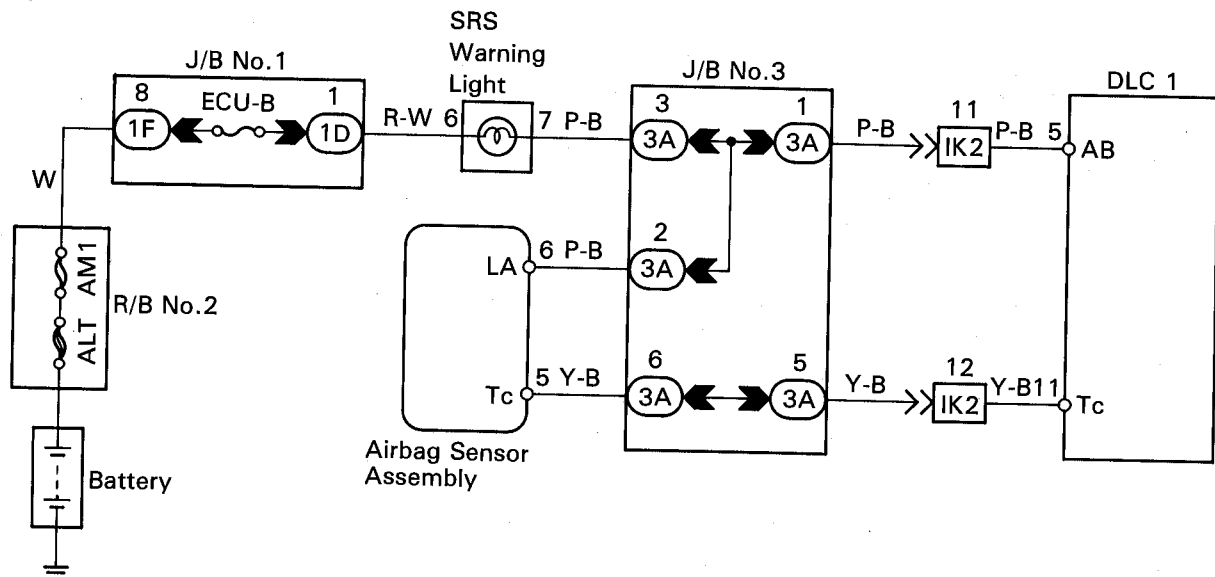
CIRCUIT DESCRIPTION

The SRS warning light is located on the combination meter.

When the SRS is normal, the SRS warning light lights up for approx. 6 seconds after the ignition switch is turned from LOCK position to ACC or ON position, and then turns off automatically. If there is a malfunction in the SRS, the SRS warning light lights up to inform the driver of the abnormality.

When terminals Tc and E₁ of the DLC1 are connected, the DTC is displayed by the blinking of the SRS warning light.

WIRING DIAGRAM



INSPECTION PROCEDURES

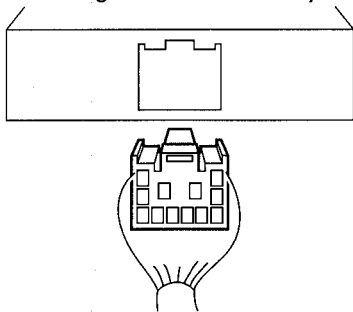
1Preparation. (See Step **1** on page RS-31)**2**

Does SRS warning light turn off?

LOCK



Airbag Sensor Assembly

AB0117
N12639**P**

(1) Disconnect airbag sensor assembly connector.
(2) Connect negative (–) terminal cable to battery.

C

Check operation of SRS warning light.

YES**NO**

Check SRS warning light circuit or terminal AB circuit of DLC1.

Replace airbag sensor assembly.

SRS Warning Light System Malfunction (Does not light up when ignition switch is turned to ACC or ON.)

RS

CIRCUIT DESCRIPTION

The SRS warning light is located on the combination meter.

When the SRS is normal, the SRS warning light lights up for approx. 6 seconds after the ignition switch is turned from LOCK position to ACC or ON position, and then turns off automatically.

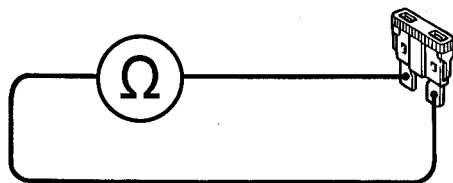
If there is a malfunction in the SRS, the SRS warning light lights up to inform the driver of the abnormality.

When terminals Tc and E₁ of the DLC1 are connected, the DTC is displayed by the blinking of the SRS warning light.

WIRING DIAGRAM

Refer to page RS-31 for the WIRING DIAGRAM

INSPECTION PROCEDURES

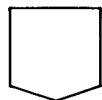
1 Check ECU-B Fuse.

N14677

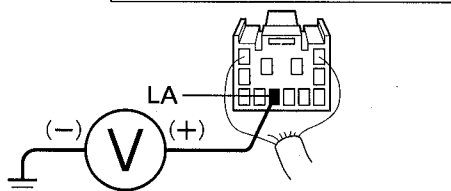
P Remove ECU-B fuse.**C** Check continuity of ECU-B fuse.**OK** Continuity.

Hint

- Fuse may be burnt out even if it appears to be OK during visual inspection.
- If fuse is OK, install it.

OK**NG** Go to step **5**.**2** Preparation. (See step **1** on page RS-31)**3** Check SRS warning light circuit.

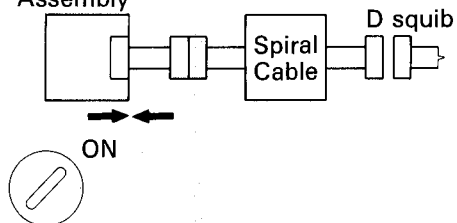
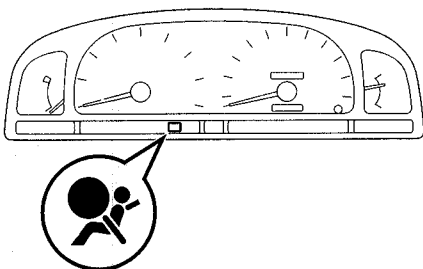
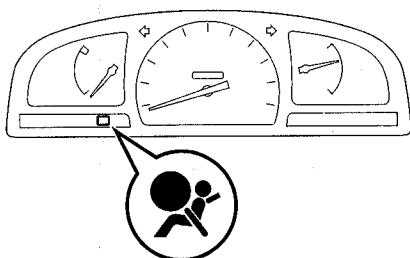
Airbag Sensor Assembly

AB0119
R14302

P

- (1) Connect negative (—) terminal cable to battery.
- (2) Turn ignition switch to ACC or ON.

C Measure voltage LA terminal of harness side connector of airbag sensor assembly.**OK** Voltage: 10 – 14 V**OK****NG** Check SRS warning light bulb/repair SRS warning light circuit.

4**Does SRS warning light come on?**Airbag Sensor
Assembly**w/ Tachometer****w/o Tachometer**AB0074
AB0119
R13460
R13459

- P** (1) Disconnect negative (–) terminal cable from the battery, and wait at least 90 seconds.
 (2) Connect airbag sensor assembly connector.
 (3) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.
 (4) Turn ignition switch to ACC or ON.
- C** Check operation of SRS warning light.

YES**NO**

Check terminal LA of airbag sensor assembly. If normal, replace airbag sensor assembly.

RS

From the results of the above inspection, the malfunctioning part can now be considered normal. To make sure of this, use the simulation method to check.

5**Is new ECU-B fuse burnt out again?****YES****NO**

Using simulation method, reproduce malfunction symptoms (See INTRODUCTION).

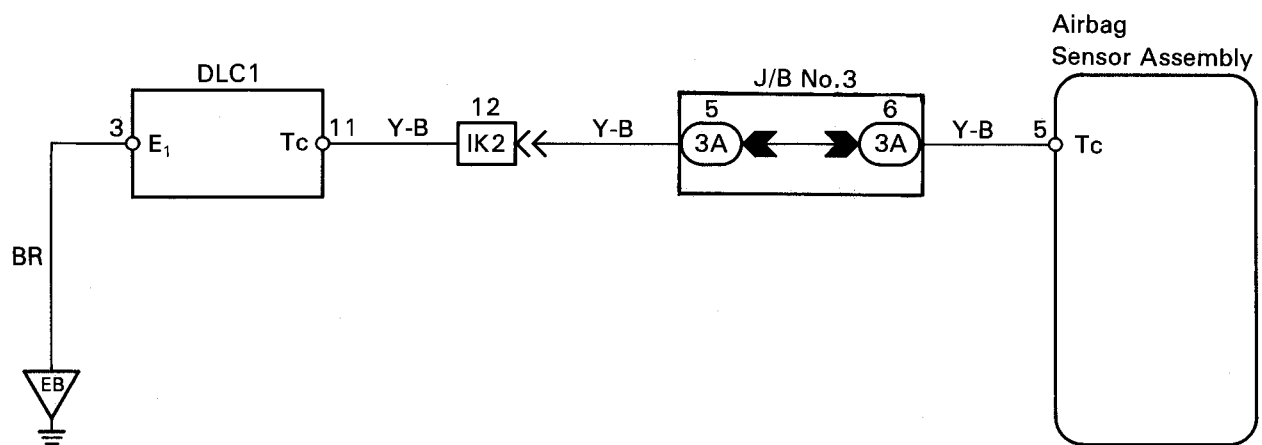
Check harness between ECU-B fuse and SRS warning light.

Tc Terminal Circuit

CIRCUIT DESCRIPTION

By connecting terminals Tc and E₁ of the DLC1 the airbag sensor assembly is set in the DTC output mode. The DTCs are displayed by the blinking of the SRS warning light.

WIRING DIAGRAM



R13823

RS

INSPECTION PROCEDURES

P Preparation **C** Check

HINT: If the DTC is not displayed, do the following troubleshooting:

1 Does SRS warning light light up for approx. 6 seconds?

LOCK



ACC

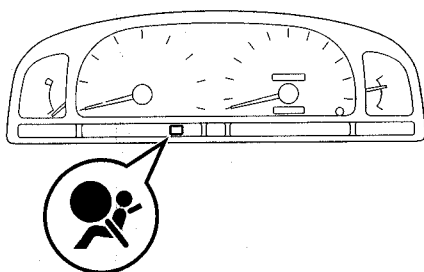


or

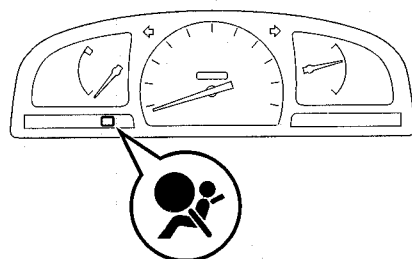
ON



w/ Tachometer



w/o Tachometer

AB0117 AB0118 AB0119
R13460
R13459**C** Check operation of SRS warning light after ignition switch turned from LOCK position to ACC or ON position.**YES****NO**Check SRS warning light system.
(See page RS-26)

RS

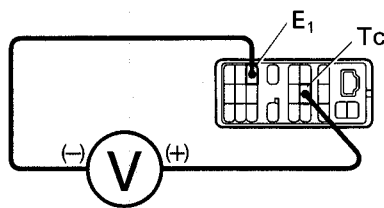
2 Check voltage between terminals Tc and E₁ of DLC1.

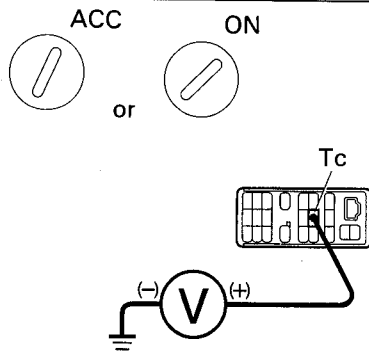
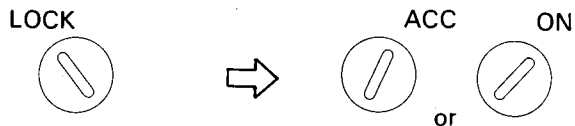
ACC



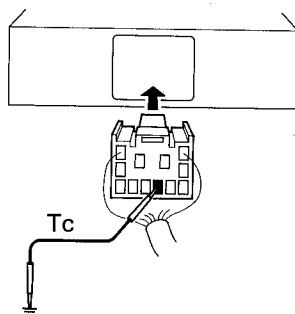
or

ON

AB0118 AB0119
R14305**P** Turn ignition switch to ACC or ON.**C** Measure voltage between terminals Tc and E₁ of DLC1.**OK** Voltage: 10 – 16 V**NG****OK**Go to step **4**.

3**Check voltage between terminals Tc of DLC1 and body ground.**AB0118 AB0119
R14304**C** Measure voltage between terminals Tc of DLC1 and body ground.**OK** Voltage: 10 – 16 V**NG****OK**Check harness between terminal E₁ of DLC1 and body ground.**4****Check airbag sensor assembly.**

Airbag Sensor Assembly

AB0117 AB0118 AB0119
R12658

- P**
- (1) Turn ignition switch to LOCK.
 - (2) Disconnect negative (–) terminal cable from the battery, and wait at least 90 seconds.
 - (3) Remove steering wheel pad. (See SR section)
 - (4) Disconnect airbag sensor assembly connector.
 - (5) Insert service wire into terminal Tc from back side as shown.
 - (6) Connect airbag sensor assembly connector with service wire.
 - (7) Connect negative (–) terminal cable to battery.
 - (8) Turn ignition switch to ACC or ON and wait at least 20 seconds.
 - (9) Connect service wire of terminal Tc to body ground.

C Check operation of SRS warning light.**OK** SRS warning light comes on.**Notice**

Never make a mistake with the terminal connection position as this will cause a malfunction.

NG**OK**

Check harness between airbag sensor assembly and DLC1.

Replace airbag sensor assembly.

HINT: If the DTC is displayed without a DTC check procedure, do the following troubleshooting.

1 Preparation. (See step **1** on page RS-31)

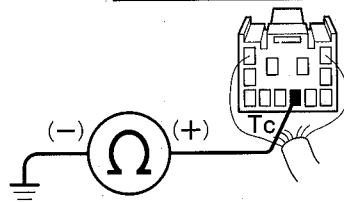
OK

2 Check resistance between terminal Tc of airbag sensor assembly and body ground.

LOCK



Airbag Sensor Assembly



AB0117
R14303

C Check resistance between terminal Tc of airbag sensor assembly connector and body ground.

OK Resistance: 1 MΩ or Higher

OK

NG Repair or replace harness or connector.

Replace airbag sensor assembly.

**SERVICE SPECIFICATIONS
TORQUE SPECIFICATIONS**

RS02T-0N

Part tightened	N·m	kgf·cm	ft·lbf
Steering wheel	34	350	25
Steering wheel pad	8.8	90	78 in·lbf
Airbag sensor assembly	20	200	14

