SUPPLEMENTAL RESTRAINT SYSTEM

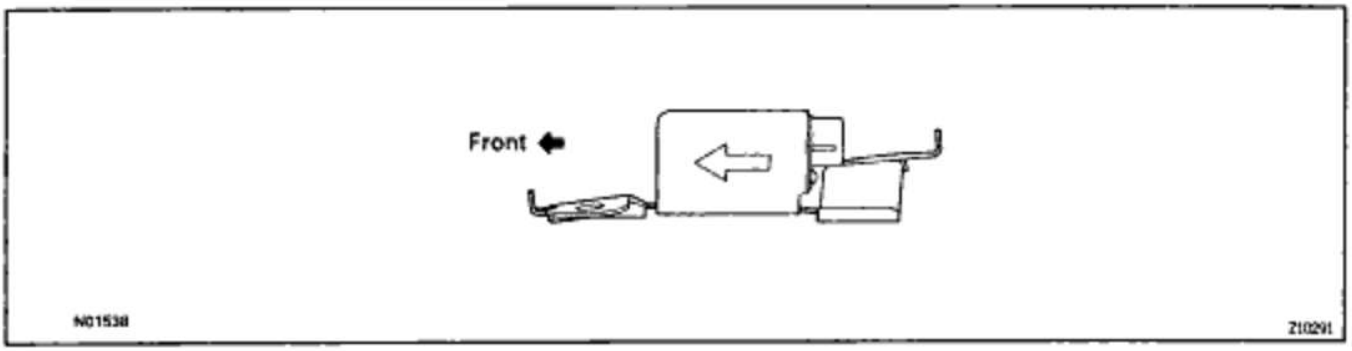
GENERAL DESCRIPTION

The 1994 CAMRY is equipped with an SRS (Supplemental Restraint System) such as the driver airbag and front passenger airbag. Failure to carry out service operations in the correct sequence could cause the SRS to unexpectedly deployed during servicing, possibly leading to a serious accident. Further, if a mistake is made in servicing the supplemental restraint system, it is possible the SRS 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, then follow the correct procedure described in the repair manual.

1. Malfunction symptoms of the supplemental restraint system are difficult to confirm, so the diagnostic trouble codes become the most important source of information when troubleshoot–ing. When troubleshooting the supplemental restraint system, always inspect the diagnostic trouble codes before disconnecting the battery (See page RS–61).
2. **Work must be started after 90 seconds from the time the ignition switch turned to the "LOCK" position and the negative (–) terminal cable is disconnected from the battery. (The supple–mental restraint system is equipped with a back–up power source so that if work is started within 90 seconds of disconnecting the negative (–) terminal cable of the battery, the SRS may be deployed.) When the negative (–) terminal cable is disconnected from the battery, memory of the clock and audio systems 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, and the front airbag sensors, the steering wheel pad and front passenger airbag assembly should be inspected (See page RS–17, 29, 43 and 46).
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 sensors during repairs.
6. Never disassemble and repair the front airbag sensors, center airbag sensor assembly or steering wheel pad or front passenger airbag assembly in order to reuse it.
7. If the front airbag sensors, center airbag sensor assembly or steering wheel pad or front passenger airbag assembly have been dropped, or if there are cracks, dents or dents or other defects in the case, bracket or connector, replace them with new ones.
8. Do not expose the front airbag sensors, center airbag sensor assembly, steering wheel pad and front passenger airbag assembly directly to hot air or flames.
9. Use a volt/ohmmeter with high impedance (10 kΩ/V minimum) of troubleshooting of the electrical circuit.
10. Information labels are attached to the periphery of the SRS components. Follow the instructions on the notices.
11. After work on the supplemental restraint system is completed, perform the SRS warning light check (See page RS–61).
12. If the vehicle is equipped with a mobile communication system, refer to the precaution in the IN section.

FRONT AIRBAG SENSOR

1. Never reuse the front airbag sensor involved in a collision when the airbag has deployed. (Replace both the left and right airbag sensors.)
2. Install the front airbag sensor with the arrow on the sensor facing toward the front of the vehicle.



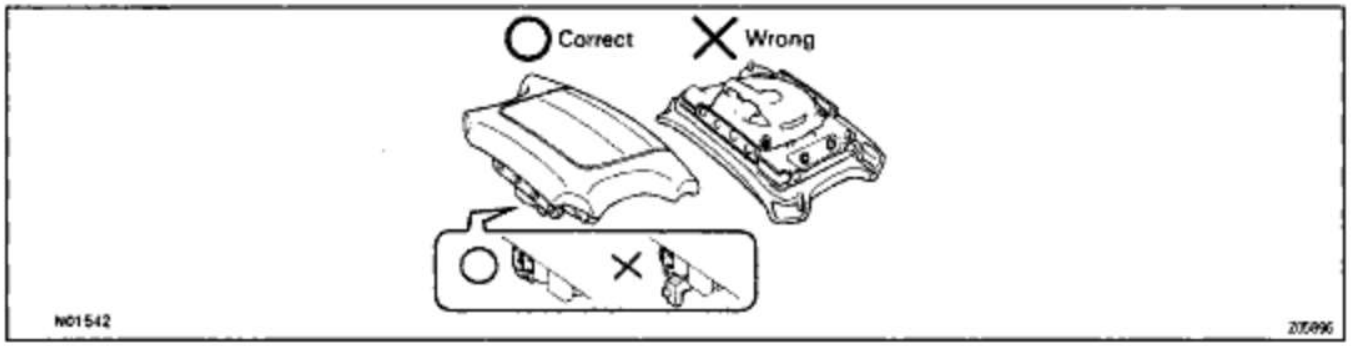
3. The front airbag sensor set bolts have been anti–rust treated.
   When the sensor is removed, always replace the set bolts with new ones.
4. The front airbag sensors is equipped with an electrical connection check mechanism. Be sure to lock this mechanism securely when connecting the connector.
   If the connector is not securely locked, a malfunction code will be detected by the diagnosis system (See page RS–13).

SPIRAL CABLE (in COMBINATION SWITCH)

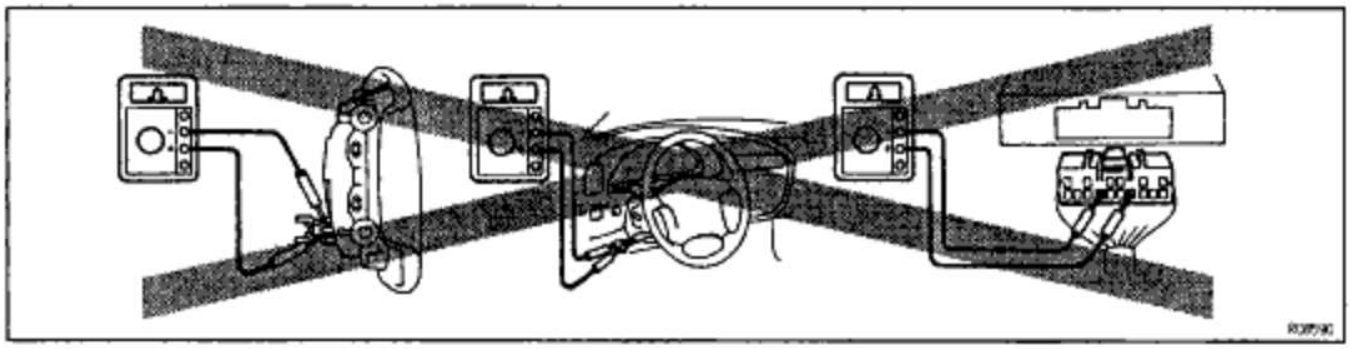
The steering wheel must be fitted correctly to the steering column with the spiral cable at the neutral position, otherwise cable disconnection and other troubles may result. Refer to page RS –20 of this manual concerning correct steering wheel installation.

STEERING WHEEL PAD (with AIRBAG)

1. When removing the steering wheel pad or handling a new steering wheel pad, 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 connector will not be damaged. And 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 inflates for some reason.



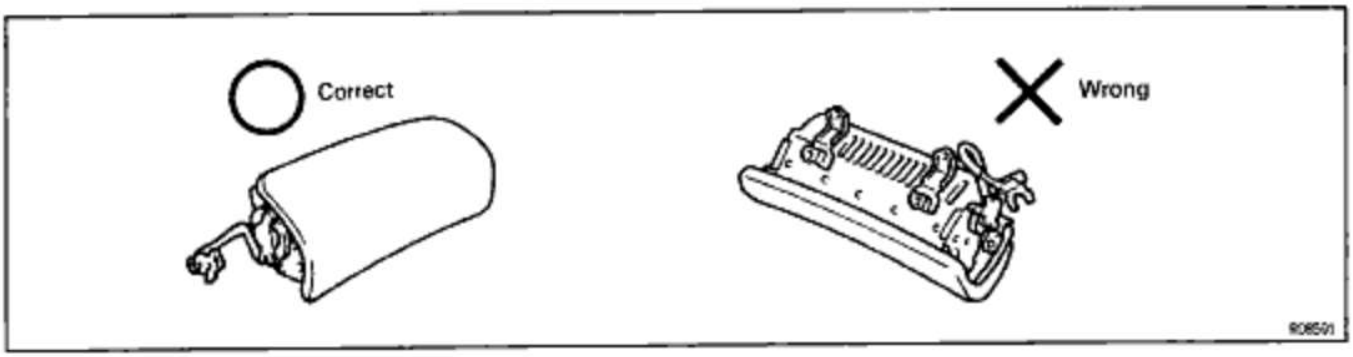
2. Never measure the resistance of the airbag squib.
(This may cause the airbag to deploy, which is very dangerous.)



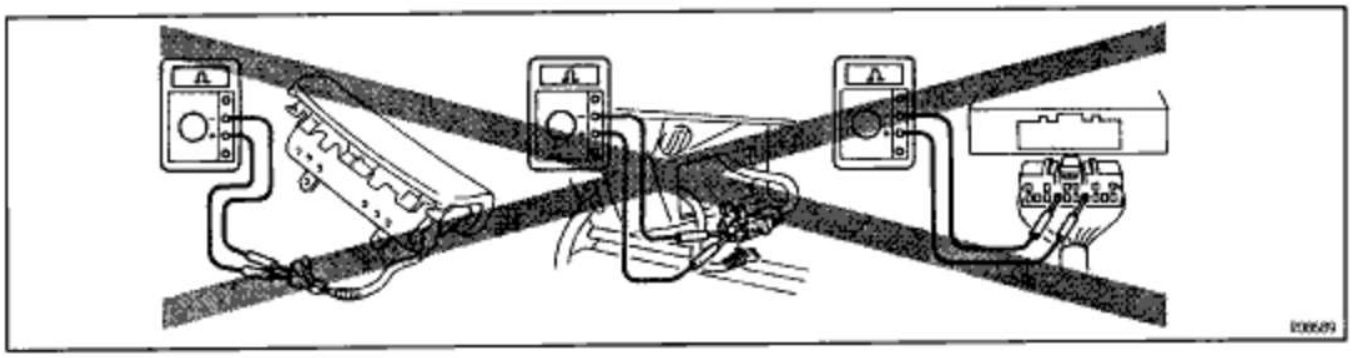
3. Grease should not be applied to the steering wheel pad and the pad should not be cleaned with detergents of any kind.
4. Store the steering wheel pad where the ambient temperature below 93°C (200° F), without high humidity and away from electrical noise.
5. When using electric welding, first disconnect the airbag connector (yellow color and 2 pins) installed on the glove compartment finish plate at the left side of the glove compartment before starting work.
6. When disposing of a vehicle or the steering wheel pad alone, the airbag should be deployed using an SST before disposal (See page RS–23). Perform the operation in a place away from electrical noise.

FRONT PASSENGER AIRBAG ASSEMBLY

1. Always store a removed or new front passenger airbag assembly with the airbag door facing up. Store the airbag assembly with the airbag door facing down could cause a serious accident if the airbag inflates.



2. Never measure the resistance of the airbag squib.
(This may cause the airbag to deploy, which is very dangerous.)



3. Grease should not be applied to the front passenger airbag and the door should not be cleaned with detergents of any kind.
4. Store the front passenger airbag assembly where the ambient temperature remains below 93°C (200°F), without high humidity and away from electrical noise.
5. When using electric welding, first disconnect the airbag connector (yellow color and 2 pins) installed on the glove compartment finish plate at the left side of the glove compartment before starting work.
6. When disposing of a vehicle or the front passenger airbag assembly alone, the airbag should be deployed using an SST before disposal (See page RS–36). Perform the operation in a place away from electrical noise.

CENTER AIRBAG SENSOR ASSEMBLY

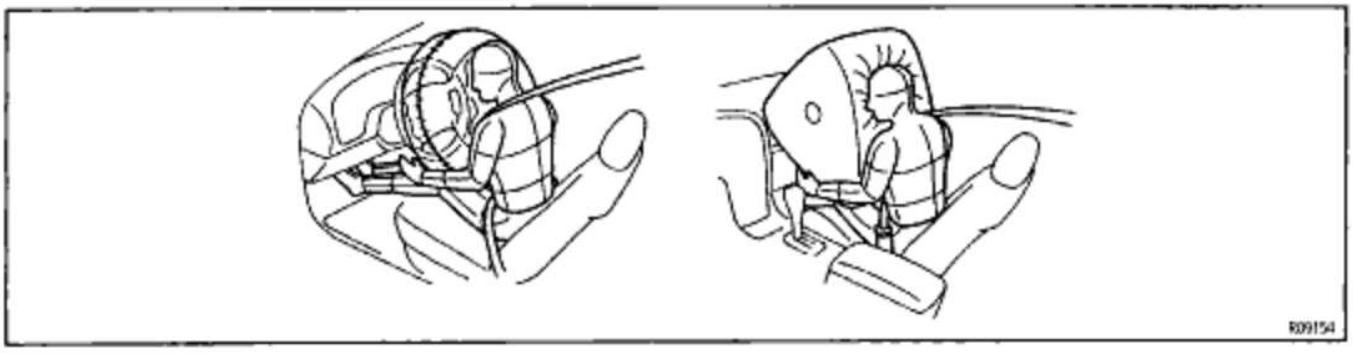
1. Never. reuse the center airbag sensor assembly involved in a collision when the airbag has deployed.
2. The connectors to the center airbag sensor assembly should be connected or disconnected with the sensor mounted on the floor. If the connectors are connected or disconnected while the center airbag sensor assembly is not mounted to the floor, it could cause undesired ignition of the supplemental restraint system.
3. Work must be started after 90 seconds from the time the ignition switch is turned to "LOCK" position and the negative (–) terminal cable is disconnected from the battery even just loosing the set bolts of center airbag sensor assembly.

WIRE HARNESS AND CONNECTOR

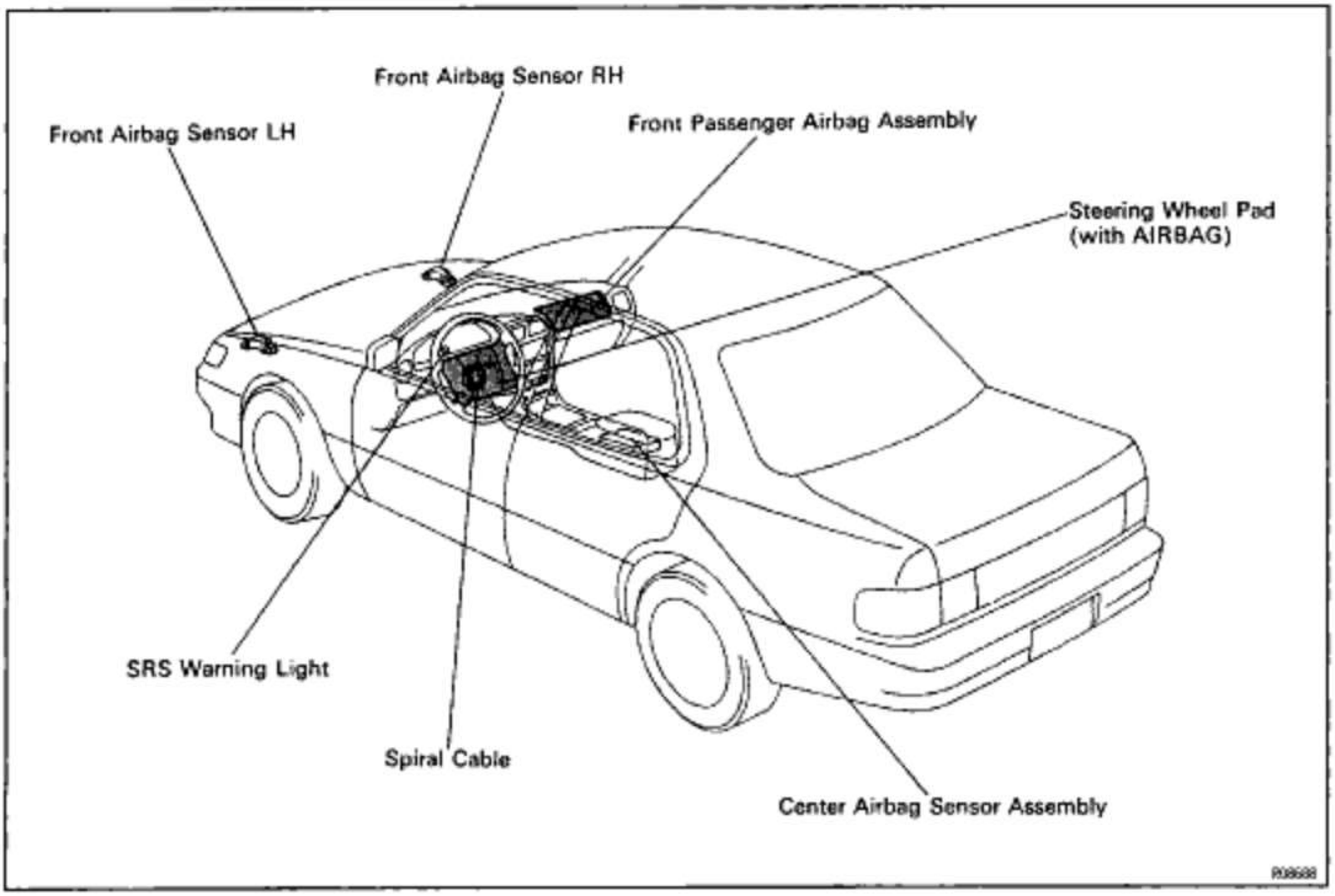
The SRS wire harness is integrated with the cowl wire harness assembly. The wires for the SRS wire harness are encased in a yellow corrugated tube. All the connectors for the system are also a standard yellow color. If the SRS wire harness becomes disconnected or the connector becomes broken due to an accident etc., repair or replace it as shown on page RS–49.

DESCRIPTION

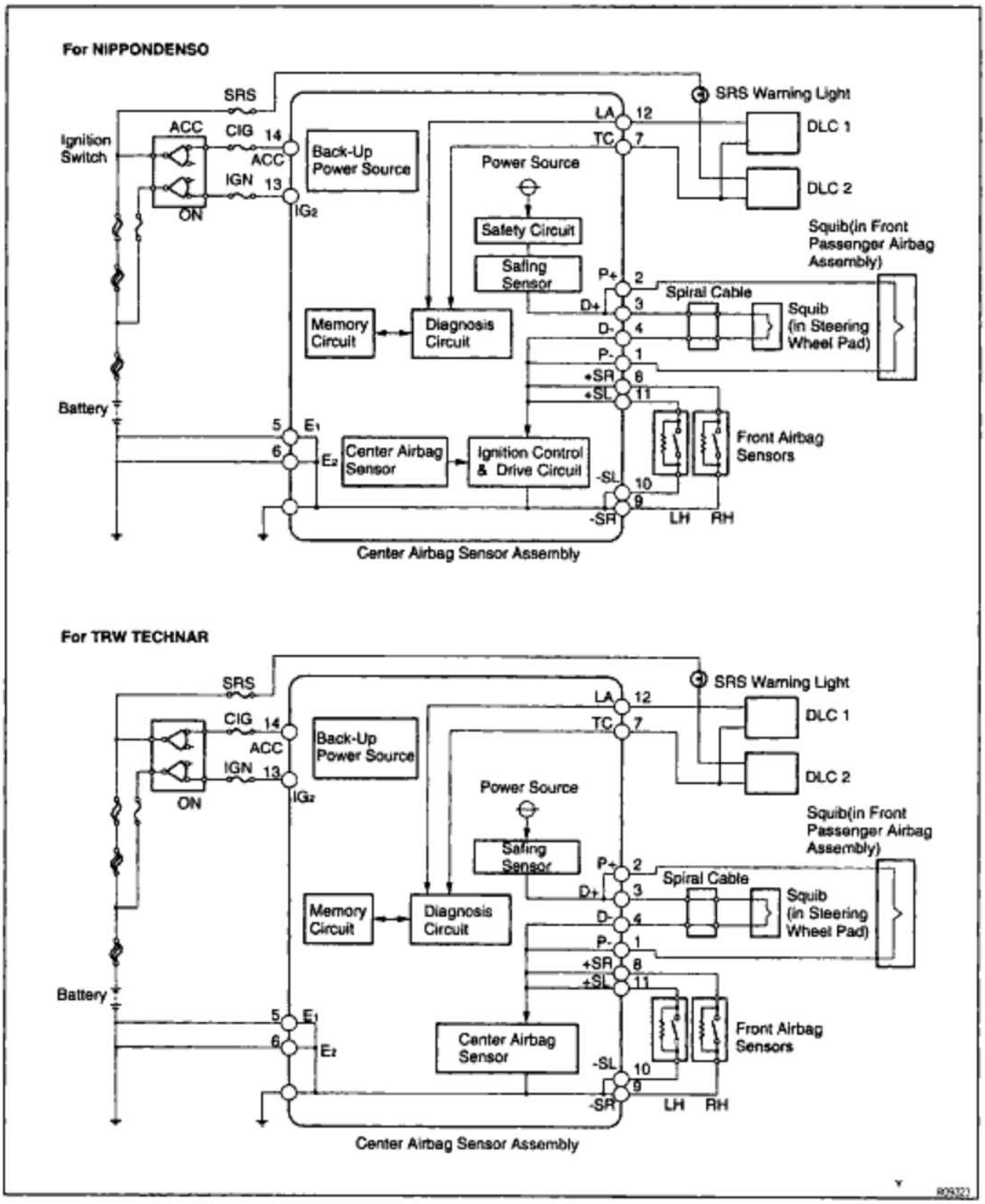
The SRS (Supplemental Restraint System), together with the seat belt, is designed to help protect the driver. In a collision, the airbag sensor detect the shock, and if the front–to–rear shock is greater than a specified value, an airbag stored in the steering wheel pad and front passenger airbag assembly are inflated instantaneously. These operation help to reduce the shock to the driver and front passenger airbag assembly.



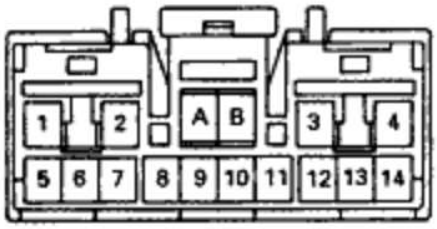
LOCATION OF COMPONENTS



WIRING DIAGRAM



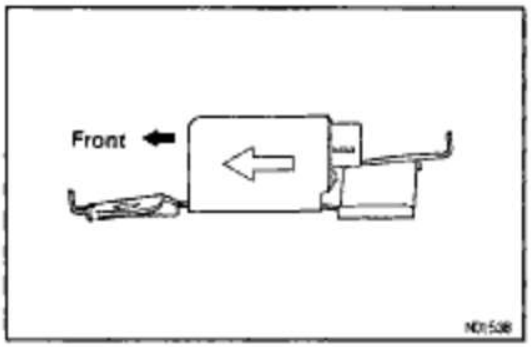
CENTER AIRBAG SENSOR ASSEMBLY CONNECTORS



R05251

Connector

No.	Symbol	Terminal Name
A	–	Electrical Connection Check Mechanism
B	–	Electrical Connection Check Mechanism
1	P^-	Squib(–) (Front Passenger)
2	P^+	Squib(+) (Front Passenger)
3	D^+	Squib(+) (Driver)
4	D^-	Squib(–) (Driver)
5	E_1	Ground
6	E_2	Ground
7	Tc	Diagnosis
8	+SR	Front Airbag Sensor RH(+)
9	−SR	Front Airbag Sensor RH(–)
10	−SL	Front Airbag Sensor LH(–)
11	+SL	Front Airbag Sensor LH(+)
12	LA	SRS Warning Light
13	IG_2	Power Source (AM2 Fuse)
14	ACC	Power Source (CIG Fuse)



OPERATION

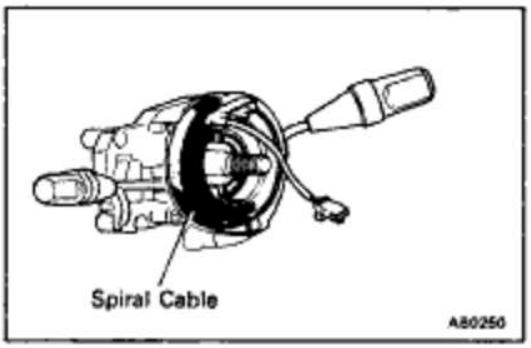
FUNCTION OF COMPONENTS

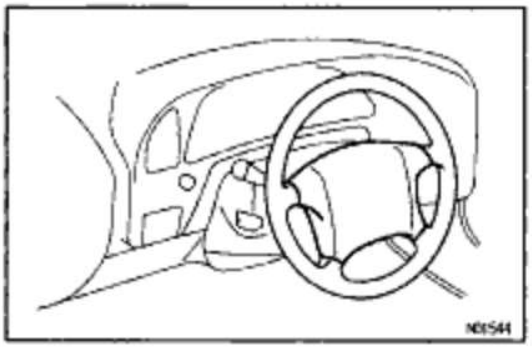
1. FRONT AIRBAG SENSOR

A front airbag sensor is mounted inside each of the front fenders. The sensor unit is a mechanical type. When the sensor detects deceleration force above a predetermined limit in a collision, the contacts in the sensor make contact, sending a signal to the center airbag sensor assembly. The sensor cannot be dis–assembled.

2. SPIRAL CABLE (in COMBINATION SWITCH)

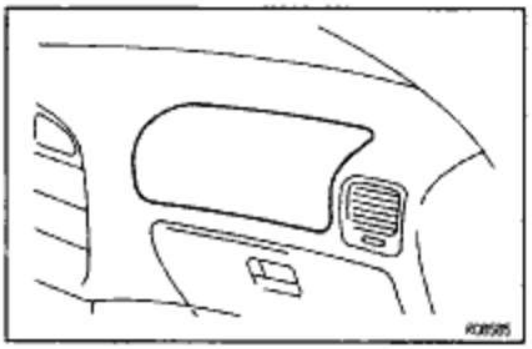
A spiral cable is used as an electrical joint from the vehicle body side to the steering wheel.





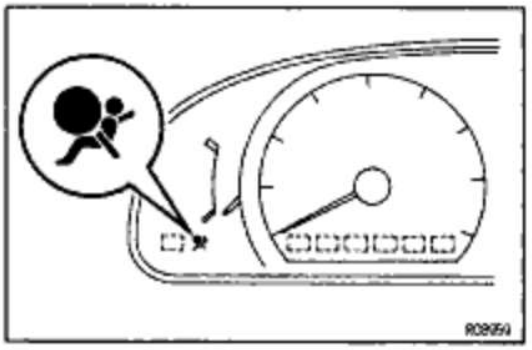
3. STEERING WHEEL PAD (with AIRBAG)

The inflater and bag of the supplemental restraint system are stored in the steering wheel pad and cannot be disassembled. The inflater contains a squib, ignite charge, gas generant, etc., and inflates the bag in case of a frontal collision.



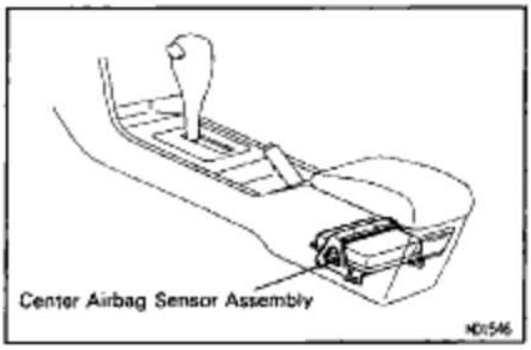
4. FRONT PASSENGER AIRBAG ASSEMBLY

The inflater and bag of the supplemental restraint system are stored in the front passenger airbag as–sembly and cannot be disassernbled. The inflater con–tains a squib, igniter charge, gas generant, etc., and inflates the bag in case of a frontal collision.



5. SRS WARNING LIGHT

The SRS warning light is located on the combination meter. It goes on the alert the driver of trouble in the system when a malfunction is detected in the center airbag sensor assembly self – diagnosis. 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.

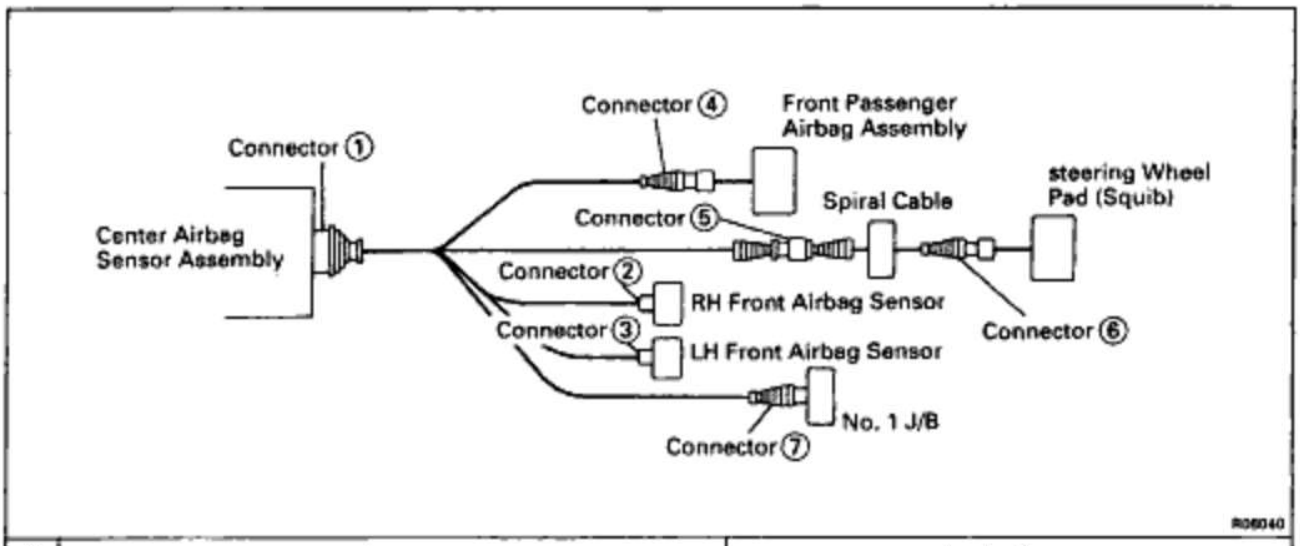


6. CENTER AIRBAG SENSOR ASSEMBLY

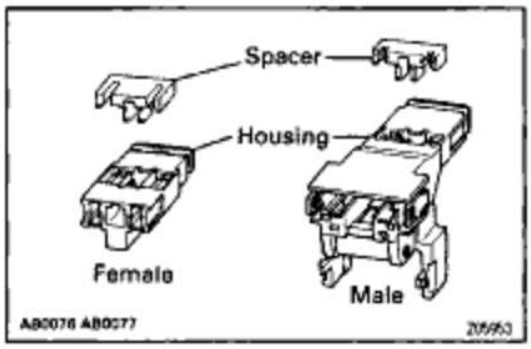
The center airbag sensor assembly is mounted on the floor inside the console box. The center airbag sensor assembly consists of a center airbag sensor, saving sensors, ignition control and drive circuit, diagnosis circuit, etc. It receives signals from the airbag sensors, judges whether the SRS must be activated or not and diagnosis system malfunctions.

7. SRS CONNECTORS

A11 connectors in the supplemental restraint system are colored yellow to distinguish them from other connectors. Connectors having special function and specifically designed for SRS are used in the locations shown below to ensure high reliability. These connec–tors use durable gold–plated terminals.



No.	Item	Application
(1)	Terminal Twin–Lock Mechanism	Connectors (1), (2), (3), (4), (5), (6), (7)
(2)	Airbag Activation Prevention Mechanism	Connectors (1), (4), (5), (6)
(3)	Electrical Connection Check Mechanism	Connectors (1), (2), (3)
(4)	Connector Twin–Lock Mechanism	Connectors (4), (5), (6), (7)

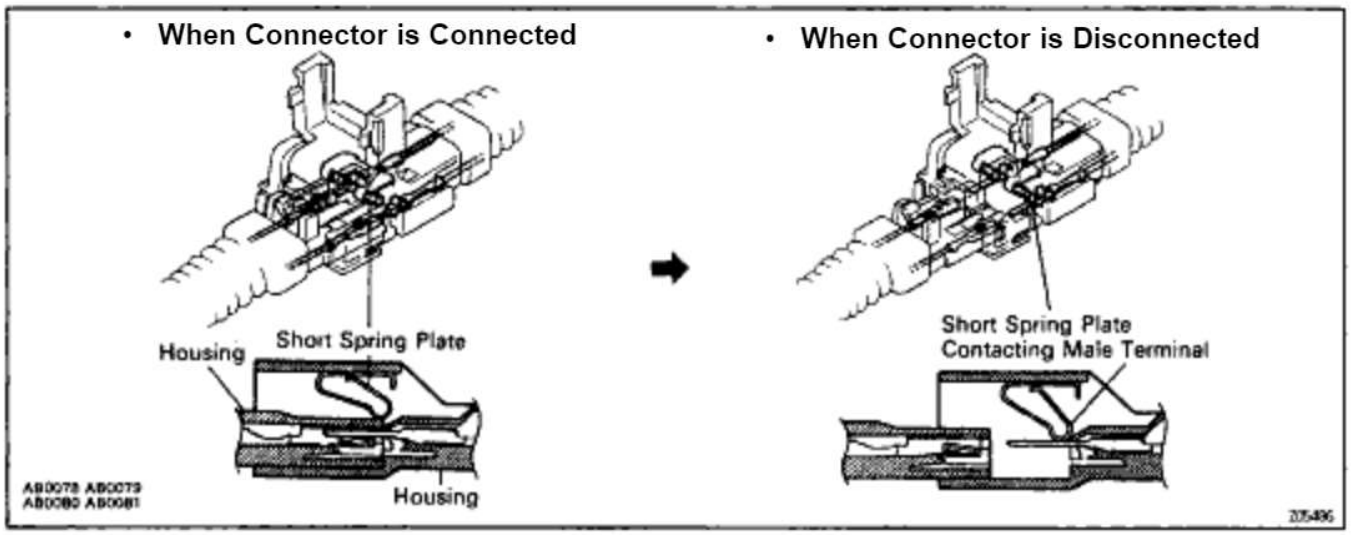


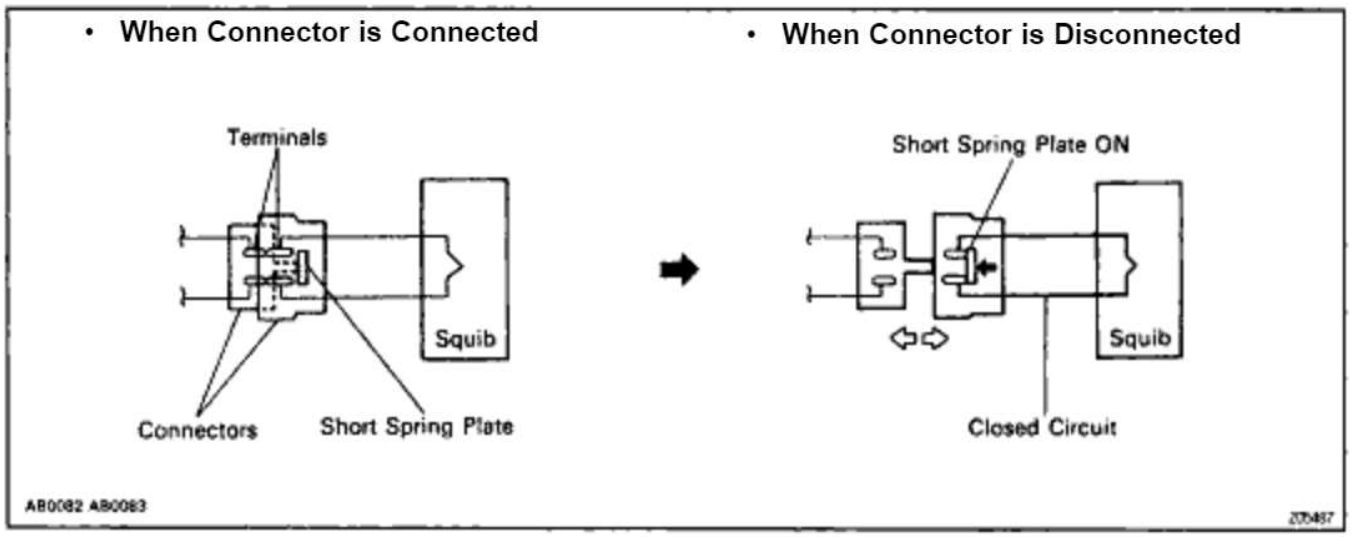
(1) Terminal Twin–Lock Mechanism

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 spacer and the lance) to prevent terminals from coming out.

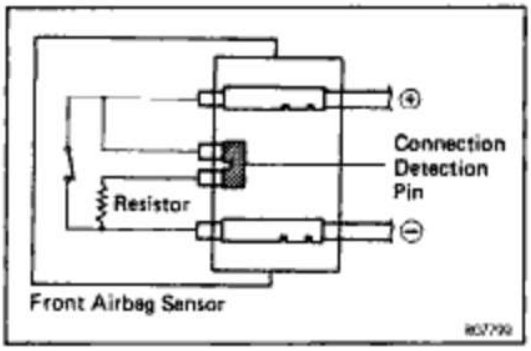
(2) Airbag Activation Prevention Mechanism

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.



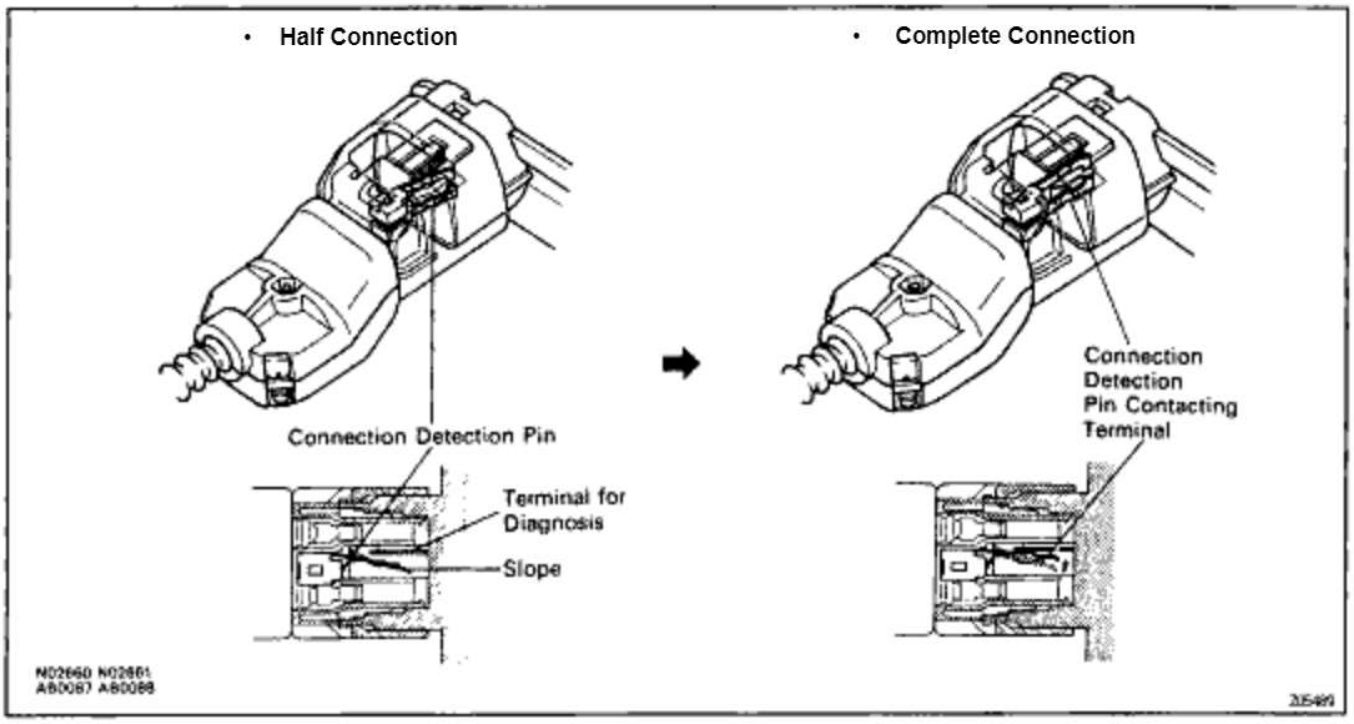


HINT: The illustration shows connectors S and¿¿. Connector (1) has a short spring plate on the female terminal side, but the operating principle is the same.



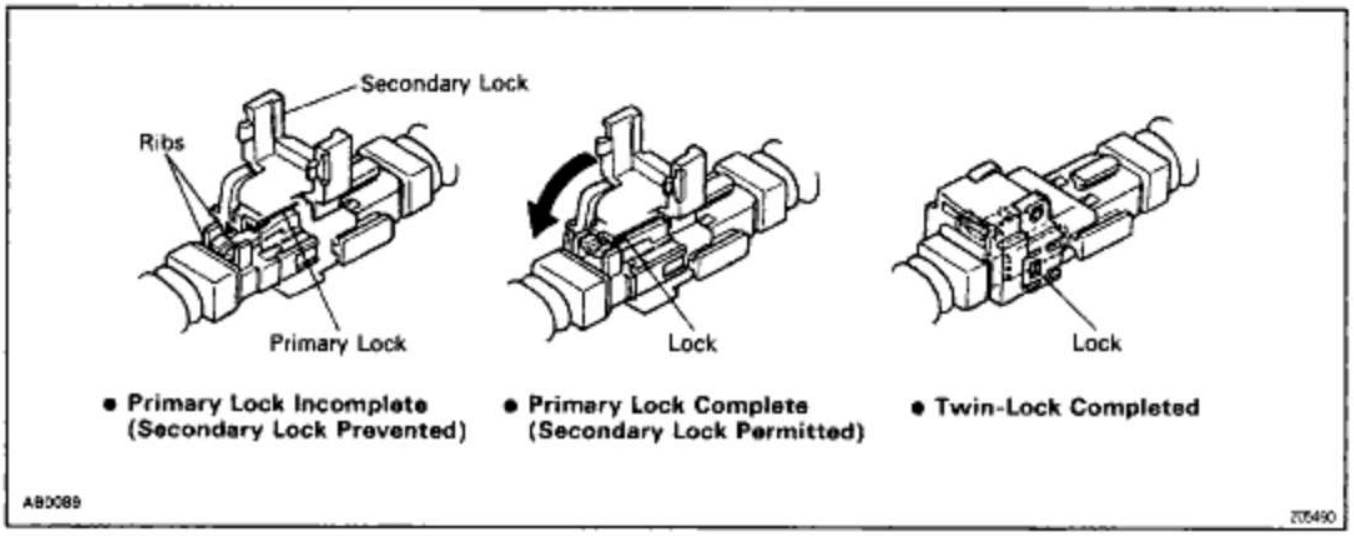
(3) Electrical Connection Check Mechanism

This mechanism is designed to electrically check if connectors are connected correctly and completely. The electrical connection check mechanism is designed so that the connection detection pin connects with the diagnosis terminals when the connector housing lock is in the locked condition.



HINT: The illustration shows connector (5) Connector (1) also has the same operating principle.

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



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 automati–cally. Safing sensors are designed to go on at a sma–ller deceleration rate than the front and center airbag sensors. As illustrated in Fig. 2 below, ignition is caused when current flows to the squib, which hap–pens when a safing sensor and a front airbag sensor and/or the center airbag sensor go on simultaneously. When a deceleration force acts on the sensor, it causes the squib to ignite. Gas is then generated, increasing the pressure inside the bag rapidly. The inflated bag breaks open the steering wheel pad and front passenger airbag assembly. Bag inflation then ends, and the gas is discharged through discharge holes provided behind the bag. The bag becomes deflated as a result.

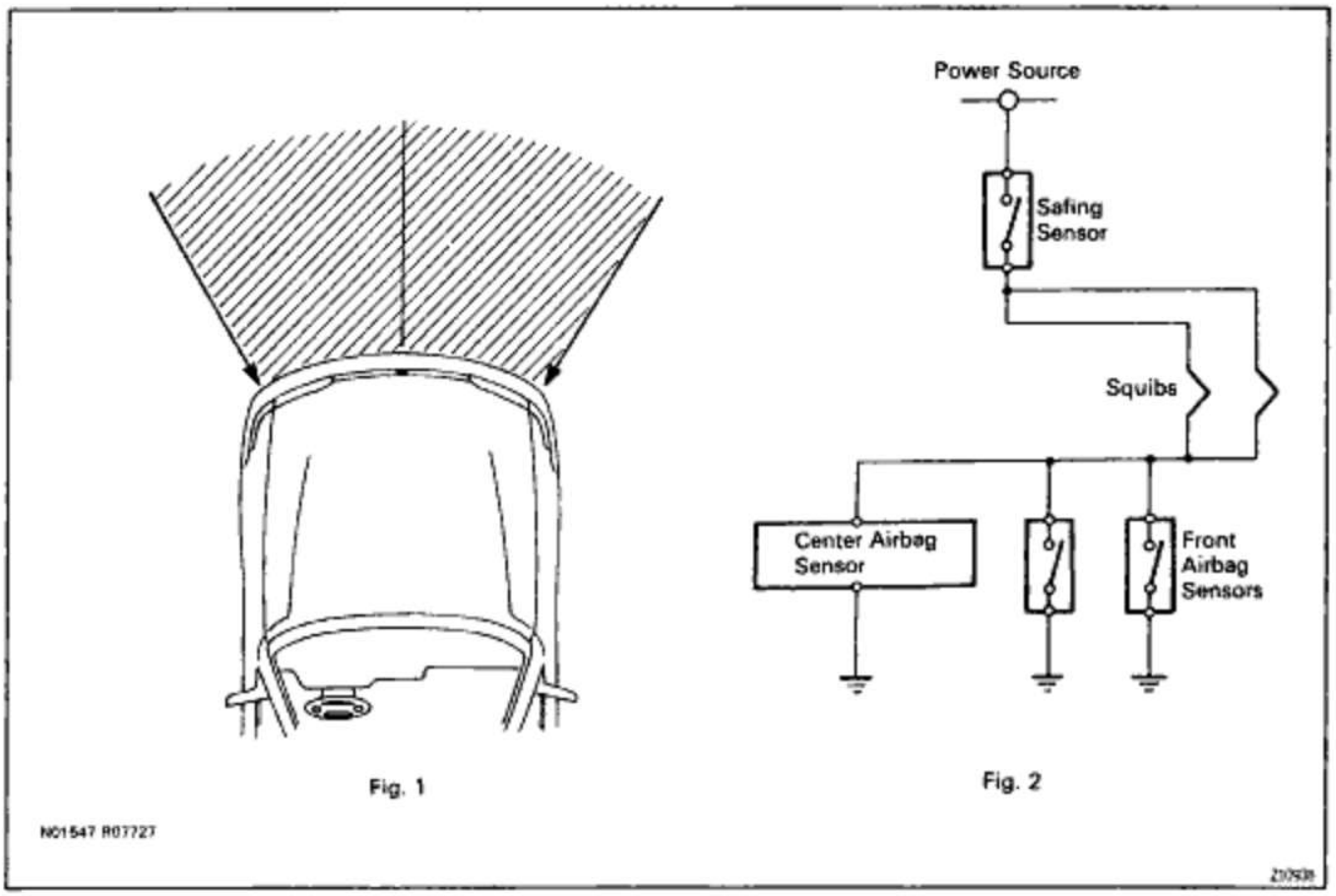


Fig. 1

Fig. 2

PREPARATION

SST (SPECIAL SERVICE TOOLS

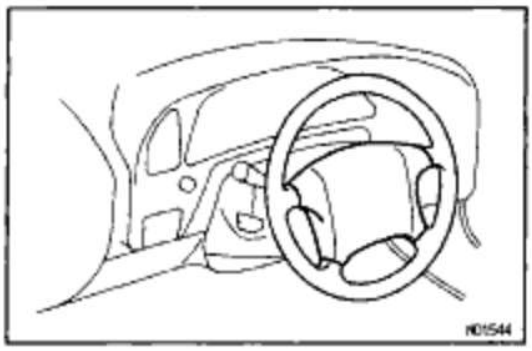
	09082–00700 SRS Airbag Deployment Tool	
	09213–31021 Crankshaft Pulley Puller	Steering wheel
	09843–18020 Diagnosis Check Wire	

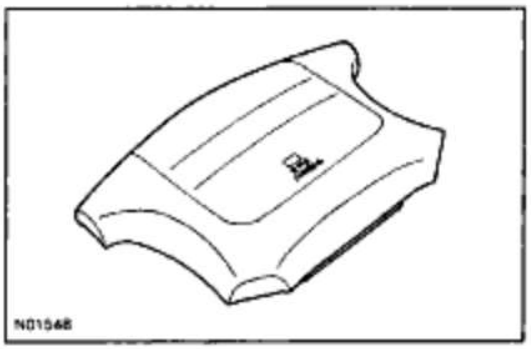
RECOMMENDED TOOLS

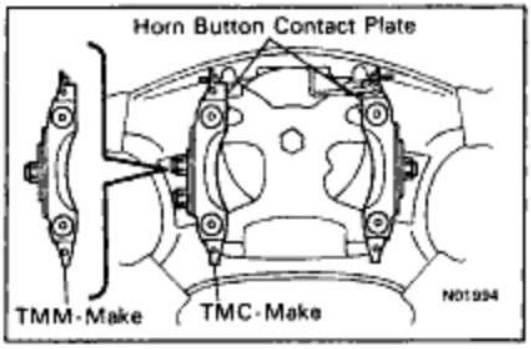
	09042–00010 Torx Socket T30	Steering wheel pad
	09042–00020 Torx Socket T40	Center airbag sensor assembly
	09082–00050 TOYOTA Electrical Tester Set	

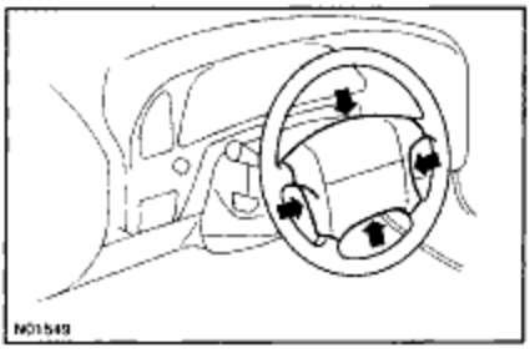
EQUIPMENT

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.: 360mm (14.17 in.)	Airbag disposal
Tire with disk wheel Width: 185 mm (7028 in.) Inner diem.: 360 mm (14.17 in.)	Airbag disposal
Vinyl bag	Airbag disposal









STEERING WHEEL PAD AND SPIRAL CABLE

INSPECTION ITEMS

1. VEHICLES NOT INVOLVED IN A COLLISION

(a) Perform a diagnostic system check (See page RS–61).

(b) Perform 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

(a) Perform a diagnostic system check (See page RS–61).

(b) Perform a visual check which includes the following items with the steering wheel pad (with airbag) removed from the vehicle.

- Check for cuts or cracks in, or marked discoloration of the steering wheel pad top surface and grooved portion.
- Check for cuts and cracks in, or chipping of connectors and wire harness.
- 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 page RS–19. REMOVAL AND INSTALLATION' and be sure to follow the correct procedure.

IF THE AIRBAG IS DEPLOYED

(a) Perform a diagnostic system check (See page RS–61).

(b) Perform a visual check which includes the following items with the steering wheel pad (with airbag) removed from he 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 pad is installed on the steering wheel.

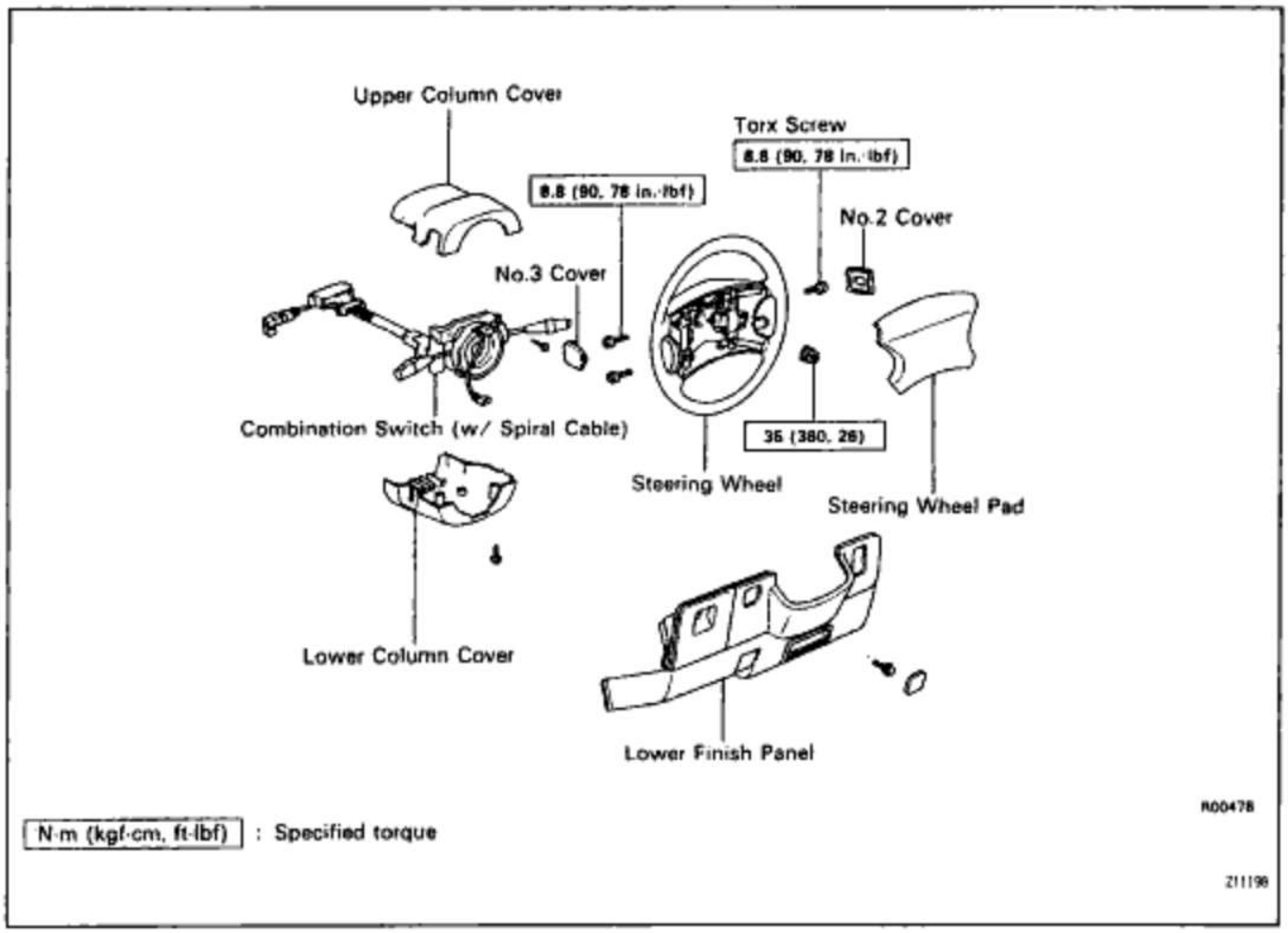
REPLACEMENT REQUIREMENTS

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

CAUTION: For replacement of the steering wheel pad, see page RS– 19.'STEERING WHEEL PAD AND SPIRAL CABLE REMOVAL AND INSTALLATION' and be sure to follow the correct procedure.

- 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 item 1–(b) or 2–(b).
- If the steering wheel pad has been dropped.

COMPONENTS



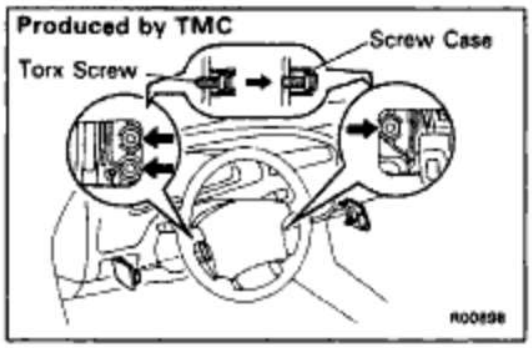
STEERING WHEEL PAD AND– SPIRAL CABLE REMOVAL AND INSTALLATION

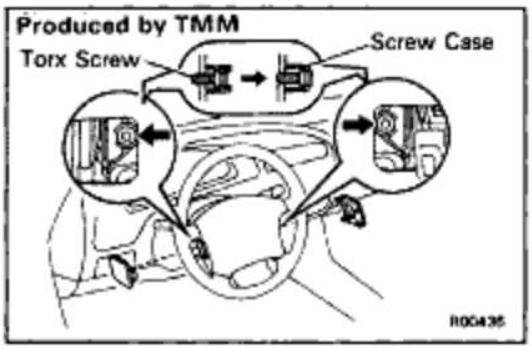
NOTICE:

- **If the wiring connector of the supplemental re–straint system is disconnected with the ignition switch at ON or ACC, diagnostic trouble codes will be recorded.**
- **Never use SRS parts from another vehicle. When replacing parts, replace with new parts.**

1. DISCONNECT NEGATIVE (–) TERMINAL CABLE FROM BATTERY

CAUTION: 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 discon–nected from the battery (See page RS–2).





2. REMOVE STEERING WHEEL PAD

(a) Remove negative terminal (–) from the battery and wait at least 90 seconds.

(b) Place the front wheels facing straight ahead.

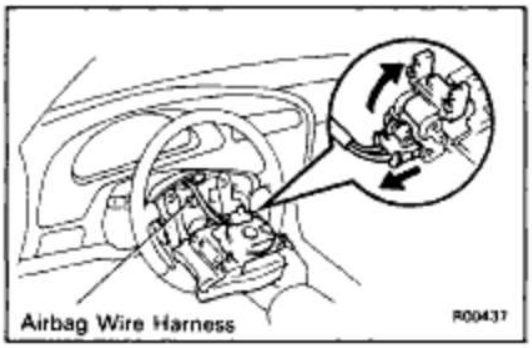
(c) Using a torx wrench, loosen the screws.

Produced by TMC: 3 screws

Produced by TMM: 2 screws

Torx wrench: T30 (Part No. 09042–00010 or locally manufactured tool)

(d) Loosen the torx screws until the groove along the screw circumference catches on the screw case.



(e) Pull the wheel pad out from the steering wheel and disconnect the airbag connector.

NOTICE: When removing the wheel pad, take care not to pull the airbag wire harness.

CAUTION:

- **When storing the wheel pad, keep the upper surface of the pad facing upward (See pages RS–4).**
- **Never disassemble the wheel pad.**

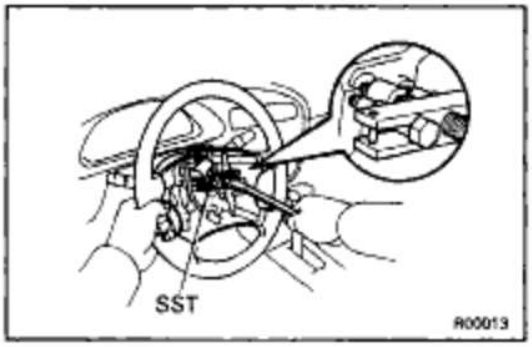
3. REMOVE STEERING WHEEL

(a) Disconnect the connector.

(b) Remove the set nut.

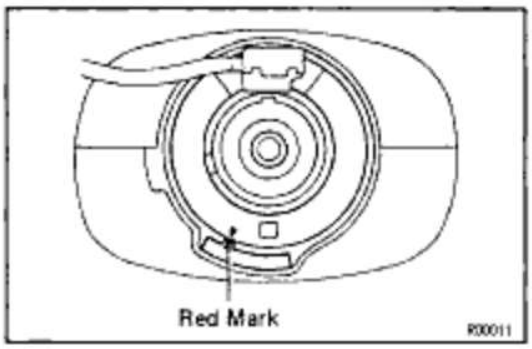
(c) Place matchmarks on the steering wheel and main shaft.

(d) Using SST, remove the steering wheel.
SST 09213–31021



4. REMOVE AND INSTALL SPIRAL CABLE FROM/TO COMBINATION SWITCH

NOTICE: Do not disassemble the spiral cable or apply oil to it.



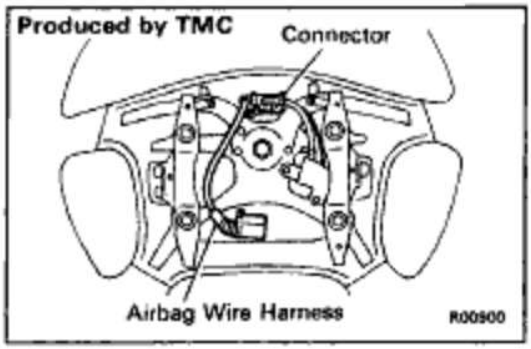
5. CENTER SPIRAL CABLE

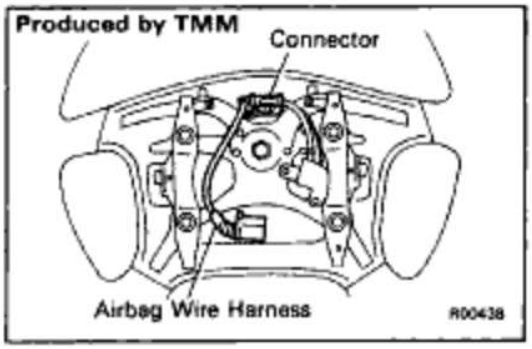
(a) Check that the front wheels are facing straight ahead.

(b) Turn the spiral cable counterclockwise by hand until it becomes harder to turn the cable.

(c) Then rotate the spiral cable clockwise about 3 turns to align the red mark.

HINT: The spiral cable will rotate about 3 turns to either left or right of the center.



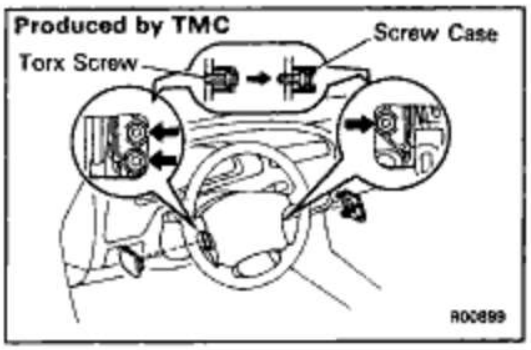


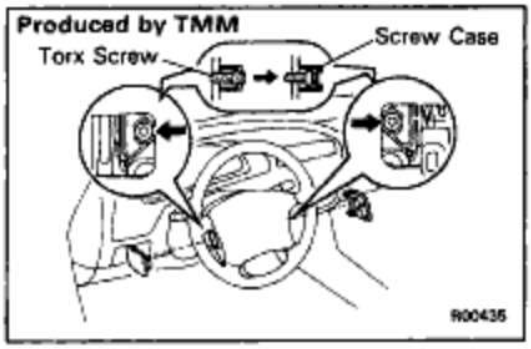
6. INSTALL STEERING WHEEL

(a) Align matchmarks on the steering wheel and main shaft, and install the steering wheel to the main shaft.
(b) Install and torque the set nut.

Torque: 35 N–m (360 kgf–cm, 26 ft–lbf)

(c) Connect the connector.





7. INSTALL STEERING WHEEL PAD

(a) Connect the airbag connector.
(b) Install the wheel pad after confirming that the circum–ference groove of the torx screws is caught on the screw case.
(c) Using a torx wrench, tighten the screws.

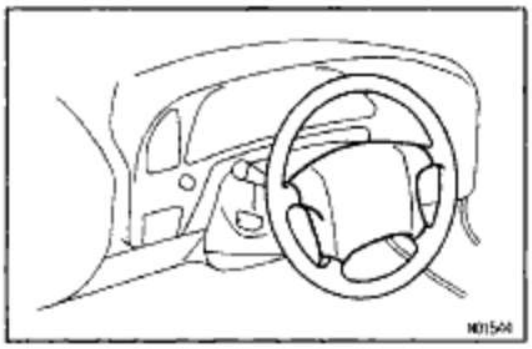
Produced by TMC: 3 screws
Produced by TMM: 2 screws
Torque: 8.8 N–m (90 kgf–cm. 78 in.–lbf)

NOTICE:

- **Make sure the wheel pad is installed to the specified torque.**
- **If the wheel pad has been dropped, or there are cracks, dents or other defects in the case or connec–tor, replace the wheel pad with a now one.**
- **When installing the wheel pad, take care that the wirings do not interfere with other parts and are not pinched between other parts.**

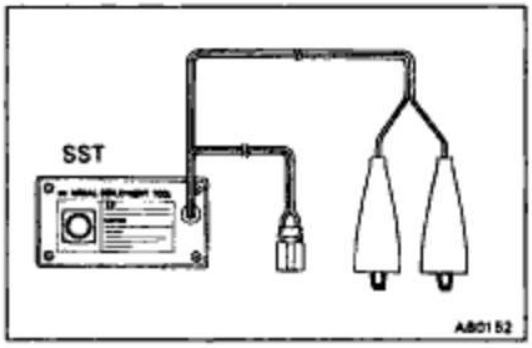
8. CHECK STEERING WHEEL CENTER POINT

9. CONNECT NEGATIVE (–) TERMINAL CABLE TO BATTERY



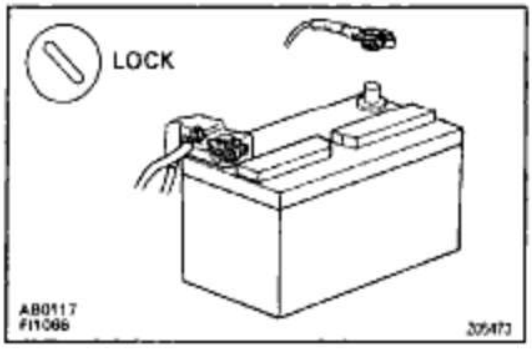
STEERING WHEEL PAD (WITH AIRBAG) DISPOSAL

When scrapping vehicles equipped with a supplemen–tal restraint system 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 proce–dure given under ”When Scrapping Vehicle, part 5, DISPOSAL OF STEERING WHEEL PAD (WITH AIRBAG)”.



PRECAUTIONS FOR AIRBAG DEPLOYMENT

- The airbag produces a sizeable exploding sound when it deploys, so perform the operation out–of–doors and where it will not create a nuisance to nearby residents.
- When deploying the airbag, always use the speci–fied SST; SRS AIRBAG DEPLOYMENT TOOL (SST 09082 –00700). Perform the operation in a place away from electrical noise.
- When deploying an airbag, perform the operation from 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 deployed airbag.
- Always wash your hands with water after com–pleting the operation.
- Do not apply water, etc. to a steering wheel pad with deployed airbag.



When scrapping vehicle

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

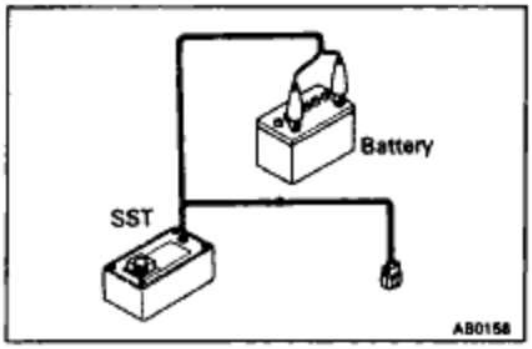
1. DISCONNECT NEGATIVE (–) TERMINAL CABLE FROM BATTERY

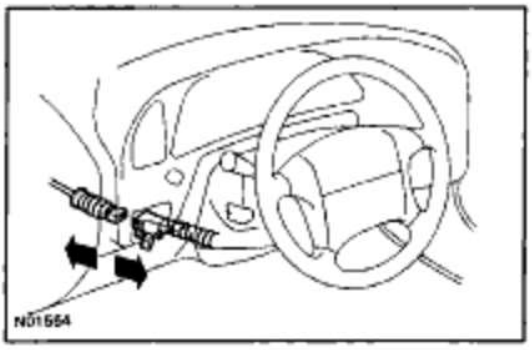
CAUTION: Work must be started after 90 seconds from the time the ignition switch is turned to the 'LOCK' position and the negative (–) terminal cable is disconnected from the battery (See page RS–2).

2. CONFIRM FUNCTIONING OF SST

(See page RS–28)

SST 09082–00700





3. INSTALL SST

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

(a) Remove the No.1 under cover.

(b) Disconnect the airbag connector of the spiral cable.

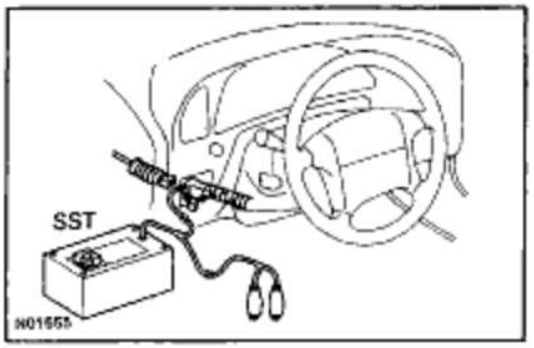
(c) Connect the SST connector to the airbag connector of the spiral cable.
SST 08082–00700

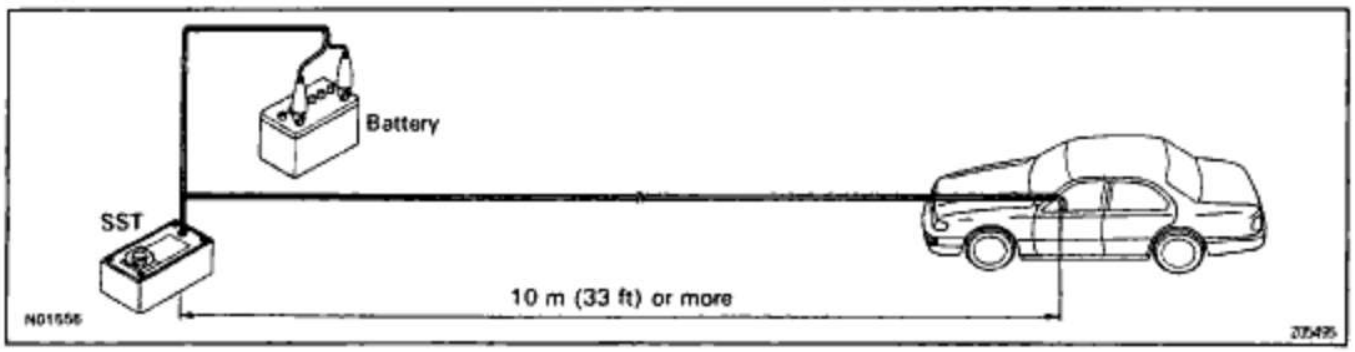
(d) Move the SST to at least 10 m (33 ft) from the front of the vehicle.

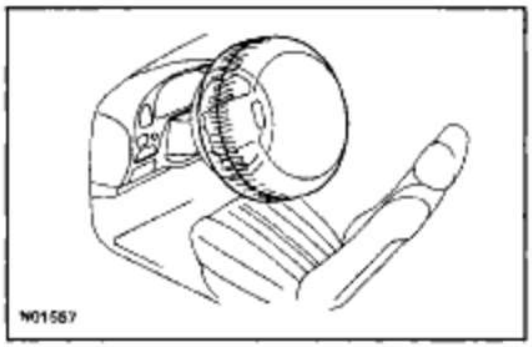
(e) Close all the doors and windows of the vehicle.

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.







4. 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.

5. 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 ste–ering wheel pad with deployed airbag.**
- **Do not apply water, etc. to a steering wheel pad with deployed airbag.**
- **Always wash your hands with water after complet–ing the operation.**

(a) When scrapping a vehicle, deploy the airbag and scrap the vehicle with the steering wheel pad still installed.

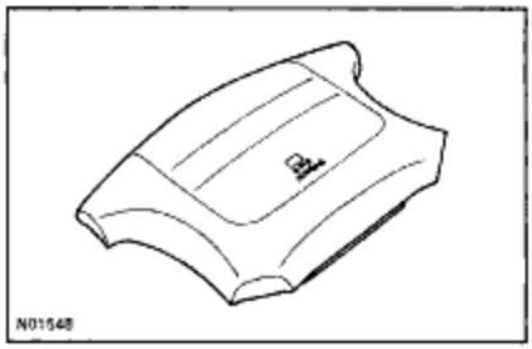
(b) When moving a vehicle for scrapping which has a steering wheel pad with deployed airbag, use gloves and safety glasses.

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.

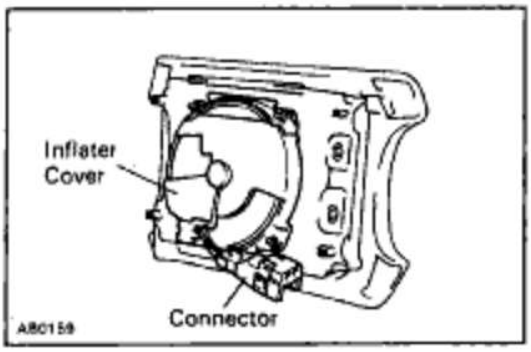
HINT: Have a battery ready as the power source deploy the airbag.



1. REMOVE STEERING WHEEL PAD (Seepage RS–20)

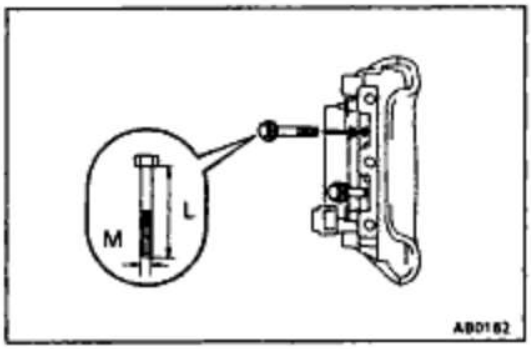
CAUTION:

- **When removing the steering wheel pad (with airbag), 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 dis–connected from the battery.**
- **When storing the steering wheel pad, keep the upper surface of the pad facing upward.**



2. REMOVE STEERING WHEEL PAD CONNECTOR

Remove the connector on the steering wheel pad rear surface from the inflater cover.



3. FIX STEERING WHEEL PAD TO DISC WHEEL WITH TIRE

(a) Install bolts with washer in the 3 bolt holes in the steering wheel pad.

Bolt:

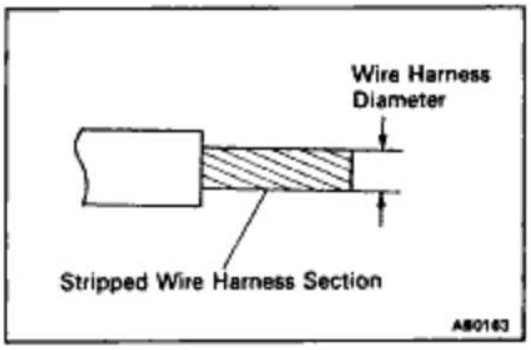
L 35.0 mm (1.4 in.)

M 6.0 mm

Pitch 1.0 mm

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 vehicle tie down the steering wheel pad to the disc wheel.

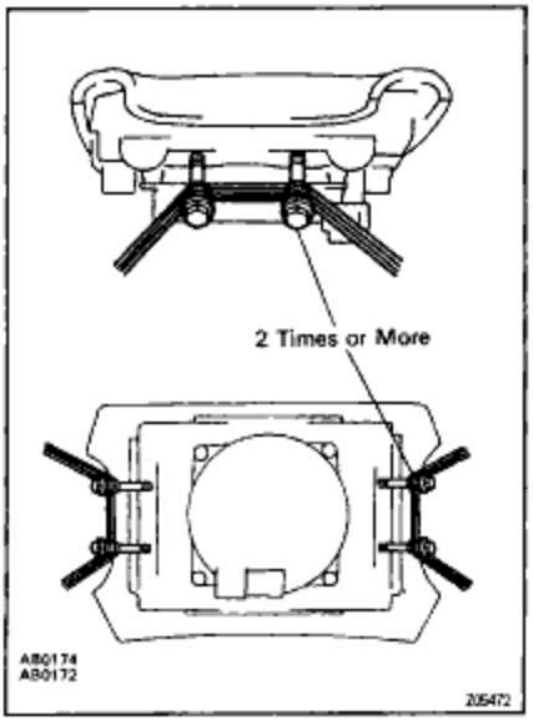
Wire harness:

Stripped wire harness section 1.25 mm^2 or more (0.002 in^2 or more)

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

Square = 3.14 x $(Diameter)^2$ divided by 4

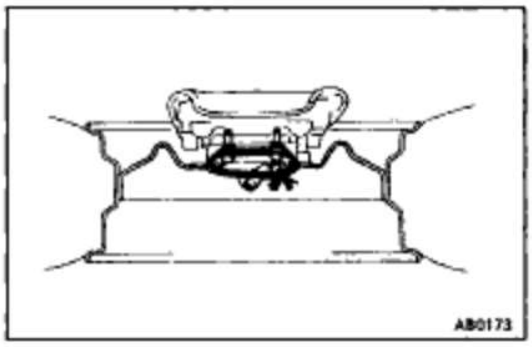
CAUTION: If a wire harness which is too thin or some other thing is used to tie down the steering wheel pad it may be snapped by the chock when the airbag is deplo–yed, this is highly dangerous. Always use a wire harness for vehicle use which is at least 1.25 mm^2 (0.002 in^2.).



(1) 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.

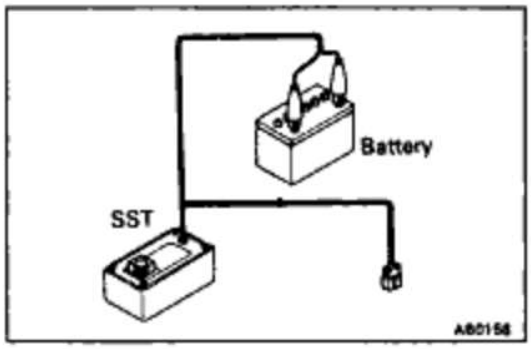


(2) Face the upper surface of the steering wheel pad upward.
Separately tie the left and right sides of the steering wheel pad to the disc wheel through the hub nut holes.
Position the steering wheel pad connector so that it hangs downward through a hub hole in the disc wheel.

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.**

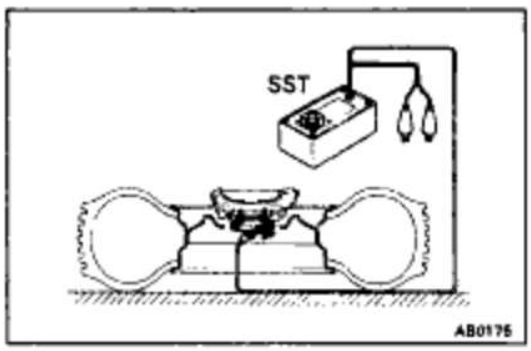
HINT: The disc wheel will be marked by airbag deployment, so use a redundant disc wheel.



4. CONFIRM FUNCTIONING OF SST

(See page RS–28)

SST 09082–00070



5. INSTALL SST

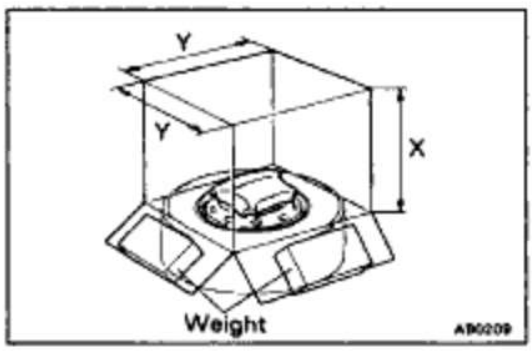
CAUTION: Place the disc wheel on level ground.

(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.

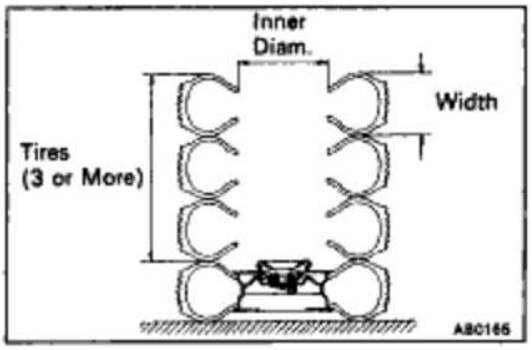
(b) Move the SST to at least 10 m (33 ft) away from the steering wheel pad tied down on the disc wheel.



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 four places with a at least 196 N (20 kgf. 44 lbf).
Size of cardboard box:
Must exceed the following dimensions
x= 460 mm (18.11 in.)
When dimension y 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: It a cardboard box smaller than the size specified is used, the cardboard box will be broken by the shock of the airbag deployment.

(Covering Method Using Tires)

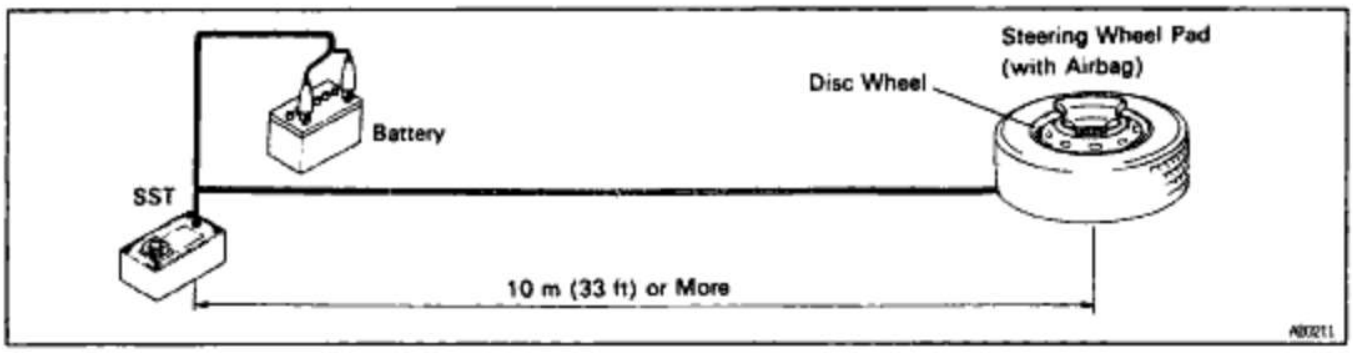
Place at least three tires without disc wheel on top of the disc wheel with tire to which with tire to which the steering wheel pad is tied.
Tire size: Must exceed the following dimensions–
Width 185 mm (7.28 in.)
Inner diam 360 mm (14.17 in.)

CAUTION: Do not use tires with disc wheels.

NOTICE: The tires by 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 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.



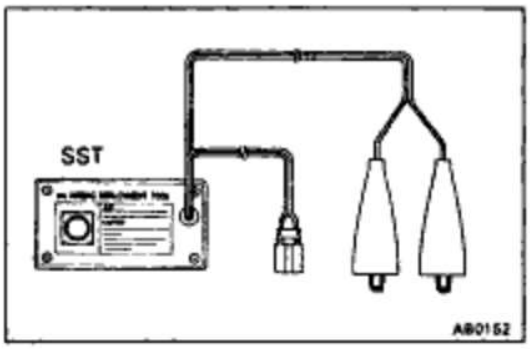


8. DISPOSAL OF STEERING WHEEL PAD (WITH AIRBAG)

CAUTION:

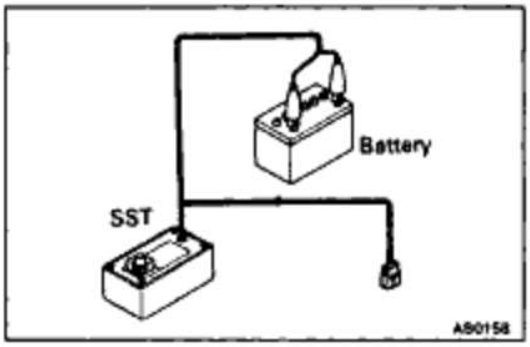
- **The steering wheel pad is battery hot when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a steering wheel pad with deployed airbag.**
- **Do not apply water, etc. to a steering wheel pad with deployed airbag.**
- **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 the same way as other general parts.



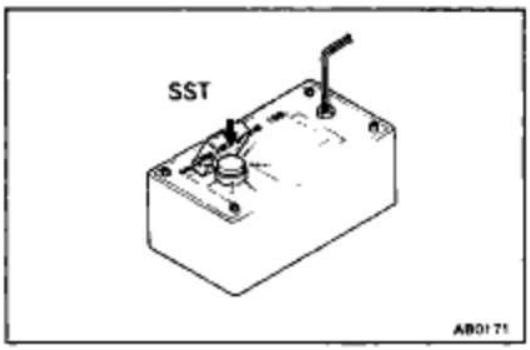
CONFIRM FUNCTIONING OF SST

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



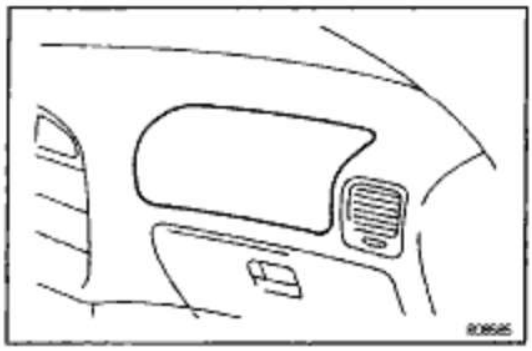
1. CONNECT SST TO BATTERY

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 airbag 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.



FRONT PASSENGER AIRBAG ASSEMBLY

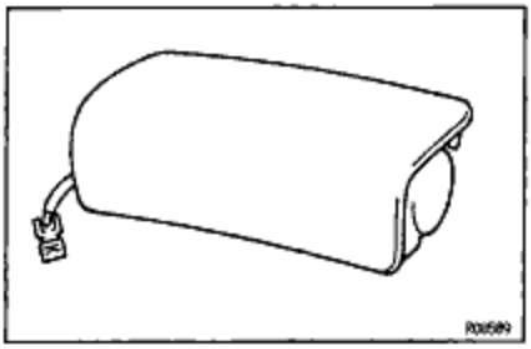
INSPECTION ITEMS

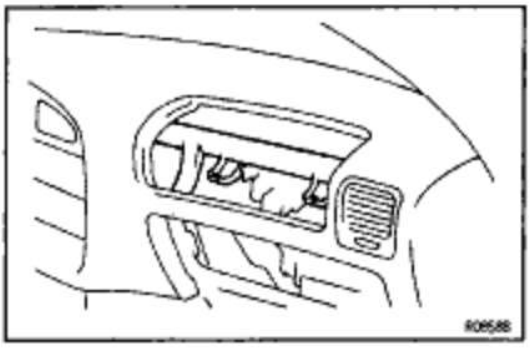
1. VEHICLES NOT INVOLVED IN A COLLISION

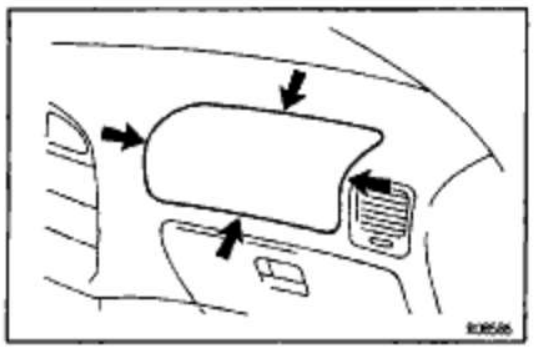
(a) Perform a diagnostic system check (See page RS–61).

(b) Perform a visual check which includes the following items with the front passenger airbag assembly installed in the vehicle.

- **Check for cuts, minute cracks or marked discoloration of the front passenger airbag door.**







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

(a) Perform a diagnostic system check (See page RS–61).

(b) Perform a visual check which includes the following items with the airbag assembly removed from the vehicle.

- **Check for cuts, cracks in, or marked discoloration of the front passenger aribag door.**
- **Check for cuts, cracks in, or chipping of connectors and wire harness.**
- **Check for deformation of the safety pad and instrument panel reinforcement.**

HINT:

- If the safety pad and instrument panel reinforcement is deformed, never repair it. Always replace it with a new one.
- There should be no interfernce between the safety pad and front passenger airbag door. The clearance should be uniform all the way around when the new airbag assembly is installed on the safety pad.

CAUTION: For removal and installation of the airbag assembly, see page RS–31, and be sure to follow the correct procedure.

IF THE AIRBAG IS DEPLOYED

(a) Perform a diagnostic system check (See page RS–61).

(b) Perform a visual check which includes the following items with the airbag assembly removed from vehicle.

- **Check for deformation of the safety pad, instrument panel reinforcement, glove compartment and door.**
- **Check for damage to the connector and wire harness.**

HINT:

- If the safety pad, instrument panel reinforcement, connector and wire harness is deformed, never repair it. Always replace it with a new one.
- There should be no interference between the safety pad and front passenger airbag door. The clearance should be uniform all the way around when the new aribag assembly is installed on the safety pad.

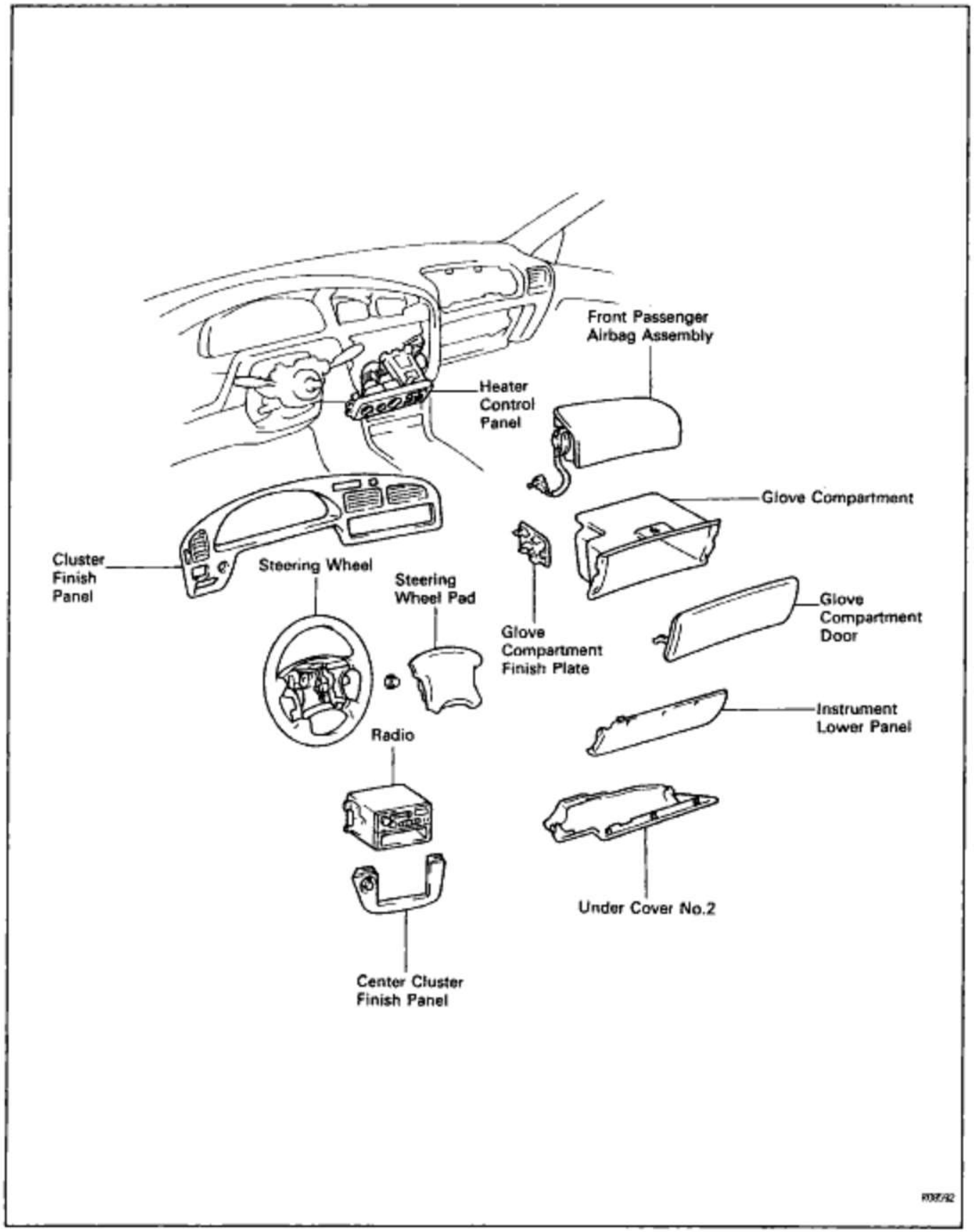
REPLACEMENT REQUIREMENTS

In the following case, replace the airbag assembly, instrument panel, instrument panel reinforcement, glove compartment and door.

CAUTION: For replacement of the airbag assembly, see page RS–31, and be sure to follow the correct procedure.

- If the airbag has been deployed.
- If the front passenger airbag assembly has been found to be fautly in troubleshooting.
- If the front passenger airbag assembly, instrument panel, reinforcement, glove compartment or glove compartment door has been found to be fautly during the check in item 1–(b) or 2– (b).
- If the front passenger airbag assembly has been dropped.

COMPONENTS


Front Passenger Airbag Assembly
Heater Control Panel
Glove Compartment
Cluster Finish Panel
Steering Wheel
Steering Wheel Pad
Glove Compartment Door
Glove Compartment Finish Plate
Instrument Lower Panel
Radio
Under Cover No.2
Center Cluster Finish Panel

FRONT PASSENGER AIRBAG ASSEMBLY TORQUE SPECIFICATION

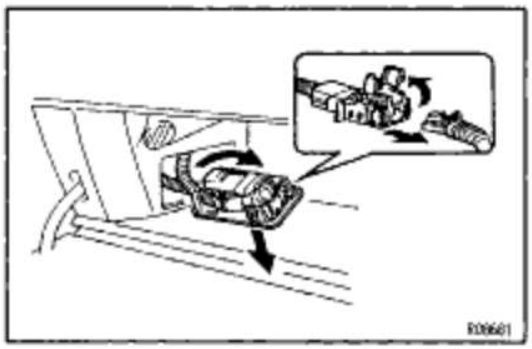
Code	Shape	Size mm (in.)	N·m	kgf·cm	ft·lbf
Ⓐ		Φ = 8 (0.32) L = 18 (0.71)	21	210	15
Ⓑ		Φ = 6 (0.24) L = 16 (0.63)	8.0	80	69in.·lbf

FRONT PASSENGER AIRBAG ASSEMBLY REMOVAL AND INSTALLATION

NOTICE: Never use airbag parts from another vehicle. When replacing parts, replace with new parts.

1. DISCONNECT NEGATIVE (–) TERMINAL CABLE FROM BATTERY

CAUTION: Work must be started after 90 second from the time the ignition switch is turned to the "LOCK" position and the negative (–) terminal cable is disconnected from the battery (See page RS–2).



2. DISCONNECT FRONT PASSENGER AIRBAG CONNECTOR

(a) Remove negative (–) terminal from the battery and wait at least 90 seconds.

(b) Remove the glove compartment door finish plate inside the glove compartment.

3. DISCONNECT AIRBAG CONNECTER

Disconnect the airbag connector.

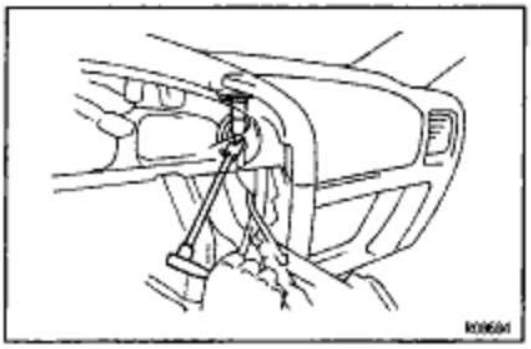
NOTICE: When disconnecting the front passenger airbag connector, take care not to pull the airbag wire harness.

4. REMOVE AND DISCONNECT FOLLOWING PARTS:

- Remove steering wheel pad
  (See page RS–20)
- Remove steering wheel
  (See page RS–20)

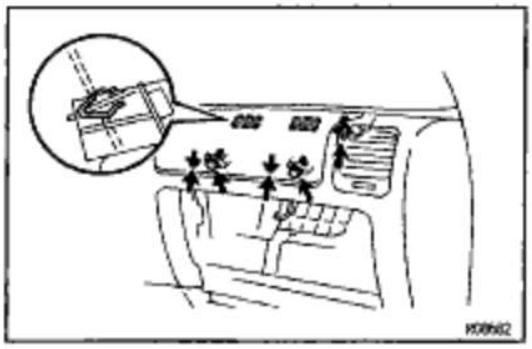
(See page BO –108)

- Remove under cover No.2
- Remove instrument lower panel
- Remove compartment panel
- Remove compartment door
- Remove combination switch
- Remove center cluster finish panel
- Remove radio
- Remove cluster finish panel
- Remove heater control panel



5. REMOVE FRONT PASSENGER AIRBAG

(a) Remove the RH side installation bolt.

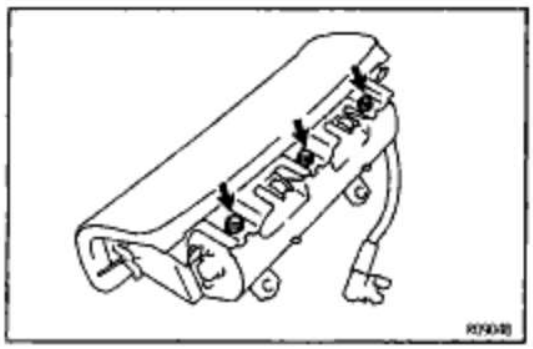


(b) Remove the 5 bolts.

(c) Remove the front passenger airbag assembly.

CAUTION:

- Do not store the front passenger airbag assembly with the airbag door facing down.
- Never disassembly the front passenger airbag assembly.

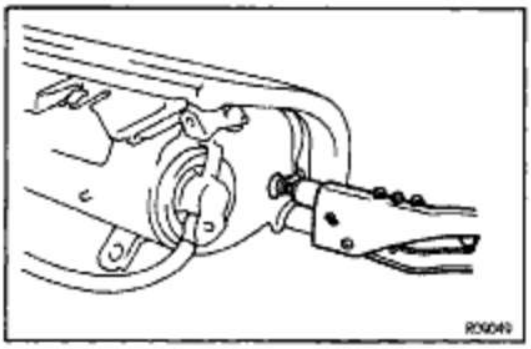


6. INSTALL AIRBAG DOOR AND FRONT PASSENGER AIRBAG ASSEMBLY (W/O AIRBAG DOOR)

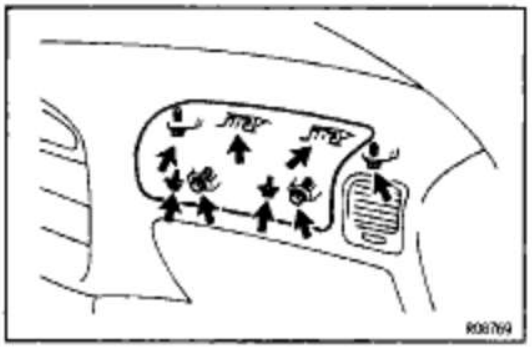
CAUTION: Make sure to replace the new airbag door and the new airbag assembly (w/o Airbag door) in combina–tion, no alone.

(a) Install the airbag door with the 3 bolts.

Torque: 8.0 N–m (80 kgf–cm, 89in.–lbf)



(b) Using a reveter, install the 2 new rivet.



6. INSTALL FRONT PASSENGER AIRBAG ASSEMBLY

(a) Install the front passenger airbag assembly with the 6 bolts.

(b) To instrument panel reinforcement.

Diameter = 8 mm (0.32 in.)

Torque: 20 N–m (210 kgf–cm, 15 ft–lbf)

To instrument panel

Diameter = 6 mm (0.24 in.)

Torque: 8.0 N–m (80 kgf–cm, 69 in.–lbf)

NOTICE:

- **Make sure the front passenger airbag assembly is installed to the specified torque.**
- **If the front passenger airbag assembly has been dropped, or there are cracks, dents or other defects in the case or connector, replace the front passen–ger airbag assembly with a new one.**
- **When installing the front passenger airbag assem–bly, take care that the wiring do not interfere with other parts and are not pinched between other parts.**

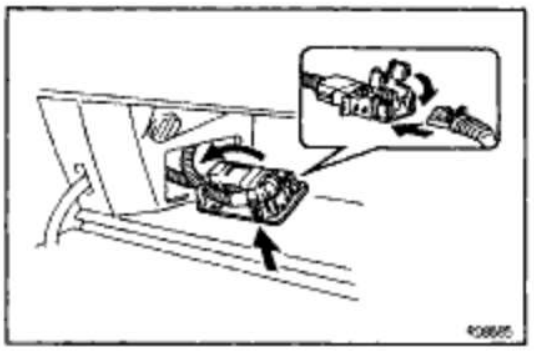
7. INSTALL FOLLOWING PARTS REMOVAL SE–QUENCE IN REVERSE

- Steering wheel

Torque: 35 N–m (360 kgf–cm, 26 ft–lbf)

HINT: When installing the glove compartment, pull the airbag wire harness out from the glove compartment opening hole.

NOTICE: Do not pull the airbag wire harnesses too stron–gly



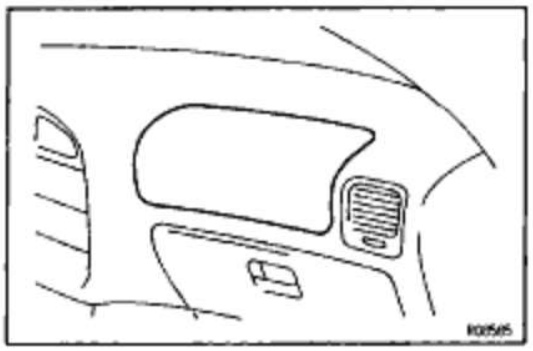
8. CONNECT AIRBAG CONNECTOR

(a) Connect the airbag connector.

(b) Put the connector on the glove compartment door finish plate.

(c) Install the glove compartment door finish plate to the glove compartment.

9. CONNECT NEGATIVE (–) TERMINAL CABLE TO BATTERY

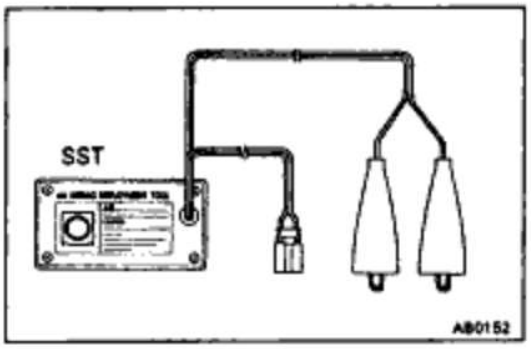


FRONT PASSENGER AIRBAG ASSEMBLY DISPOSAL

When scrapping vehicles equipped with an supple–mental restraint system or disposing of a front pas–senger airbag assembly, 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..

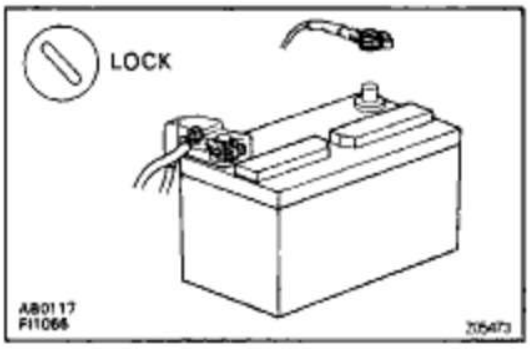
Never dispose of a front passenger airbag assembly which has an undeployed airbag.

When disposing of a front passenger airbag assembly with an airbag deployed in a collision, follow the same procedure given under "WHEN SCRAPPING THE VE–HICLE, part 5, DISPOSAL OF FRONT PASSENGER AIRBAG ASSEMBLY".



PRECAUTIONS FOR AIRBAG DEPLOYMENT

- The airbag produces a sizeable exploding sound when it deploys, so perform the operation out–of–doors and where it will not create a nuisance to nearby residents.
- When deploying the airbag, always use the speci–fied SST: SRS AIRBAG DEPLOYMENT TOOL (SST 09082–00700). Perform the operation in a place away from electrical noise.
- When deploying an airbag, perform the operation from at least 10 m (33 ft) away from the front passenger airbag assembly.
- The front passenger airbag assembly 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 front passenger airbag assembly with deployed airbag.
- Always wash your hands with water after com–pleting the operation.
- Do not apply water, etc., to a front passenger airbag assembly deployed airbag.



When scrapping vehicle

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

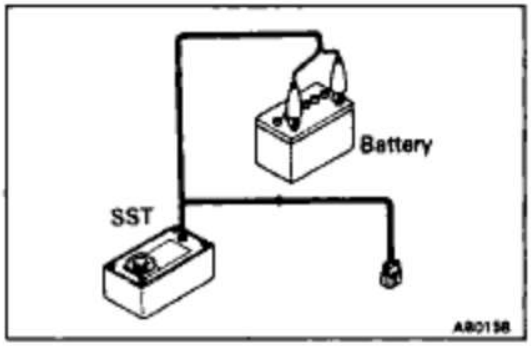
1. DISCONNECT NEGATIVE (–) TERMINAL CABLE FROM THE BATTERY

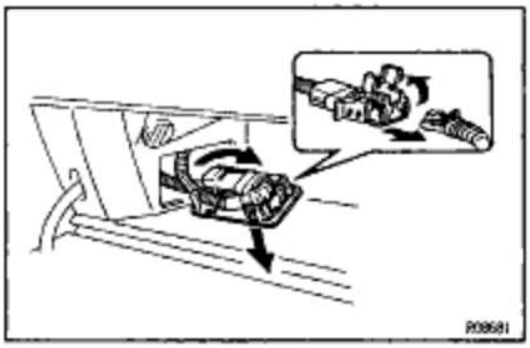
CAUTION: Work must be started after 90 seconds from the time the ignition switch is turned to the 'LOCK' position and the negative (–) terminal cable is disconnected from the battery (See page RS–2).

2. CONFIRM FUNCTIONING OF SST

(See page RS–42)

SST 09082–00700



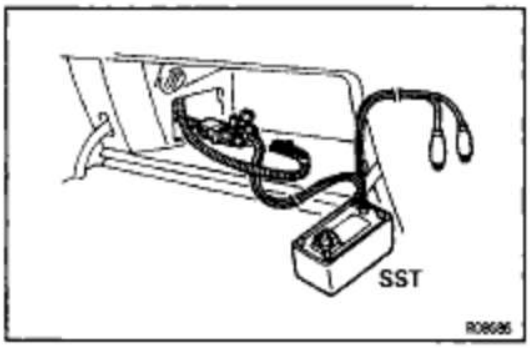


3. DISCONNECT CONNECTOR

CAUTION: Check that there is no looseness in the front passenger airbag assembly.

(a) Remove the glove compartment door finish plate inside the glove compartment.

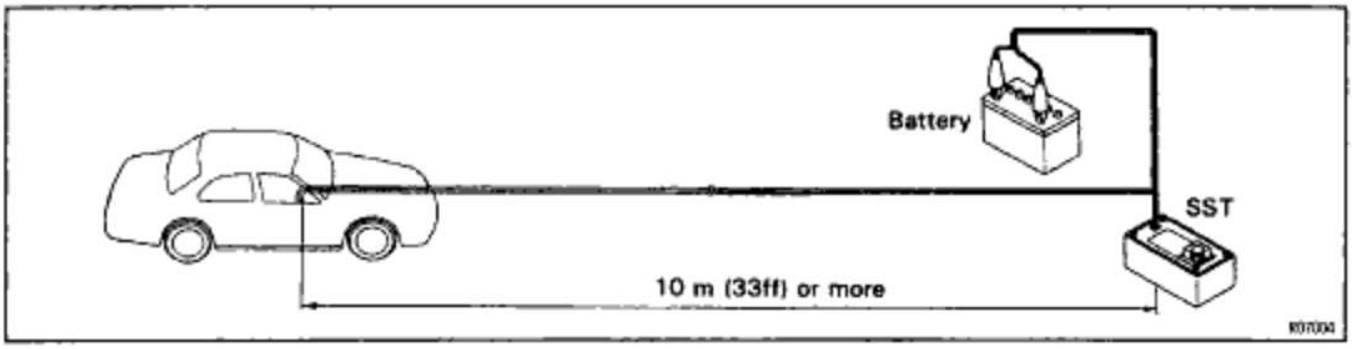
(b) Disconnect the center airbag sensor assembly connector from the wiring harness connector.

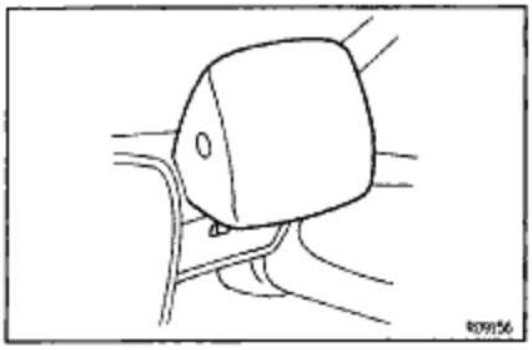


4. INSTALL SST

(a) Connect the SST connector to the airbag connector and lock the secondary lock of the twin lock.
SST 09082–00700

(b) Move the SST to at least 10 m (33 ft) from the front of the vehicle.
(c) close all the doors and windows of the vehicle.
NOTICE: Take care not change the SST wire harness.
(d) Connect the SST red clip to the battery positive (+) terminal and the black clip to the battery negative (–) terminal.





6. 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.

6. DISPOSAL OF FRONT PASSENGER AIRBAG AS–SEMBLY

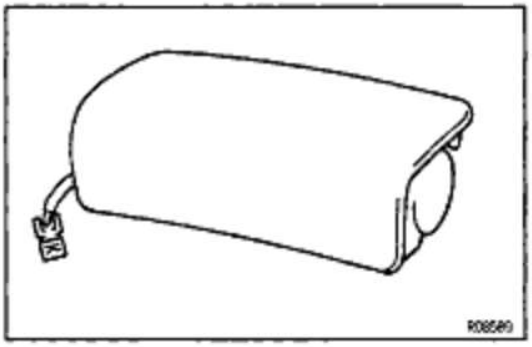
NOTICE:

- **The front passenger airbag assembly is very out not when the airbag is deployed, so leave it alone for at least 30 minutes after deployment.**
- **Use gloves and safety glasses when handling a front passenger airbag assembly with deployed airbag.**
- **Do not apply water, etc., to a front passenger airbag asssembly with deployed airbag.**
- **Always wash your hands with water after complet–ing the operation.**

When scrapping a vehicle, deploy the airbag and scrap the vehicle with the front passenger airbag assembly still installed.

When disposing of front passenger airbag assembly only

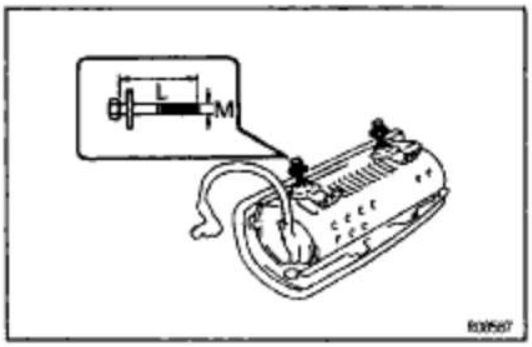
When disposing of the front passenger airbag assem–bly (w/ airbag) only, never use the customer's vehicle to deploy the airbag.
Remove the front passenger airbag assembly from the vehicle and be sure to follow the procedure given below when diploying the airbag.
HINT: Have a battery ready as the power source to deploy the airbag.



1. REMOVE FRONT PASSENGER AIRBAG ASSEMBLY

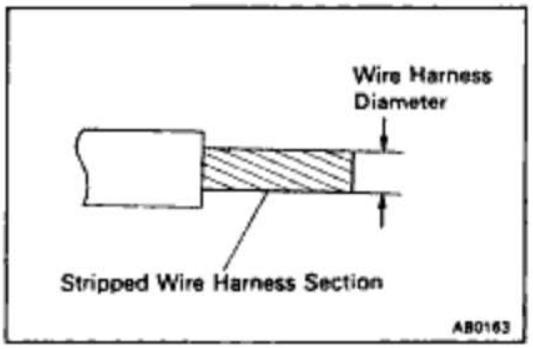
CAUTION:

- **When removing the front passenger airbag assem–bly, 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 dis–connected from the battery (See page RS–2).**
- **Store the front passenger airbag assembly with the airbag door facing up.**



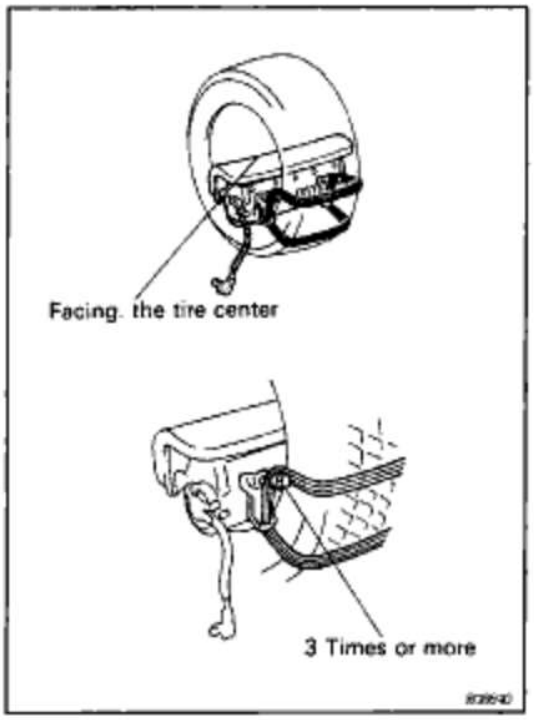
2. FIX FRONT PASSENGER AIRBAG ASSEMBLY TO TIRE

(a) Install bolts with washers in the 2 bolt holes in the front passenger airbag assembly.
Bolt:
L 35.0 mm (1.4 in.)
M 6.0 m m
Pitch 1.0 mm
NOTICE: Tighten the bolts by hand until the bolts become difficult to turn.
Do not tighten the bolts too much.



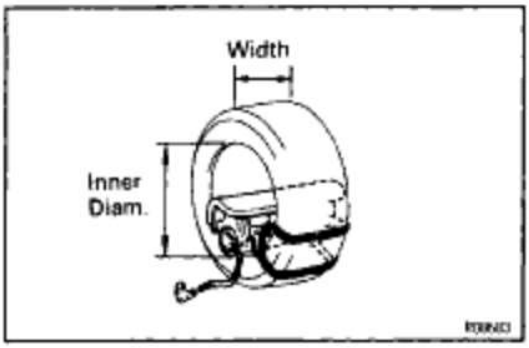
(b) Using a service–purpose wire harness for vehicle, tie down the front passenger airbag assembly to the tire.
Wire harness–. Stripped wire harness section 1.25 mm^2 or more (0.002 in^2 or more).

HINT: To calculate the square of the stripped wire harness section –
Square = 3.14 x (Diarneter)^2 divided by 4



CAUTION: If a wire harness which is too thin or some other thing is used to tie down the front passenger airbag assembly, 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 mm^2 (0.002 in^2).

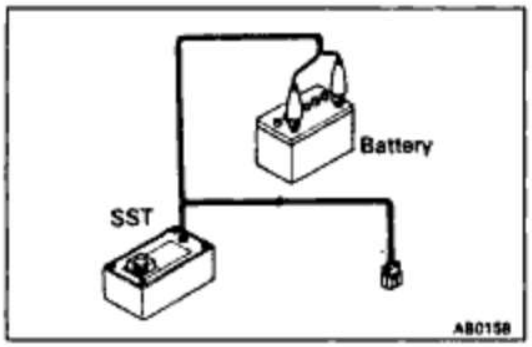
(1) Using 3 wire harness, wrap the wire harnesses at least 2 times each around the bolts installed on the left and right side of the front passenger airbag assembly.
CAUTION: Tightly wind the wire harness around the bolts so that there is o slack. If there is slackness in the wire harness, the front passenger airbag assembly may come loose due to the shock when the airbag is deployed, this is highly dangerous.



(2) Position the front passenger airbag assembly inside the tire with the airbag door facing inside.
Tie the wire harness to the tire.
Tire size: Must exceed the following dimensions
Width 185 mm (7.28 in.)
Inner diameter 360 mm (14.17 in.)

CAUTION:
- **Make sure the wire harness is tight. It is very dan–gerous if a loose wire harness results in the front passenger airbag assembly coming free due to the shock of the airbag deploying.**
- **Always tie down the front passenger airbag assem–bly with the airbag door facing inside.**

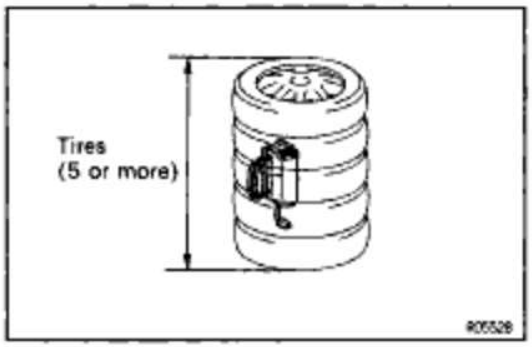
NOTICE: The tire will be marked by the airbag deploy–ment, so use a redundant tire.



3. CONFIRM FUNCTIONING OF SST

(See page RS–42)

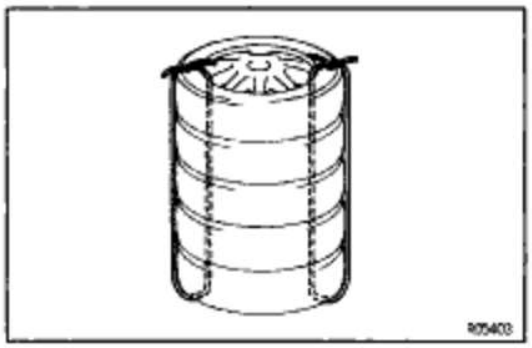
SST 09082–00700



4. PLACE TIRES

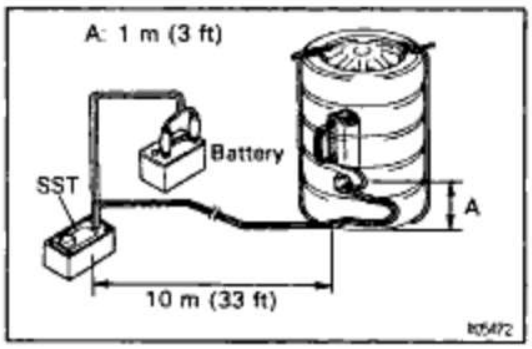
(a) Place at least 2 tires under the tire to which the front passenger airbag assembly is tied.

(b) Place at least 2 tires over the tire to which the front passenger airbag assembly is tied. The top tire should have the wheel installed.



(c) Tie the tires together by 2 wire harnesses.

CAUTION: Make sure that the wire harnesses are tight. It is very dangerous if loose wire harnesses result in the tires coming free due to the shock of the airbag deploy–ing.



HINT: Place the SST connect and wire harness inside tires. Provide at least a meter 1 m (3 ft) of slack for the wire harness.

5. INSTALL SST

(a) Connect the front passenger airbag assembly connec–tor and lock the secondary lock of the twin lock.

(b) Connect the SST connector and lock the secondary lock of the twin lock.
SST 09082–00700

6. 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 tire the front passenger airbag assembly 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.



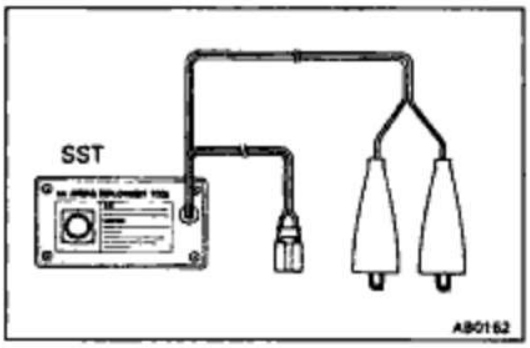
7. DISPOSAL OF FRONT PASSENGER AIRBAG ASSEMBLY

CAUTION:

- **The front passenger airbag assembly 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 front passenger airbag asssembly with deployed airbag.**
- **Do not apply water, etc., to a front passenger airbag assembly with deployed airbag.**
- **Always wash your hand with water after completing the operation.**

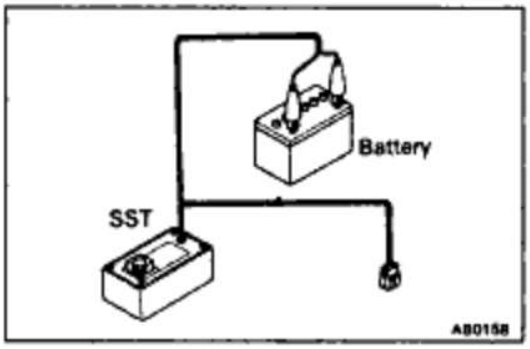
(a) Remove the front passenger airbag assembly from the tire.

(b) Place the front passenger airbag assembly in a vinyl bag, tie the end tightly and dispose of it the same way as other general parts.



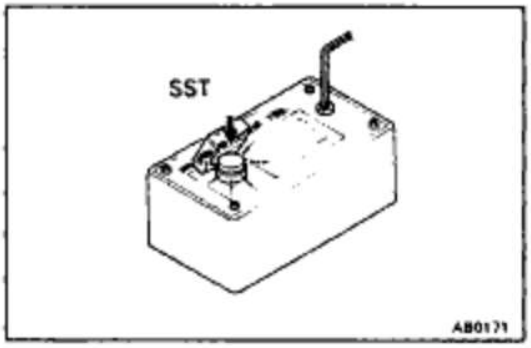
CONFIRM FUNCTIONING OF SST

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



1. CONNECT SST TO BATTERY

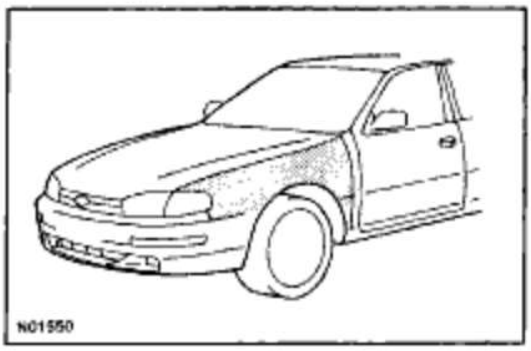
Connect the red clip of the SST to the battery positive (+) terminal and the black clip to the battery negative (–) terminal.
HINT: Do not connect the yellow connector which connects with the supplemental restraint system.

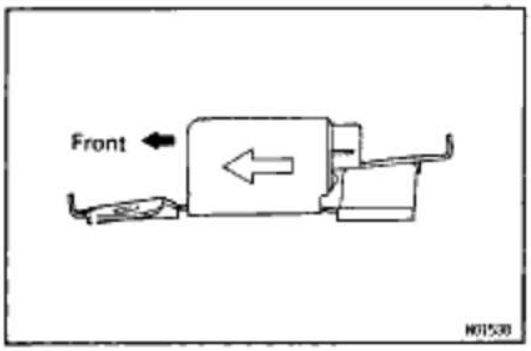


2. CONFIRM FUNCTIONING OF SST

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.





FRONT AIRBAG SENSOR

INSPECTION ITEMS

1. VEHICLES NOT INVOLVED IN A COLLISION

- Perform a diagnostic system check (See page RS–61).

2. VEHICLES INVOLVED IN A COLLISION

(a) Perform a diagnostic system check (See page RS–61).

(b) If the front fender of the car or its periphery is dam–aged, perform visual check for damage to the front airbag sensor, which includes the following items even if the airbag was not deployed:

- **Bracket deformation.**
- **Peeling of paint from the bracket.**
- **Cracks, dents or chips in the case.**
- **Cracks and dents in, or chipping and scratches of the connector.**
- **Peeling off of the label or damage to the series number.**

Also refer to the body dimension drawings check the dimensions and mounting surface angle of the body area where the front airbag sensors are mounted. (The SRS may malfunction, or may not work, if the mount–ing angle or dimensions of the sensor mount are not correct.)

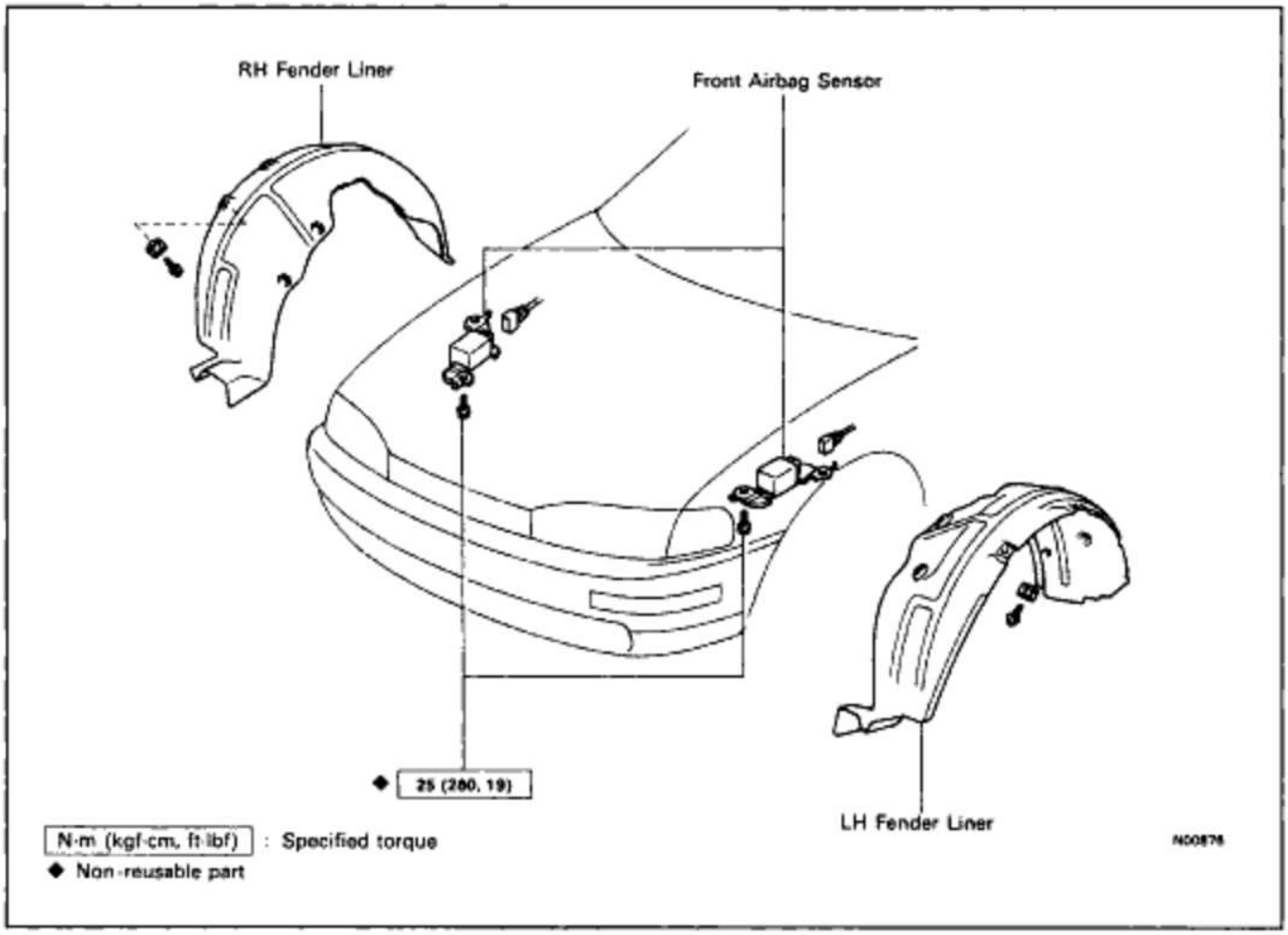
REPLACEMENT REQUIREMENTS

In the following cases, replace the front airbag sensor.

NOTICE: for replacement of the front airbag sensor, see page RS–45,'FRONT AIRBAG SENSOR REMOVAL AND INSTALLATION'.

- If the SRS has been deployed in a collision. (Replace both the left and right airbag sensors.)
- If the front airbag sensor has been found to be faulty in troubleshooting.
- If the front airbag sensor has been found to be faulty during the check in item 2–(b).
- If the front airbag sensor has been dropped.

COMPONENTS



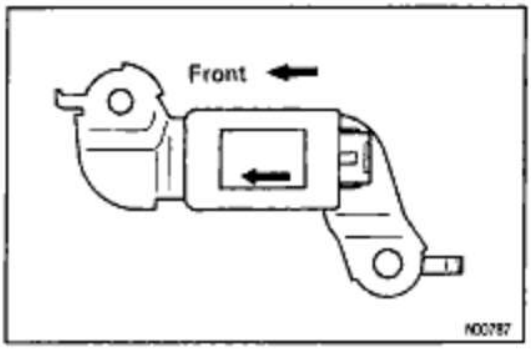
FRONT AIRBAG SENSOR REMOVAL AND INSTALLATION

NOTICE:

- **If the wiring connector of the supplemental re–straint system is disconnected with the ignition switch at ON or ACC, diagnostic trouble codes will be recorded.**
- **Never use SRS parts from another vehicle. When replacing parts, replace with now parts.**
- **Never reuse the sensor involved in a collision when the SRS has deployed.**
- **Never repair a sensor in order to reuse it.**

1. DISCONNECT NEGATIVE (–) TERMINAL CABLE FROM BATTERY

CAUTION: 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 discon–nected from the battery (See page RS–2).



2. REMOVE FENDER LINER

3. REMOVE FRONT AIRBAG SENSOR

(a) Disconnect the connector.

(b) Remove the bolt and sensor.

4. INSTALL FRONT AIRBAG SENSOR

Install the sensor with the arrow on the sensor facing toward the front of the vehicle.

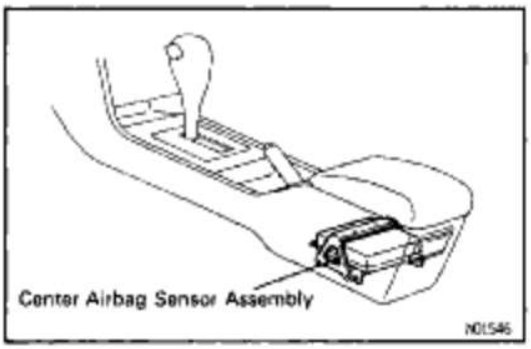
Torque: 25 N–m (260 kgf–cm, 19 ft–lbf)

NOTICE:

- **Make sure the sensor is installed to the specified torque.**
- **If the sensor has been dropped, or there are cracks dents or other defects in the case, bracket or connector, replace the sensor with a new one.**
- **The sensor set bolts have been anti–rust treated When the sensor is removed, always replace the set bolts with new ones.**
- **After installation, shake the sensor to check that there is no looseness.**
- **The front sensor is equipped with an electrical connection check mechanism. Be sure to lock this mechanism securely when connecting the connector. If the connector is not securely locked, a malfunction code will be detected by the diagnosis system.**
- **Check that the dimensions of the body where the front airbag sensor is installed match those in the body dimension drawings in the BODY section. (The SRS may malfunction, or may not work, if the mounting angle or dimensions of the sensor mount are not correct.)**

5. INSTALL FENDER LINER

6. CONNECT NEGATIVE (–) TERMINAL CABLE TO BATTERY



CENTER AIRBAG SENSOR ASSEMBLY

INSPECTION ITEMS

1. VEHICLES NOT INVOLVED IN A COLLISION

- Perform a diagnostic system check (See page RS–61).

2. VEHICLES INVOLVED IN A COLLISION

IF THE SRS IS NOT DEPLOYED

- **Perform a diagnostic system check (See page RS–61).**

IF THE SRS IS DEPLOYED

- Replace the center airbag sensor assembly certainly.

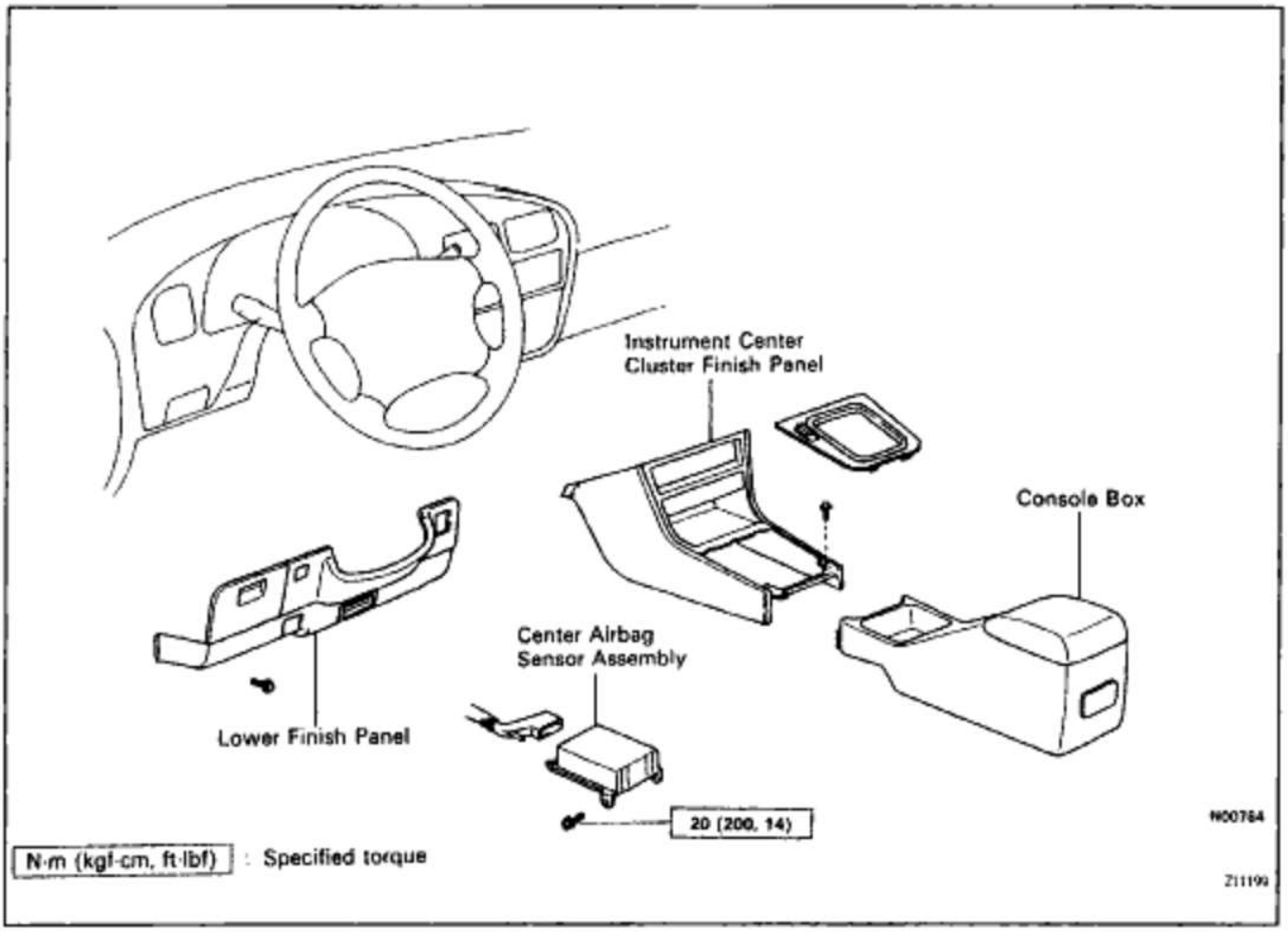
REPLACEMENT REQUIREMENTS

In the following cases, replace the center airbag sensor assembly.

NOTICE: For replacement of the center airbag sensor assembly, see page RS–47, 'CENTER AIRBAG SENSOR ASSEMBLY REMOVAL AND INSTALLATION".

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

COMPONENTS



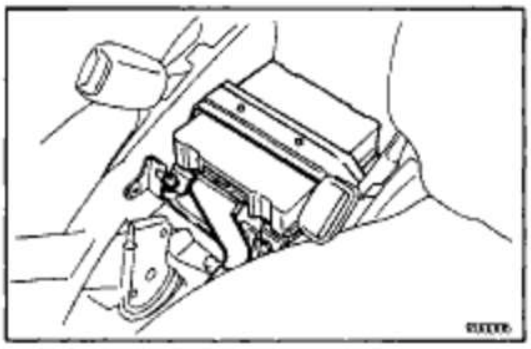
CENTER AIRBAG SENSOR ASSEMBLY REMOVAL AND INSTALLATION

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 destr–oyed by static electricity.)**
- **Never use SRS parts from another vehicle. When replacing parts, replace with new parts.**
- **Never reuse the center airbag sensor assembly in–volved in a collision when the airbag has deployed.**
- **Never repair a sensor in order to reuse it.**

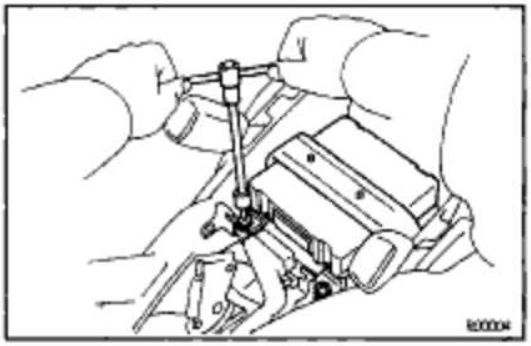
1. DISCONNECT NEGATIVE (–) TERMINAL CABLE FROM BATTERY

CAUTION: 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 discon–nected from the battery (See page RS–2).



2. REMOVE AND INSTALL CENTER AIRBAG SENSOR ASSEMBLY

(a) Using a torx wrench, loosen and tighten the 3 screws.
Torx wrench: T40 (Part No. 09042–00020 or locally manufactured tool)



(b) Disconnect and connect connector.
NOTICE: Removal and installation of the connector is done with the sensor assembly installed.

(c) Using a torx wrench, tighten the 3 screws.
Torx wrench: T40 (Part No. 09042–00020 or locally manufactured tool)
Torque: 20 N–m (200 kgf–cm, 14 ft–lbf)

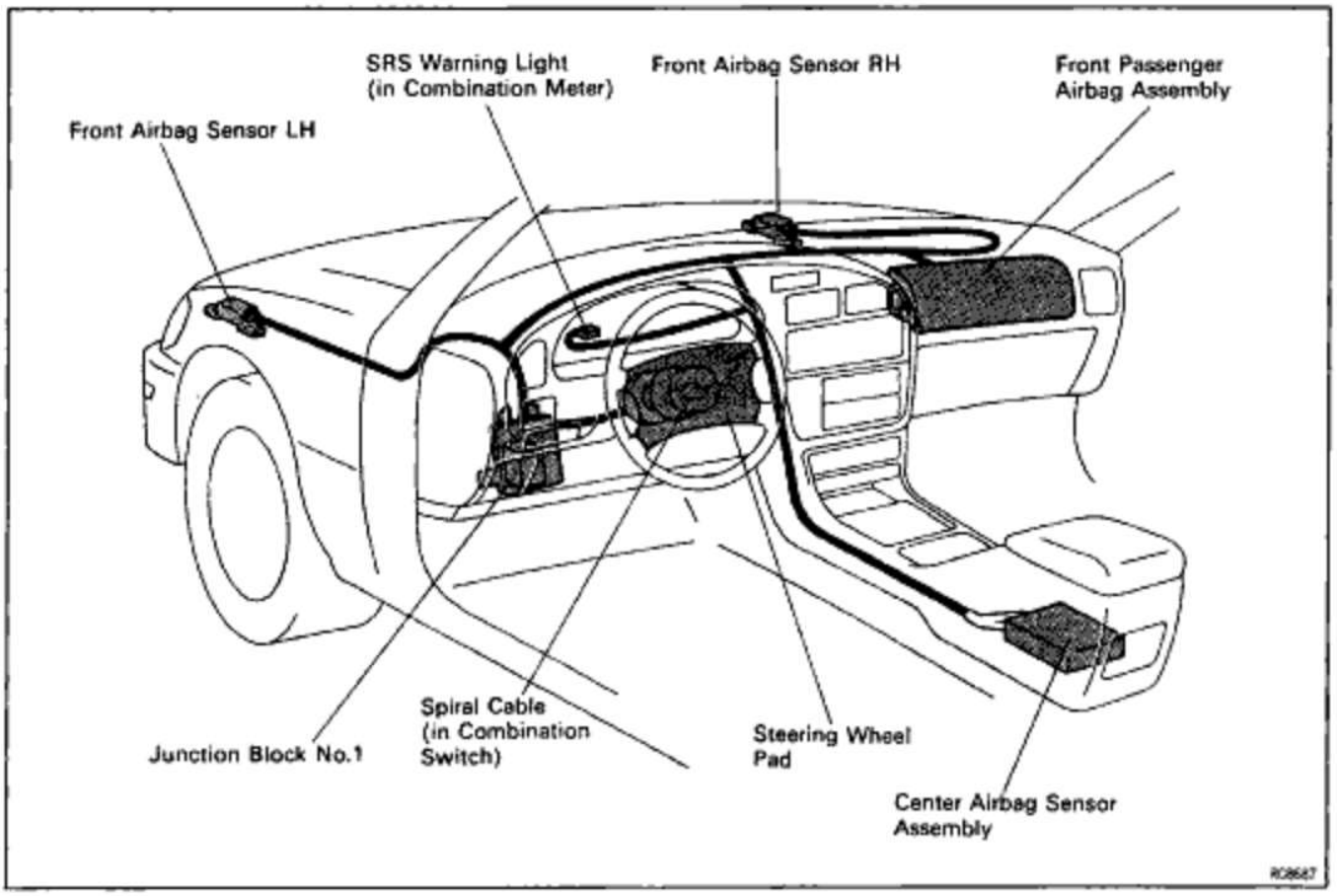
NOTICE:

- **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, brack–et or connector, replace the sensor assembly with a new one.**
- **When installing the sensor assembly, take care that the airbag 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.**

3. CONNECT NEGATIVE (–) TERMINAL CABLE TO BATTERY

WIRE HARNESS AND CONNECTOR

HINT: The SRS wire harness is integrated with the cowl wire harness assembly and floor 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.



INSPECTION ITEMS

1. VEHICLES NOT INVOLVED IN A COLLISION

- Perform a diagnostic system check (See page RS–61).

2. VEHICLES INVOLVED IN A COLLISION

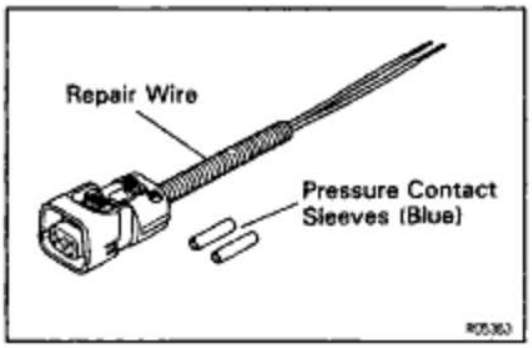
(a) Perform a diagnostic system check (See page RS–61).
(b) If there is a break in any of the wires in the SRS wire harness, or if conductors are exposed.
(c) In the SRS wire harness connectors are cracked or chipped.

REPLACEMENT REQUIREMENTS

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

- If any part of the SRS wire harness or any con–nector has been found to be faulty in troublesh–ooting.
- If any pant of the SRS wire harness or any con–nector has been found to be faulty during the check in item 2–(b) or (c).

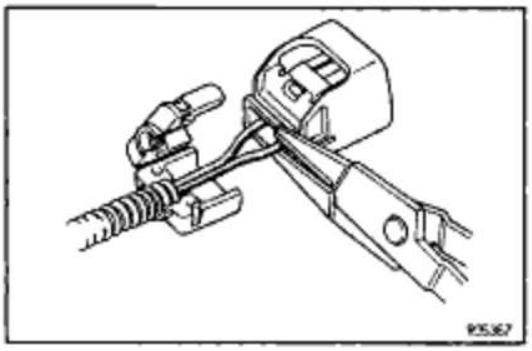
NOTICE: If the wire harness used in the SRS is damaged, replace the whole wire harness assembly.
When the connector to the front airbag sensors can be repaired alone (when there is no damaged to the wire harness), use the repair wire specially designed for the purpose (See page RS–13).



REPAIR WIRE FOR FRONT AIRBAG SENSOR REPLACEMENT

Repair wire with 2 pressure–contact sleeves (Part No. 82988–24010) has been prepared for exclusive use in repairing connector damage etc. caused by frontal collision of the vehicle.
When repairing the front airbag sensor connector on the wire harness side, always use the special repair wire.

NOTICE: Do not replace the connector housing or termi–nal only.

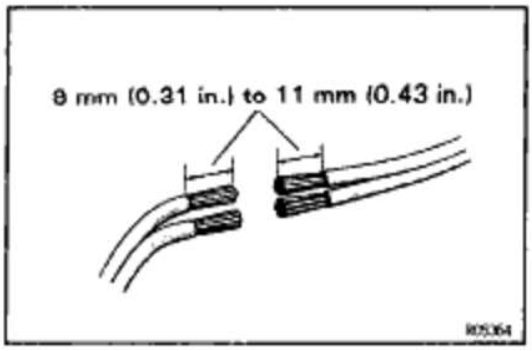


AIRBAG REPAIRWIRE REPLACEMENT

CAUTION: 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 discon–nected from the battery (See page RS–2).

1. DISCONNECT WIRE HARNESS AT VEHICLE SIDE

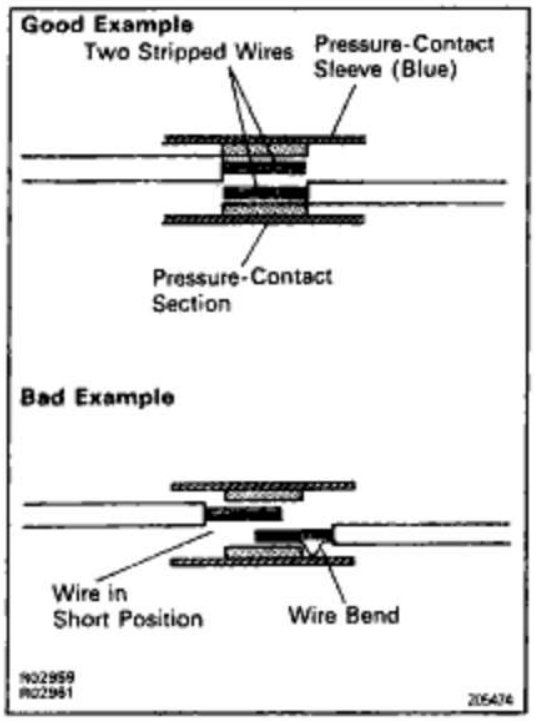
(a) Remove the cover at the rear of the connect housing and expose the wire harness.
(b) Cut the wire harness behind the connector housing.
HINT: The operation is performed more easily if the wire harness is left as long as possible.



2. CONNECT FRONT AIRBAG SENSOR WIRE HARNESS AT VEHICLE SIDE AND REPAIR WIRE

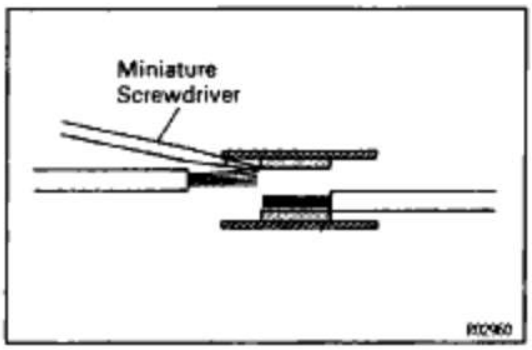
(a) Start stripping at least 8 mm (0.31 in.) to 11 mm (0.43 in.) away from the end of the existing harness at vehicle side and also from the end of the repair wire.

NOTICE: Take care not to damage the wire when stripping the wire harness lead. After finishing the operation, visually inspect the wire. If there is any damaged, perform the operation again.

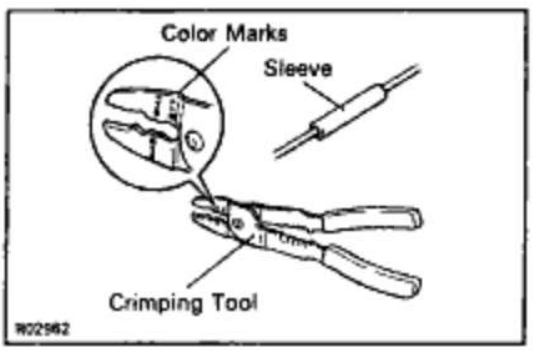


(b) Overlap the 2 stripped wire ends inside of the pressure–contact sleeve as illustrated in the left.

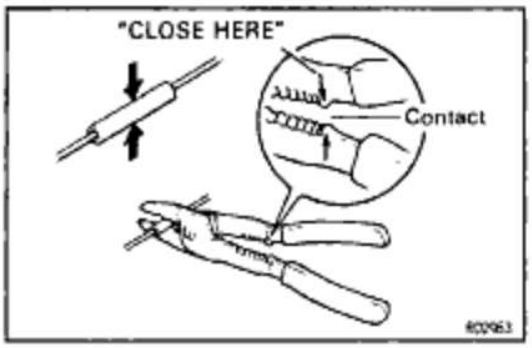
HINT: The blue pressure–contact sleeve (Part No. 82999–12020) is available individually.



HINT: You might find it easier if you use a miniature screwdriver as a guide as you insert wires into the sleeve.

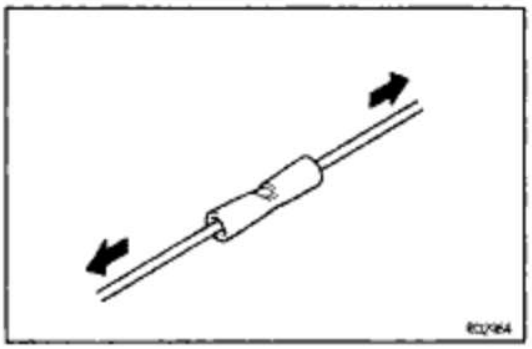


(c) The crimping tool (AMP Part No. 69060) has color marks on it. Place the sleeve in the correct section of the tool according to the color of the sleeve itself.



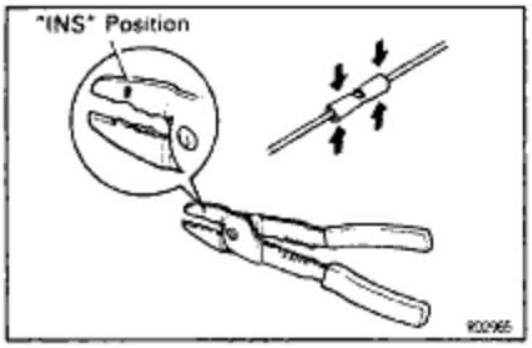
(d) with the center of the sleeve correctly placed be–tween the crimping jaws, squeeze the crimping tool until either end comes into contact at the section marked by "CLOSE HERE".

HINT: Check to see that the sleeve and wires are still in the correct position before closing the crimping tool ends with steady pressure.

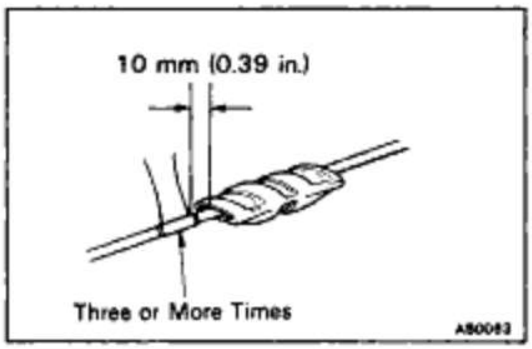


(e) Pull the joined wires to either end. Make sure that they are joined firmly by the sleeve.

NOTICE: If the joined wire come loose the splice is defec–tive, so replace the sleeve and repeat the procedure.



(f) Crimp both ends of the sleeve with the crimping tool at the "INS" position.



3. PROTECT JOINED SECTION

Wrap silicon tape around the joins to protect them from water.

HINT:

- Before starting the operation, thoroughly wipe dirt and grease off the sections to be joined.
- If the adhesive surfaces of two tapes come in contact they will stick together and will not come apart, so do not remove the backing film except when using the tape.
- Do not let oil and dust, etc., get on the tape surface.

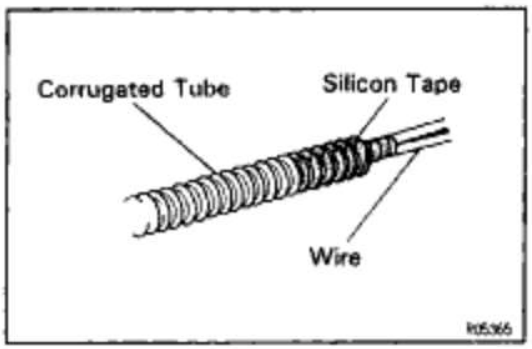
(a) Ready about 100 mm (3.94 in.) of silicon tape (Part No. 08231–00045) and peel oft the film.

(b) Stretch the silicon tape until its width is reduced by half.

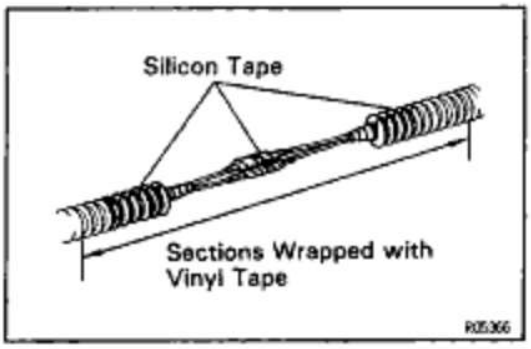
(c) About 10 mm (0.39 in.) from the end of the pressure contact sleeve, wrap the silicon tape around the sleeve 3 or more times while stretching the tape.



(d) Wrap the remaining part of sleeve with half of the tape overlapping at each turn.
(e) Firmly wrap the tap 2 times or more about 10 mm (0.39 in.) from the other end of the pressure contact sleeve, then wrap the tap back towards the start again and firmly finish winding the tape around the center of the sleeve.



(f) Fix the corrugated tube to the wire using silicon tape.



(g) After applying the silicon tape, apply vinyl tape on the corrugated tube of repair wire side over to the corrugated tube of vehicle wire harness side.

– MEMO

TROUBLESHOOTING

HOW TO PROCEED WITH TROUBLESHOOTING

Malfunction symptoms of the supplemental restraint system are difficult to confirm, so the diagnostic trou–ble codes become the most important source of information when troubleshooting. Perform troubleshooting of the supplemental restraint system in accordance with the following procedure:
HINT: Do not disconnect the battery negative (–) terminal cable until step [3] , Diagnostic Trouble Code Check and Recording, has been completed.

[1] CUSTOMER PROBLEM ANALYSIS

Using the CUSTOMER PROBLEM ANALYSIS CHECK SHEET (See page RS–60) for reference, ask the customer in as much detail as possible about the problem.

[2] WARNING LIGHT CHECK

Check the SRS warning light. If the light remains on, a malfunction is stored in the center airbag sensor, assembly, so proceed to step [3] . If the SRS warning light is not on, a malfunction has occurred in the SRS warning light circuit, so perform troubleshooting for SRS Warning Light System Malfunction.
HINT: Code 22 is recorded when a malfunction occurs in the SRS warning light system.
If an open malfunction occurs in the SRS warning light system, the SRS warning light does not light up, so that until the malfunction is repaired, the diagnostic trouble codes cannot be confirmed.

[3] DIAGNOSTIC TROUBLE CODE CHECK AND RECORDING

Check the diagnostic trouble codes and make a note of any malfunction codes which are output. If a normal code is output, an abnormality in the power source circuit may have occurred, so perform troubleshooting for source voltage in step [8] .
If code 22 is output, skip steps [4] and [5] and proceed to step [7] .

[4] MALFUNCTION CODE CLEARANCE

Clear the malfunction code.
HINT: The malfunction code output in step [3] indicates that a malfunction has occurred in the circuit designated by the malfunction code, but does not indicate whether the malfunction is still occurring or whether it was in the past. ,
Accordingly, it is necessary to find out the present condition of the malfunction occurrence by clearing the malfunction code and performing the diagnostic trouble code check again. If this operation is neglected and troubleshooting is performed using only the malfunction code confirmed in step [3] , isolating the problem component becomes difficult and invites mistaken diagnosis.

[5] DIAGNOSTIC TROUBLE CODE CHECK AND RECORDING

After repeating ignition switch ON–OFF operation (ON: wait 20 secs., OFF: wait 20 secs.) 5 times, check the diagnostic trouble code. If any code is output, the malfunction is still occurring, so proceed to step [7].
Bearing in mind that a malfunction code was registered in step [3] , provided that the normal code is presently output, use the methods described in step [6] to simulate the malfunction.
NOTICE: When connecting the battery after clearing the malfunction code, always do it with the ignition switch in ”LOCK” position. When the battery has been reconnected, turn the ignition switch to ACC or ON position after at least 2 seconds have elapsed.
If the battery is reconnected with the ignition switch in ACC or ON position, or the ignition switch is turned to ACC or ON within 2 seconds of connecting the battery, it is possible that the diagnosis system will not operate normally.

[6] SYMPTOM SIMULATION

[7] DIAGNOSTIC TROUBLE CODE CHART

Proceed to the appropriate flow chart in step [8] in accordance with the malfunction code found in step [5] or [6] .

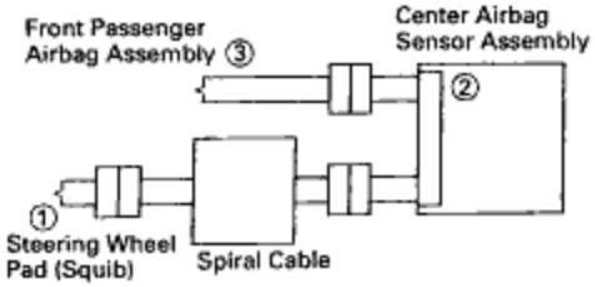
[8] CIRCUIT INSPECTION [9] REPAIR

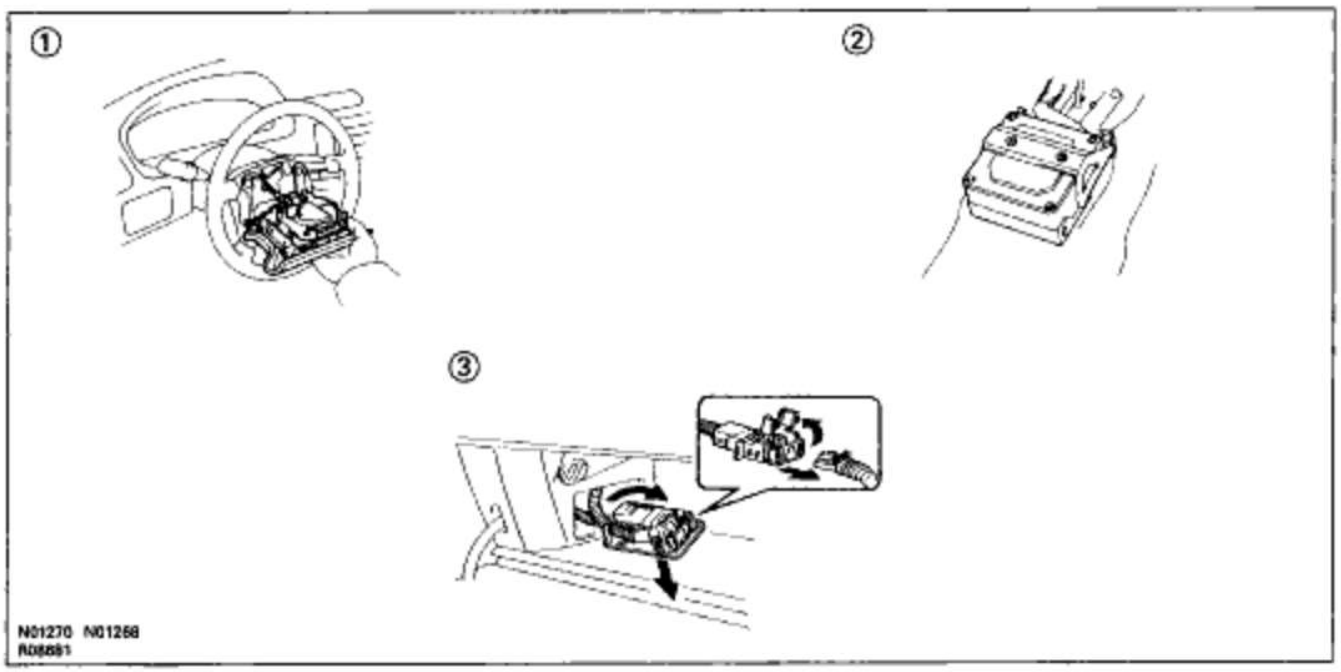
Find out if the problem lies in a sensor, actuator or wire harness and connector, and repair the problem.

After the problem part is repaired, reinstall the disassembled parts. Do not start work until 90 seconds after the ignition switch is turned to the LOCK position and the negative (–) terminal cable is disconnected.

CAUTION: If incorrect procedure is used, a malfunction may occur in the system or there is the danger that airbag may be accidentally deploy during the repair operation. Carefully read the GENERAL DESCRIPTION (See page RS–2) and the cautions for each operation, perform repairs in the correct order using the correct methods.

HINT: The following illustration for the CIRCUIT INSPECTION shows each connector for the SRS squib circuit.





[10] MALFUNCTION CODE CLEARANCE

When all the malfunction codes found in steps [5] and [6] have been repaired, clear the malfunction codes.

[11] DIAGNOSTIC TROUBLE CODE CHECK

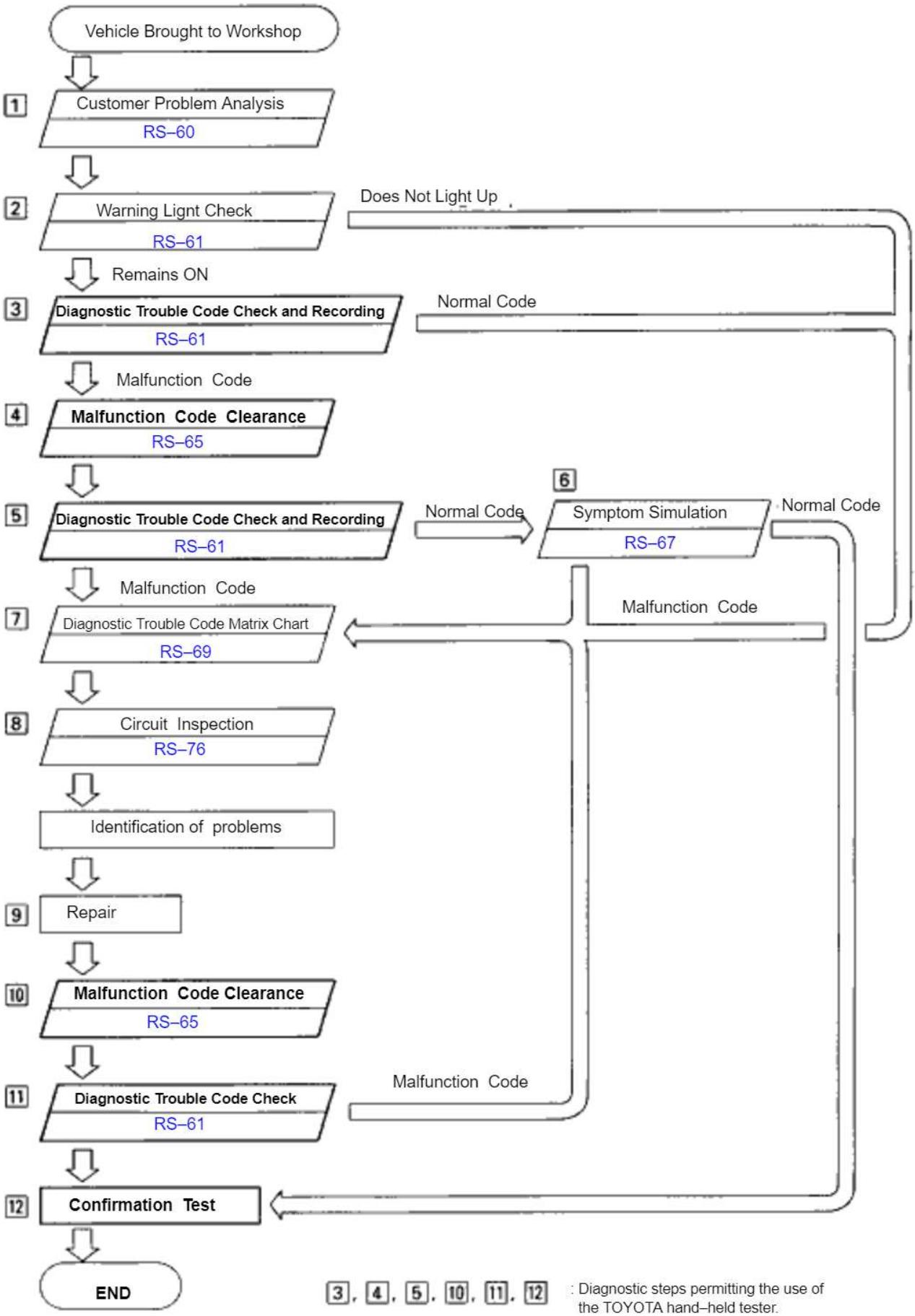
After repeating ignition switch ON–OFF operation (ON: wait 20 secs., OFF: wait 20 secs.) 5 times, check
the diagnostic trouble codes. If a code is displayed, return to step [7] and troubleshoot the displayed malfunction code.

NOTICE: When connecting the battery after clearing the malfunction code, always do it with the ignition switch in "LOCK" position. When the battery has been reconnected, turn the ignition switch to ACC or ON position after at least 20 seconds have elapsed.

If the battery is reconnected with the ignition switch in ACC or ON position, or the ignition switch is turned to ACC or ON within 20 seconds of connecting the battery, it is possible that the diagnosis system will not operate normally.

[12] CONFIRMATION TEST

Check the warning light again and confirm that all the malfunctions have been repaired. If the warning light indicates and abnormally, repeat the operation again from step [2].


Vehicle Brought to Workshop
1
Customer Problem Analysis
RS–60
2
Warning Lignt Check
RS–61
Does Not Light Up
Remains ON
3
Diagnostic Trouble Code Check and Recording
RS–61
Normal Code
Malfunction Code
4
Malfunction Code Clearance
RS–65
5
Diagnostic Trouble Code Check and Recording
RS–61
Normal Code
6
Symptom Simulation
RS–67
Normal Code
Malfunction Code
Malfunction Code
7
Diagnostic Trouble Code Matrix Chart
RS–69
8
Circuit Inspection
RS–76
Identification of problems
9
Repair
10
Malfunction Code Clearance
RS–65
11
Diagnostic Trouble Code Check
RS–61
Malfunction Code
12
Confirmation Test
END
3, 4, 5, 10, 11, 12 : Diagnostic steps permitting the use of the TOYOTA hand–held tester.

CUSTOMER PROBLEM ANALYSIS CHECK SHEET

Supplemental Restraint System Check Sheet

Inspector's Name :

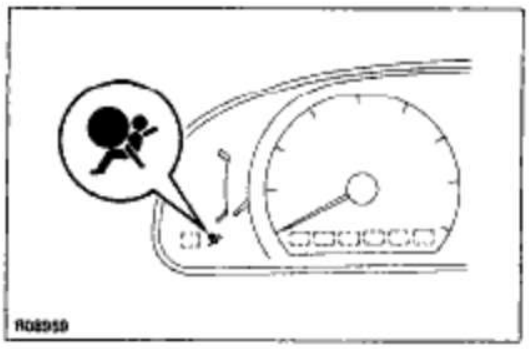
Customer's Name		Registration No.	
		Registration Year	/ /
		Frame No.	
Date Vehicle Brought In	/ /	Odometer Reading	km Miles

Date of Problem Occurrence		
Conditions when Problem Occurs	Weather	☐ Fine ☐ Cloudy ☐ Rainy ☐ Snowy ☐ Various/Other _____
	Outdoor Temperature	☐ Hot ☐ Warm ☐ Cool ☐ Cold (Approx. °C (°F))
	Vehicle Operation	☐ Starting ☐ Idling ☐ Driving [☐ Constant speed ☐ Acceleration ☐ Deceleration ☐ Other]
	Condition of road	

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.]	



DIAGNOSIS INSPECTION

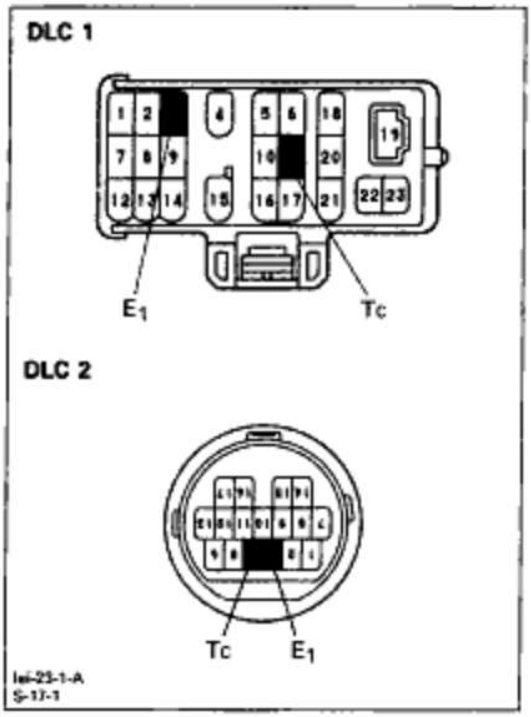
SRS warning light check

(a) Turn the ignition switch to ACC or ON and check that the SRS warning light lights up.

(b) 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, the center 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 (always lit up, when ignition switch LOCK position) on page RS–146.



Diagnostic trouble code check

Using diagnosis check wire:

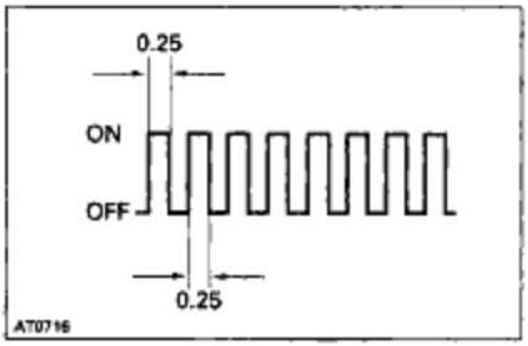
1. OUTPUT DIAGNOSTIC TROUBLE CODE

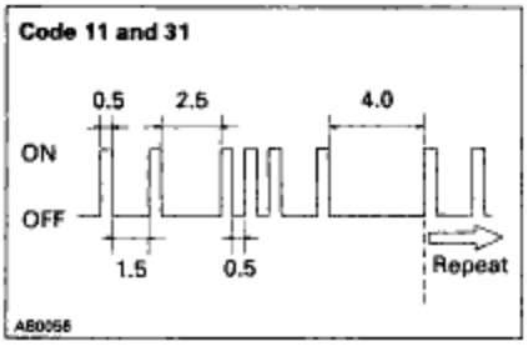
(a) Turn the ignition switch to ACC or ON position and wait Approx. 20 seconds.

(b) Using SST, connect terminals Te and El of the DLC1 or DLC2.

SST 09843 – 18020

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





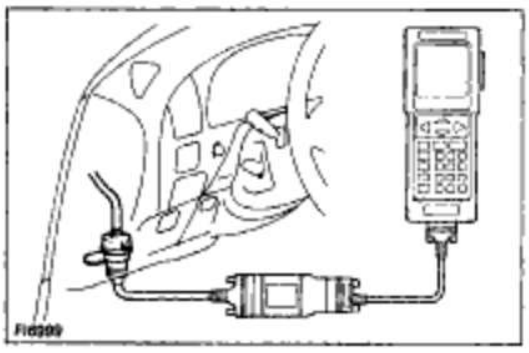
2. READ DIAGNOSTIC TROUBLE CODE

Read the 2–digit diagnostic trouble code 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
  In the event of a malfunction, the light will blink. The number represented by the first blink code output indicates the first digit of a 2–digit diagnostic trouble code. After a 1.5 second pause, the second blink code will indicate the second digit.
  If there are 2 or more codes, there will be a 2.5 second pause between each. 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 1st from the smallest numbered code to the larger.
- If it does not output a diagnostic trouble code or outputs a diagnostic trouble code without terminal connection, proceed to the Tc terminal circuit inspection on page RS–127.



Using TOYOTA hand–held Tester

(a) Hook up the TOYOTA hand–held tester to the DLC1 or DLC2.
(b) Read the diagnostic trouble codes by following the prompts on the tester screen.

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

DIAGNOSTIC TROUBLE CODES

DTC No.	Blink Pattern	Diagnosis	Trouble Area	SRS Warning Light
(Normal)	 FI1401	• System normal		OFF
		• Source voltage drop	• Battery • Center airbag sensor assembly	ON
11	 AB0057	• Short in squib circuit or front airbag sensor circuit (to ground) • Front airbag sensor or malfunction • Center airbag sensor assembly malfunction	• Steering wheel pad (squib) • Front passenger airbag sensor (squib) • Front airbag sensor • Spiral cable • Center airbag sensor assembly • Wire harness	ON
12	 FI1389	• Short in squib circuit (to +B) • Open in front airbag circuit	• Steering wheel pad (squib) • Front passenger airbag sensor (squib) • Front airbag sensor • Spiral cable • Center airbag sensor assembly • Wire harness	ON
13	 FI1390	• Short in squib circuit (between D+ wire harness and D– wire harness)	• Steering wheel pad (squib) • Spiral cable Center airbag sensor assembly • Wire harness	ON
14	 FI1391	• Open in driver side airbag squib circuit	• Steering wheel pad (squib) • Spiral cable • Center airbag sensor assembly • wire harness	ON
15	 AB0058	• Open in front airbag sensor circuit	• Front airbag sensor • Center airbag sensor assembly • Wire harness	ON
22*	 FI1392	• SRS warning light system malfunction	• SRS warning light • Center airbag sensor assembly • Wire harness	ON
24	 BE3932	• Open in center airbag sensor assembly connector malfunction	• Center airbag sensor assembly • Wire harness	ON
31	 FI1394	• Center airbag sensor assembly malfunction	• Center airbag sensor assembly	ON
53	 R04789	• Short in passenger airbag squib circuit (between P+ wire harness and P+ wire harness)	• Front passenger airbag assembly • Wiring harness • Center airbag sensor assembly • Wire harness	ON
54	 R04790	• Open in passenger airbag squib circuit	• Front passenger airbag assembly • Wiring harness • Center airbag sensor assembly • Wire harness	ON

HINT:

- When the SRS warning light remains lit up and the diagnostic trouble code in the normal code, this means a source voltage drop.
  This malfunction is not stored in memory by the center airbag sensor Assembly and if the power source voltage returns to normal, after approx. 10 seconds the SRS warning light will automatically go out.
- Code 22 is recorded when a malfunction occurs in the SRS warning light system.
  If an open malfunction occurs in the SRS warning light system, the SRS warning light does not light up, so that until the malfunction is repaired, the diagnostic trouble codes (including code 22) cannot be con–firmed.
- When 2 or more codes are indicated, the lowest numbered code will appear first.
- If a code not listed on the chart is displayed, then the center airbag sensor assembly is faulty.

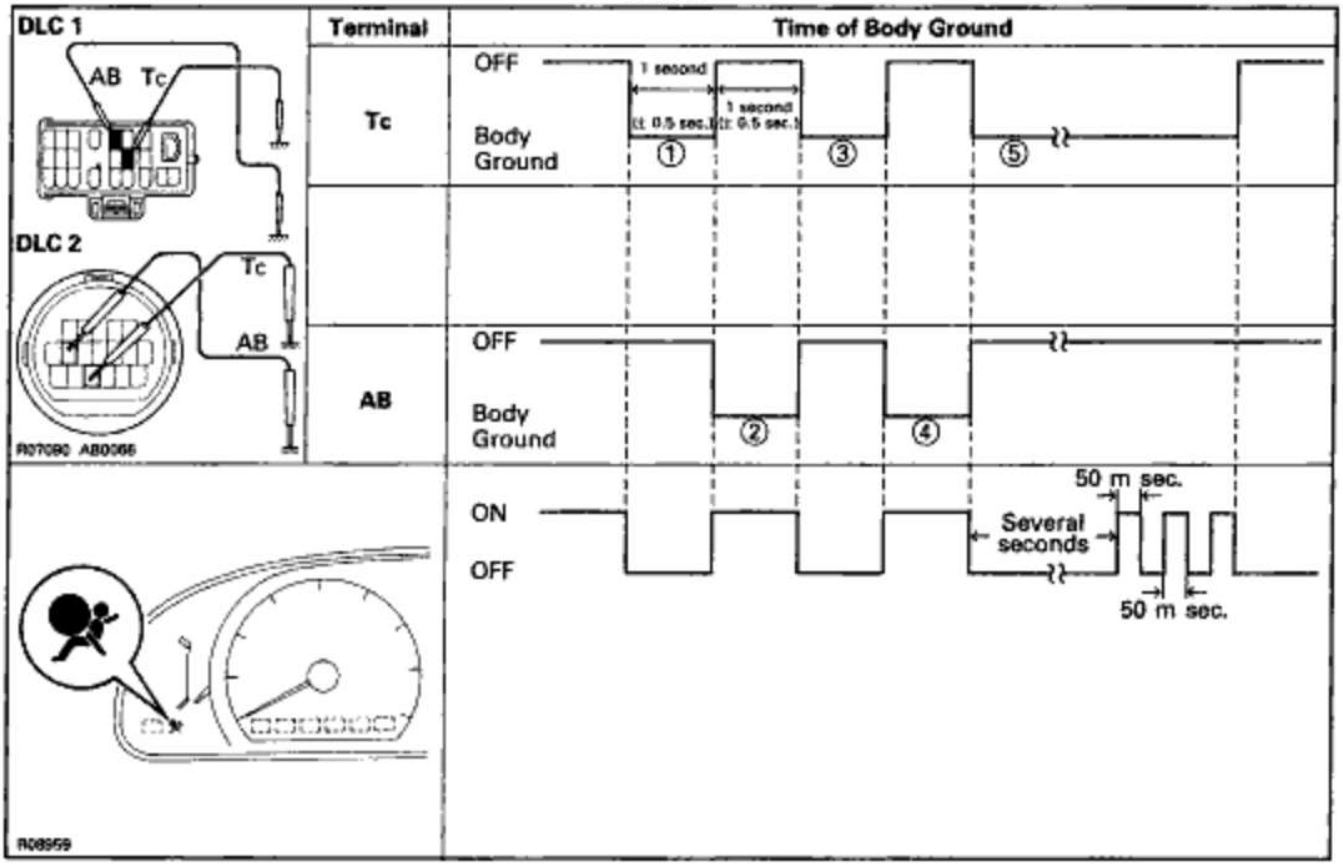
CLEARING OF DIAGNOSTIC TROUBLE CODE

Using diagnosis check wire:

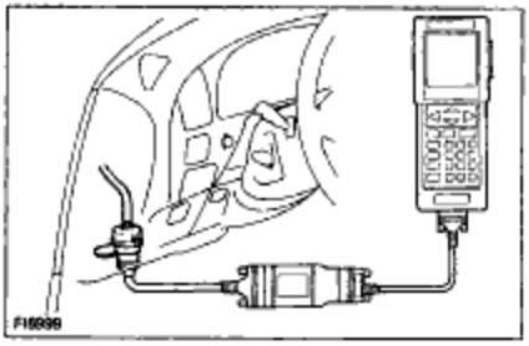
(a) Connect service wires to terminals Tc and AB of the check connector.

(b) Turn the ignition switch ACC or ON and wait approx. 6 seconds.

(c) Starting with the Tc terminal, apply body ground alternately to terminal Tc and terminal AB twice each in cycles of 1.0 ±0.5 seconds. (Confirm that body ground is absolute.)
Finally, keep applying body ground to terminal Tc.
HINT: When alternately grounding terminals Tc and AB, release ground from one terminal and immediately apply it to the other terminal. This action must be done within the time limits shown below. If you are not within the time limits, repeat the above procedure until you clear the codes.



(d) Several seconds after performing the clearing procedure, the SRS warning light will blink in a 50 m sec. cycle to indicate the codes have been cleared.



Using TOYOTA hand–held tester

(a) Hook up the TOYOTA hand–held tester to the DLC1 or DLC2.

(b) Clear the diagnostic trouble codes by following the prompts on the tester screen.

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

SYMPTOM SIMULATION

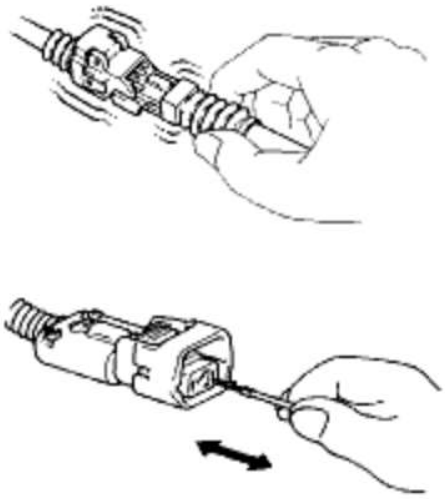
"Intermittent troubles or problems" are the malfunctions about which the customer has a complaint, but which do not occur and can not be conformed in the workshop. The intermittent problems also include complaints about the SRS warning light going on and off erratically.

The self–diagnostic system stores the circuit of the intermittent problem in memory even if the ignition switch is turned off.

And, for accurate diagnosis of the problems, ask the customer to obtain information as much as possible following the customer problem analysis check sheet (See page RS–60) and try to reproduce the intermittent problem.

The problem simulation methods described below are the effective ways for this nature of problem to pro–duce the problem conditions by applying vibration, heat, and humidity.

1 VIBRATION METHOD: when vibration seems to be the major cause.



CONNECTORS

Slightly shake the connector vertically and horizontally.

(inspection of connectors)

(a) Does the wire harness connecting with its cor–responding part have insufficient slack?

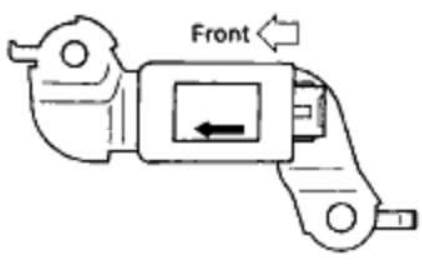
(b) Are the terminals dirty?

(c) Are the terminals making loose contact due to ter–minals spread?



WIRE HARNESS

Slightly shake the wire harness vertically and horizon–tally. The connector joint, fulcrum of the vibration, and body through portion are the major areas to be checked thoroughly.



PARTS AND SENSORS

Apply vibration slightly by a finger to the part or sensor considered to be the problem cause and check if the malfunction will occur.

CAUTION: Do not apply vibration to the center airbag sensor assembly.

2 **HEAT METHOD: When the problem seems to occur when the suspect area is heated.**



Heat the component that is likely the cause of the mal–function with a hair dryer or similar object. Check to see if the malfunction will occur.

NOTICE:

- Do not heat to more than 60°C (140°F) (Tempera–ture limit that the component can be touched with a hand.).
- Do not apply heat directly to part in the ECU.

3 **WATER SPRINKLING METHOD: When the malfunction seems to occur on a rainy day or in a high–humidity condition.**



Sprinkle water onto the vehicle and check to see if the malfunction will occur.

NOTICE: Never apply water directly onto the electronic components.

HINT:

- If a vehicle is subject to water leakage, the leaked water may contaminate the ECU. When testing a vehicle with a water leakage problem, special caution must be paid.

4 **OTHER: when a malfunction seems to occur when electrical load is excessive.**



Turn on all electrical loads including the heater blower, headlights, rear window defogger, etc. and check to see if the malfunction will occur.

DIAGNOSTIC TROUBLE CODE MATRIX CHART

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

DTC No.	Diagnosis	Page
(Normal)*1	• Source volatage drop	RS–76
11	• Short in squib circuit or front airbag sensor circuit (to ground)	RS–80
12	• Short in squib circuit or front airbag sensor circuit (to +B)	RS–88
13	• Short in squib circuit (between D+ wire harness and D– wire harness)	RS–96
14	• Open in squib circuit (between D+ wire harness and D– wire harness)	RS–104
15	• Open in front airbag sensor circuit	RS–110
22*2	• SRS warning light system malfunction	RS–116
24	• Open in center airbag sensor assembly connector malfunction	RS–122
31	• Center airbag sensor assembly malfunction	RS–126
53	• Short in squib circuit (between P+ wire harness and P– wire harness)	RS–128
54	• Open in squib circuit (between P+ wire harness and P– wire harness)	RS–134

HINT:

*1 When the SRS warning light remains lit up and the diagnostic trouble code is the normal code, this means a source voltage drop.

*2 Code 22 is recorded when a malfunction occurs in the SRS warning light system.

If an open malfunction occurs in the SRS warning light system, the SRS warning light does not light up, so that until the malfunction is repaired, the diagnostic trouble codes (including code 22) cannot be confirmed.

PROBLEM SYMPTOM CHART

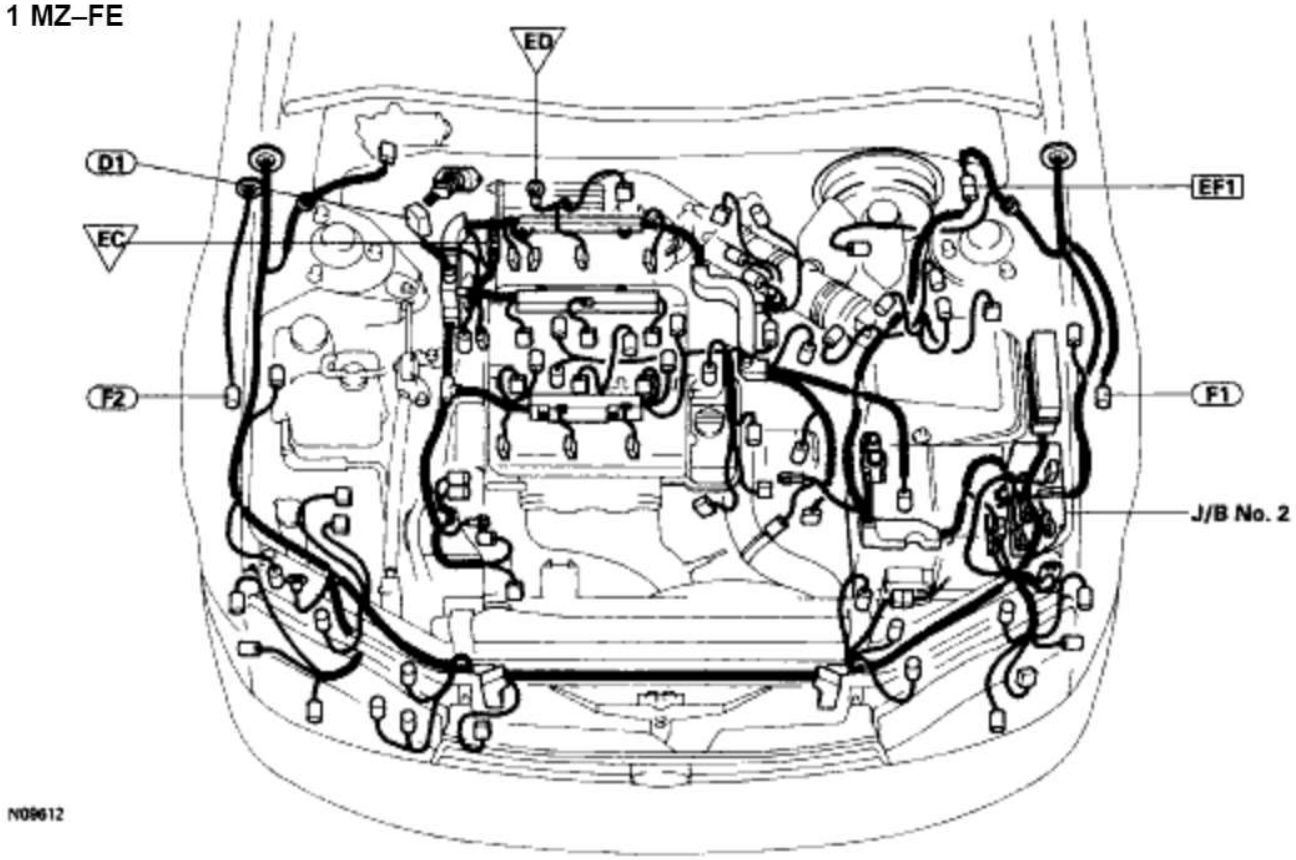
Proceed with troubleshooting of each circuit in the table below.

Problem Symptom	Inspection Item	Page
• With the ignition switch at ACC on ON, the SRS warning light does not lights up.	• SRS warning light malfunc–tion.	RS–140
• With the ignition switch at ACC or ON, the SRS warning light sometimes lights up after approx. 6 seconds have elapsed. • SRS warning light lights up even when ignition switch is in the LOCK position.	• SRS Warning light system (Always lit up when ignition switch is LOCK position)	RS–146
• Diagnostic trouble code not displayed. • Diagnostic trouble code continuously displayed.	• Te terminal circuit	RS–148

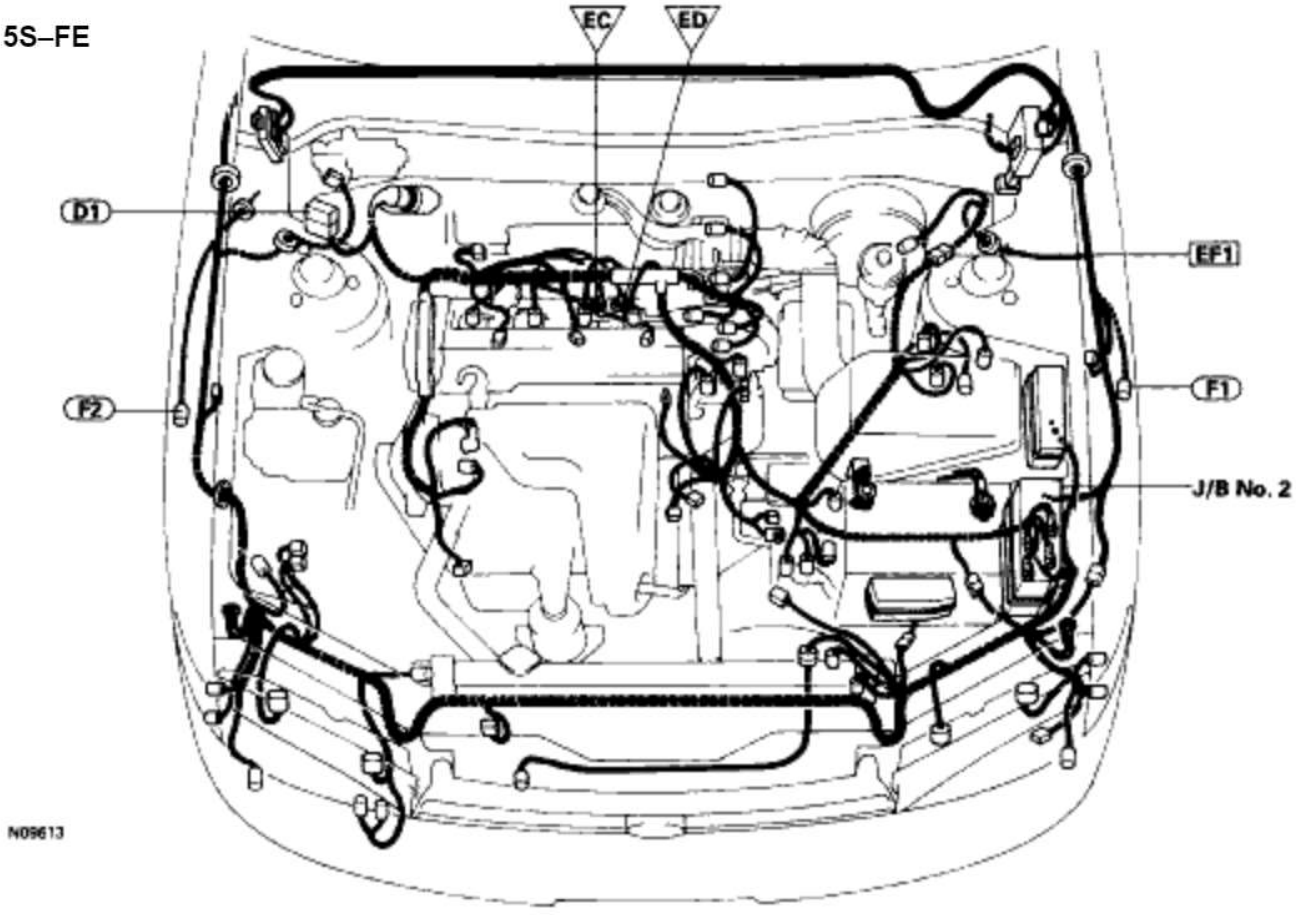
LOCATION OF CONNECTORS

Location of Connectors in Engine Compartment

1 MZ–FE



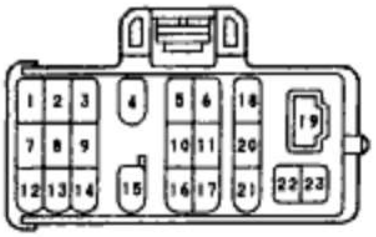
5S–FE



1MZ-FE

D1

DLC1

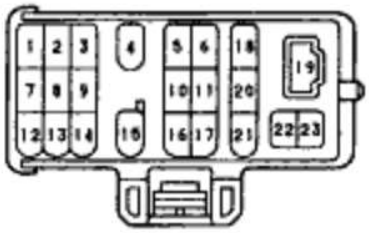


Isi-23-1

5S-FE

D1

DLC1



Isi-23-1-A

F1

Front Airbag Sensor LH



Ie-2-1-B

F2

Front Airbag Sensor RH



Ie-2-1-B

EF1

Engine Wire



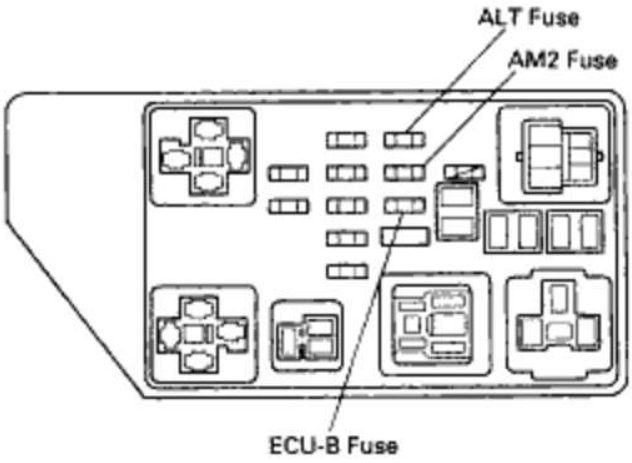
Ifg-4-1

Engine Room Main Wire

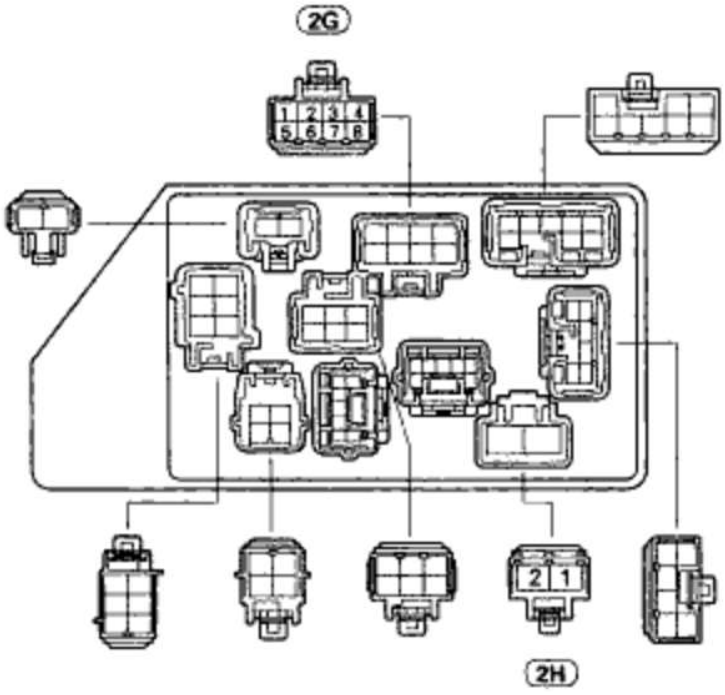


Ifg-4-2

JI6 No. 2

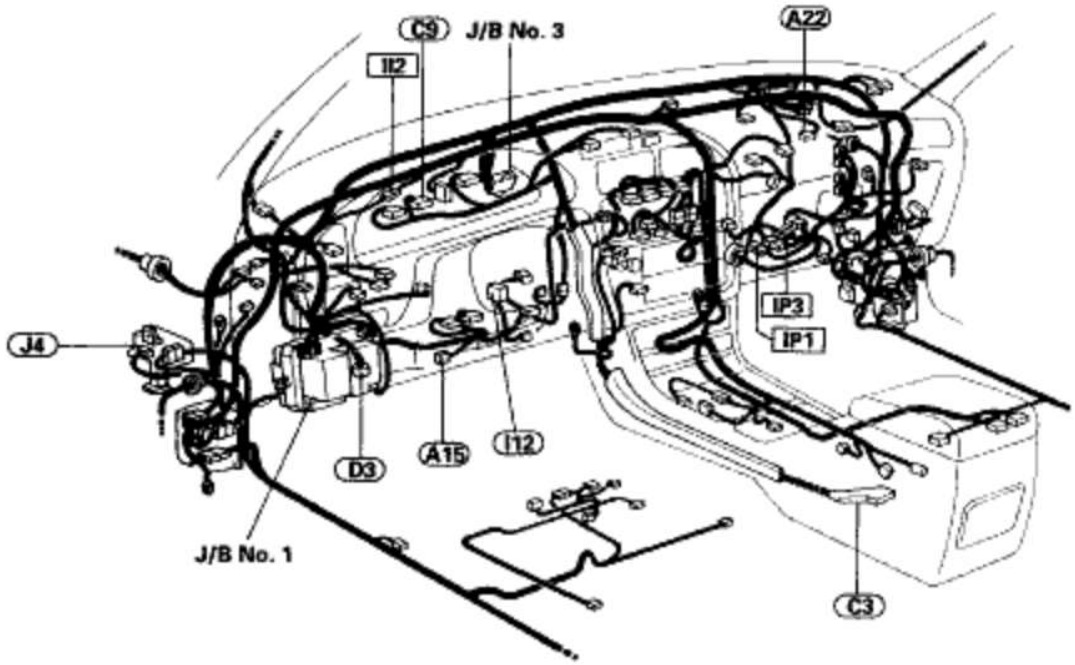


N09542

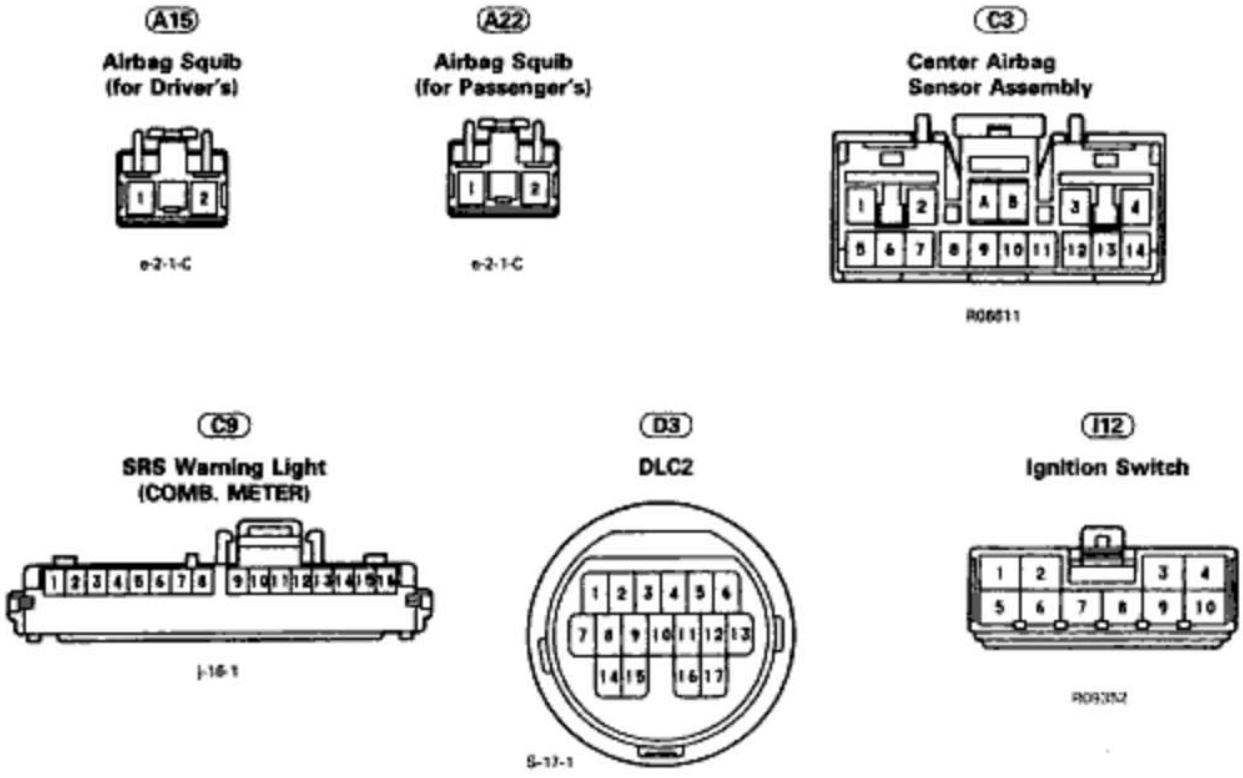


N09543

Location of Connectors in Instrument Panel



N09614



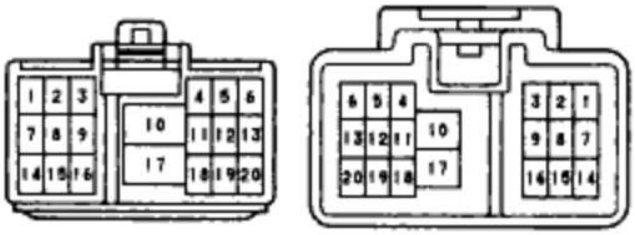
J4

Junction Connector



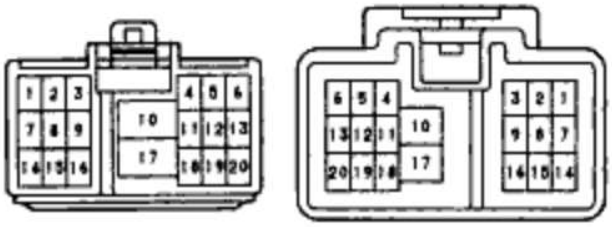
e-14-1-A

I12



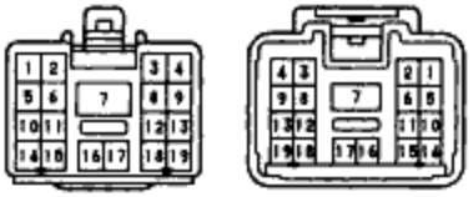
e-20-1-B e-20-2-B

IP1



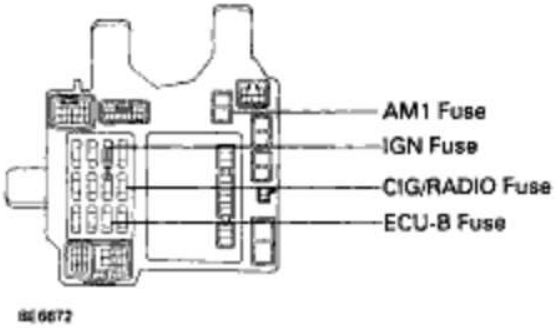
e-20-1-B e-20-2-B

IP3



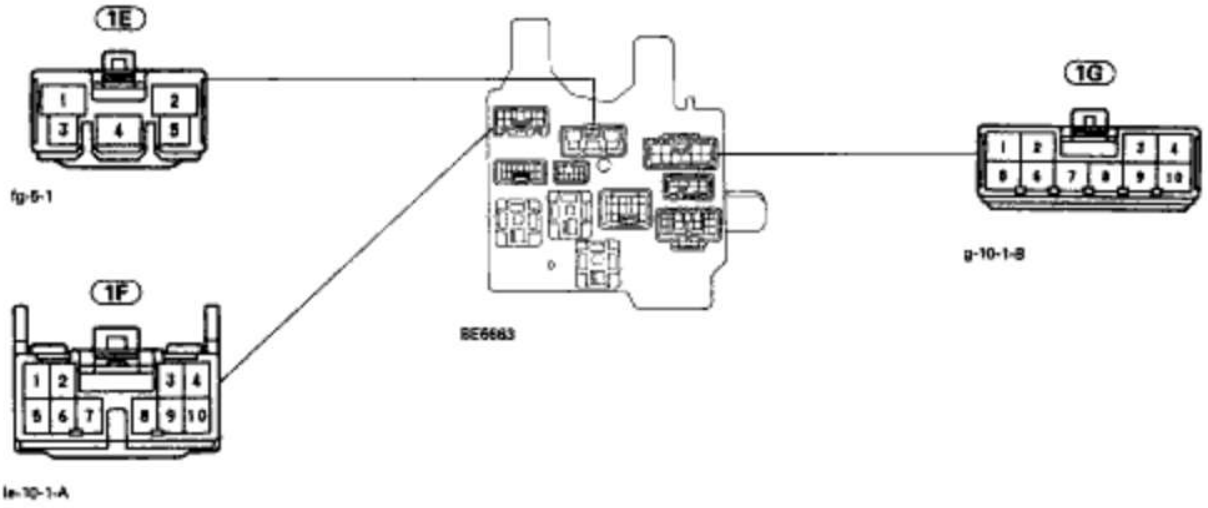
ef-19-1 ef-19-2

J/B No. 1



BE6672

JIB No. 1

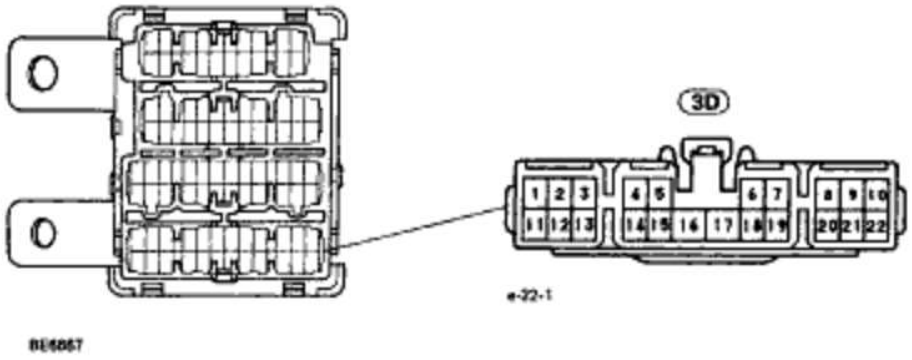


fg-5-1 g-10-1-B

BE6683

fe-10-1-A

J/B No. 3



CIRCUIT INSPECTION

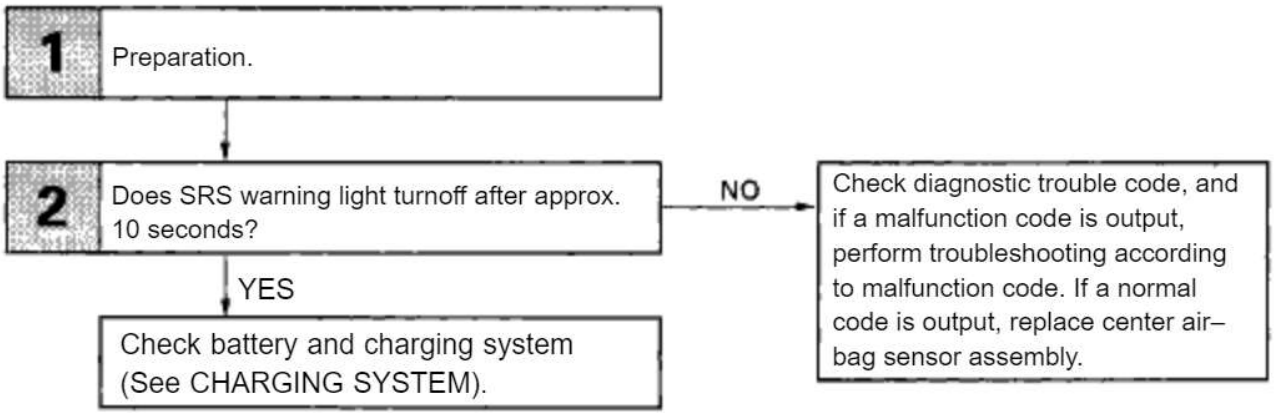
DTC (Normal) Source Voltage Drop

CIRCUIT DESCRIPTION

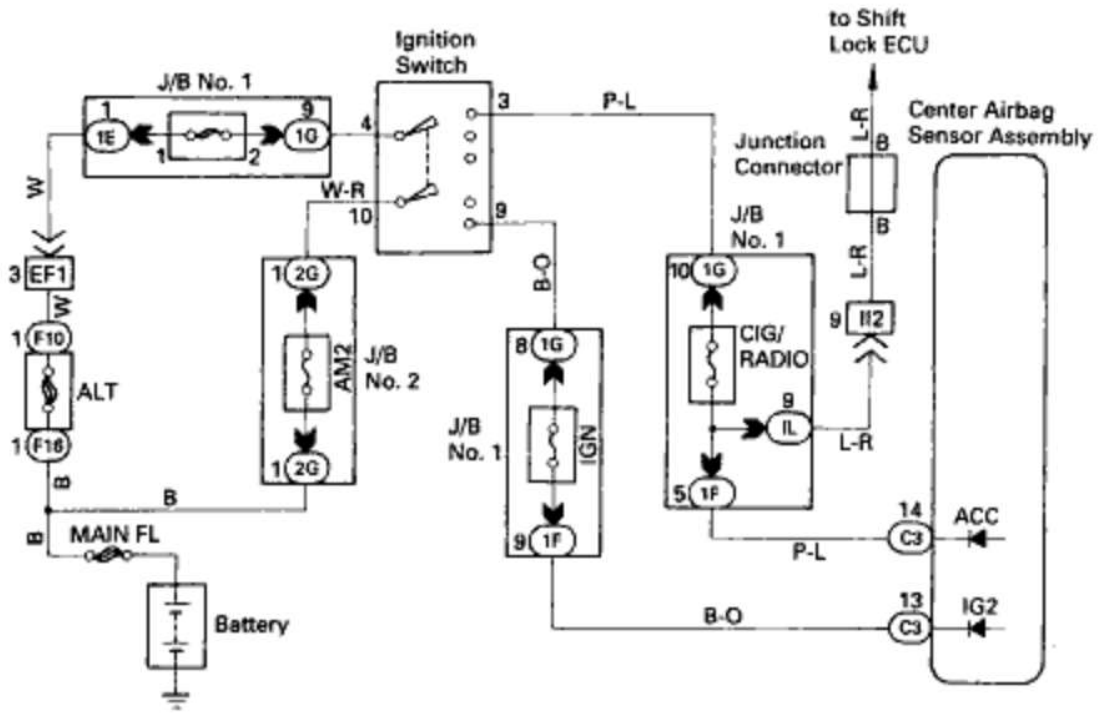
The supplemental restraint system is equipped with a voltage – increase circuit (DC–DC converter) in the center airbag sensor assembly in case the source voltage drops.
When the battery voltage drops, the voltage – increase circuit (DC–DC converter) functions to increase the voltage of the supplemental restraint system to normal voltage.
The diagnosis system malfunction display for this circuit is different to other circuits – when the SRS warning light remains lit up and the diagnostic trouble code is a normal code, source voltage drop is indicated. Malfunction in this circuit is not recorded in the center airbag sensor assembly, and approx. 10 seconds after the source voltage returns to normal, the SRS warning light automatically goes off.

DTC No.	Diagnosis
(Normal)	Source voltage drop.

DIAGNOSTIC CHART



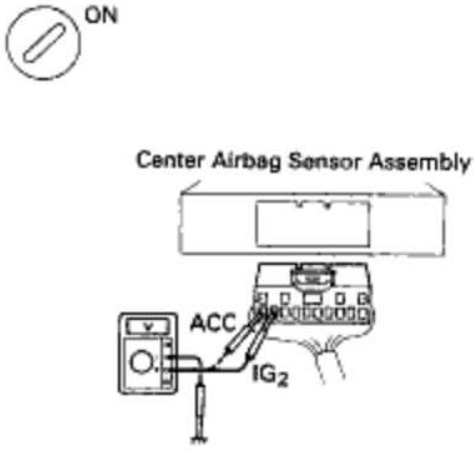
DIAGNOSTIC CHART
WIRING DIAGRAM



INSPECTION PROCEDURES

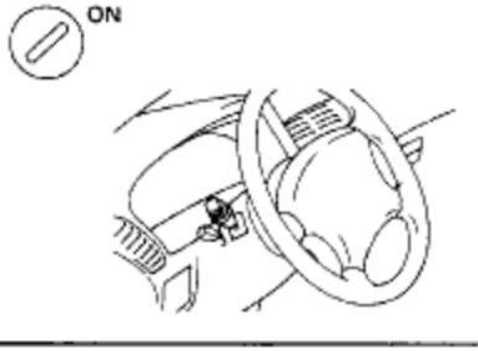
P Preparation C Check

1 Preparation.



P
(1) Turn ignition switch LOCK.
(2) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(3) Connect battery negative (–) terminal cable.
(4) Disconnect center airbag sensor assembly connector.
(5) Turn ignition switch O
N. But do not start engine.
(6) Measure voltage at IG2 or ACC on connector wire harness side of center airbag sensor assembly and operate electric system (defogger, wiper, headlight, heater blower, etc.).
Voltage: 6 V – 11.5 V at IG2 and ACC.
(7) Turn electric system switch OFF.
(8) Turn ignition switch LOCK.
(9) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(10) Remove voltmeter and connect center airbag sensor assembly connector.
(11) Connect battery negative (–) terminal cable.

2 Does SRS warning light turn off?



P Turn ignition switch ON.
C Operate electric system checked in 1 (5) and check that SRS warning light goes off.

YES

NO → **Check diagnostic trouble code, and if a malfunction code is output, perform troubleshooting according to malfunction code. If a normal code is output, replace center airbag sensor assembly.**

Check battery and charging system .

– MEMO –

DTC 11 Short in Squib Circuit or Front Airbag Sensor Circuit (to Ground)

CIRCUIT DESCRIPTION

The squib circuit consists of the center airbag sensor assembly, spiral cable, steering wheel pad (squib), wire harness connector and front passenger airbag assembly(squib). It causes the airbag to operate when the airbag operation conditions are satisfied.
The front airbag sensor detects the deceleration force in a frontal collision and is located in front fender on the left and right sides.
For details of the function of each component, see FUNCTION OF COMPONENTS on page RS–10.
Diagnostic trouble code 11 is recorded when ground short is detected in the squib circuit or front airbag sensor circuit.

DTC No.	Diagnosis
11	• Short circuit in squib wire harness (to ground). • Squib malfunction. • Short circuit in front airbag sensor +S, D+, D–, P+, P–, wire harness (to ground). • Front airbag sensor malfunction. • Short circuit between +S wire harness and –S wire harness of front airbag sensor. • Spiral cable malfunction. • Center airbag sensor assembly malfunction.

DIAGNOSTIC CHART

1	Preparation.		
2	Check front airbag sensor circuit. (Measure resistance between terminals +SR and –SR, +SL and –SL of center airbag sensor assembly connector.)	NG	Go to step [9] on next page.
3	Check front airbag sensor circuit. (Measure resistance between terminals +SR, +SL of center airbag sensor assembly connector and body ground.)	NG	Repair or replace harness or connector between front airbag sensor and center airbag sensor assembly (See page RS–50).
4	Check D squib circuit. (Measure resistance between terminals D^+, D^- of center airbag assembly connector and body ground.)	NG	Go to step [10] on next page.
5	Check P squib circuit. (Measure resistance between terminals P^+, P^- of center airbag assembly connector and body ground.)	NG	Repair or replace harness or connector between front airbag sensor and center airbag sensor assembly (See page RS–50).
6	Check center airbag sensor assembly.	NG	Replace center airbag sensor assembly.
7	Check D squib.	NG	Replace steering wheel pad.
8	Check P squib.	NG	Replace front passenger airbag assembly.

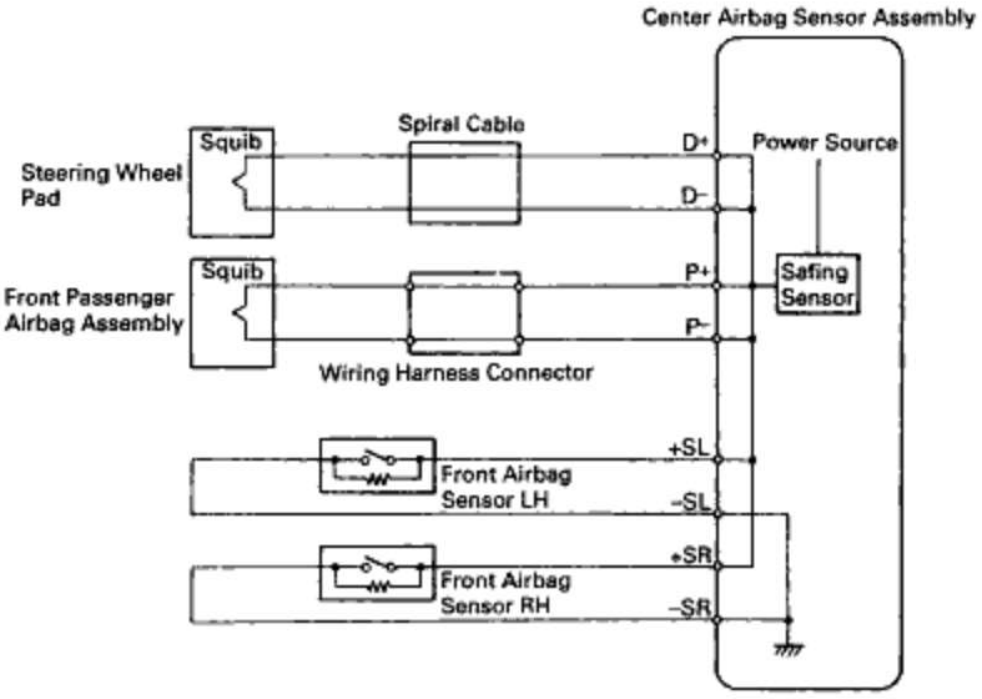
OK

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.

DIAGNOSTIC CHART (Cont'd)

9	Check front airbag sensor.	NG	Replace front airbag sensor.
	OK		
	Repair or replace harness or connector between front airbag sensor and center airbag sensor assembly (See page RS–50).		
10	Check spiral cable.	NG	Repair or replace spiral cable.
	OK		
	Repair or replace harness or connector between center airbag sensor assembly and spiral cable.		

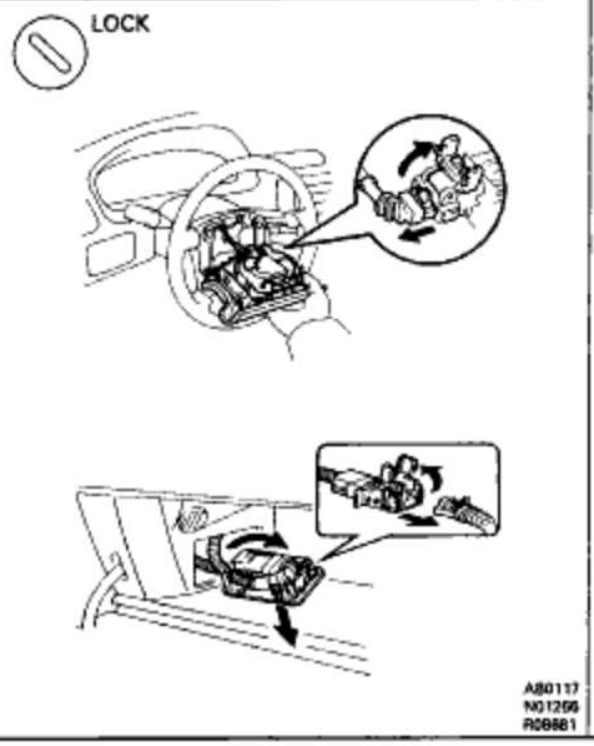
WIRING DIAGRAM



INSPECTION PROCEDURE

P Preparation C Check

1 Preparation.

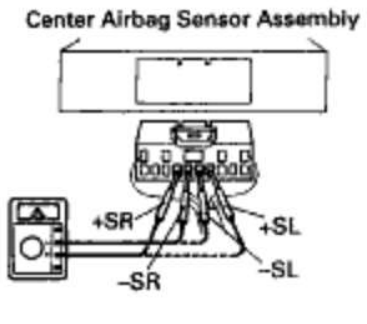


P (1) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(2) Remove steering wheel pad (See page RS–20).
(3) Disconnect connectors of front passenger airbag assembly. (See page RS–29)

Caution

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

2 Check front airbag sensor circuit. (Measure resistance between terminals +SR and –SR, +SL and –SL of center airbag sensor assembly connector.)



P Disconnect center airbag sensor assembly connectors.

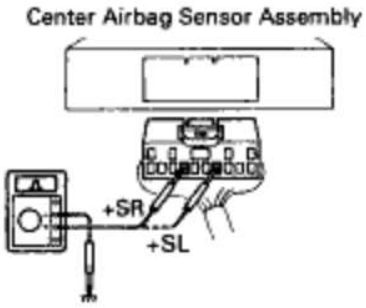
C Measure resistance between terminals +SR and –SR, +SL and –SL of harness side connector of center airbag sensor assembly.

OK **Resistance: 755 Ω – 885 Ω**

OK

NG Go to step 9.

3 **Check front airbag sensor circuit. (Measure resistance between terminals +SR, +SL of center airbag sensor assembly connector and body ground.)**



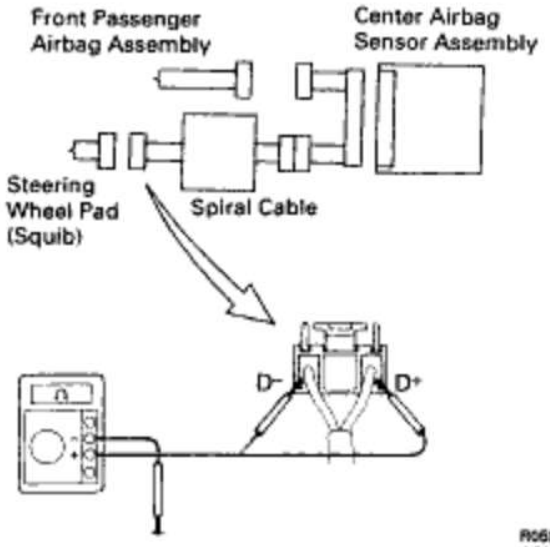
C Measure resistance between terminals +SR, +SL of harness side connector of center airbag sensor assembly and body ground.

OK **Resistance: 1 MΩ or higher.**

OK

NG **Repair or replace harness or connector between front airbag sensor and center airbag sensor assembly (See page RS–50).**

4 **Check D squib circuit.**



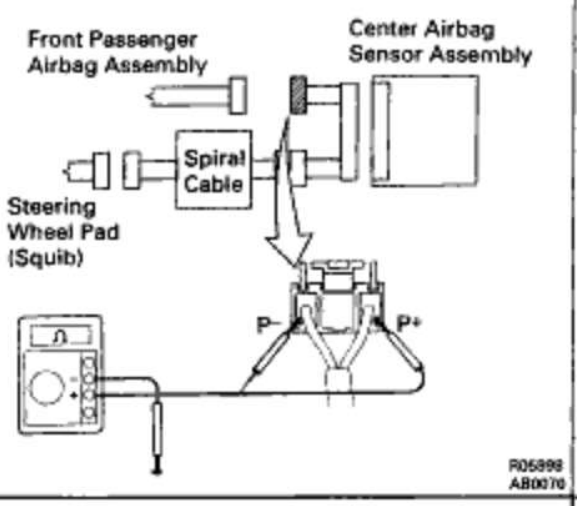
C For the connector (on the spiral cable side) between the spiral cable and steering wheel pad, measure the resistance between D+, D– and body ground.

OK **Resistance: 1 MΩ or higher**

OK

NG Go to step 10.

5 **Check P squib circuit.**



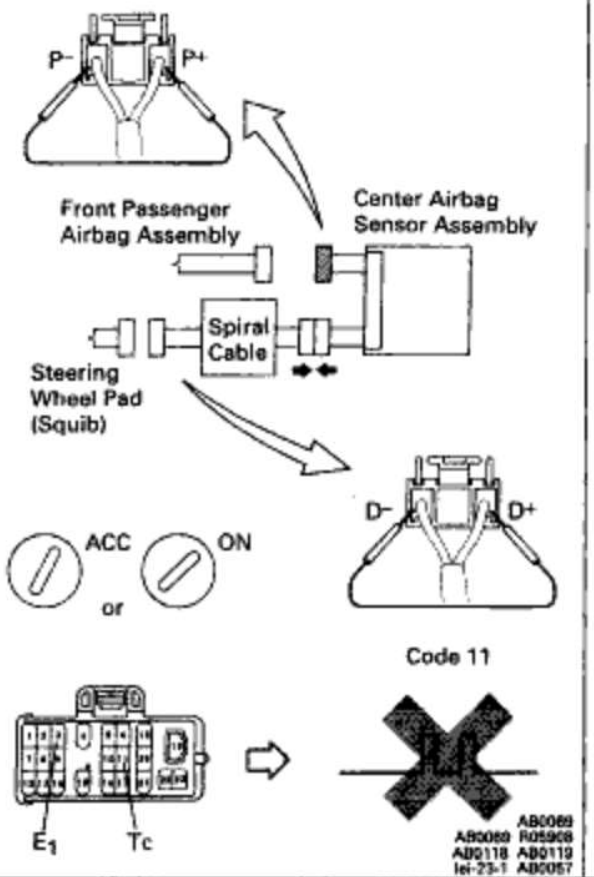
C For the connector (on the wiring harness connector side) between the wiring harness connector and front passenger airbag assembly, measure the resistance between P+, P– and body ground.

OK **Resistance: 1 MΩ or higher**

OK

NG **Repair or replace harness of connector between the center airbag sensor assembly and front passenger airbag assembly.**

6 **Check center airbag sensor assembly.**



P
(1) Connect connectors to center 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) Using a service wire, connect P+ and P– on center airbag sensor assembly side of connec–
tor between center airbag sensor assembly and front passenger airbag assembly.
(4) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.
(5) Turn ignition switch ACC or ON, and wait at least 20 seconds.
Clear malfunction code (See page RS–65).
Turn ignition switch LOCK and wait at least 20 seconds.

C
(1) Turn ignition switch ACC or ON and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

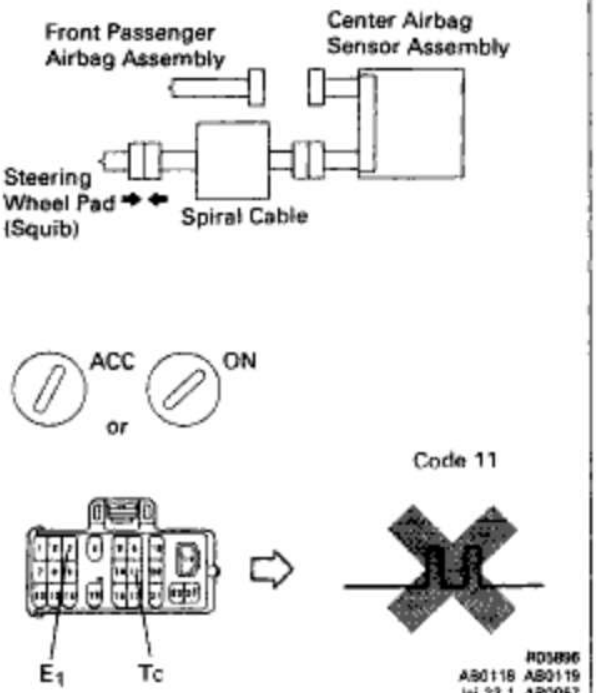
OK **Diagnostic trouble code 11 is not output.**

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

OK

NG **Replace center airbag sensor assembly.**

7 **Check D squib.**



P
(1) Turn ignition switch LOCK.
(2) Disconnect battery negative (–) terminal cable, 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.
(5) Turn ignition switch ACC or ON, and wait at least 20 seconds.
Clear malfunction code. Turn ignition switch LOCK, and wait at least 20 seconds.

C
(1) Turn ignition switch ACC or ON, and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020

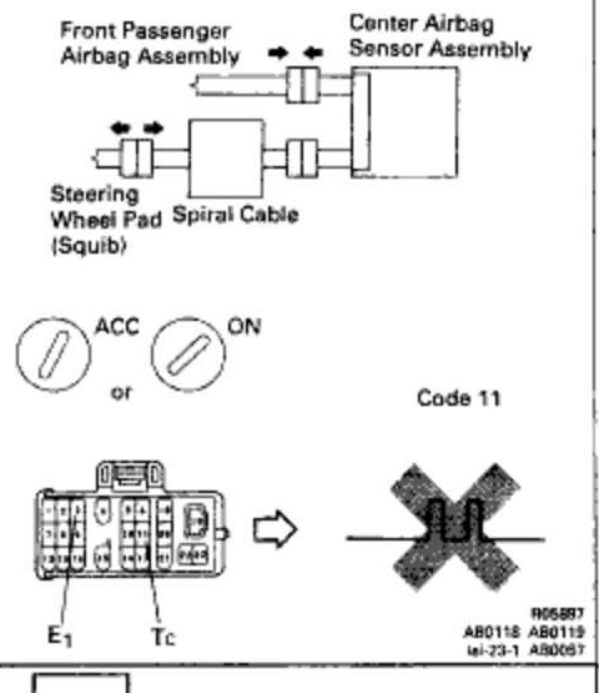
OK
(3) Check diagnostic trouble code.

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

OK

NG **Replace steering wheel pad.**

8 **Check P squib.**



P
(1) Turn ignition switch LOCK.
(2) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(3) Connect front passenger airbag assembly (squib) connector.
(4) Disconnect steering wheel pad (squib) connector.
(5) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.
(6) Turn ignition switch ACC or ON, and wait at least 20 seconds.
Clear malfunction code. Turn ignition switch LOCK, and wait at least 20 seconds.

C
(1) Turn ignition switch ACC or ON, and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
(3) Check diagnostic trouble code.

OK **Diagnostic trouble code 11 is not output.**

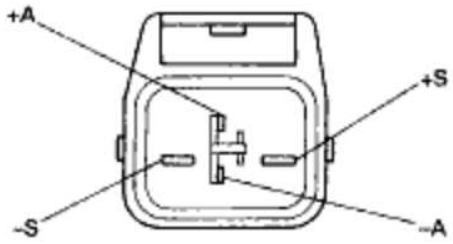
Hint Codes other than code 11 may be output at this time, but they are not relevant to this check.

OK

NG **Replace front passenger airbag 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.

9 Check front airbag sensor.



P Disconnect front airbag sensor connector.

C Measure resistance between each terminal of front airbag sensor.

OK

Terminal	Resistance
(+)S – (+)A	Below 1 Ω
(+)S – (–) S	M Cl or higher
(–)S – (–) A	755 Ω – 885 Ω

Notice

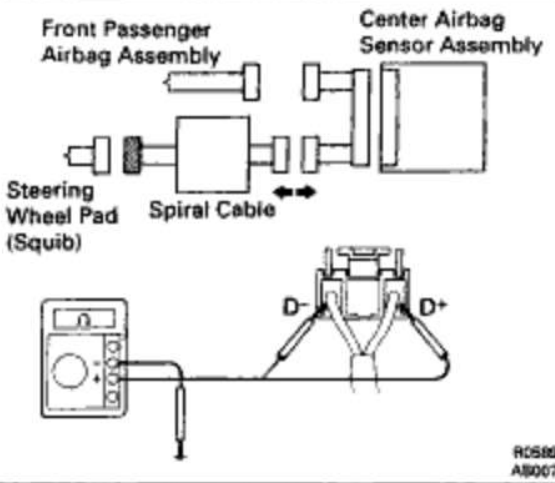
- **Do not press ohmmeter probes strongly against terminals of front airbag sensor.**
- **Make sure the front airbag sensor connector is properly connected.**

OK

NG **Replace front airbag sensor.**

Repair or replace harness or connector between center airbag sensor assembly and front airbag sensor (See page RS–27).

10 Check spiral cable.



P Disconnect connector between center airbag sensor assembly and spiral cable.

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

OK **Resistance: 1 M Ω or higher**

OK

NG **Repair or replace spiral cable.**

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

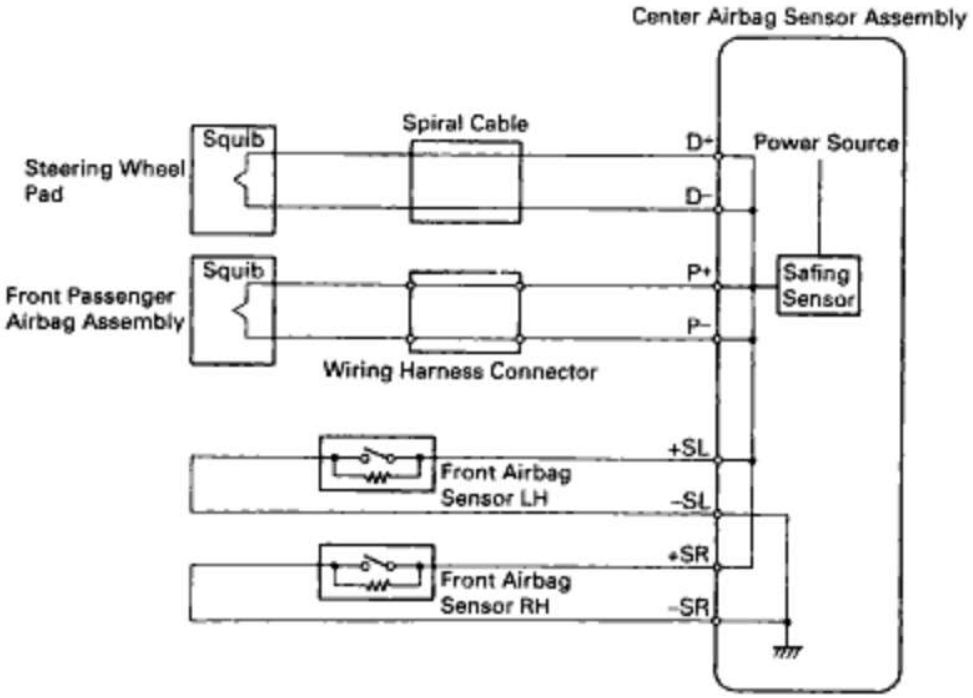
DTC 12 Short in Squib Circuit (to B+)

CIRCUIT DESCRIPTION

The squib circuit consists of the center airbag sensor assembly, spiral cable and the steering wheel pad (squib). It causes the airbag to deploy when the airbag deployment conditions are satisfied.
The front airbag sensor detects the deceleration force in a frontal collision and is located in the front fender on the left and right sides.
For details of the function of each component, see FUNCTION OF COMPONENTS on page RS–10–
Diagnostic trouble code 12 is recorded when a +B short is detected in the squib circuit or the front airbag sensor circuit.

DTC No.	Diagnosis
12	• Short circuit in squib wire harness (to +B). • Squib malfunction. • Short circuit in front airbag sensor +S wire harness (to +B). • Open circuit in RH and LH front airbag sensor harness. • Spiral cable malfunction. • Center airbag sensor assembly malfunction.

WIRING DIAGRAM



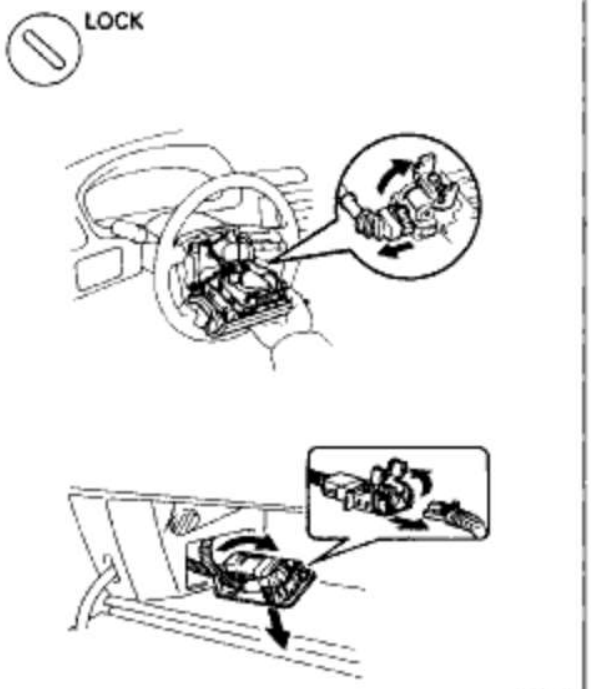
DIAGNOSTIC CHART

1	Preparation.		
2	Check front airbag sensor circuit. (Measure resistance between terminals +SR and –SR, +SL and –SL of center airbag sensor assembly connector.)	NG	Go to Code 15 (See page RS–110).
3	Check front airbag sensor circuit. (Measure voltage between terminal +SR or +SL of center airbag sensor assembly connector and body ground.)	NG	Repair or replace harness or connector between center airbag sensor assembly and front airbag sensor (See page RS–50).
4	Check front airbag sensor circuit. (Measure voltage between terminals D+ and D– of center airbag sensor assembly connector and body ground.)	NG	Go to step [9]
5	Check front airbag sensor circuit. (Measure voltage between terminals P+ and P' of center airbag sensor assembly connector and body ground.)	NG	Repair or replace harness or connector between front airbag sensor and center airbag sensor assembly. (See page RS–50).
6	Check center airbag sensor assembly.	NG	Replace center airbag sensor assembly.
7	Check D squib.	NG	Replace steering wheel pad.
8	Check P squib.	NG	Replace front passenger airbag 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.		
9	Check spiral cable.	NG	Repair or replace spiral cable.
	Repair or replace harness or connecter between center airbag sensor assembly and spiral cable.		

INSPECTION PROCEDURES

P Preparation C Check

1 Preparation.

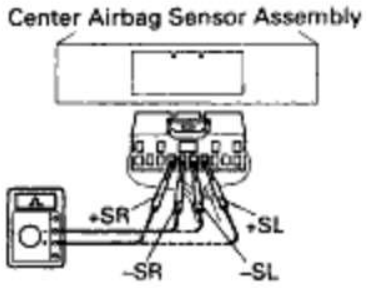


P (1) Disconnect battery negative H terminal cable, and wait at least 90 seconds.
(2) Remove steering wheel pad (See page RS–20).
(3) Disconnect connectors of front passenger airbag assembly. (See page RS–29)

Caution

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

2 Check front airbag sensor circuit. (Measure resistance between terminals +SR and –SR, +SL and –SL of center airbag sensor assembly connector.)



P Disconnect center airbag sensor assembly connector.

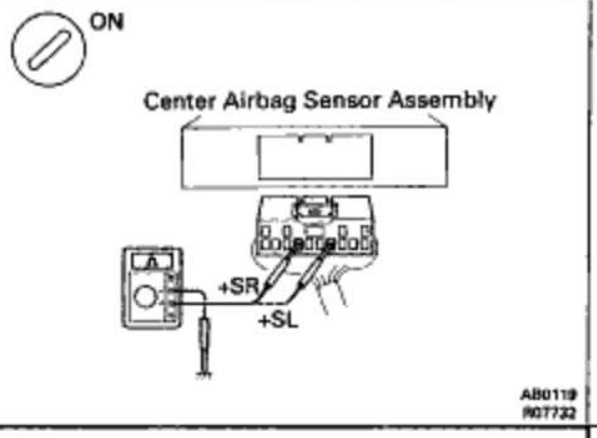
C Measure resistance between terminals +SR and –SR, +SL and –SL of harness side connector of center airbag sensor assembly.

OK **Resistance: 755Ω – 885Ω**

OK

NG **Go to Code 15 (See page RS–110).**

3 **Check front airbag sensor circuit. (Measure voltage between terminal +SR or +SL of center airbag sensor assembly connector and body ground.)**



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

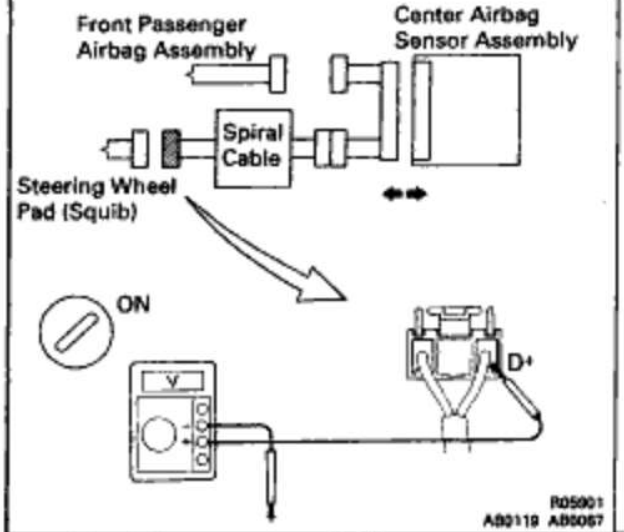
C Measure voltage between terminals +SR or +SL of harness side connector of center airbag sensor assembly and body ground.

OK **Voltage: Below 1 V**

OK

NG **Repair or replace harness or connector between center airbag sensor assembly and front airbag sensor (See page RS–50).**

4 **Check D squib circuit.**



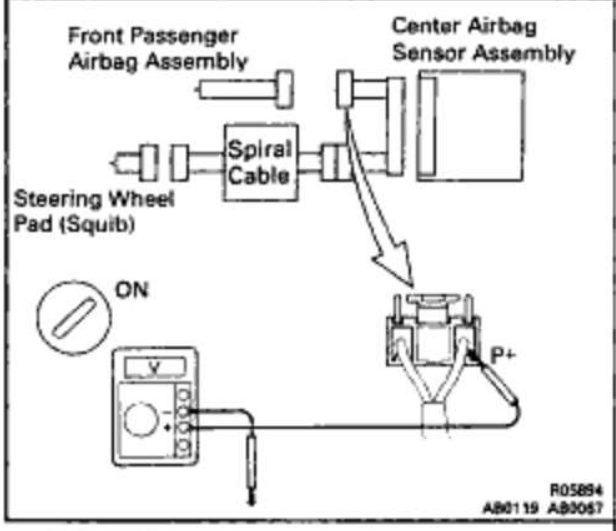
C Measure voltage at D+ on spiral cable side of connector between spiral cable and steering wheelpad.

OK **Voltage: Below 1 V**

OK

NG **G o to step 9 .**

5 **Check P squib circuit.**



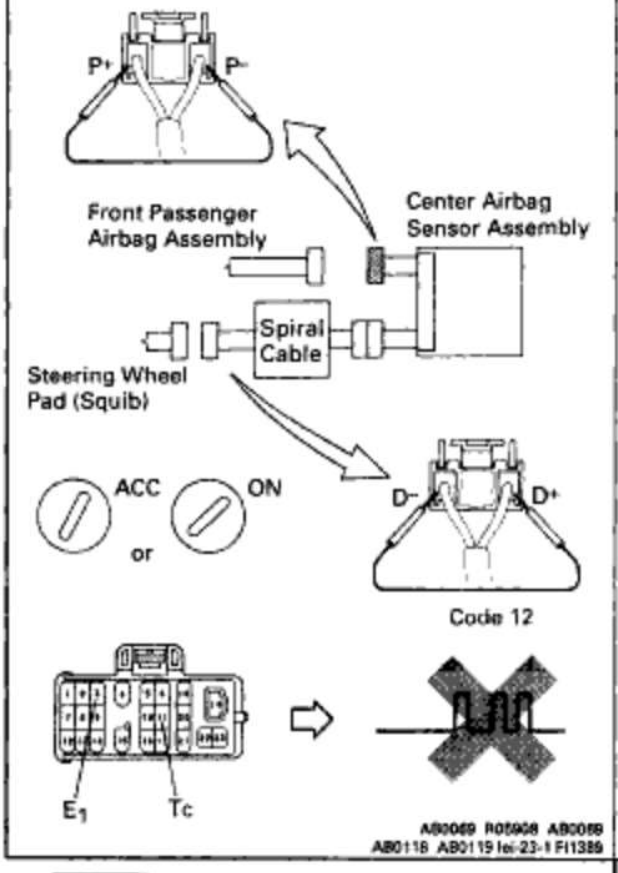
C Measure voltage at P+ on center airbag sensor assembly side of connector between center airbag sensor assembly and front passenger airbag assembly.

OK **Voltage: Below 1 V**

OK

NG **Repair or replace harness or connector between front airbag sensor and center airbag sensor assembly. (See page RS–50).**

6 **Check D squib circuit.**



P (1) Turn ignition switch LOCK.
(2) Disconnect negative H terminal cable from battery.
(3) Connect connector to center airbag sensor assembly.
(4) Using a service wire, connect D+ and D– on spiral cable side of connector between spiral cable and steering wheel pad.
(5) Using a service wire, connect P+ and P– on wire harness connector and front passenger airbag assembly.
(6) Connect negative H terminal cable to battery, and wait at least 2 seconds.
(7) Turn ignition switch ACC on ON and wait at least 20 seconds.
Clear malfunction code. Turn ignition switch LOCK, and wait at least 20 seconds.

C (1) Turn ignition switch ACC or ON, and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

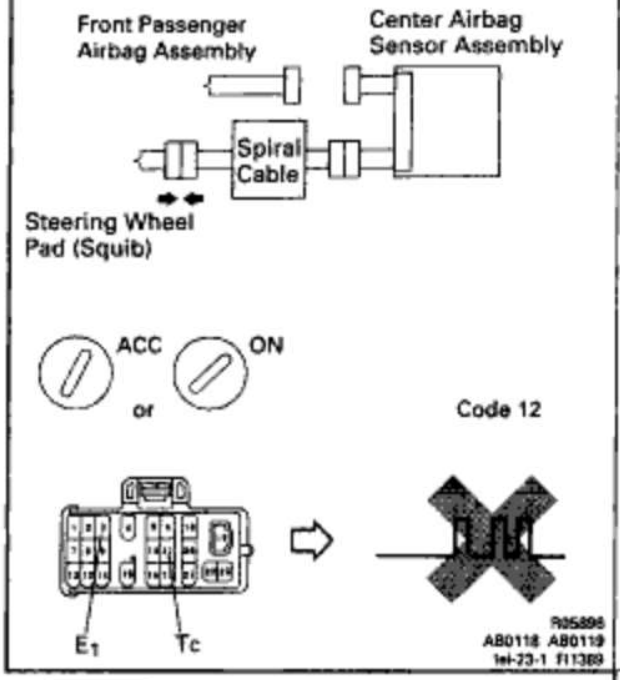
OK **Diagnostic trouble code 12 is not output.**

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

OK

NG **Replace center airbag sensor assembly.**

7 Check D squib.



P (1) Turn ignition switch LOCK.
(2) Disconnect battery negative 1–) terminal cable, and wait at least 90 seconds.
(3) Connect steering wheel pad (squib) connector.
(4) Connect negative H terminal cable to battery, and bait at least 2 seconds.
(5) Turn ignition switch, ACC or ON, and wait at least 20 seconds.
Clear malfunction code. Turn ignition switch LOCK, and wait at least 20 seconds.

C (1) Turn ignition switch ACC or ON, and wait at least 20 seconds
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

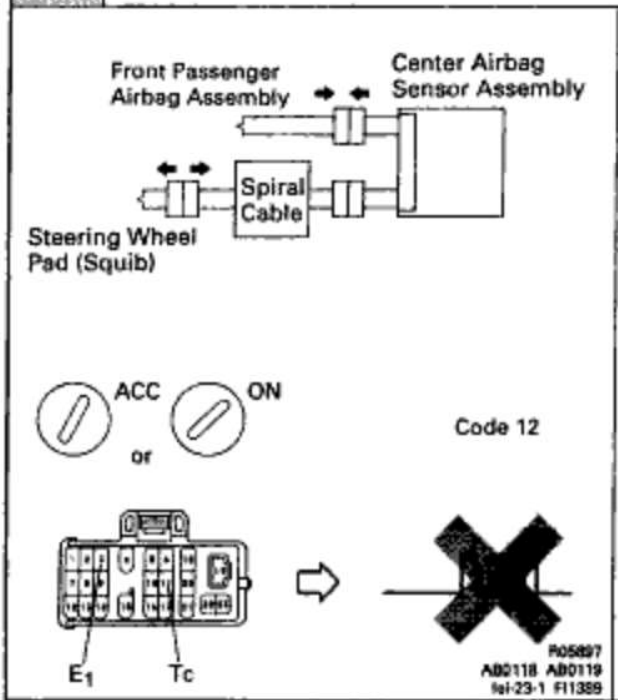
OK **Diagnostic trouble code 12 is not output.**

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

OK

NG **Replace steering wheel pad.**

8 Check P squib.



P (1) Turn ignition switch LOCK.
(2) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(3) Connect front passenger airbag assembly (squib) connector.
(4) Disconnect steering wheel pad (squib)connector.
(5) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.
(6) Turn ignition switch ACC or ON and wait at least 20 seconds.
Clear malfunction code. Turn ignition switch LOCK, and wait at least 20 seconds.

C (1) Turn ignition switch ACC or ON, and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.

OK

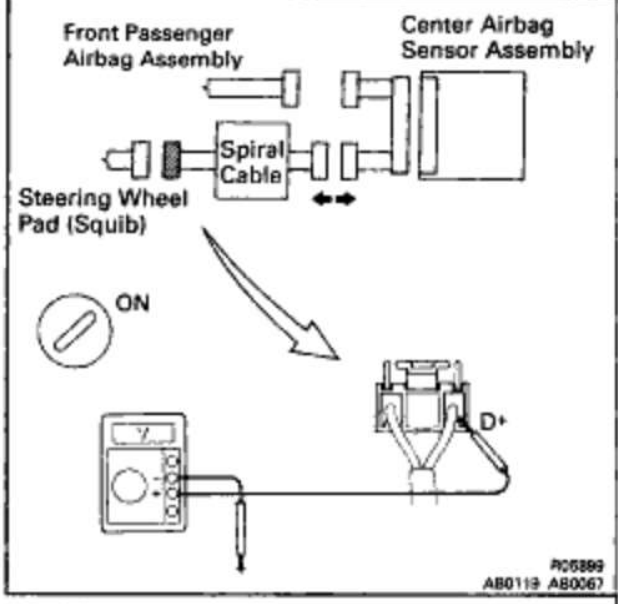
Hint (3) Check diagnostic trouble code.
Diagnostic trouble code 12 is not output.
Codes other than code 12 may be output at this time, but they are not relevant to this check.

OK

NG **Replace center 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.

7 **Check spiral cable.**



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

C Measure voltage at D+ on spiral cable side of con–
nector between spiral cable and steering wheel pad.

OK **Voltage: Below 1 V**

OK

NG **Repair or replace spiral cable.**

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

– MEMO –

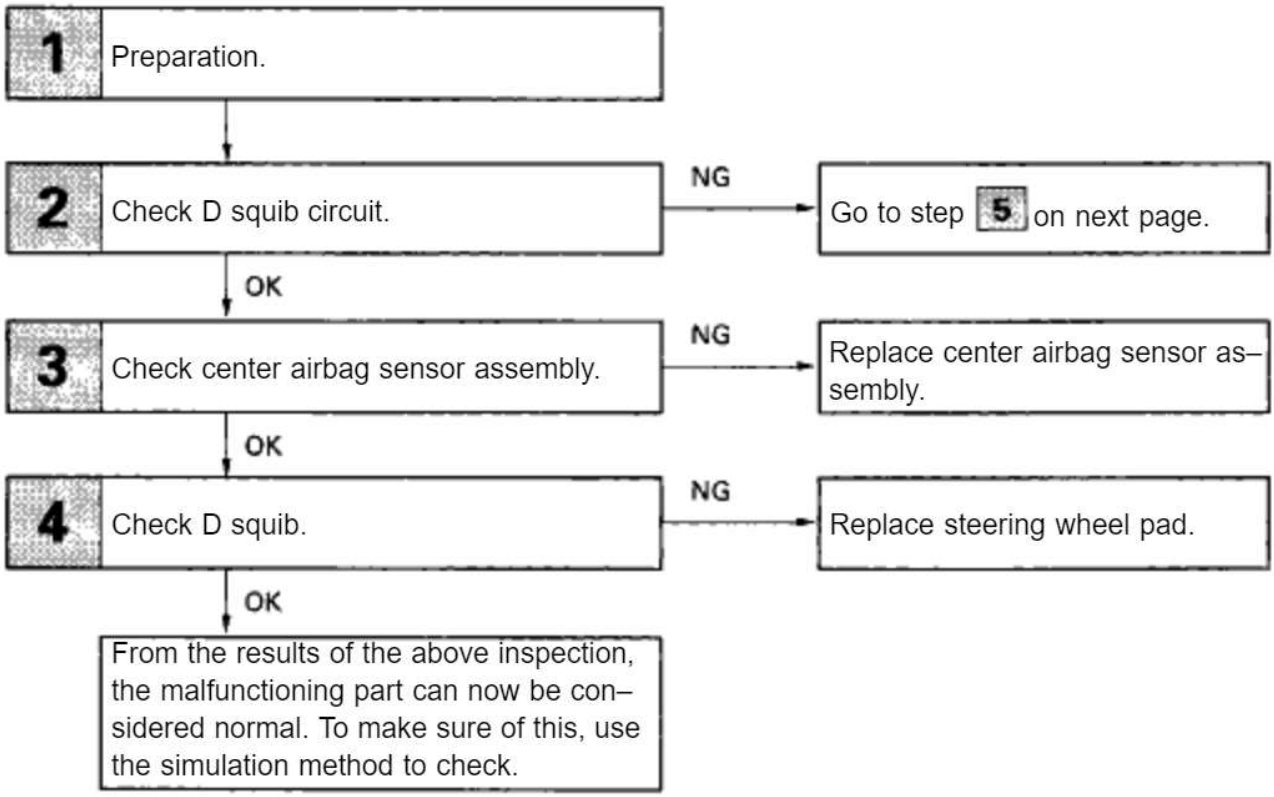
DTC 13 Short in Squib Circuit (Between D+ Wire Harness and D– Wire Harness)

CIRCUIT DESCRIPTION

The squib circuit consists of the center airbag sensor assembly, spiral cable and the steering wheel pad (squib). 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–10.
Diagnostic trouble code 13 is recorded when a short is detected in the D+ wire harness and D– wire harness of the squib circuit.

DTC No.	Diagnosis
13	• Short circuit between D+ wire harness and D– wire harness of squib. • Squib malfunction. • Spiral cable malfunction. • Center airbag sensor assembly malfunction.

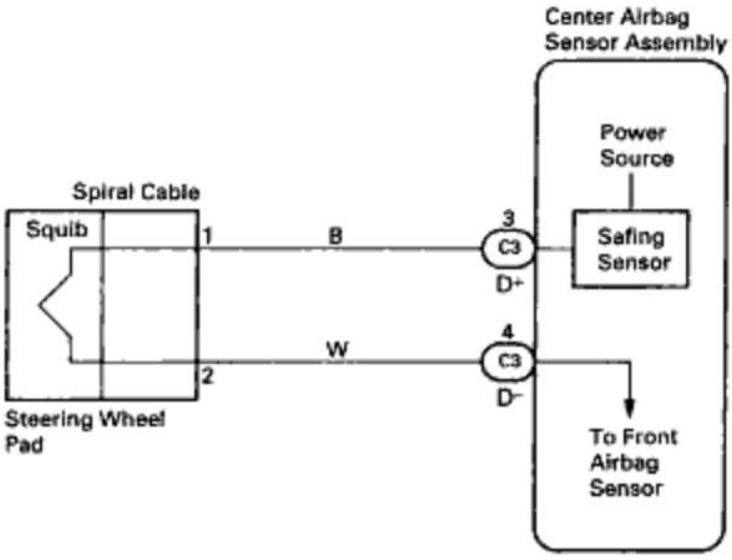
DIAGNOSTIC CHART



DIAGNOSTIC CHART (Cont'd)

5	Check spiral cable.	NG	Repair or replace spiral cable.
OK ↓			
6	Check harness between center airbag sensor assembly and spiral cable.	NG	Repair or replace harness or connector between center airbag sensor assembly and spiral cable.
OK ↓			
7	Check center airbag sensor assembly.	NG	Replace center airbag sensor assembly.
OK ↓			
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.			

WIRING DIAGRAM

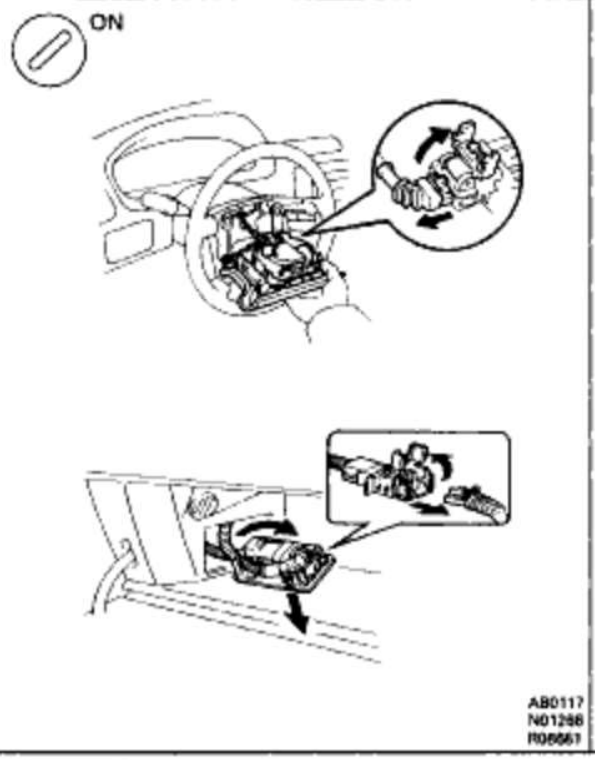


R05103

INSPECTION PROCEDURE

Preparation
P
C Check

1 Preparation.



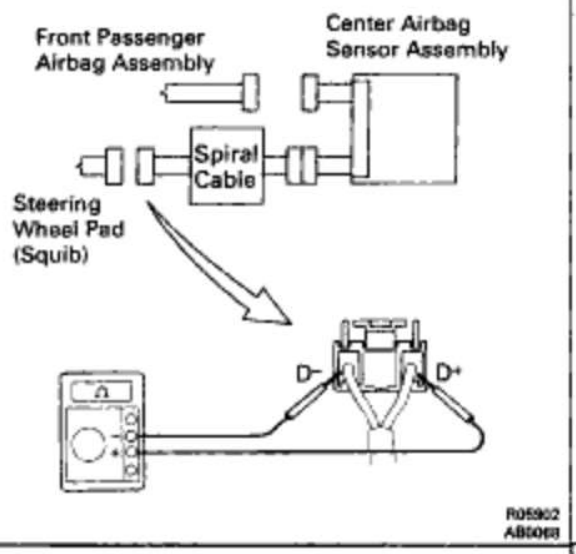
P (1) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(2) Remove steering wheel pad (See page RS–20).
(3) Disconnect connectors of front passenger airbag assembly and seat belt pretensioners. (See page RS–29)

Caution

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

OK

2 Check D squib circuit.



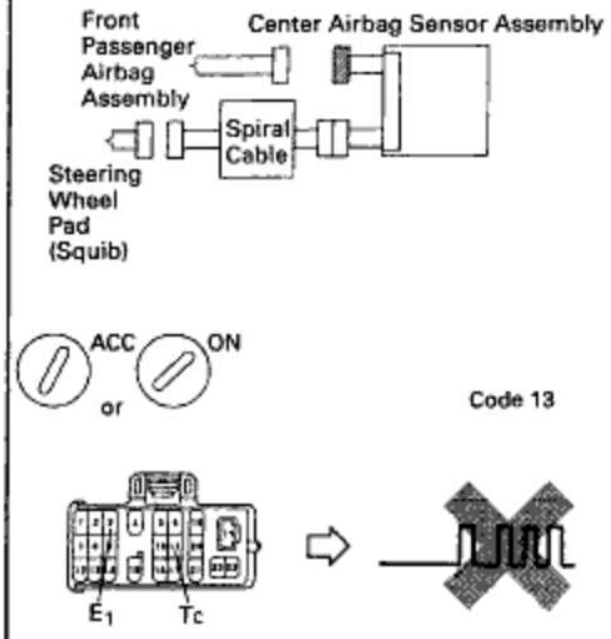
C Measure resistance between D+ and D– on spiral cable side of connector betwen spiral cable and steering wheel pad.

OK **Resistance: 1 kΩ or higher**

OK

NG Go to step 5 .

3 **Check center airbag sensor assembly.**



P (1) Connect negative (–) terminal cable to battery.
(2) Clear malfunction.
(3) Turn ignition switch LOCK, and wait at least 20 seconds.

C (1) Turn ignition switch ACC or ON, and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

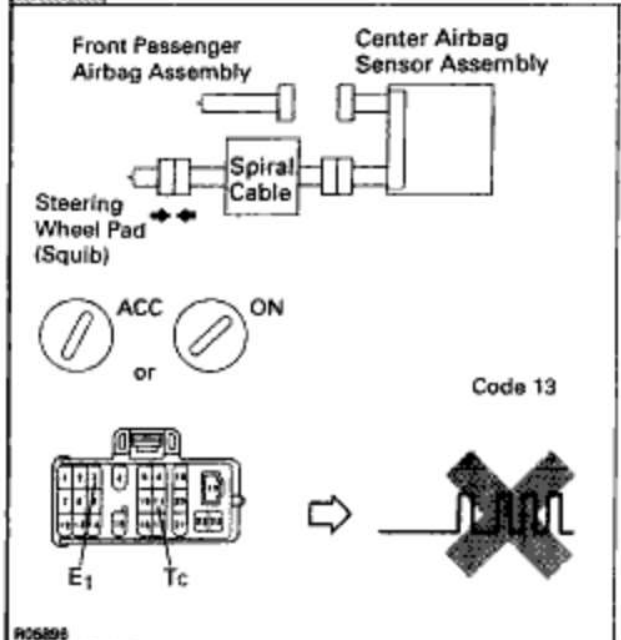
OK **Diagnostic trouble code 13 is not output.**

Hint Codes other than code 13 may be output at this time, but they are not relevant to this check.

OK

NG ⟩ **Replace center airbag sensor assembly.**

4 **Check D squib.**



P (1) Turn ignition switch LOCK.
(2) Disconnect battery negative (–) terminal cable and wait at least 90 seconds.
(3) Connect steering wheel pad (squib) connector.
(4) Connect negative (–) terminal cable to battery.
(5) Clear malfunction.
(6) Turn ignition switch LOCK, and wait at least 20 seconds.

C (1) Turn ignition switch ACC or ON and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

OK **Diagnostic trouble code 13 is not output.**

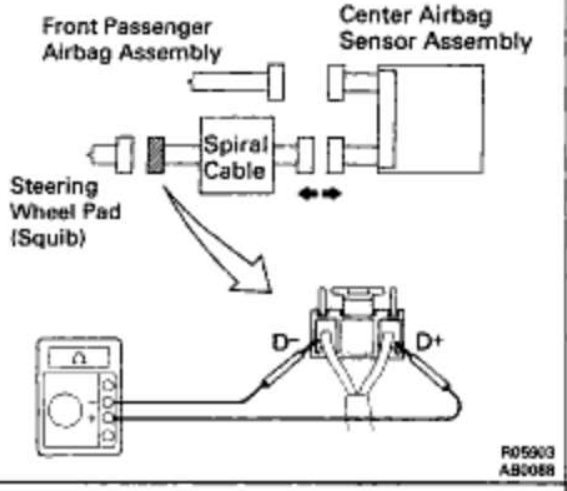
Hint Codes other than code 13 may be output at this time, but they are not relevant to this check.

OK

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.



P (1) Disconnect connector between center airbag sensor assembly and spiral cable.
(2) Release airbag activation prevention mechanism on center airbag sensor assembly side of spiral cable connector (See page RS–102).

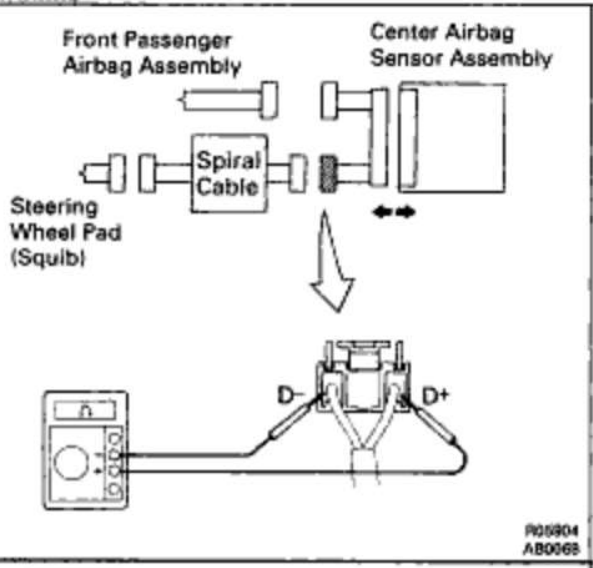
C Measure resistance between D+ and D– on spiral cable side of connector between spiral cable and steering wheel pad.

OK **Resistance: 1 MΩ or higher**

OK

NG **Repair or replace spiral cable.**

6 Check harness between center airbag sensor assembly and spiral cable.



P (1) Disconnect center airbag sensor assembly connector.
(2) Release airbag activation prevention mechanism on center airbag sensor assembly connector (See page RS–50).

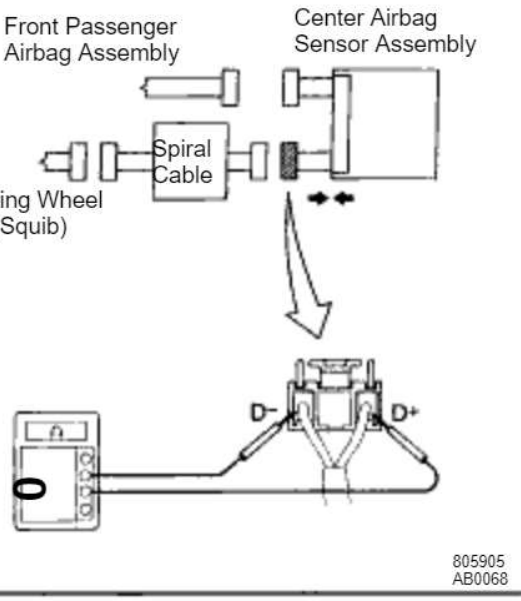
C Measure resistance between D+ and D– on center airbag sensor assembly side of connector between center airbag sensor assembly and spiral cable.

OK **Resistance: 1 MΩ or higher**

OK

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

7. Check center airbag sensor assembly.



[P] Connect center airbag sensor assembly connector.

C Measure resistance between D+ and D– on center airbag sensor assembly side of connector between center airbag sensor assembly and spiral cable.

OK **Resistance: 1 KM Ω or higher**

OK

NG 〉 **Replace center 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.

RELEASE METHOD OF AIRBAG ACTIVATION PREVENTION MECHANISM

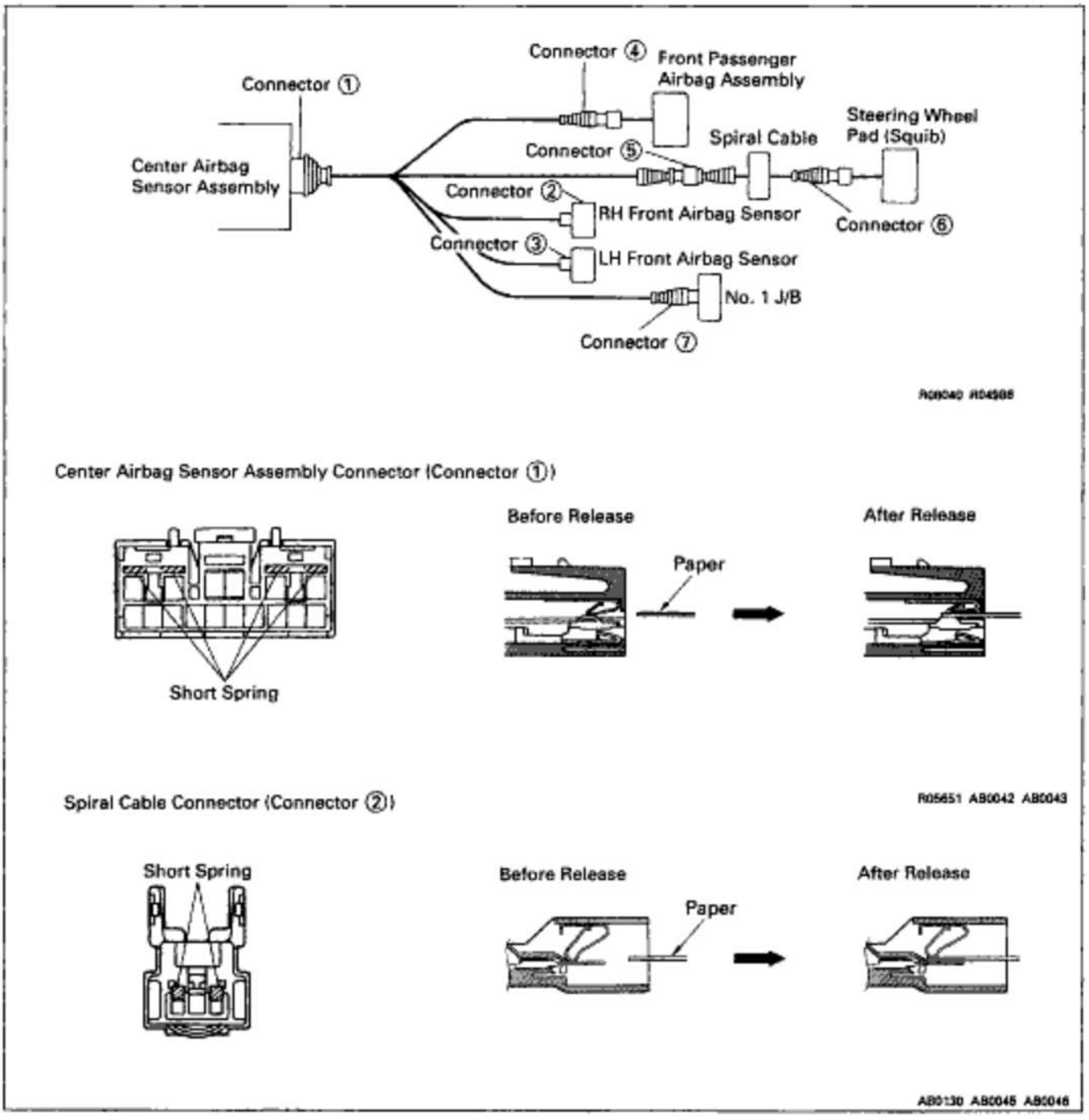
An airbag activation prevention mechanism is built into the connector for the squib circuit of the supplemental restraint system. When release of the airbag activation prevention mechanism is directed in the troubleshooting procedure, as shown in the illustration of the connector T and 0 below, insert paper which is the same thickness as the male terminal, between the terminal and the short spring

CAUTION:

- **NEVER RELEASE the airbag activation prevention mechanism on the steering wheel pad connector.**

NOTICE:

- **Do not release the airbag activation prevention mechanism unless specifically directed by the troubleshooting procedure.**
- **If the paper inserted is too thick the terminal and short spring may be damaged, so always use paper the same thickness as the male terminal.**



– MEMO –

DTC 14 Open in D Squib Circuit

CIRCUIT DESCRIPTION

The squib circuit consists of the center airbag sensor assembly, spiral cable and the steering wheel pad (squib). 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–10.
Diagnostic trouble code 14 is recorded when an open is detected in the squib circuit.

DTC No.	Diagnosis
14	• Open circuit in D+ wire harness or D‘ wire harness of squib. • Squib malfunction. • Spiral cable malfunction. • Center airbag sensor assembly malfunction.

DIAGNOSTIC CHART

1 Preparation.

2 Check D squib circuit.
- OK → Go to step **5**
- NG →

3 Check spiral cable.
- NG → Repair or replace spiral cable.
- OK →

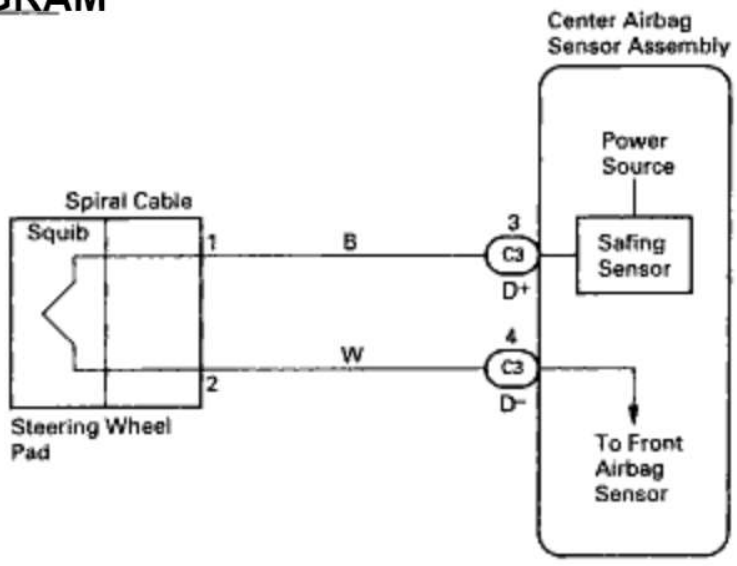
4 Check harness between center airbag sensor assembly and spiral cable.
- NG → Repair or replace harness or connector between center airbag sensor assembly and spiral cable.
- OK →

5 Check center airbag sensor assembly.
- NG → Replace center airbag sensor assembly.
- OK →

6 Check D squib.
- NG → Replace steering wheel pad.
- OK →

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.

WIRING DIAGRAM

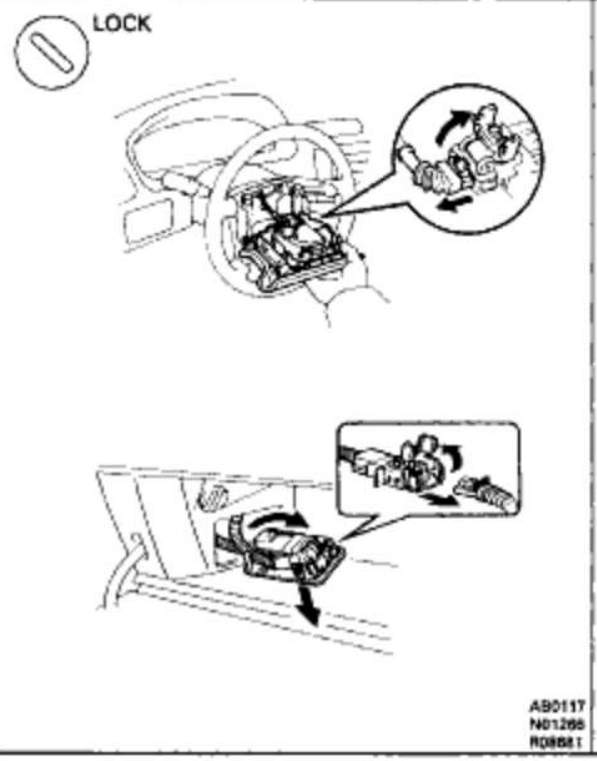


R06103

INSPECTION PROCEDURE

P Preparation C Check

1 Preparation.

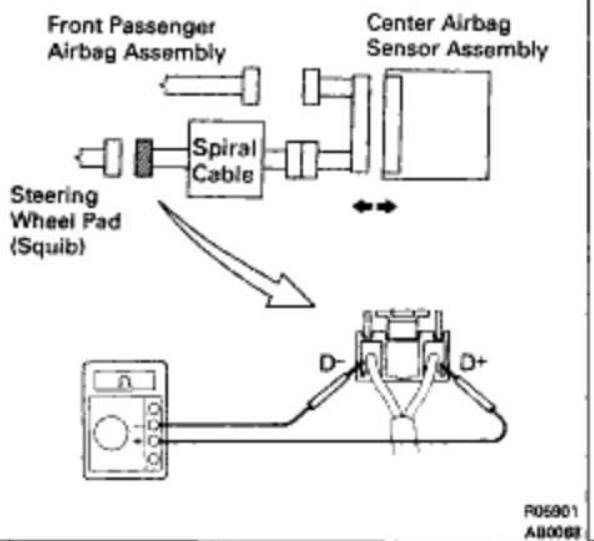


P (1) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(2) Remove steering wheel pad (See page RS–20).
(3) Disconnect connectors of front passenger airbag assembly. (See page RS–29)

Caution

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

2 Check D squib circuit.



P Disconnect center airbag sensor assembly connectors.

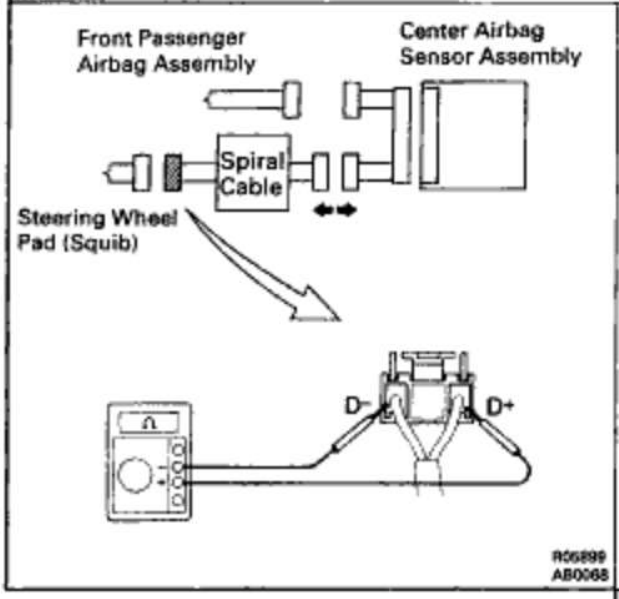
C Measure resistance between D+ and D– on spiral cable side of connector between spiral cable and steering wheel pad.

OK **Resistance: Below 1Ω**

NG

OK 〉 Go to step 5 .

3 **Check spiral cable.**



P Disconnect connector between center airbag sensor assembly and spiral cable.

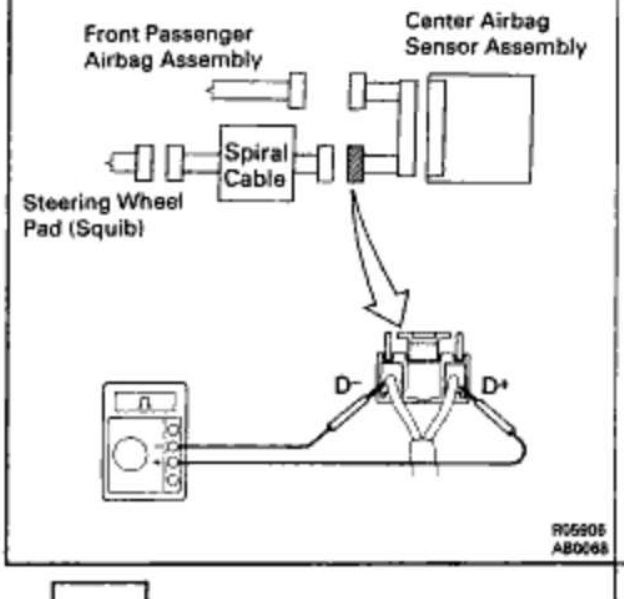
C Measure resistance between D+ and D– on spiral cable side of connector between spiral cable and steering wheel pad.

OK **Resistance: Below 1 Ω**

OK

NG **Repair or replace spiral cable.**

4 **Check harness between center airbag sensor assembly and spiral cable.**



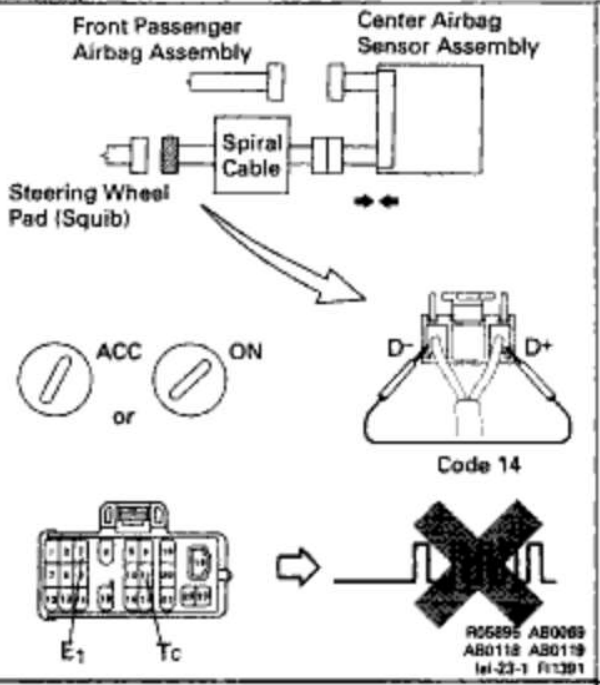
P Measure resistance between D+ and D– on center airbag sensor assembly side of connector between
center airbag sensor assembly and spiral cable.

OK Resistance: Below 1 Ω

OK

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

5 Check center airbag sensor assembly.



P (1) Connect connector to center airbag sensor connector.

(2) Connect connector between center airbag sensor assembly and spiral cable.

(3) Using a service wire, connect D+ and D– on spiral cable side of connector between spiral cable and steering wheel pad.

(4) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.

(5) Turn ignition switch ACC on ON and wait at least 20 seconds.
Clear malfunction code. Turn ignition switch LOCK, and wait at least 20 seconds.

C (1) Turn ignition switch ACC or ON, and wait at least 20 seconds.

(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020

(3) Check diagnostic trouble code.

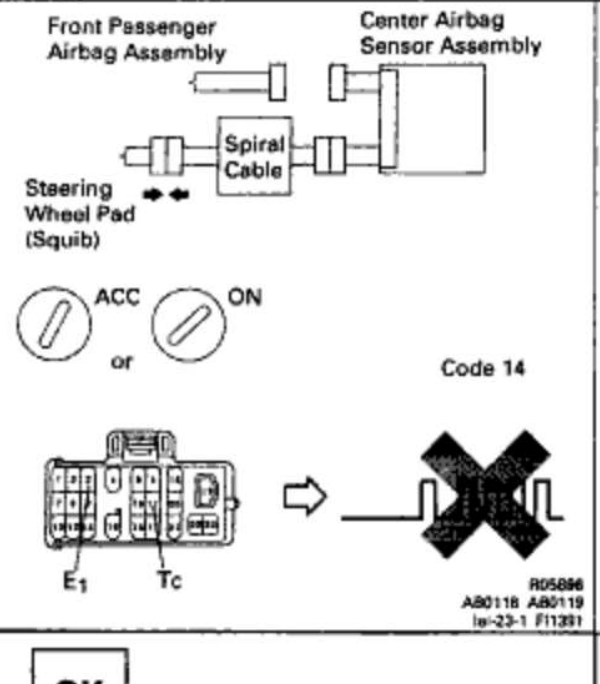
OK **Diagnostic trouble code 14 is not output.**

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

OK

NG **Replace center airbag sensor assembly.**

6 Check D squib.



P (1) Turn ignition switch LOCK.

(2) Disconnect battery negative H terminal cable, and wait at least 90 seconds.

(3) Connect steering wheel pad (squib) con–nector.

(4) Connect negative (–y terminal cable to bat–tery, and wait at least 2 seconds.

(5) Turn ignition switch ACC or ON, and wait at least 20 seconds.

(6) Clear malfunction code. Turn ignition switch LOCK, and wait at least 20 seconds.

C Turn ignition switch ACC or ON, and wait at least 20 seconds

(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020

(3) Check diagnostic trouble code.

OK **Diagnostic trouble code 14 is not output.**

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

OK

NG **Replace steering wheel pad.**

From the results of the above inspection, the malfunctioning part can now be considered nor-mal. To make sure of this, use the simulation method to check.

– MEMO –

DTC 15 Open in Front Airbag Sensor Circuit

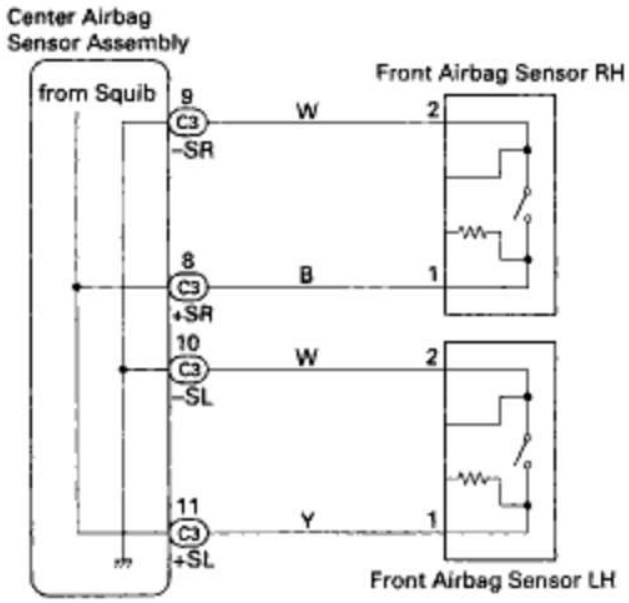
CIRCUIT DESCRIPTION

The front airbag sensor detects the deceleration force in a frontal collision and is located in the front fender on the left and right sides.
For details of the function of each component, see FUNCTION OF COMPONENTS on page RS–10.
Diagnostic trouble code 15 is recorded when an open is detected in the front airbag sensor circuit.

NOTICE: The front airbag sensor connector is equipped with an electrical connection check mechanism for the purpose of detecting an open in the front airbag sensor (See page RS–13). This mechanism is constructed so that when the terminals of the front airbag sensor have been connected (when the connector housing lock is in the locked condition), the connection detection pin on the wire harness side connects with the terminals for diagnosis use on the sensor side. If the connector is not properly connected, the diagnosis system, may detect only a malfunction code, even though the supplemental restraint system is functioning normally. When connecting the front airbag sensor connector, make sure it is connected properly. If diagnostic trouble code 15 is displayed after the front airbag sensor connector has been connected, check again that it is properly connected.

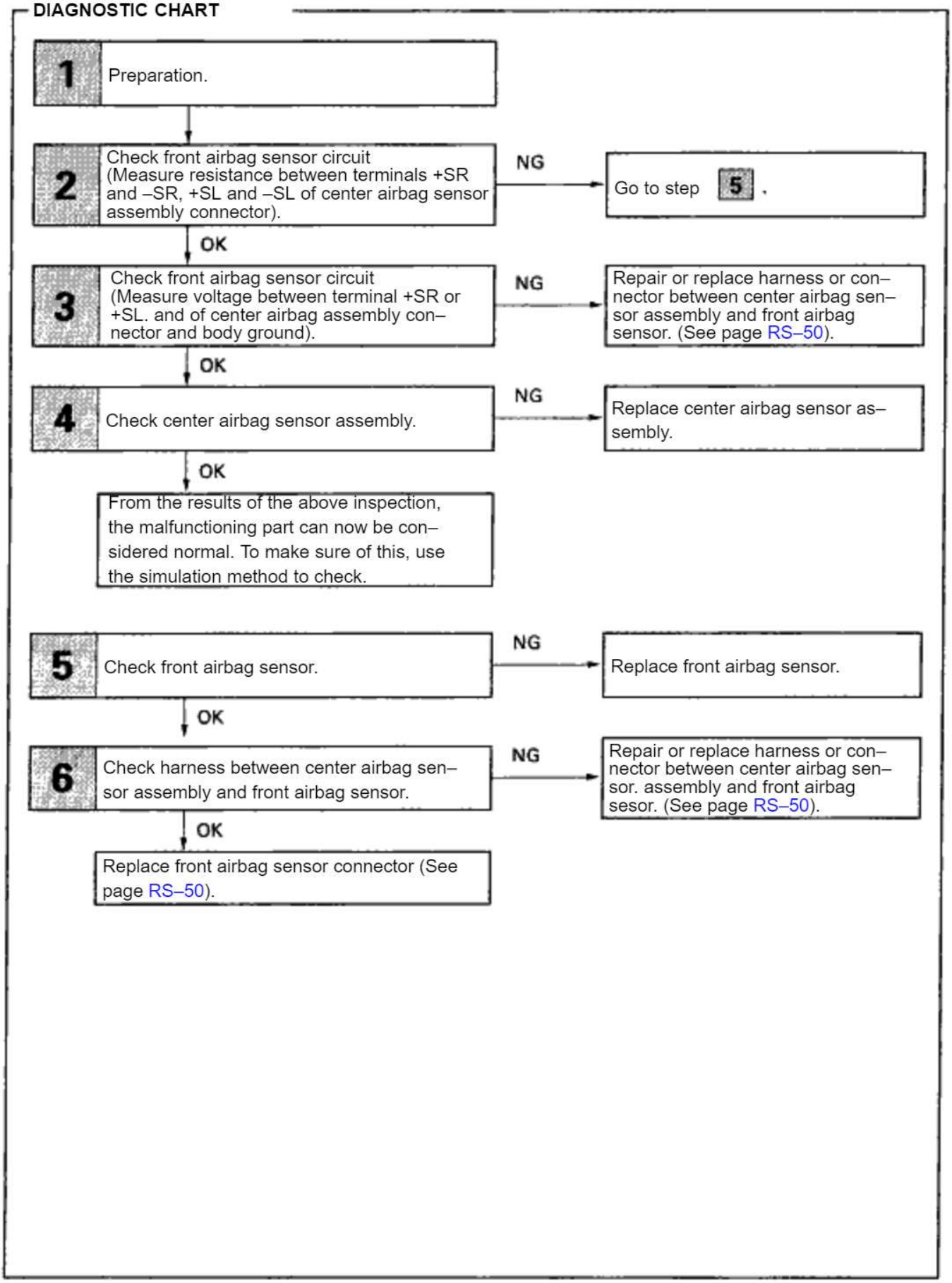
DTC No.	Diagnosis
15	• Open circuit in +S wire harness or –S wire harness of front airbag sensor. • Short circuit in front airbag sensor +S wire harness (to +B). • Front airbag sensor malfunction. • Malfunction of electrical connection check mechanism of front airbag sensor. • Center airbag sensor assembly malfunction.

WIRING DIAGRAM



RD6104

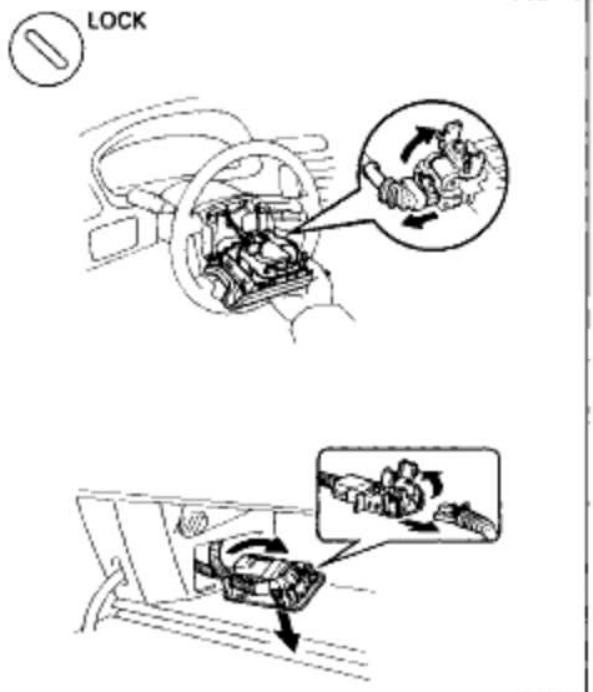
DIAGNOSTIC CHART



INSPECTION PROCEDURE

P Preparation C Check

1 Preparation.

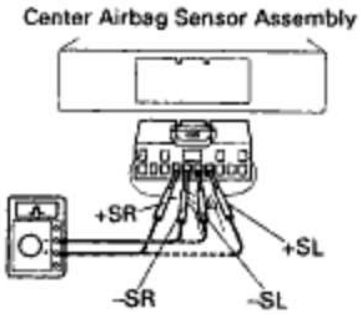


P (1) Disconnect battery negative (–) terminal cable and wait at least 90 seconds.
(2) Remove steering wheel pad (See page RS–20).
(3) Disconnect connectors of front passenger airbag assembly. (See page RS–29)

Caution

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

2 Check front airbag sensor circuit (Measure resistance between terminals +SR and –SR, +SL and –SL of center airbag sensor assembly connector.).



P Disconnect center airbag sensor assembly connectors.

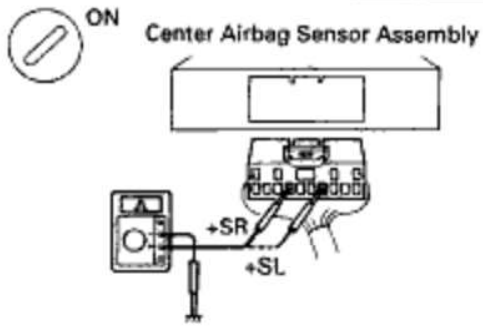
C Measure resistance between terminals +SR and –SR, +SL and –SL of harness side connector of center airbag sensor assembly.

OK **Resistance: 755 Ω – 885Ω**

OK

NG Go to step 5 .

3 **Check front airbag sensor circuit. (Measure voltage between terminal +SR or +SL of center airbag sensor assembly connector and body ground.)**



P (1) Connect negative H terminal cable to battery.
(2) Turn ignition SWitch ON.

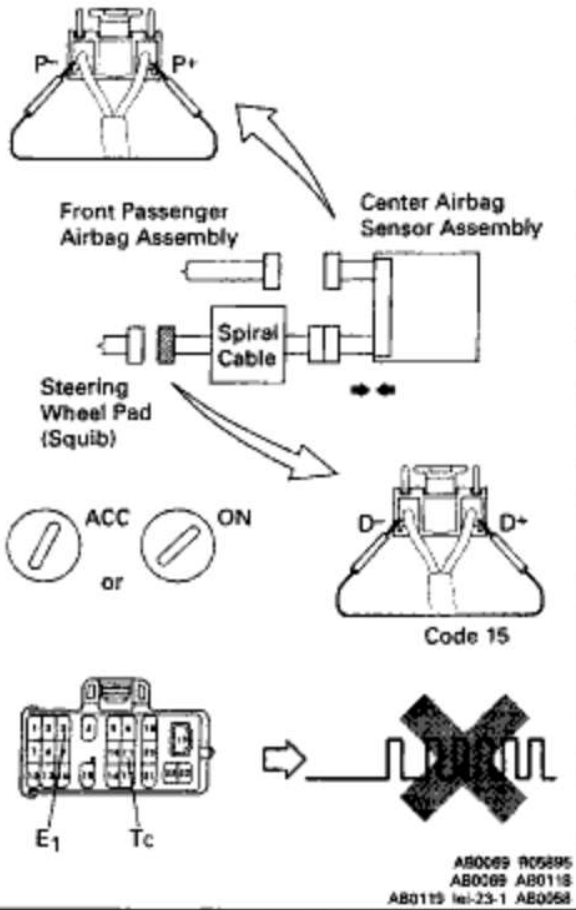
C Measure voltage between terminals +SR or +SL ofharness side connector of center airbag sensor assembly and body ground.

OK **Voltage: Below 1 V**

OK

NG **Repair or replace harness or connector between center airbag sensor assembly and front airbag sensor (See page RS–50).**

4 **Check center airbag sensor assembly.**



P (1) Turn ignition switch LOCK.
(2) Disconnect negative (–) terminal cable from battery.
(3) Connect connector to center airbag sensor assembly.
(4) Using a service wire, connect D+ and D– on spiral cable side of connector between spiral cable and steering wheel pad.
(5) Using a service wire, connect P+ and P– on wire harness connector side of connector be–tween wire harness connector and front pas–senger airbag. .
(6) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.
(7) Turn ignition switch ACC or ON and wait at least 20 seconds.
Clear malfunction code. Turn ignition switch LOCK and wait at least 20 seconds.

C (1) Turn ignition switch ACC or ON and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

OK **Diagnostic trouble code 15 is not output.**

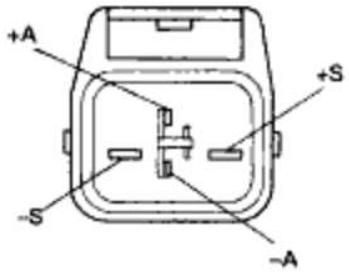
Hint Codes other than code 15 may be output at this time, but they are not relevant to this check.

OK

NG **Replace center 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.

5 **Check front airbag sensor.**



AB0034

P Disconnect front airbag sensor connector.

C Measure resistance between each terminal of front airbag sensor.

OK

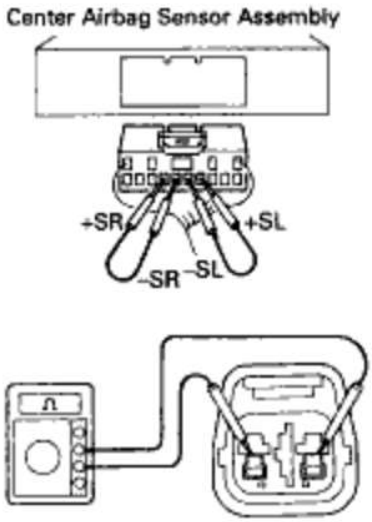
Terminal	Resistance
⊕ S – ⊕ A	Below 1 Ω
⊕ S – ⊖ S	1 MΩ or higher
⊖ S – ⊖ A	755 Ω – 885 Ω

Notice
- **Do not press ohmmeter probes too strongly against terminals of front airbag sensor.**
- **Make sure the front airbag sensor connector is properly connected.**

OK

NG **Replace front airbag sensor.**

6 **Check harness between center airbag sensor assembly and front airbag sensor.**



R07845
AB0039

P (1) Disconnect center airbag sensor assembly connectors.

(2) Using service wires, connect +SR and –SR, +SL and –SL on the wire harness side of the center airbag sensor assembly connectors.

C Measure resistance between terminals +SR and –SR, +SL and –SL of harness side connector of front airbag sensor.

Notice
- **Lightly touch ohmmeter probes at position shown in illustration.**
- **Make sure the front airbag sensor connector is properly connected.**

OK **Resistance: Below 1Ω**

OK

NG **Repair or replace harness or connector between center airbag sensor assembly and front airbag sensor (See page RS–50).**

Replace front airbag sensor connector (See page RS–50).

– MEMO –

DTC 22 SRS Warning Light System Malfunction

CIRCUIT DESCRIPTION

The SRS warning light is located on the cluster finish panel.
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 $E_1$of the DLC1 or DLC2 are connected, the diagnostic trouble code is displayed
by the blinking of the SRS warning light.
The SRS warning light circuit is equipped with an electrical connection check mechanism which detects
when the connector to the center airbag sensor assembly is not properly connected.
If the connector to the center airbag sensor assembly is not properly connected, the SRS warning light will not light up.
Diagnostic trouble code 22 is recorded when a malfunction occurs in the SRS warning light system. If an OPEN malfunction occurs in the SRS warning light system, the SRS warning light does not light up, so that until the malfunction is repaired, the diagnostic trouble codes (including code 22f cannot be confirmed.

DTC No.	Diagnosis
22	• Open circuit in SRS warning light system. • Center– airbag sensor assembly malfunction.

DIAGNOSTIC CHART

Troubleshooting for this system is different for when the SRS warning light does not light up and for when diagnostic trouble code 22 is output. Confirm the problem symptoms first before selecting the appropriate troubleshooting procedure.

HINT: If SRS warning light does not light up, perform the following troubleshooting:

1	Check ECU–B Fuse.	NG	G o to step 6 .
OK			
2	Check connection of center airbag sensor assembly connector.	NG	Repair.
OK			
3	Preparation.		
4	Check SRS warning light circuit.	NG	Repair SRS warning light circuit.
OK			
5	Does SRS warning light come on?	NO	Check terminal LA of center airb–ag sensor assembly and electrical connection check mechanism. If normal, replace center airbag sen-sor assembly.
YES			
From the results of the above inspection, the malfunctioning part can now be con–sidered normal. To make sure of this, use the simulation method to check.			
6	Is ECU–B Fuse burnt out again?	NO	Using simulation method, repro–duce malfunction symptoms (See page RS–67).
YES			
Check harness between ECU–B fuse and SRS warning. light.			

DIAGNOSTIC CHART

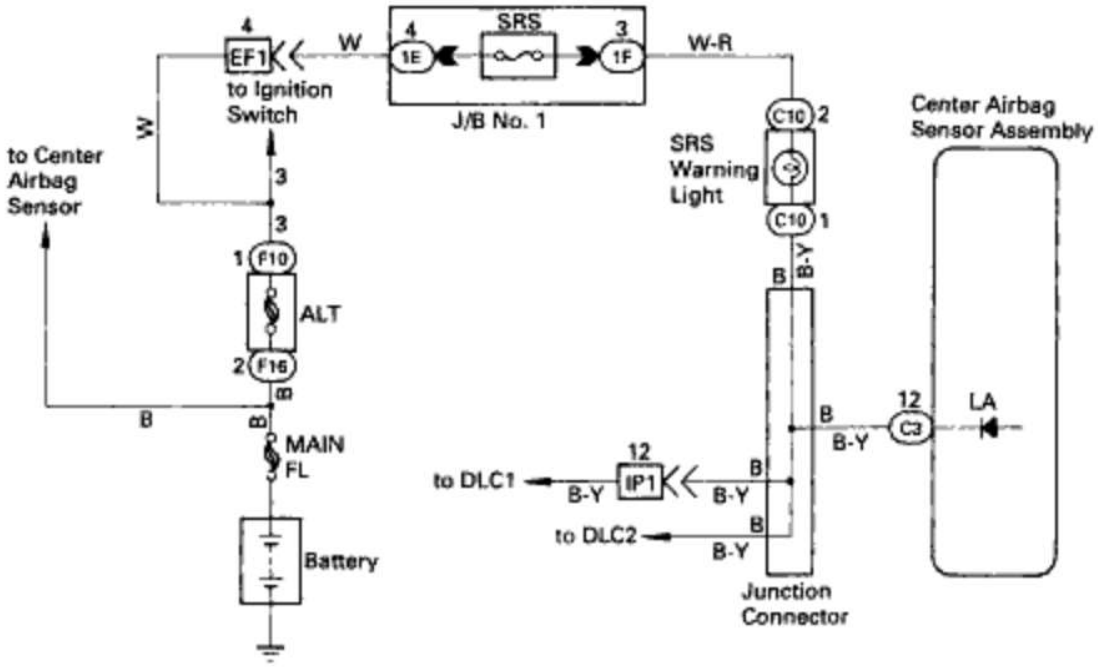
HINT: If diagnostic trouble code 22 is output, perform the following troubleshooting:
NO Using simulation m

1	Is diagnostic trouble code 22 output again?	Using simulation method, repro–duce malfunction symptoms (See page RS–67).

YES

Replace center airbag sensor assembly.

WIRING DIAGRAM

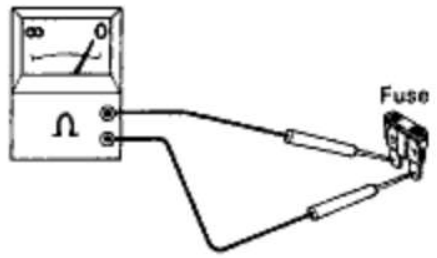


INSPECTION PROCEDURES

P Preparation C Check

HINT: IF SRS warning light does not light up, perform the following troubleshooting:

1 Check ECU–B fuse.



P Remove ECU–B fuse.

C Check continuity of ECU–13 fuse.

OK **Continuity**

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

OK

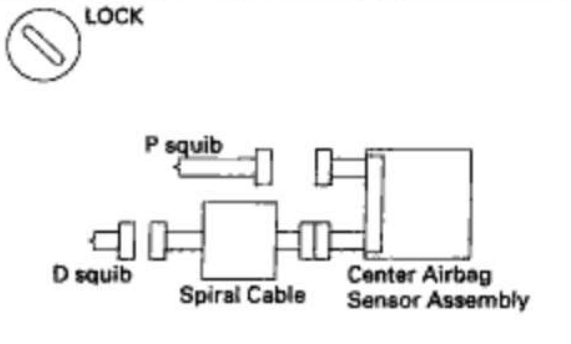
NG Go to step 6 .

2 Check connection of center airbag sensor assembly connector.

OK

NG Repair.

3 Preparation.



P (1) Disconnect negative (–) terminal cable from the battery, and wait at least 90 seconds.

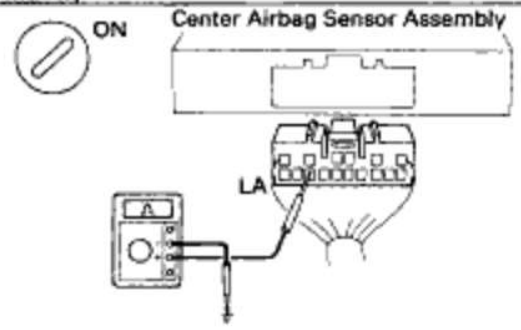
(2) Remove steering wheel pad (See page RS–20).

(3) Disconnect connector of front passenger airbag assembly. (See page RS–29).

Caution

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

4 **Check SRS warning light circuit.**

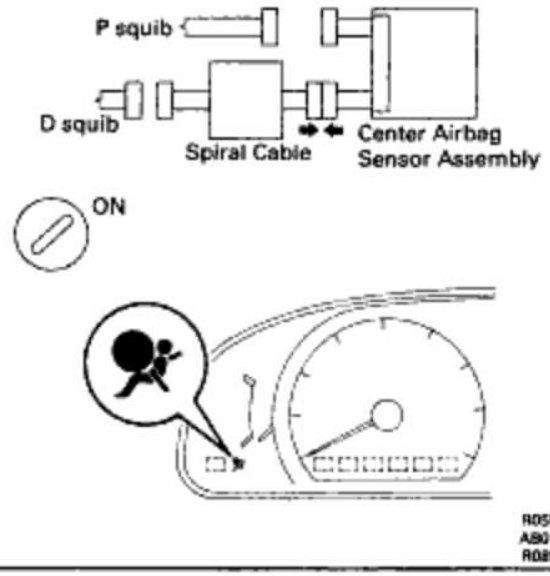


P (1) Disconnect center airbag sensor assembly connector.
(2) Connect negative (–) terminal cable to battery.
(3) Turn ignition switch ACC or ON.
C Measure voltage LA terminal of harness side connector of center airbag sensor assembly.
OK **Voltage: Battery positive voltage**

OK

NG **Repair SRS warning light circuit.**

5 **Does SRS warning light come on?**



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

YES

NO **Check terminal LA of center airbag sensor assembly and electrical connection check mechanism. If normal, replace center 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.

6 **Is new ECU–B fuse burnt out again?**

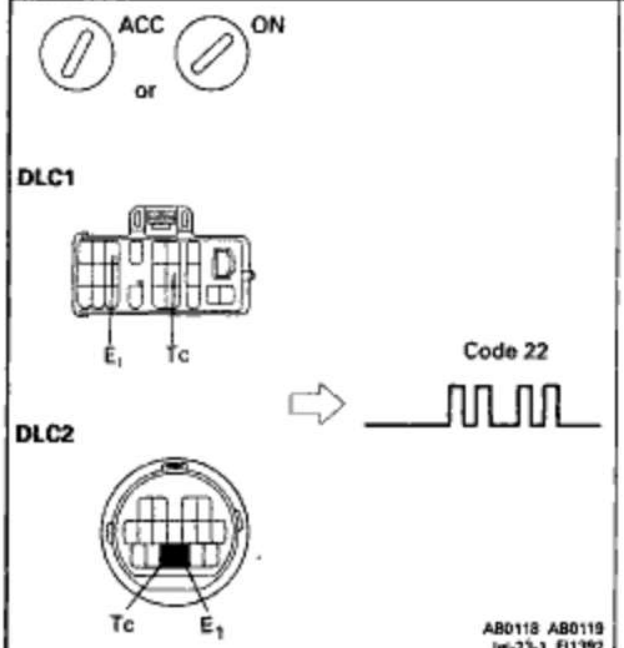
YES

NO **Using simulation method, reproduce malfunction symptoms (See page RS–67).**

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

HINT: If diagnostic trouble code 22 is output, perform the following troubleshooting:

1 **Is diagnostic trouble code 22 output again?**



C
(1) Turn ignition switch LOCK, and wait at least 2 seconds.
(2) Turn ignition switch ACC or ON, and wait at least 20 seconds.
(3) Clear malfunction code stored in memory.
(See page RS–65)
(4) Turn ignition switch LOCK, and wait at least 20 seconds.
(5) Turn ignition switch ACC or ON, and wait at least 20 seconds.
(6) Using SST, connect terminals Te and El of DLC1 or DLC2.
SST 09843–18020
(7) Check diagnostic trouble code.

YES

Replace center airbag sensor assembly.

NO **Using simulation method, reproduce malfunction symptoms (See page RS–67).**

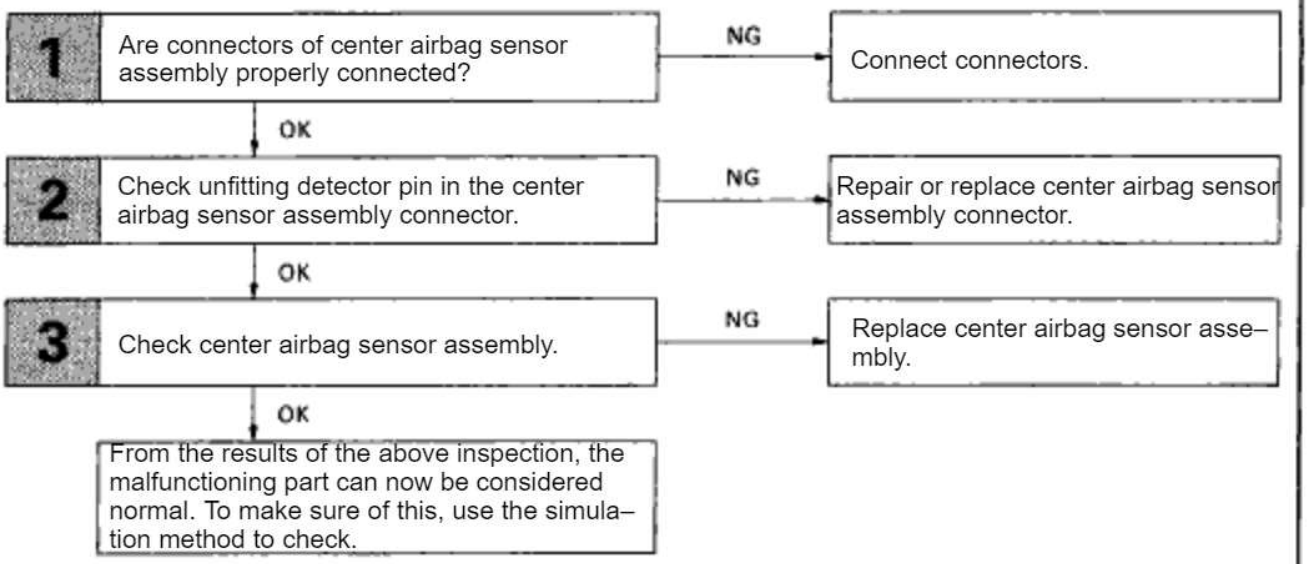
DTC 24 Open in Center Airbag Sensor Assembly Connectors Malfunction

CIRCUIT DESCRIPTION

The center airbag sensor assembly detects partial connection of connectors.
For details of the function of each component, see FUNCTION OF COMPONENTS on page RS–10.
When the center airbag sensor assembly detects an open in the electrical connection check mechanism of the center airbag sensor connector or in the center airbag sensor circuit, trouble code 24 is recorded.

DTC No.	Diagnosis
24	• Malfunction of electrical connection check mechanism of center airbag sensor assembly connectors. • Center airbag sensor assembly malfunction.

DIAGNOSTIC CHART



INSPECTION PROCEDURE

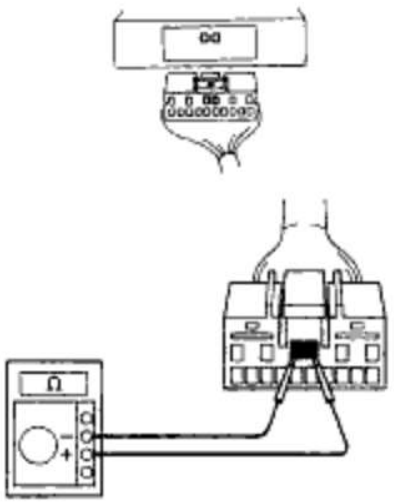
P Preparation C Check

1 Are connector of center airbag sensor assembly properly connected?

OK

NG > Connect connectors.

2 Check unfitting detector pin in the center airbag sensor assembly connector.



P (1) Disconnect negative (–) terminal cable from battery.

(2) Disconnect center airbag sensor assembly.

C Test for continuity.

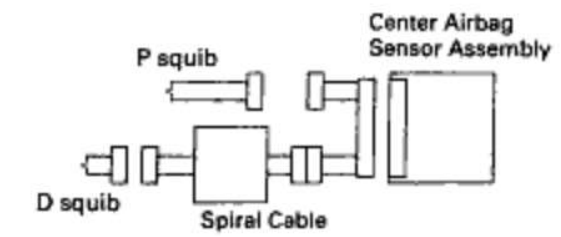
OK Continuity exists.

OK

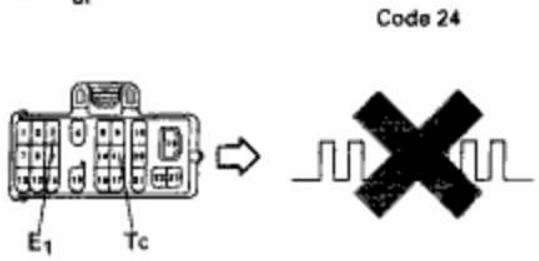
NG > Repair or replace center airbag sensor assembly connector.

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.

3 Check center– airbag sensor assembly.







R05804
A80118 A80119

P (1) Disconnect negative (–y terminal cable from battery.
(2) Connect center airbag sensor assembly.
(3) Connect negative H terminal cable to battery.
(4) Turn ignition switch ACC or ON.

C Check diagnostic trouble code.

OK **Diagnostic trouble code 24 is not output.**

OK

NG **Replace center 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 31 Center Airbag Sensor Assembly Malfunction

CIRCUIT DESCRIPTION

The center airbag sensor assembly consists of a center airbag sensor, safing sensor, ignition control and drive circuit, diagnosis circuit, etc.
It receives signals from the airbag sensors, judges whether or not the airbag must be deploy, and diagnosis system malfunction.
Diagnostic trouble code 31 is recorded with occurrence of a malfunction in the center airbag sensor assembly is detected.

DTC No.	Diagnosis
31	• Center airbag sensor assembly malfunction.

DIAGNOSTIC CHART

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	Is diagnostic trouble code 31 output again?	NO	Using simulation method, repro–duce malfunction symptoms (See INTRODUCTION).

YES

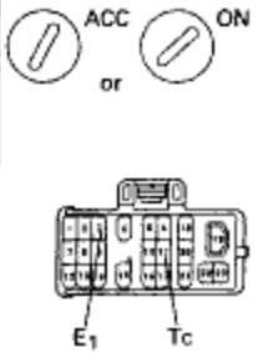
Replace center airbag sensor assembly.

INSPECTION PROCEDURE

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.

P Preparation C Check

1 Is diagnostic trouble code 31 output again?





AB0118 AB0119
lai-23-1 F11394

P Clear malfunction code.

C
(1) Turn ignition switch LOCK, and wait at least 20 seconds.
(2) Turn ignition switch 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 El of DLC1 or DLC2.
SST 09843–18020
(5) Check diagnostic trouble code.

YES

NO → **Using simulation method, reproduce malfunction symptoms (See INTRODUCTION).**

Replace center airbag sensor assembly.

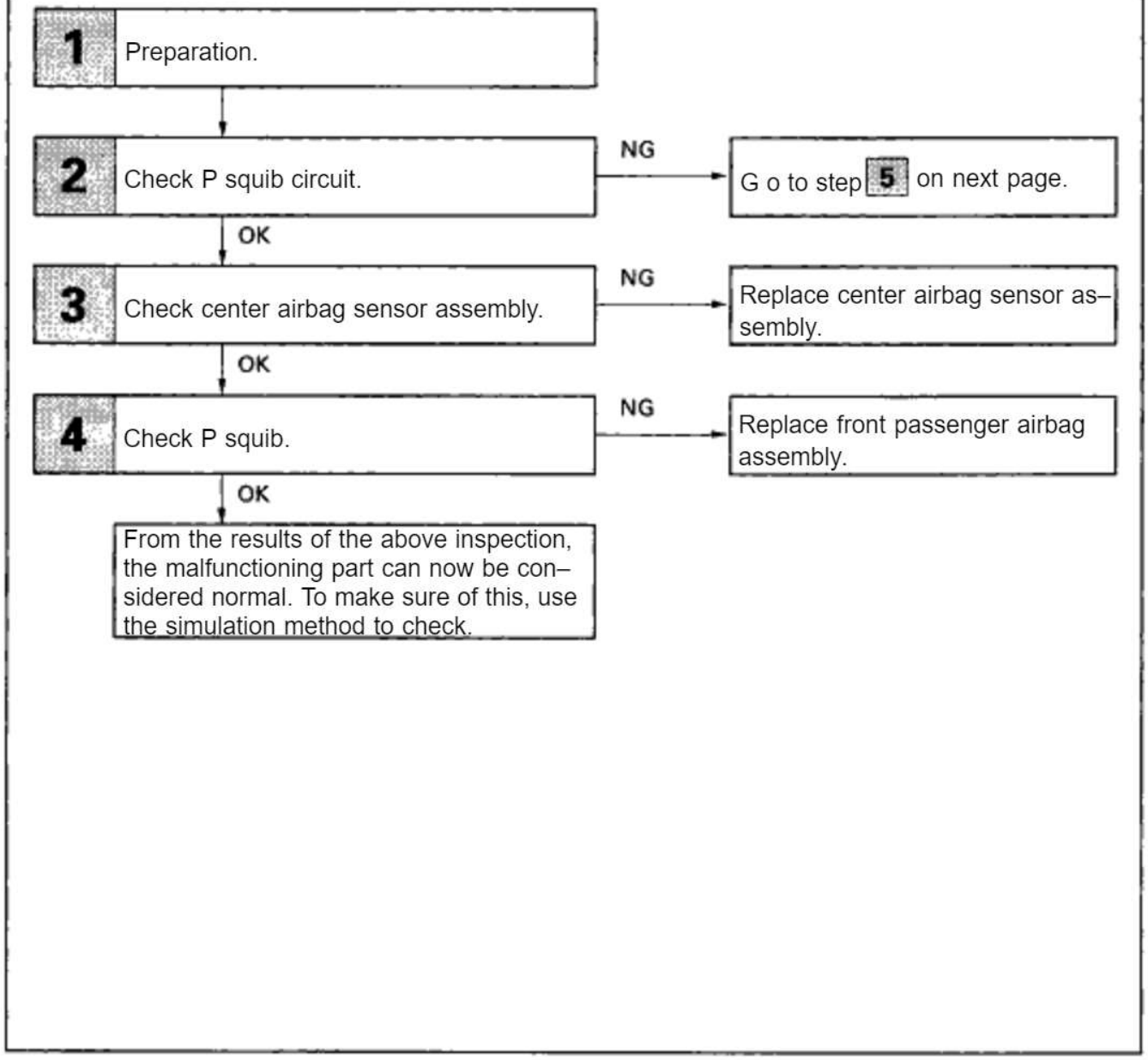
DTC 53 Short in P Squib Circuit (Between P+ Wire Harness and P– Wire Harness)

CIRCUIT DESCRIPTION

The squib circuit consists of the center airbag sensor assembly, (squib). 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–10–
Diagnostic trouble code 53 is recorded when a short is detected in the P+ wire harness and P– wire harness of the squib circuit.

DTC No.	Diagnosis
53	• Short circuit between P+ wire harness and P– wire harness of squib. • Squib malfunction. • Center airbag sensor assembly malfunction.

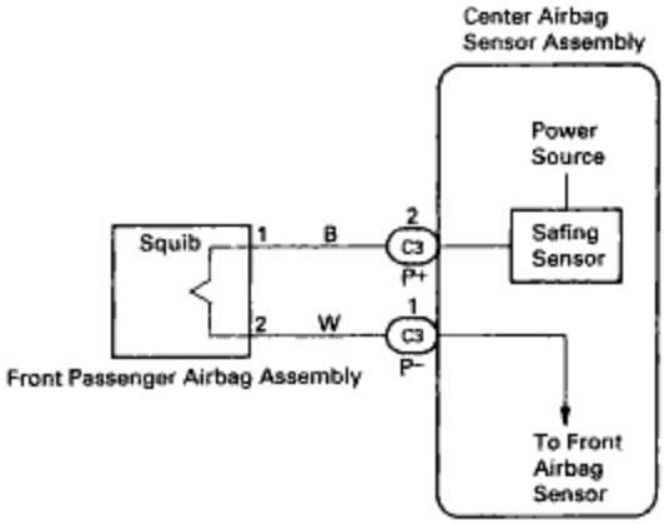
DIAGNOSTIC CHART



DIAGNOSTIC CHART (Cont'd)

5 Check P circuit.	NG	Repair or replace harness or connector between center airbag sensor assembly and front passenger airbag assembly.
OK		
6 Check center airbag sensor assembly.	NG	Replace center airbag sensor assembly.
OK		
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.		

WIRING DIAGRAM

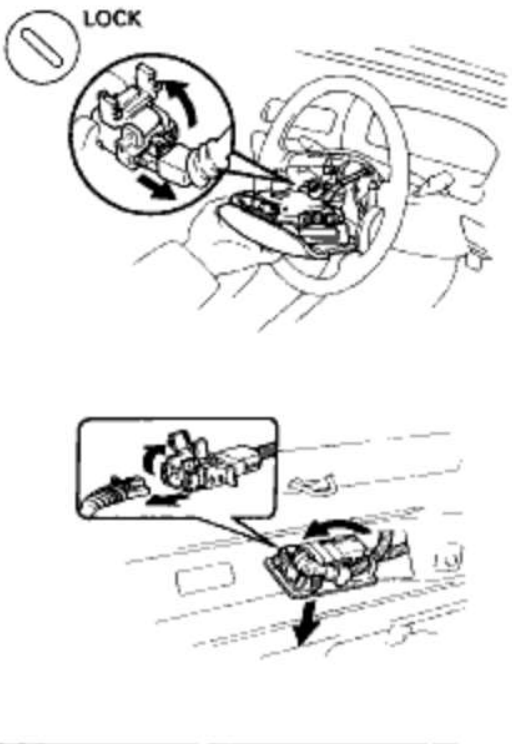


R06120

INSPECTION PROCEDURE

P Preparation C Check

1 Preparation.

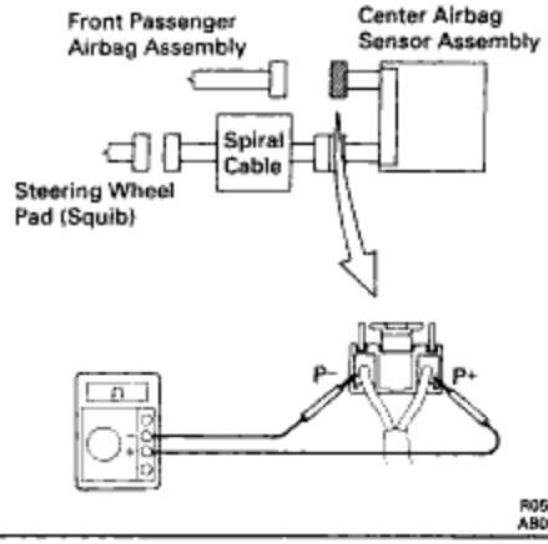


P (1) Disconnect battery negative H terminal cable, and wait at least 90 seconds.
t2y Remove steering wheel pad (See page RS–20).
(3) Disconnect connectors of front passenger airbag assembly (See page RS–29).

Caution

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

2 Check Psquib circuit.



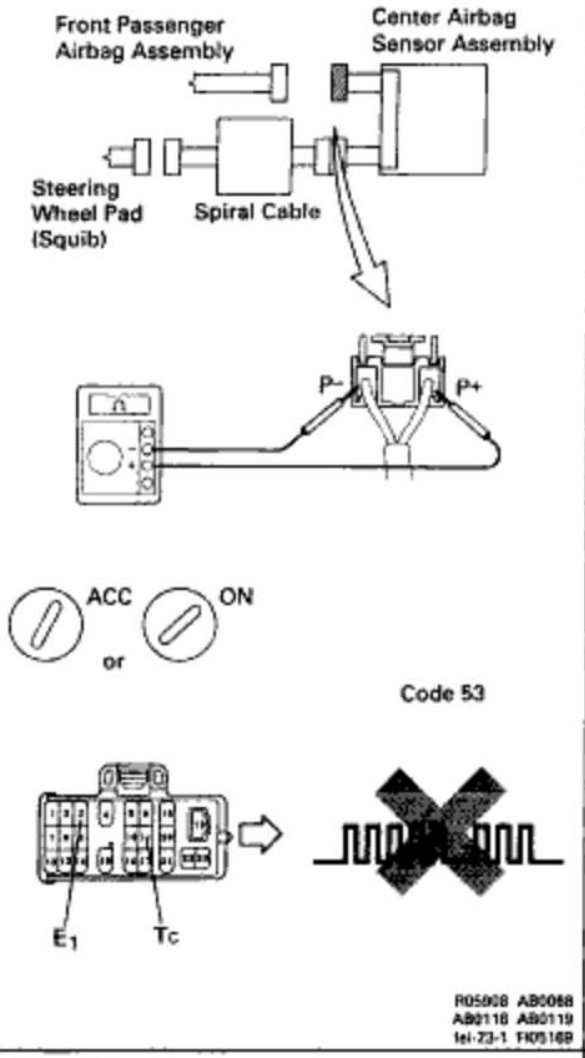
C For the connector (on the center airbag sensor assembly side) between the center airbag sensor assembly and front passenger airbag assembly, measure the resistance between P+ and P'.

OK **Resistance: 1 kΩ or higher**

OK

NG Go to step 5

3 Check center airbag sensor assembly.



P

(1) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.
(2) Clear malfunction code stored in memory (See page RS–65).
(3) Turn ignition switch LOCK, and wait at least 20 seconds.

C

(1) Turn ignition switch ACC or ON and wait at least 20 seconds.
(2) Using SST, connect terminals Tc and El of D LC 1 or D LC2 .
SST 09843–18020
(3) Check diagnostic trouble code.

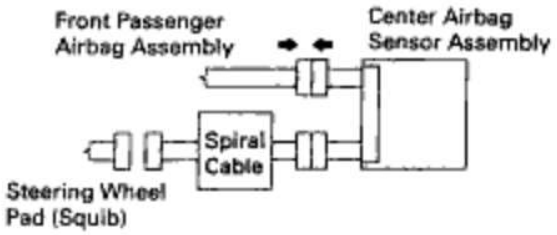
OK **Diagnostic trouble code 53 is not output.**

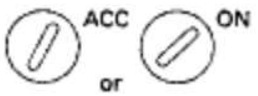
Hint Codes other than code 53 may be output at this time, but they are not relevant to this check.

OK

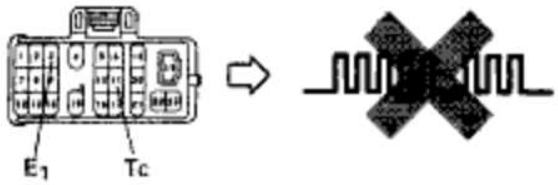
NG Replace center airbag sensor assembly.

4 Check P squib.





Code 53



RD5909
AB0118 AB0119
Jel-23-1 FI05189

P
(1)Turn ignition switch–LOCK.
(2) Disconnect battery negative (–) terminal cable and wait at least 90 seconds.
(3) Connect front passenger airbag assembly connector.
(4) Connect negative H terminal cable to battery, and wait at least 2 seconds.
(5)Clear malfunction code (See page RS–65).
(6) Turn ignition switch ACCor ON, and wait at least 20 seconds.

C
(1)Turn ignition switch ACC or ON and wait at least 20 seconds
(2)Using SSt, connect terminals Tc and E1 of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

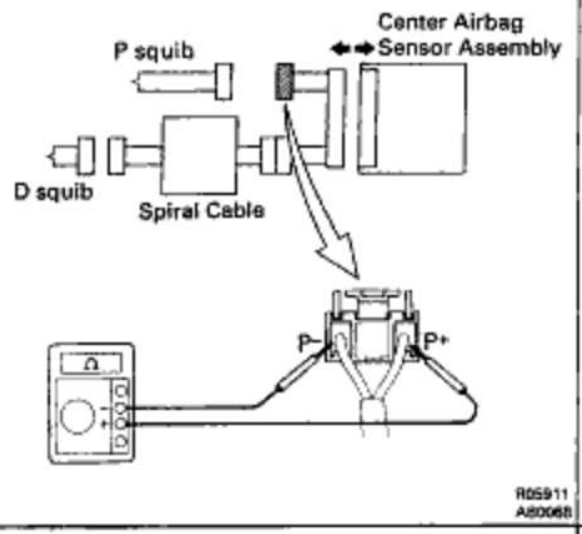
OK **Diagnostic trouble code 53 is not output.**

Hint Codes other than code 54 may be output at this time, but they are not relevant to this check.

OK → **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.**

NG → **Replace front passenger airbag assembly.**

5 **Check P circuit**



P (1) Disconnect center airbag sensor assembly connector.

(2) Release airbag activation prevention mechanism on center airbag sensor assembly connector (See page RS–102).

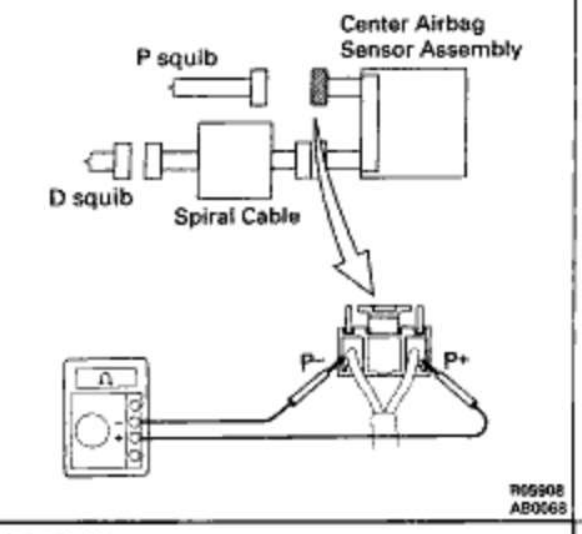
C For the connector (on the center airbag sensor assembly side) between the center airbag sensor assembly and front passenger airbag assembly, measure the resistance between P+ and P–.

OK **Resistance: 1 kΩ or higher**

OK

NG **Repair or replace harness or connector between center airbag sensor assembly and front passenger airbag assembly.**

6 **Check center airbag sensor assembly.**



P Connect center airbag sensor assembly connector.

C For the connector (on the center airbag sensor assembly side) between the center airbag sensor assembly and front passenger airbag assembly, measure the resistance between P+ and P–.

OK **Resistance: 1 kΩ or higher**

OK

NG **Replace center 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 54 Open in P Squib Circuit

CIRCUIT DESCRIPTION

The squib circuit consists of the center airbag sensor assembly, wiring harness connector and front passenger airbag assembly. 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–10.

Diagnostic trouble code 54 is recorded when an open is detected in the squib circuit.

DTC No.	Diagnosis
54	• Open circuit in P+ wire harness and P– wire harness of squib. • Squib malfunction. • Center airbag sensor assembly malfunction.

DIAGNOSTIC CHART

1	Preparation.		
2	Check P squib circuit.	NG	Repair or replace harness or connector between center airbag sensor assembly and front airbag sensor (See page RS–13).
3	Check center airbag sensor assembly.	NG	Replace center airbag sensor assembly.
4	Check P squib.	NG	Replace front passenger airbag assembly.

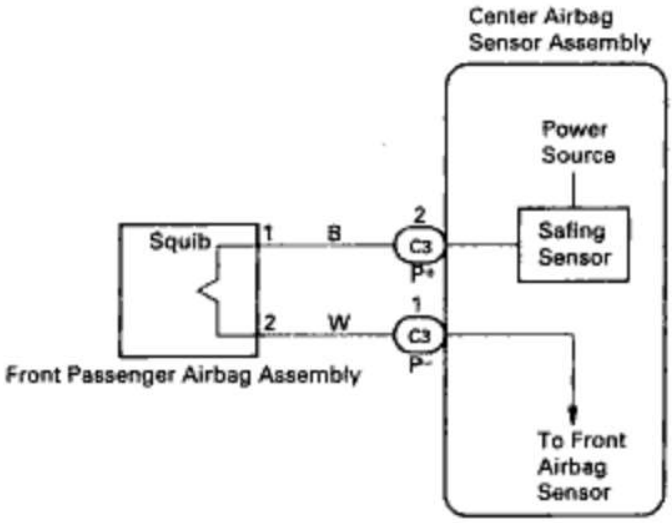
OK

OK

OK

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.

WIRING DIAGRAM

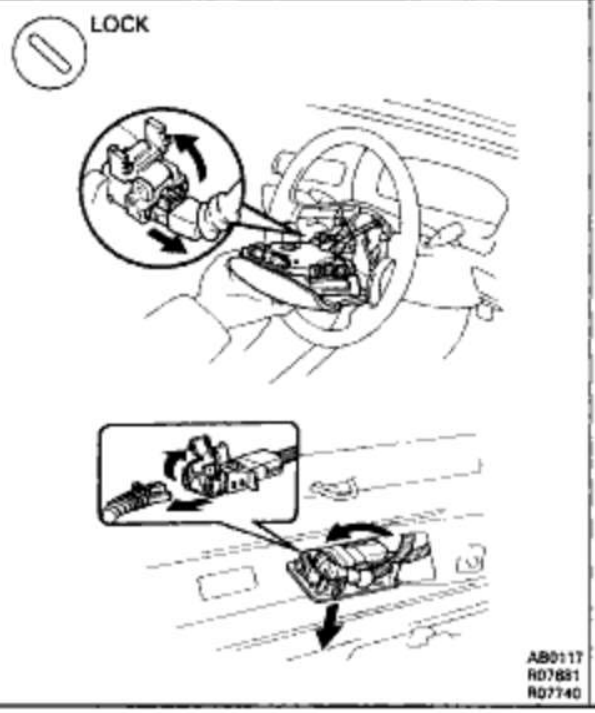


R06120

INSPECTION PROCEDURE

P Preparation C Check

1 Preparation.



P (1) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.

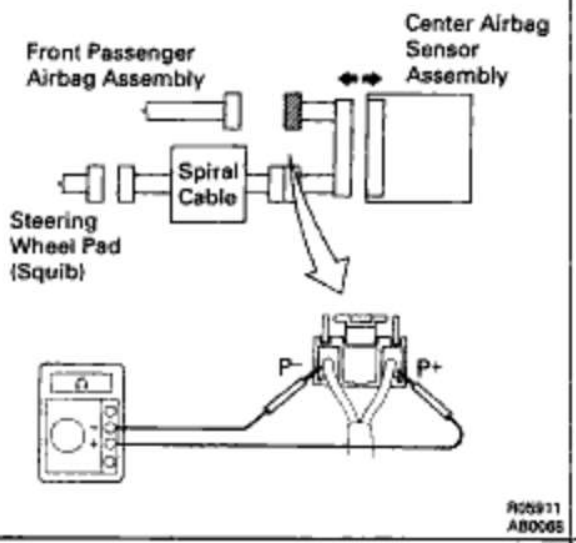
(2) Remove steering wheel pad (See page RS–20).

(3) Disconnect connectors of front passenger airbag assembly (See page RS–29).

Caution

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

2 Check P squib circuit.



P Disconnect center airbag sensor assembly connector.

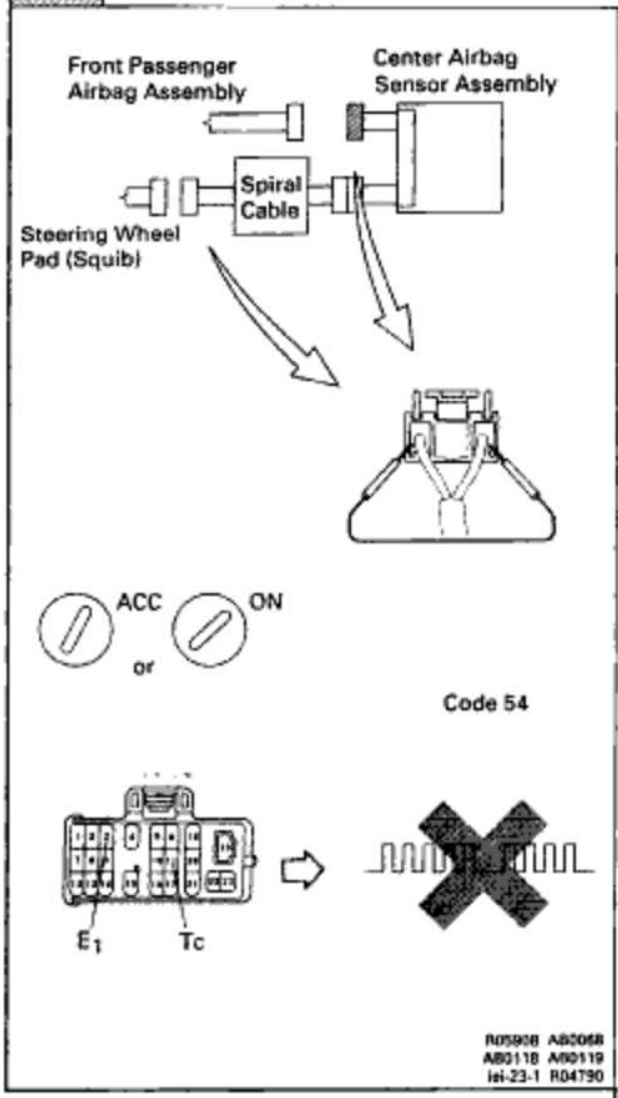
C For the connector (on the center airbag sensor assembly side) between the center airbag sensor assembly and front passenger airbag assembly, measure the resistance between P+ and P–.

OK **Resistance: Below 1Ω**

OK

NG **Repair or replace harness or connector between center airbag sensor assembly and front passenger airbag assembly.**

3 **Check center airbag sensor assembly.**



P (1) Connect connectors to center 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) Using a service wire, connect P+ and P' on center airbag sensor assembly side of connec–tor between center airbag sensor assembly and front passenger airbag assembly.

(4) Connect negative (–) terminal cable to battery, and wait at least 2 seconds.
(5)Turn ignition switch ACC or ON ON
(6)Clear malfunction code stored in memory

(see page RS–65)

(7)Turn ignition switch LOCK, and wait at least 20 seconds.

C (1)Turn ignition switch ACC or ON and wait at least 20 seconds
(2)Using SSt, connect terminals Tc and E1 of DLC1 or DLC2.
SST 09843–18020
(3) Check diagnostic trouble code.

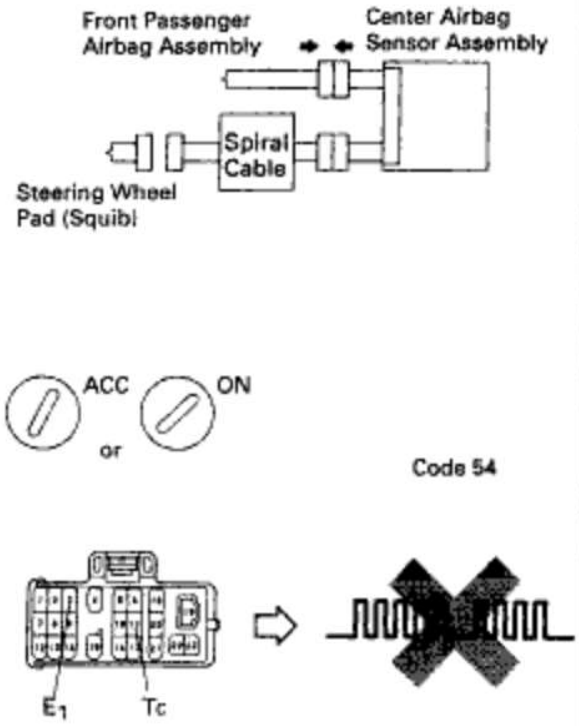
OK **Diagnostic trouble code 54 is not output.**

Hint Codes other than code 54 may be output at this time, but they are not relevant to this check.

OK

NG **Replace center airbag sensor assembly.**

4 **Check P squib.**



P Turn ignition switch LOCK.

(2) Disconnect battery negative 1–y terminal cable and wait at least 90 seconds.

(3) Connect front passenger airbag assembly connector.

(4) Connect negative 1–y terminal cable to battery, and wait at least 2 seconds.

(5) Turn ignition switch ACC or ON and wait at least 20 seconds.

(6) Clear malfunction code stored in memory

(See page RS–65).

C (7) Turn ignition switch LOCK, and wait at least 20 seconds.

(1) Turn ignition switch ACC or ON, and wait at least 20 seconds.

(2) Using SST, connect terminals Tc and E, of DLC1.

SST 09843–18020

OK (3) Check diagnostic trouble code.

Diagnostic trouble code 54 is not output.

Hint Codes other than code 54 may be output at this time, but they are not relevant to this check.

OK

NG **Replace front passenger airbag 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.

– MEMO –

SRS Warning Light System Malfunction

CIRCUIT DESCRIPTION

The SRS warning light is located on the combination meter.
When the supplemental restraint system 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 supplemental restraint system, the SRS warning light lights up to inform the driver of the abnormality.
When terminals Tc and EI of the check connector are connected, the diagnostic trouble code is displayed by the blinking of the SRS warning light.

DIAGNOSTIC CHART

Troubleshooting for this system is different for when the SRS warning light does not light up. Confirm the problem symptoms first before selecting the appropriate troubleshooting procedure.
HINT: If SRS warning light does not light up, perform the following troubleshooting:

1 Check SRS fuse. — NG → Go to step **5**.

OK

2 Preparation.

OK

3 Check SRS warning light circuit. — NG → Repair SRS warning light circuit (See page BE–61).

OK

4 Does SRS warning light come on? — NO → Check terminal LA of center airbag sensor assembly and electrical connection check mechanism. If normal, replace center airbag sensor assembly.

YES

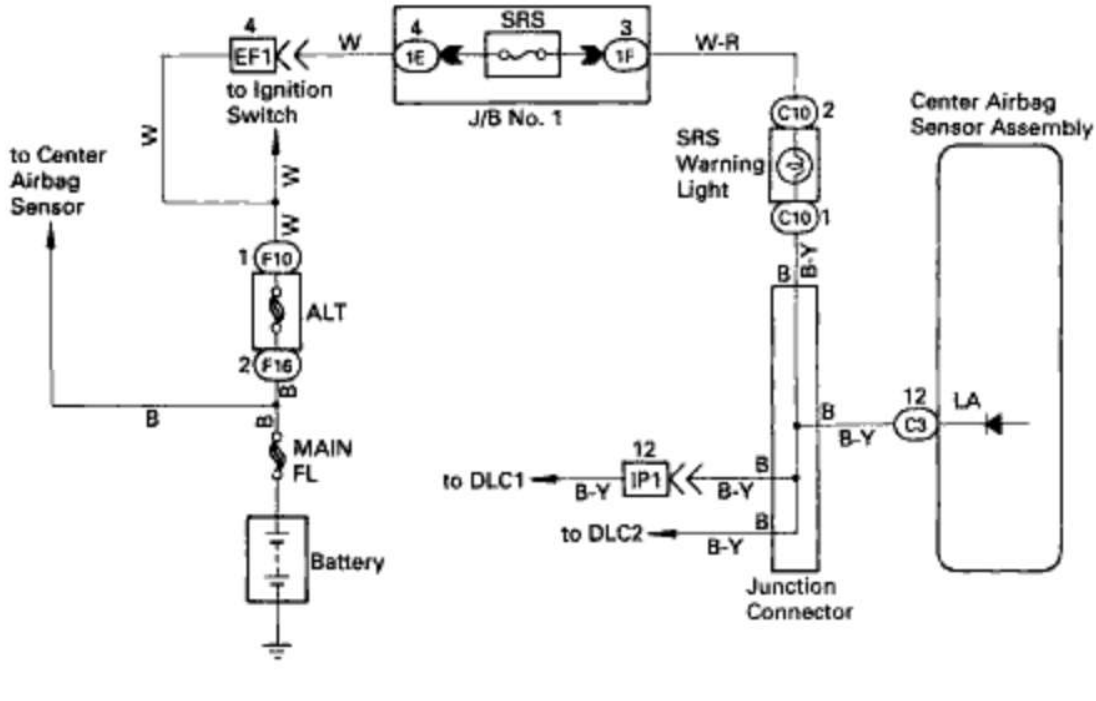
From the results of the above inspection, the malfunctioning part can now be considered normal. To make sure of this, use the simulation method to check.

5 Is new SRS fuse burnt out again? — NO → Using simulation method, reproduce malfunction symptomes (See INTRODUCTION).

YES

Check harness between SRS fuse and SRS warning light, and SRS fuse and center airbag sensor assembly.

DIAGNOSTIC CHART WIRING DIAGRAM



INSPECTION PROCEDURE

P Preparation C Check

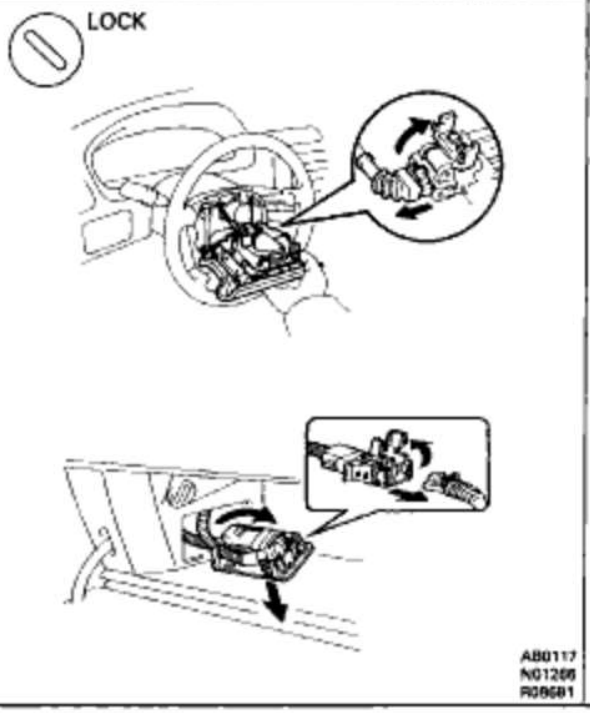
HINT: If SRS warning light does not light up, perform the following troubleshooting:

1 Check SRS fuse.

OK

NG > Go to step 5 .

2 Preparation.



P Disconnect battery negative H terminal cable, and wait at least 90 seconds.

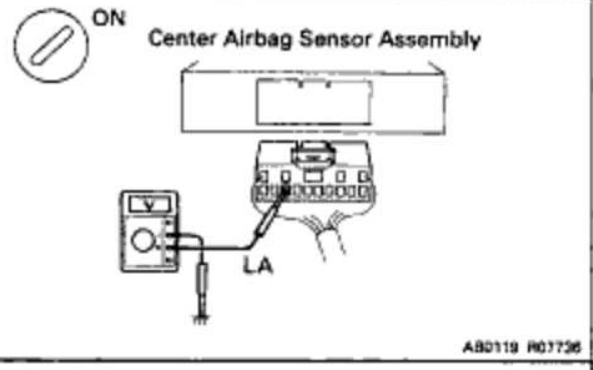
(2) Remove steering wheel pad (See page RS–20).

(3) Disconnect connectors of front passenger airbag assembly. (See page RS–29).

Caution

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

3 **Check SRS warning light circuit.**



P (1) Disconnect center airbag sensor assembly.
(2) Connect negative (–) terminal cable to battery.
(3) Turn ignition switch ACC or ON.

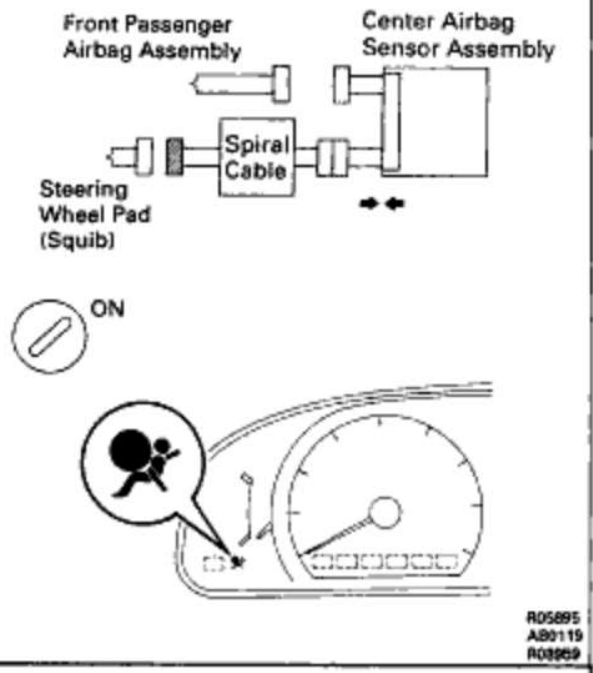
C Measure voltage LA terminal of harness side connector of center airbag sensor assembly.

OK **Battery Voltage: 10 – 14 V**

OK

NG **Repair SRS warning light circuit (See page BE–61).**

4 **Does SRS warning light come on?**



P (1) Disconnect negative (–) terminal cable from battery.
(2) Connect center airbag sensor assembly.
(3) Connect negative (–) terminal cable to battery.
(4) Turn ignition switch ACC or ON.

C (1) Turn ignition switch OFF, and wait at least 6 seconds.
(2) Turn ignition switch ON.

YES

NO **Check terminal LA of center airbag sensor assembly and electrical connection check mechanism. If normal, replace center airbag sensor assembly.**

5 **Is now SRS fuse burnt out again?**

YES

NO **Using simulation method, reproduce malfunction symptoms (See INTRODUCTION).**

Check harness between SRS fuse and SRS warning light, and SRS fuse and center airbag sensor assembly.

– MEMO –

SRS Warning Light System (Always Lit Up when ignition switch is LOCK position)

CIRCUIT DESCRIPTION

The SRS warning light is located on the combination meter.
When the supplemental restraint system 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 supplemental restraint system, the SRS warning light lights up to inform the driver of the abnormality.
When terminals Tc and El of the DLC1 or DLC2 are connected, the diagnostic trouble code is displayed by the blinking of the SRS warning light.

DIAGNOSTIC CHART

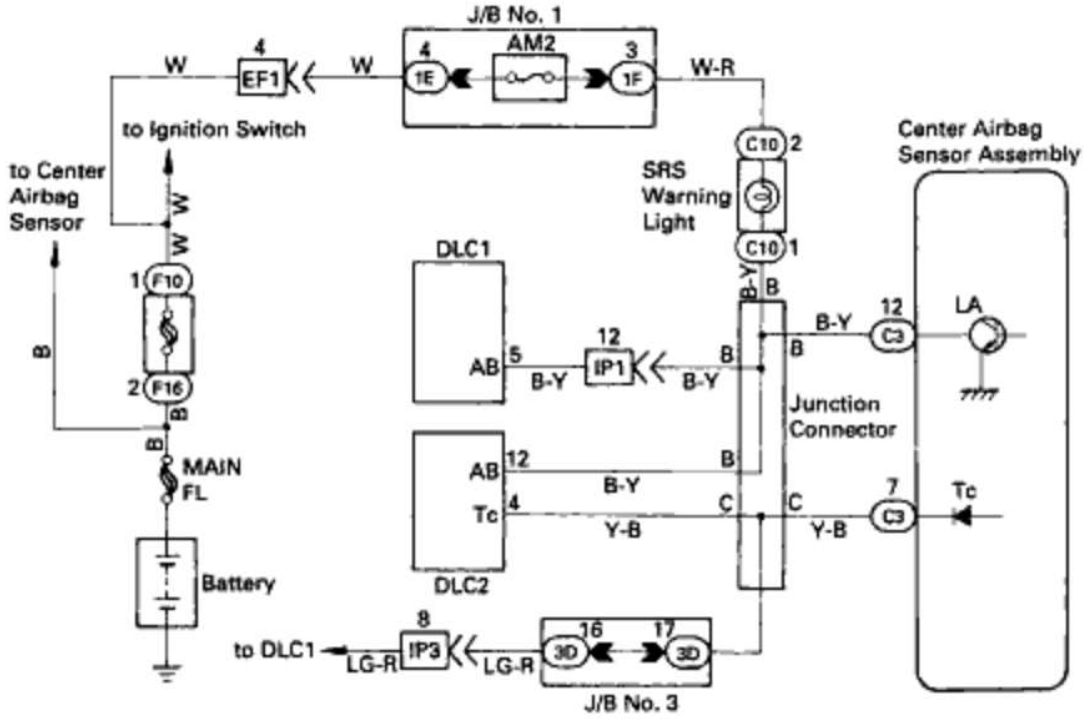
HINT: If the SRS warning light is always lit up by a DTC check procedure, perform Tc terminal circuit check procedure (See page RS–148).

1 Does SRS warning light turn off?

NO → Check SRS warning light circuit or terminal AB circuit of DLC1 or DLC2.

YES → Replace center airbag sensor assembly.

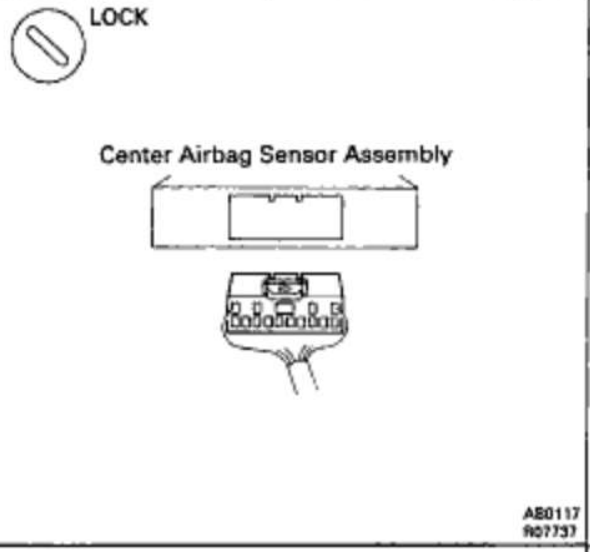
WIRING DIAGRAM



INSPECTION PROCEDURE

P Preparation C Check

1 Does SRS warning light turn off?



P Turn ignition switch LOCK.

(2) Disconnect negative H terminal cable from battery and wait at least 90 seconds.

(3) Remove steering wheel pad (See page RS–20).

(4) Disconnect connectors of front passenger airbag assembly. (See page RS–29)

(5) Disconnect center airbag sensor assembly connector.

C (6) Connect negative H terminal cable to battery. Check operation of SRS warning light.

Hint **Ignition Switch is LOCK position.**

YES

Replace center airbag sensor assembly.

NO

Check SRS warning light circuit or terminal AB circuit DLC1 or DLC2.

Tc Terminal Circuit

CIRCUIT DESCRIPTION

By connecting terminals Tc and El of the DLC1 or DLC2, the center airbag sensor assembly is set in the diagnostic trouble code output mode. The diagnostic trouble codes are displayed by the blinking of theSRS warning light.

DIAGNOSTIC CHART

Troubleshooting for this system is different depending on whether the diagnostic trouble code is not displayed SRS warning light is always lit up with a DTC check procedure, or is displayed without a DTC check procedure. Confirm the problem symptoms first before selecting the appropriate troubleshooting procedure.

HINT: If the diagnostic trouble code is not displayed or SRS warning light is always lit up with a DTC check procedure perform the following troubleshooting:

1. Check voltage between terminals Tc and E of DLC1 or DLC2.
   - OK → G o to step 3
   - NG ↓
2. Check voltage between terminal Tc of DLC1 or DLC2 and body ground.
   - OK → Check harness between termina E1 of DLC1 or DLC2 and body ground.
   - NG ↓
3. Check center airbag sensor assembly.
   - OK → Check harness between center airbag sensor assembly and DLC1 or DLC2.
   - NG ↓

Replace center airbag sensor assembly.

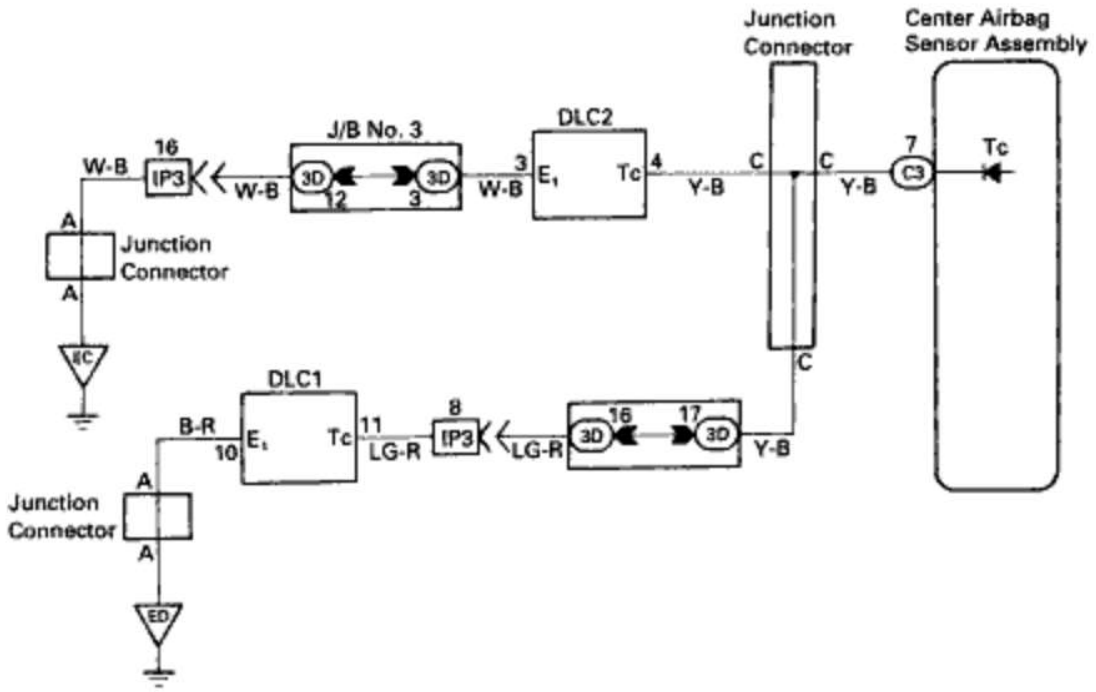
HINT: If the diagnostic trouble code is continuously displayed without a DTC check procedure, perform the following troubleshooting:

1. Check resistance between terminal Tc of center airbag sensor assembly and body ground.
   - OK → Replace center airbag sensor assembly.
   - NG ↓

Repair or replace harness or connector.

DIAGNOSTIC CHART

WIRING DIAGRAM

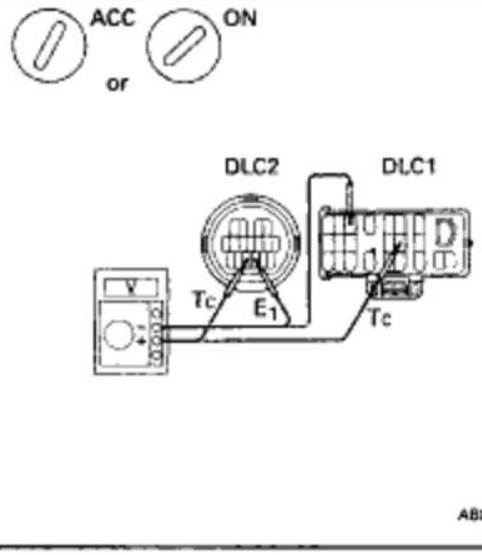


INSPECTION PROCEDURE

P Preparation C Check

HINT: If the diagnostic trouble code is not displayed, perform the following troubleshooting:

1 **Check voltage between terminals Te and El of DLC1 or DLC2.**



P Turn ignition switch ACC or ON.

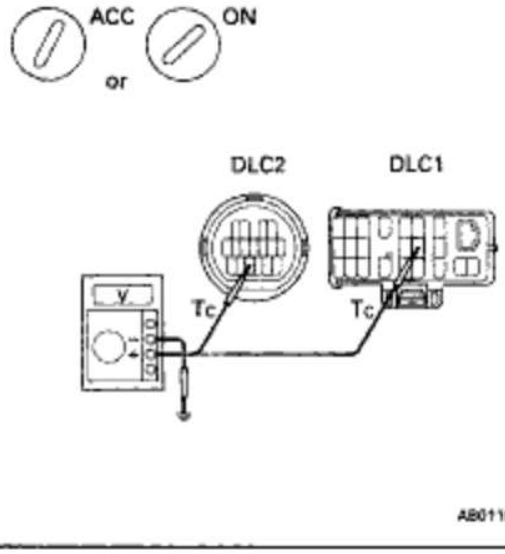
C Measure voltage between terminals Tc and El of DLC1 or DLC2.

OK **Battery Voltage: 10 – 14 V**

NG

OK → Go to step 3.

2 **Check voltage between terminal Te of DLC1 or DLC2 and body ground.**



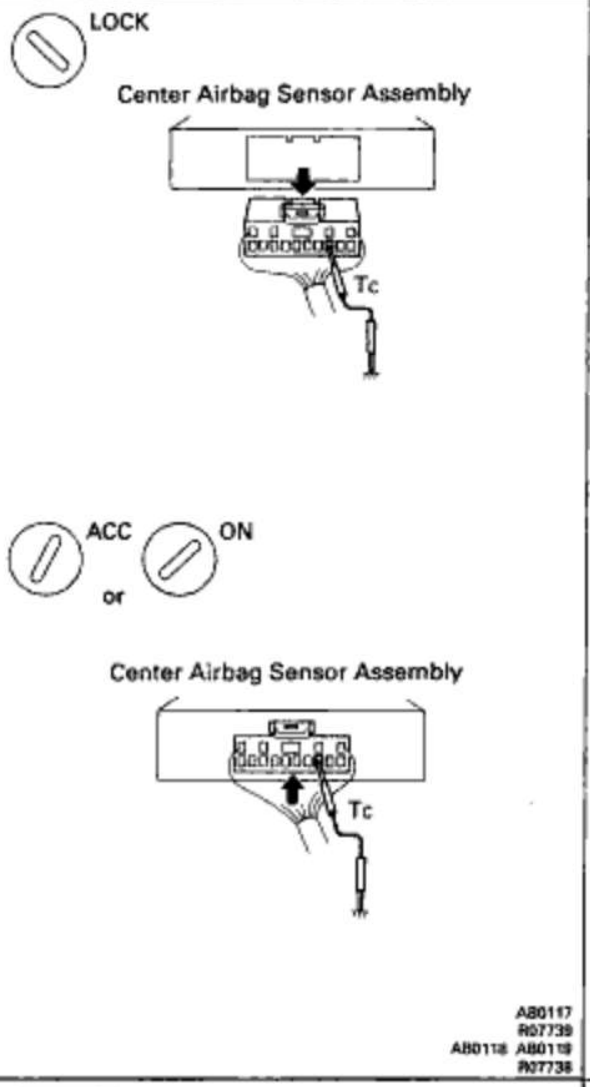
C Measure voltage between terminal Tc of DLC1 or DLC2 and body ground.

OK **Battery Voltage: 10 – 14 V**

NG

OK → **Check harness between terminal El of DLC1 or DLC2 and body ground.**

3 **Check center airbag sensor assembly.**



P (1) Turn ignition switch LOCK.
(2) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.
(3) Remove steering wheel pad (See page RS–20).
(4) Disconnect connectors of front passenger airbag assembly. (See page RS–29).

C Check operation of SRS warning light.

OK **SRS warning light comes on.**

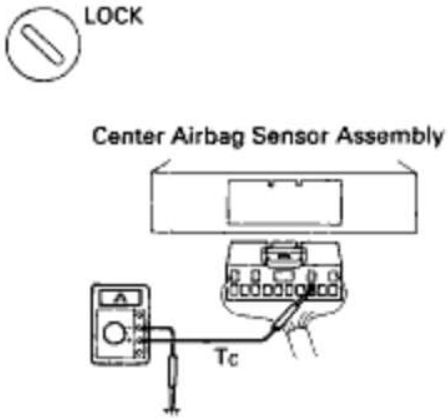
NG

OK **Check harness between center airbag sensor assembly and DLC1 or DLC2.**

Replace center airbag sensor assembly.

HINT: If the diagnostic trouble code is continuously displayed, perform the following troubleshooting.

1 **Check resistance between terminal Tc of center airbag sensor assembly and body ground.**



P Turn ignition switch LOCK.

(2) Disconnect center airbag sensor assembly connector.

(3) Disconnect battery negative (–) terminal cable, and wait at least 90 seconds.

(4) Remove steering wheel pad (See page RS–20).

(5) Disconnect connectors of front passenger airbag assembly. (See page RS–29).

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

OK **Resistance: 1 MΩ or higher**

NG

Repair or replace harness or connector.

OK **Replace center airbag sensor assembly.**

SERVICE SPECIFICATIONS

SERVICE DATA

Front airbag sensor resistance	Terminal	
	⊕ S - ⊕ A	Less than 1 Ω
	⊕ S - ⊖ S	∞
	⊖ S - ⊖ A	755 – 885 Ω

TORQUE SPECIFICATIONS

Part tightened		N·m	kgf·cm	ft·lbf
Steering Wheel		35	360	26
Steering wheel pad		8.8	90	78 in.·lbf
Front passenger airbag assembly	to instrument panel reinforcement	21	210	15
	to instrument panel	8.0	80	69 in.·lbf
Seat belt shoulder anchor bolt		42	420	31
Front seat outer belt		42	420	31
Front airbag sensor		29	300	22
Center airbag sensor		20	200	15